



BY THE
NUMBERS



2022



UNIVERSITY OF TORONTO
FACULTY OF APPLIED SCIENCE & ENGINEERING

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We wish to acknowledge this land on which the University of Toronto operates. For thousands of years it has been the traditional land of the Huron-Wendat, the Seneca, and the Mississaugas of the Credit. Today, this meeting place is still the home to many Indigenous people from across Turtle Island and we are grateful to have the opportunity to work on this land.

FACULTY AT A GLANCE

Read U of T's *Impact Report 2022* at
uofteng.ca/2022

Comparison of U of T Engineering with Ontario and Canada, 2020–2021

	U of T Engineering	Ontario	U of T % of Ontario	Canada	U of T % of Canada
Undergraduate					
Enrolment (FTE)	5,526	41,046	13.5%	95,274	5.8%
% Women	38.4%	29.4%		25.2%	
Degrees Awarded	1,075	8,476	12.7%	18,476	5.8%
% Women	31.8%	27.0%		22.9%	
Master's (MEng, MAsC and MHS c)					
Enrolment (FTE)	1,357	7,786	17.4%	18,756	7.2%
Degrees Awarded	793	4,735	16.7%	9,529	8.3%
% Women	30.8%	23.9%		25.5%	
Doctoral (PhD)					
Enrolment (FTE)	1,016	3,901	26.0%	10,704	9.5%
Degrees Awarded	118	613	19.2%	1,578	7.5%
% Women	22.0%	22.7%		22.4%	
Faculty					
Tenured and Tenure-Stream	243	1,749	13.9%	3,941	6.2%
% Women	19.1%	16.4%		16.6%	
Major Awards					
Major Awards Received	8	24	33.3%	63	12.7%
Research Funding					
NSERC Funding for Engineering	\$37.M	\$168.7M	21.9%	\$421.1M	8.8%

Note: Because of the lag in reporting from some peer institutions, 2020–2021 is the most recent year for which all comparison data is available. Enrolment and degrees awarded are based on the 2020 calendar year. Faculty data is current as of November 2020. NSERC research funding is based on the 2020–2021 grant year (April–March). Major award counts are based on the 2021 calendar year.

Comparison of U of T Engineering with St. George Campus and University of Toronto, 2021–2022

	U of T Engineering	St. George Campus	Engineering % of Campus	University of Toronto	Engineering % of U of T
Student Enrolment					
Undergraduate	5,628	40,442	13.9%	70,416	8.0%
Professional Master's (MEng and MHSc)	1,181	9,596	12.3%	10,288	11.5%
Research Master's (MAsc)	620	2,896	21.4%	3,010	20.6%
Doctoral (PhD)	1,210	7,374	16.4%	7,819	15.5%
All Students	8,639	60,308	14.3%	91,533	9.4%
Degrees Awarded					
Undergraduate	945	8,305	11.4%	14,052	6.7%
Professional Master's (MEng and MHSc)	627	4,573	13.7%	5,014	12.5%
Research Master's (MAsc)	241	1,319	18.3%	1,362	17.7%
Doctoral (PhD)	129	876	14.7%	945	13.7%
Total Degrees	1,942	15,073	12.9%	21,373	9.1%
Faculty and Staff					
Professoriate	277			3,288	8.4%
Administrative and Technical Staff	408			10,881	3.8%
Research Funding					
Sponsored Research Funding	\$98.3M			\$617.9M	15.9%
Industry Research Funding	\$19.7M			\$41.8M	47.2%
Space					
Space (NASMs)	71,914	642,743	11.2%	859,886	8.4%
Revenue					
University-wide Costs	\$86.1M			\$672.7M	12.8%
Total Operating Revenue	\$218.6M			\$2,305.9M	9.5%

Note: Student enrolment is shown as of November 1, 2021. Degrees awarded are based on the 2021–2022 academic year (convocations in November 2021, March 2022 and June 2022). Professoriate includes comparison of U of T Engineering with University of Toronto, tenured, tenure-stream and teaching-stream faculty members. Administrative and technical staff includes full- and part-time staff. Faculty and staff data is as of September 2020, based on U of T Facts and Figures (2021). Research funding is based on the 2020–2021 grant year (April to March). Space is measured in Net Assignable Square Metres (NASMs). Revenue is based on the 2021–2022 U of T fiscal year (May to April). For more information, see Data Sources on page 123.

Faculty Leadership, 2021–2022

Dean

Christopher Yip

Vice-Dean, Graduate Studies

Julie Audet

Vice-Dean, Undergraduate

Aimy Bazylak (acting to August 31, 2021)

Thomas Coyle (from September 1, 2021)

Vice-Dean, Research

Ramin Farnood (to December 31, 2021)

Stark Draper (interim from January 1, 2022)

Associate Dean, Cross-Disciplinary Programs

Bryan Karney (to August 31, 2021)

Dionne Aleman (from September 1, 2021)

Vice-Dean, First Year

Dawn Kilkenny (from September 1, 2021)

Vice-Dean, Strategic

Heather MacLean (from November 1, 2021)

Director, University of Toronto Institute for Aerospace Studies

Christopher Damaren

Director, Institute of Biomedical Engineering

Warren Chan

Chair, Department of Chemical Engineering & Applied Chemistry

Grant Allen (to December 31, 2021)

Ramin Farnood (from January 1, 2022)

Chair, Department of Civil & Mineral Engineering

Brent Sleep

Chair, The Edward S. Rogers Sr. Department of Electrical & Computer Engineering

Deepa Kundur

Director, Division of Engineering Science

Will Cluett (to June 30, 2022)

Aimy Bazylak (interim from July 1, 2022)

Chair, Department of Materials Science & Engineering

Glenn Hibbard

Chair, Department of Mechanical & Industrial Engineering

Markus Bussmann (to June 30, 2022)

Greg Jamieson (interim from July 1, 2022)

Director, Institute for Studies in Transdisciplinary Engineering Education & Practice

Greg Evans

Assistant Dean and Director of Diversity, Inclusion & Professionalism

Marisa Sterling

Chief Administrative Officer

Lisa Camilleri

Chief Financial Officer

Brian Coates (to June 30, 2022)

Olenka Baron (interim from July 1, 2022)

Director, Facilities & Infrastructure Planning

Tom Saint-Ivany

Director, Office of the Dean

Cathy Grilo (to June 9, 2022)

Executive Director, Communications

Marit Mitchell

Executive Director, Advancement

Mark Rittinger

Faculty Registrar

Don MacMillan

CHAPTER 1

UNDERGRADUATE STUDIES

FACTS AND FIGURES

756

PEY Co-op placements in 2021–2022, including 42 outside of Canada.

94.3%

Proportion of undergraduate students who move on to second year within two years of starting their programs.

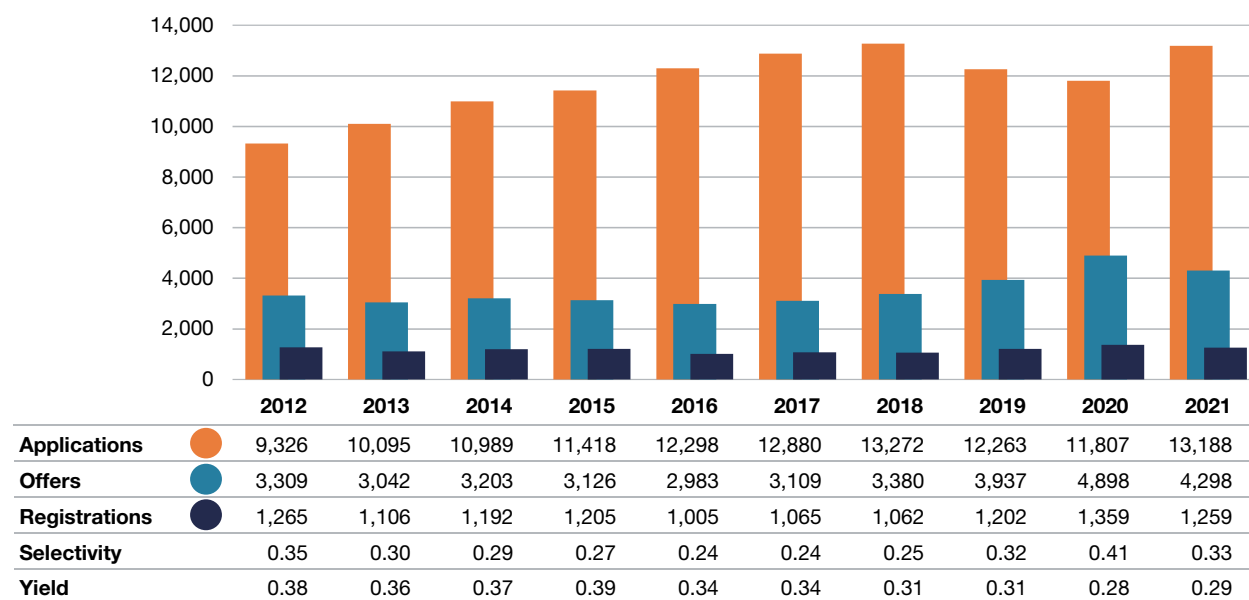
47.7%

Proportion of students graduating with Honours or High Honours standing.

719

Students who completed at least one interdisciplinary minor or certificate upon graduation, comprising 76.1% of the graduating class.

Figure 1.1a Applications, Offers, Registrations, Selectivity and Yield of First-Year Undergraduates, 2012 to 2021



Data in this chapter are presented by academic year (September to August) unless otherwise noted.

Note 1.1a, b, c: Student registration counts are shown as of November 1. Applications and offers are for the fall admissions cycle. Selectivity = offers ÷ applications and represents the proportion of applicants who were offered admission. Yield = registration ÷ offers. Domestic students are defined as citizens (living in Canada or abroad) or permanent residents of Canada.

Figure 1.1b Applications, Offers, Registrations, Selectivity and Yield of Domestic First-Year Undergraduates, 2012 to 2021

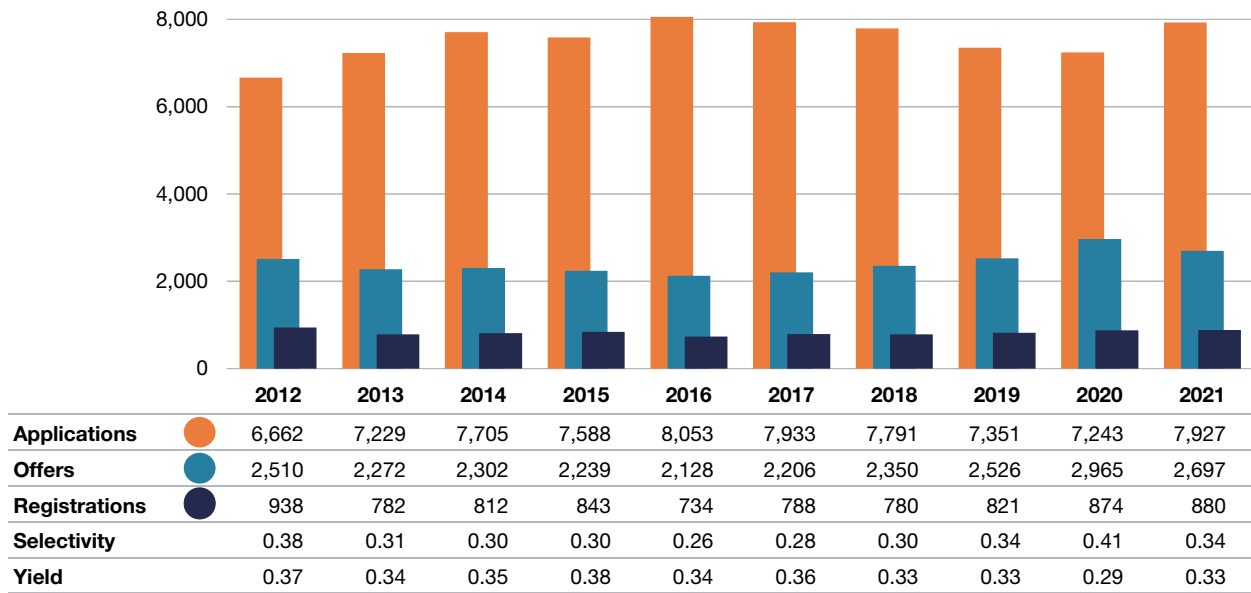


Figure 1.1c Applications, Offers, Registrations, Selectivity and Yield of International First-Year Undergraduates, 2012 to 2021

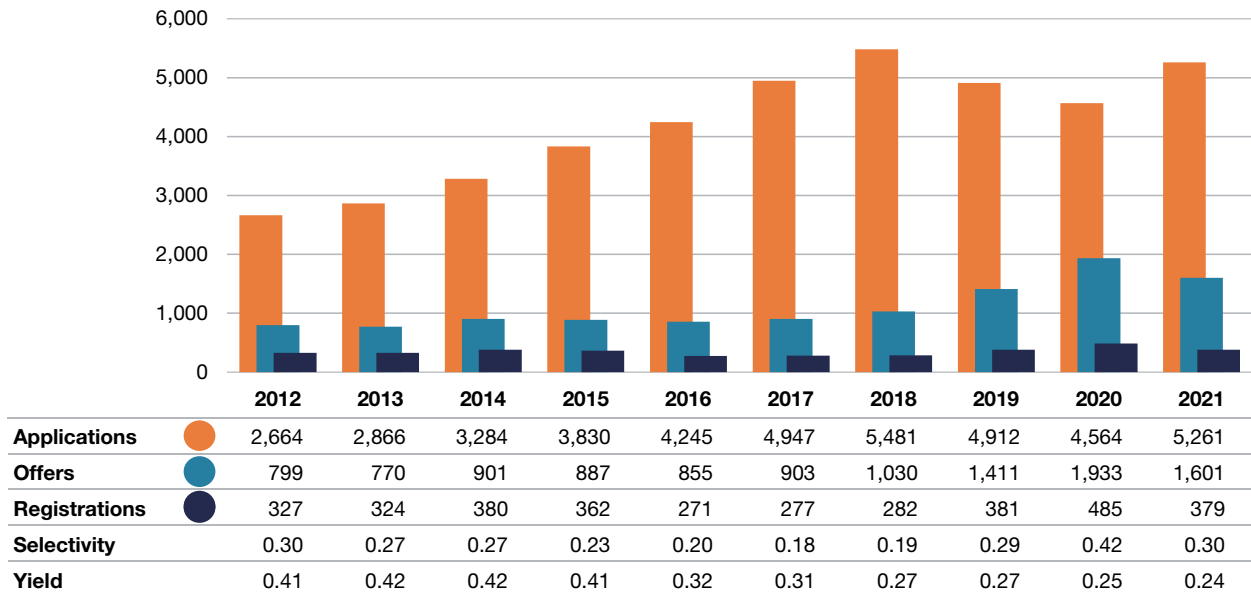


Figure 1.2a Ontario Secondary School Averages of Incoming First-Year Undergraduates, 2012 to 2021

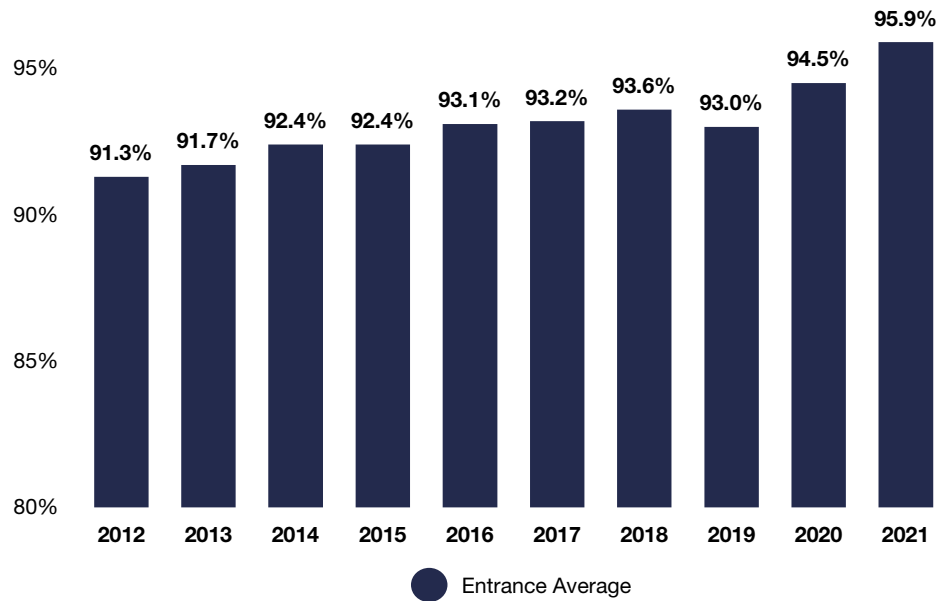
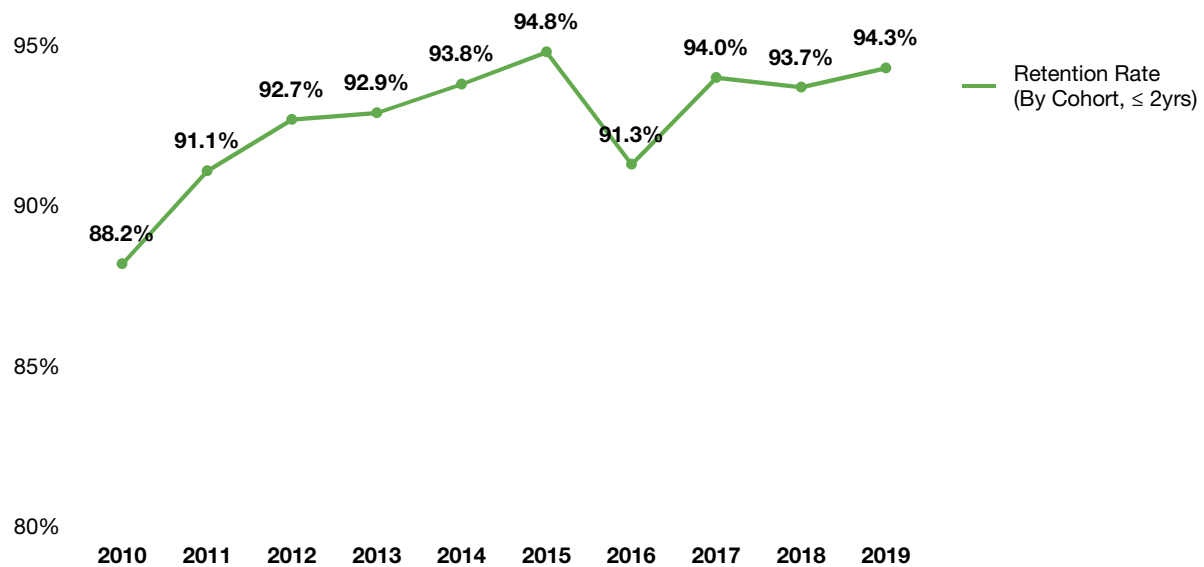


Figure 1.2b Two-Year Retention Rate, 2010 to 2019



Note 1.2a: Entrance average is derived from data provided by the Ontario Universities' Application Centre, and therefore only reflects Ontario secondary school students.

Note 1.2b: Two-year retention rate is the proportion of students who successfully move on to second year within two years of beginning their studies. The years in this figure are those in which the relevant cohort began their studies.

Figure 1.3 Incoming First-Year Undergraduates by Program, 2012–2013 to 2021–2022

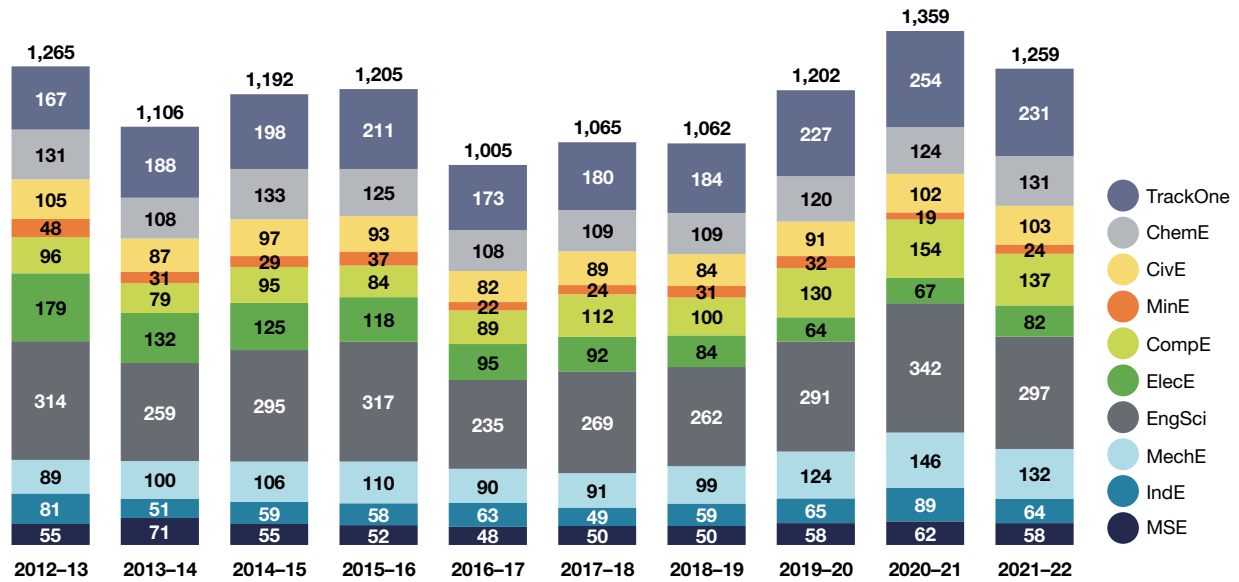
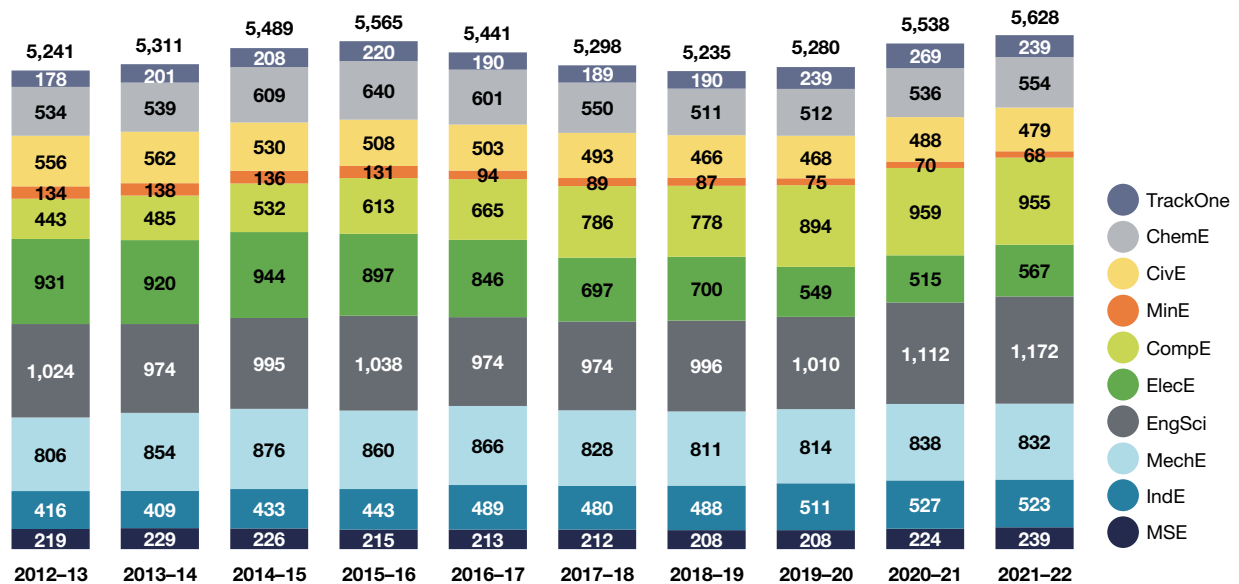


Figure 1.4a All Undergraduates by Program, 2012–2013 to 2021–2022



Note 1.3: Student counts are shown as of November 1.

Note 1.4a: Includes full- and part-time students and those working full time through the Professional Experience Year Co-op Program (PEY Co-op). Does not count students with special (non-degree) status. Student counts shown as of November 1.

Figure 1.4b All Undergraduates by Program, Year of Study and Professional Experience
Year Co-op, 2021–2022

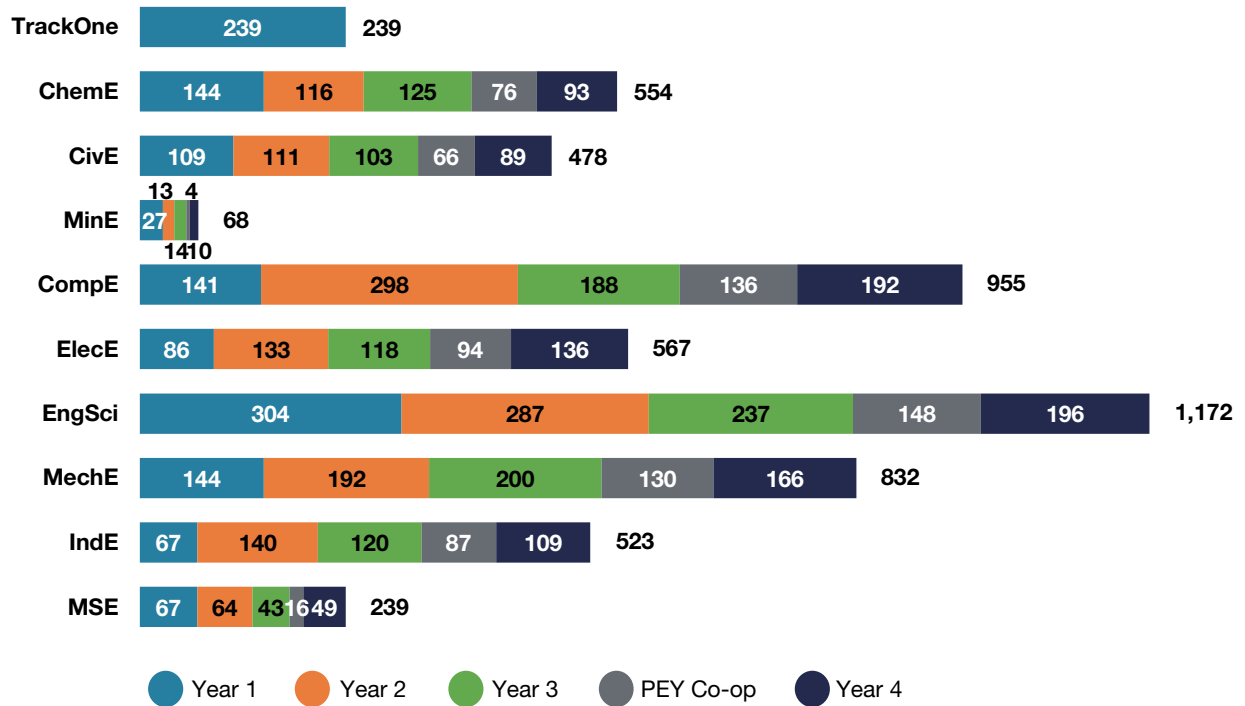
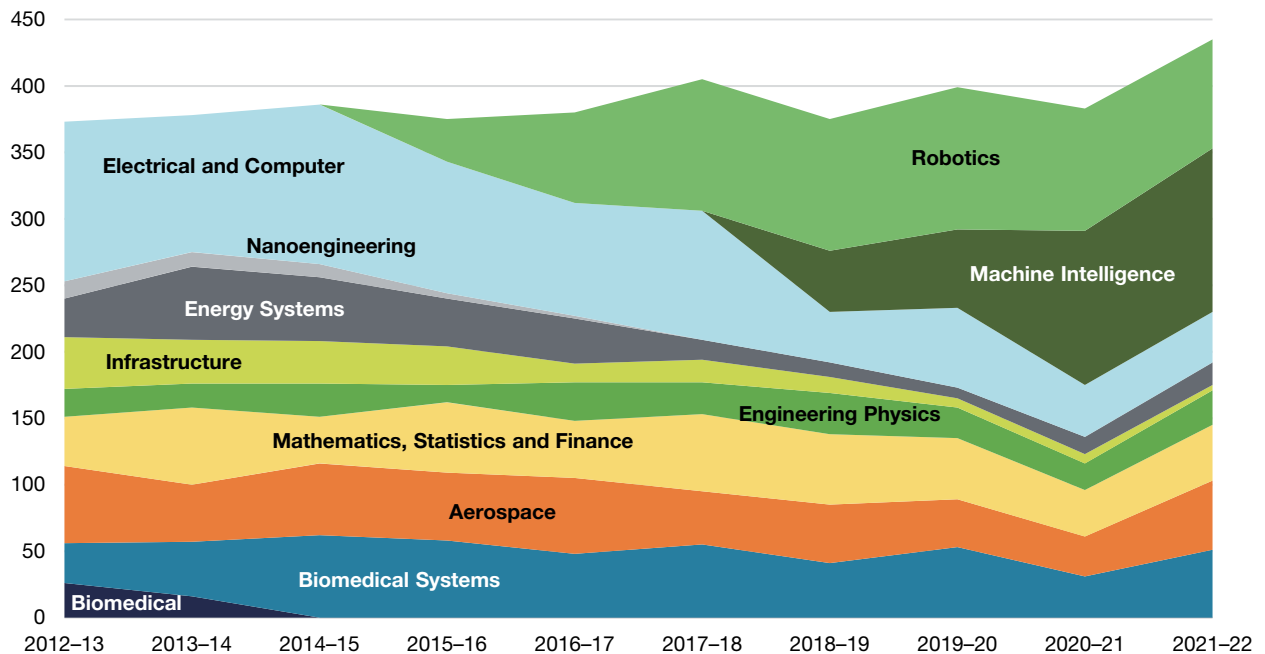


Figure 1.4c Enrolment in Engineering Science Majors, 2012–2013 to 2021–2022



Note 1.4b, c: Student counts are shown as of November 1, 2021. Engineering Science Majors show only students in Year 3 and Year 4 and do not count students on PEY Co-op.

Figure 1.5a Undergraduate Student-to-Faculty Ratios by Academic Area, 2021–2022

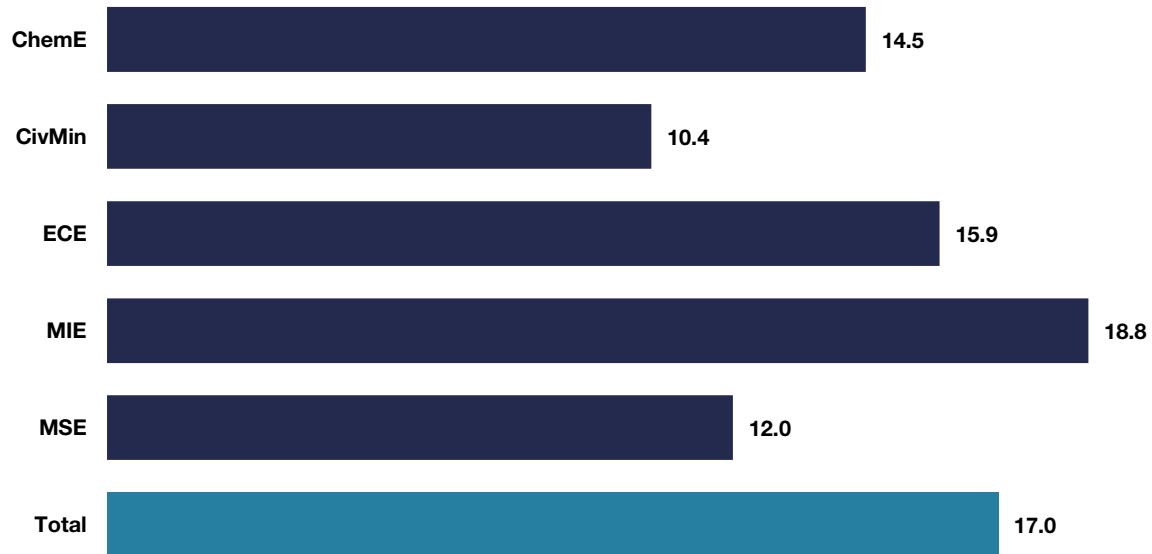
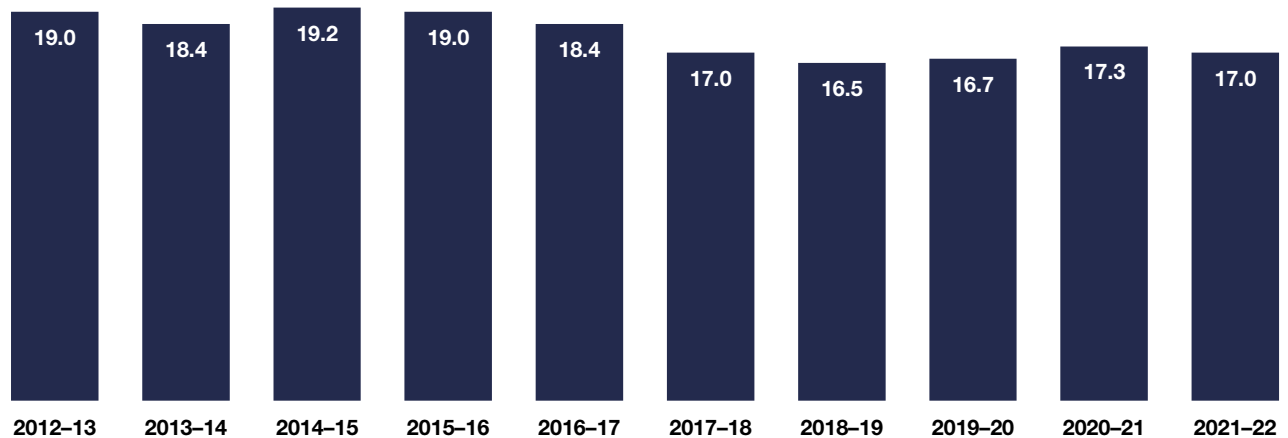


Figure 1.5b Undergraduate Full-Time Equivalent Student-Faculty Ratios, 2012–2013 to 2021–2022



Note 1.5a, b: Student and faculty counts are shown as of November 1, 2022. For full-time equivalency (FTE), each part-time student is counted as 0.3 FTE. Students with special (non-degree) status or on PEY Co-op are not included. Faculty counts include tenure-stream and teaching-stream faculty.

Figure 1.6a Undergraduate Participation in Summer Research Opportunities, 2013 to 2022

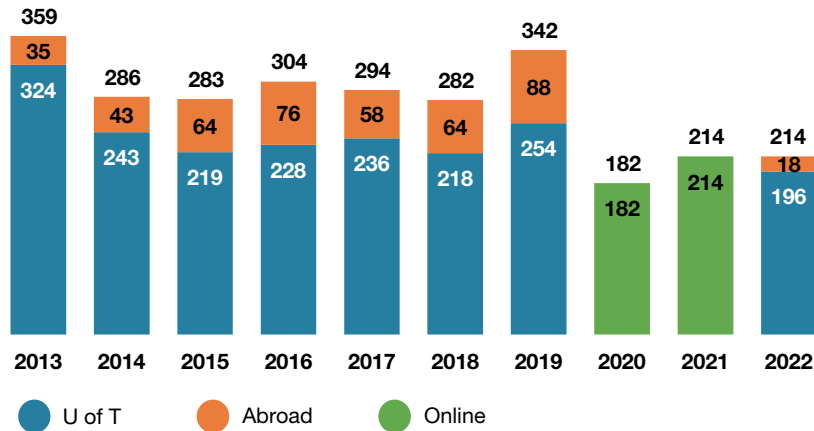
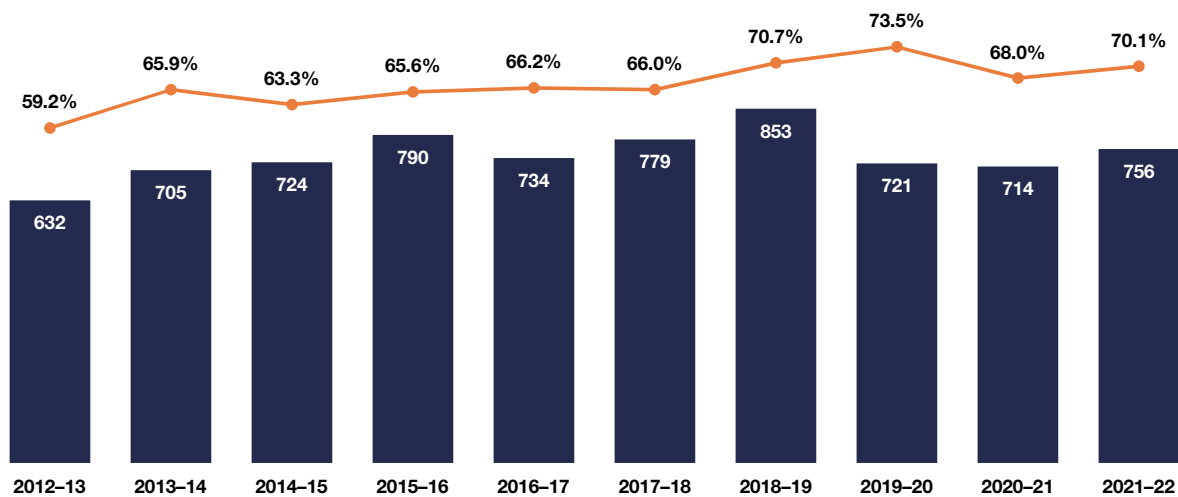


Figure 1.6b Undergraduate Participation in Summer Research Opportunities by Academic Area, 2022

Research Participation:	U of T	Abroad	Total
ChemE	4	2	6
CivE & MinE	18	1	19
ECE	32	2	34
EngSci	86	8	94
MIE	40	4	44
MSE	16	1	17
Total	196	18	214

Figure 1.7a Number of Engineering Undergraduate Students Participating in PEY Co-op with Percentage Participation, 2012–2013 to 2021–2022



Note 1.6a,b: As of publication time, only partial data on summer research opportunities for ChemE students was available. Pandemic-related travel restrictions also limited participation in international summer research opportunities for 2021-2022.

Note 1.7a: Percentage participation is calculated by dividing the number of completed PEY Co-op positions by the number of eligible students (i.e. the third-year cohort from the previous year).

Figure 1.7b Number of Canadian and International PEY Co-op Positions, 2012–2013 to 2021–2022

	Canadian Positions	U.S. Positions	Other International Positions	Total Positions
2012–13	592	24	16	632
2013–14	644	36	25	705
2014–15	663	42	19	724
2015–16	711	50	29	790
2016–17	669	49	16	734
2017–18	713	48	18	779
2018–19	768	64	21	853
2019–20	673	37	11	721
2020–21	672	22	20	714
2021–22	714	10	32	756

Figure 1.7c Number of PEY Co-op Employers, 2012–2013 to 2021–2022

PEY Co-op Employers who Hired Engineering Students	
2012–13	241
2013–14	304
2014–15	317
2015–16	310
2016–17	337
2017–18	318
2018–19	368
2019–20	357
2020–21	310
2021–22	361

Note 1.7b: For 2020–2021 and 2021–2022, students' ability to participate in U.S.-based PEY positions was limited by pandemic-related travel restrictions. Some U.S. companies responded by making offers through their Canadian offices, which were recorded as Canadian positions.

Figure 1.8a Number of Awards Received by Cohort with Total Number of Undergraduate Need-Based Award Recipients, 2012–2013 to 2021–2022

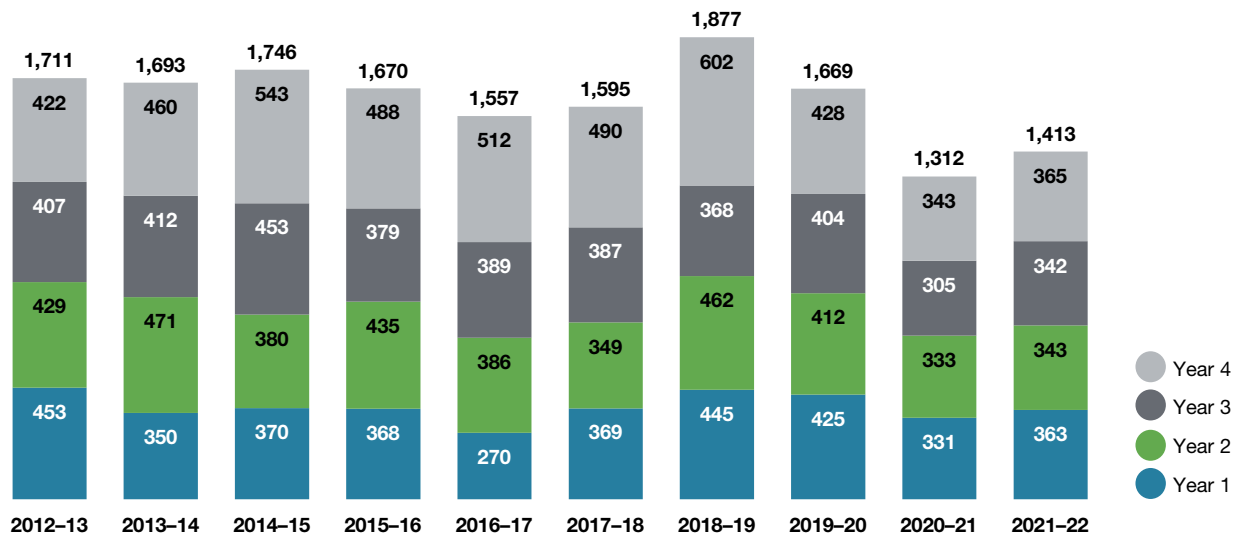
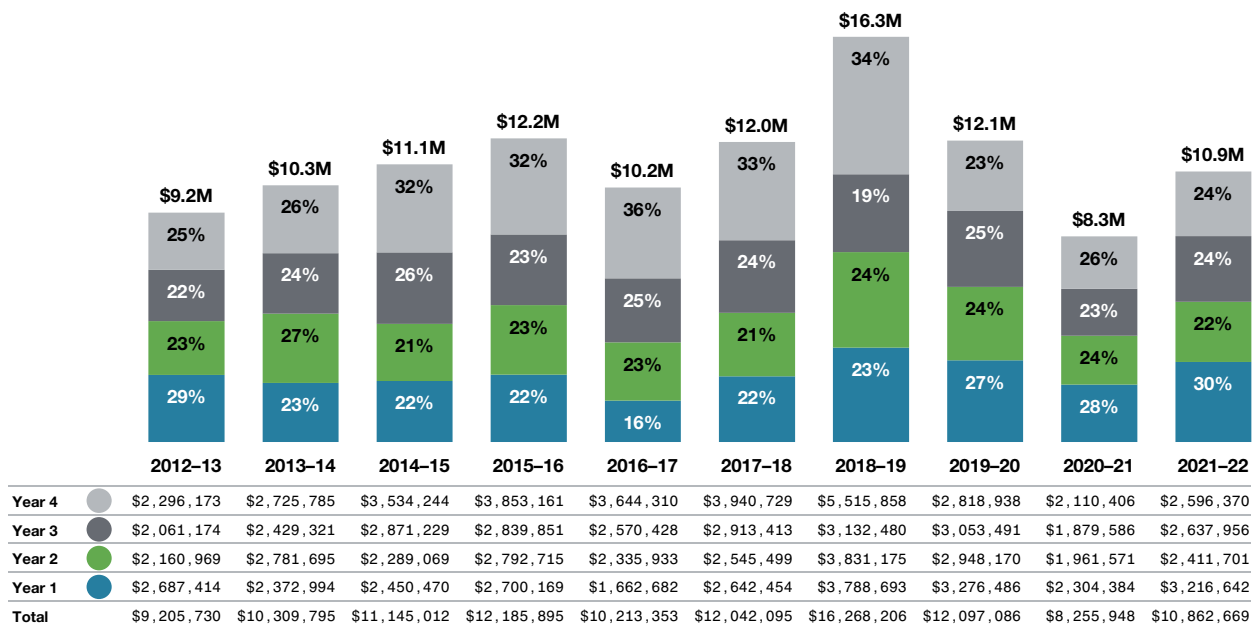


Figure 1.8b Total Value of Undergraduate Financial Assistance and Percentage Distributed by Year of Study, 2012–2013 to 2021–2022



Note 1.8a, b: Data comes from the Student Accounts Analysis Cube.

Figure 1.9 Undergraduate Degrees Awarded by Program, 2012–2013 to 2021–2022

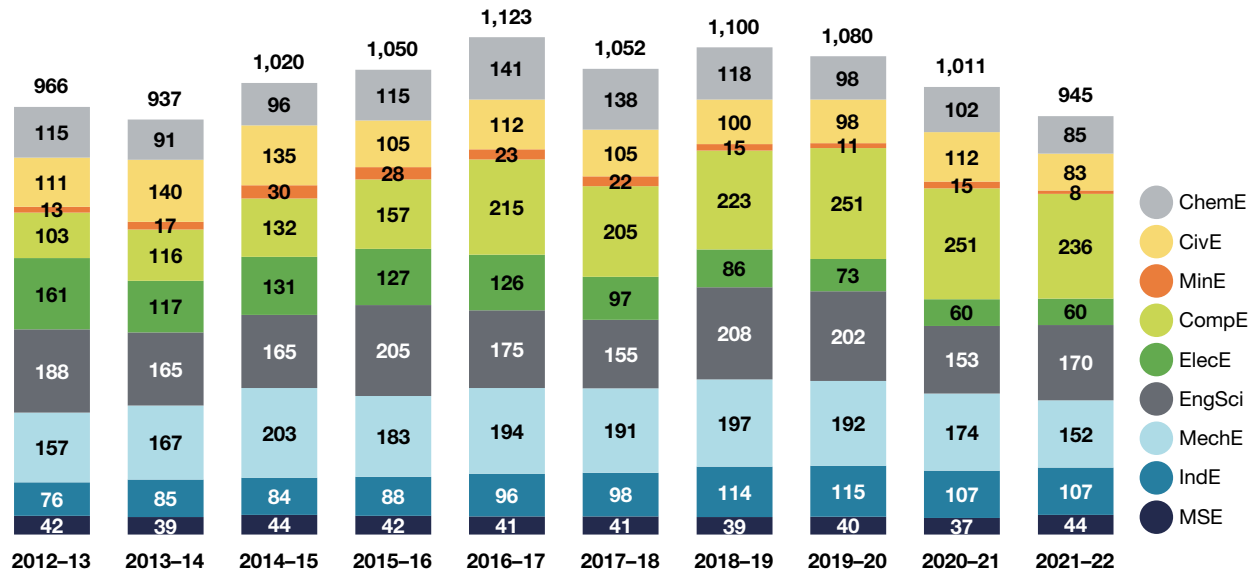
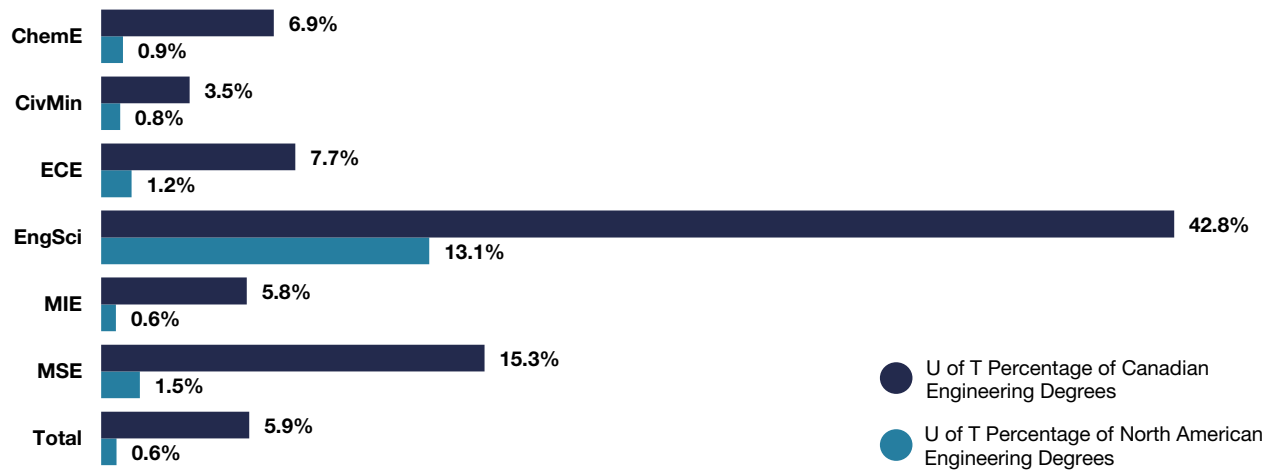


Figure 1.10 U of T Engineering Degrees Awarded by Academic Area Compared with Canadian and North American Degree Totals, 2020



Note 1.9: Data reported by academic year (September to August).

Note 1.10: Data sourced from reports produced by Engineers Canada and the American Society for Engineering Education; 2020 is the most recent year for which reports from both these institutions have been published. Total percentages show U of T as a proportion of all engineering degrees in North America, including those awarded in fields for which U of T does not have a specific degree program (e.g. Biomedical, Environmental, Software, etc.).

Figure 1.11a Number of Students and Percentage of Class Graduating with Honours, 2013 to 2022

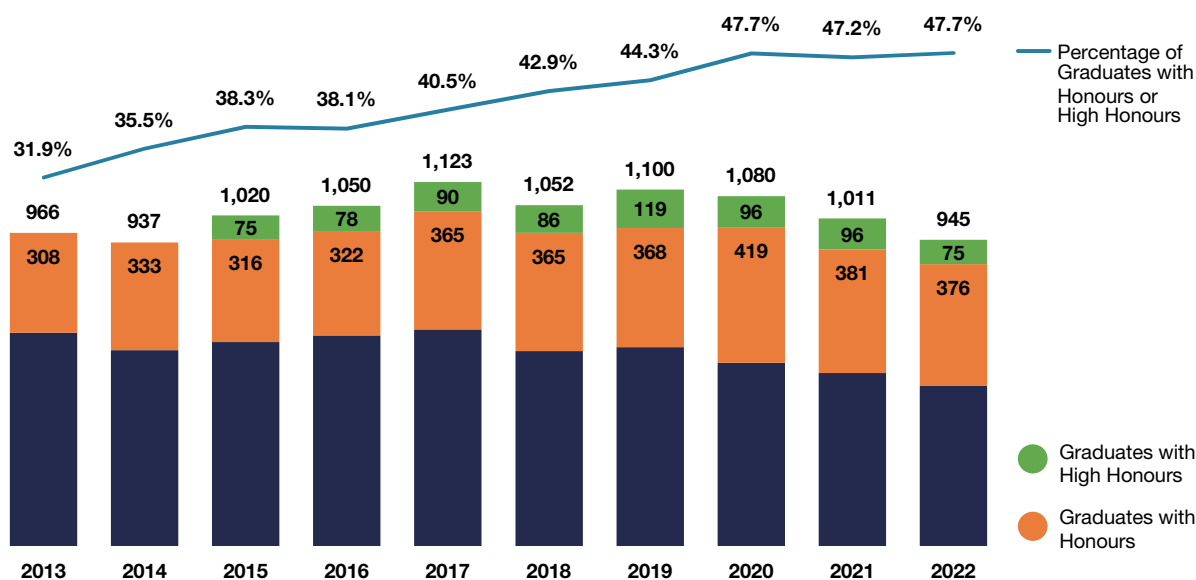
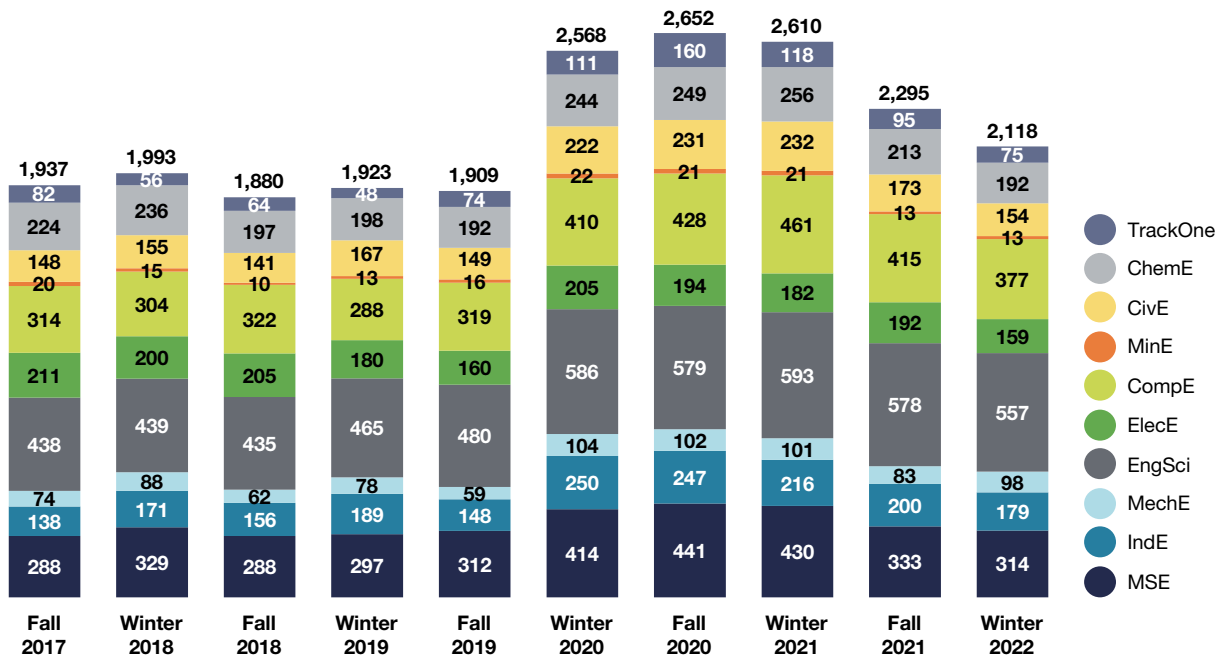


Figure 1.11b Number of Students on the Dean's Honour List by Term and Academic Area, Fall 2017 to Winter 2022



Note 1.11a: Students are normally eligible to be considered for Honours standing only if they are carrying a full academic load (2.5 credits per session, excluding extra courses) and if the session is not being repeated. During fourth year, a student may reduce their course load in either semester (but not both) and still be eligible for Honours standing, provided the other conditions are met.

Note 1.11b: The results for 2020 Winter, 2020 Fall, and 2021 Winter reflect various impacts due to COVID-19 adaptations. Moving all classes to online formats necessitated adjustments both to specific assignments and to overall grading schemes. For 2020 Winter only, students were permitted to apply a Credit or No Credit (CR/NCR) option, rather than a percentage grade, to any of their courses, or even to drop a failed course, after seeing their final grades. Sessional grades used to determine honour status were calculated using only those courses that students chose to have recorded as a percentage grade. A minimum of 4 such percentage grades were required to be considered for the Dean's Honour List. For the 2020–2021 academic year, the CR/NCR option was discontinued, but the extended Late Withdrawal option was retained. Provision was also made for part-time students to achieve Dean's Honour List standing. For the 2021-2022 academic year the Late Withdrawal option was discontinued.

Figure 1.12a Number of Students and Percentage of Graduating Class Completing an Engineering Minor, 2012–2013 to 2021–2022

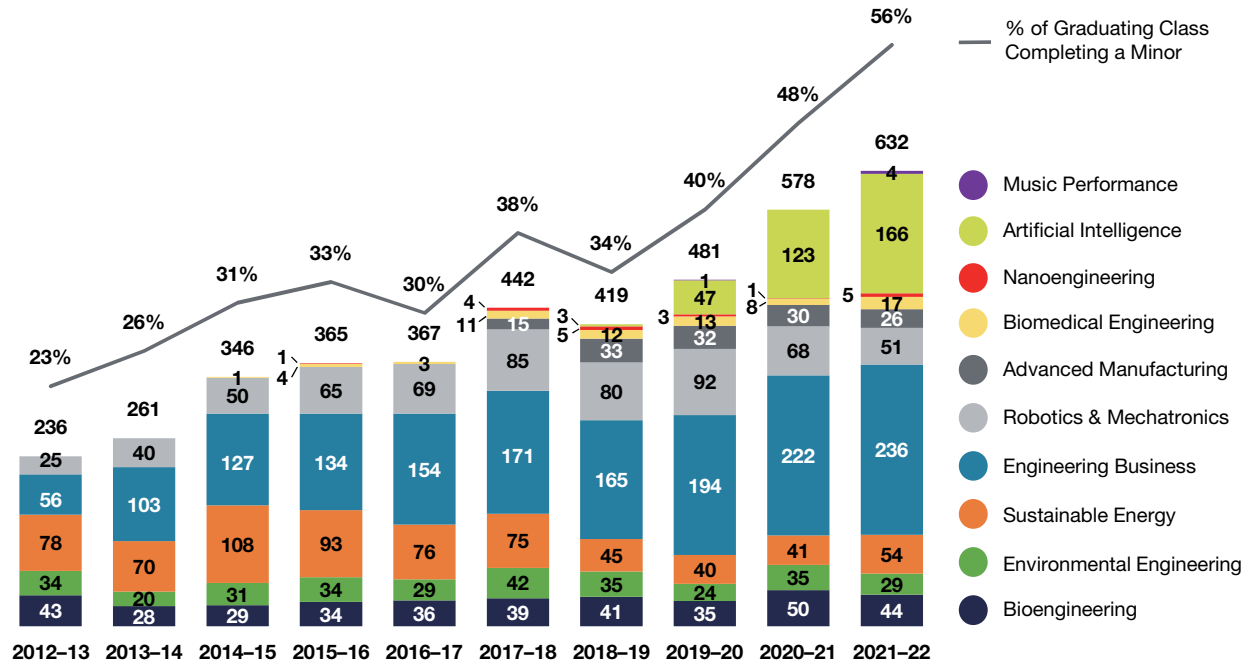
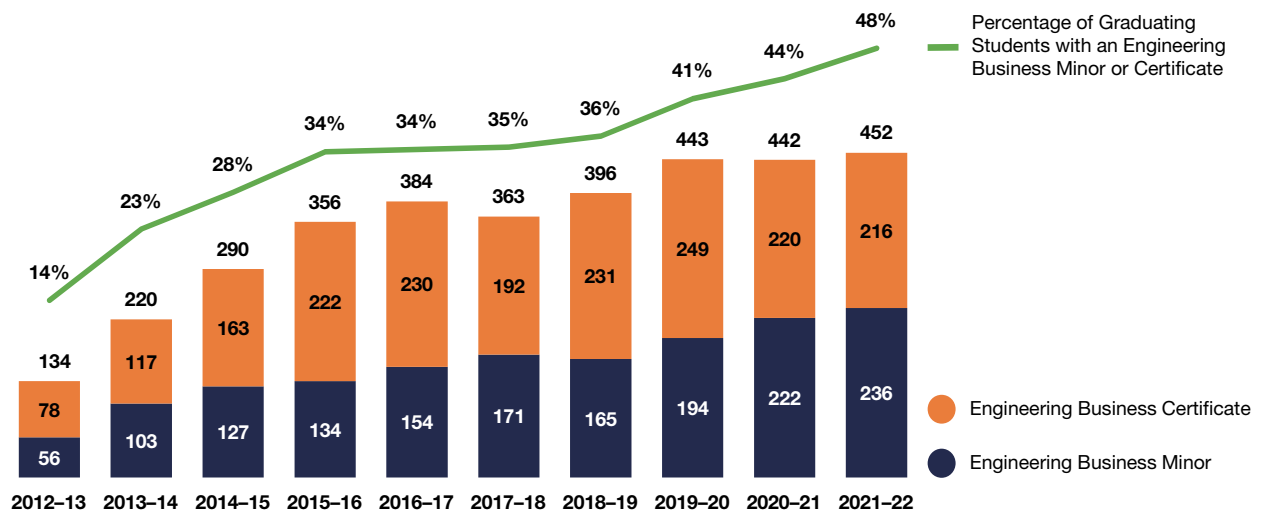


Figure 1.12b Students Graduating with an Engineering Business Minor or Certificate, 2012–2013 to 2021–2022



Note 1.12a: A total of 632 minors were completed by 526 students in 2021–2022, with many students completing more than one minor. In total, 719 students completed at least one minor or certificate, comprising 76.1% of the graduating class.

Figure 1.13 **New Undergraduate Courses Approved, 2021–2022**

Course	Title
APS470H1	Engineering and Public Health
AER306H1	Introduction to Space Flight
AER515H1	Combustion Processes
ECE415H1	Adaptive Control and Reinforcement Learning
MIN520H1	Mine Optimization
MSE294H1	Communications I
MSE295H1	Communications II
MSE396H1	Communications III
MSE397H1	Communications IV
MSE465H1	Applications of AI in Materials Design
MSE467H1	Multimodal Models of Material Failure

CHAPTER 2 GRADUATE STUDIES

FACTS AND FIGURES

3,011

Total graduate student cohort, an increase of 55.8% over the past decade.

7.3

Average graduate student-to-faculty ratio, representing larger lab groups with a greater potential for impactful research.

52

Number of students fast-tracked from MASc to PhD programs in 2021–2022, an increase of 67.7% over the past decade

\$57.5M

Total graduate student funding, an increase of 50.5% over the past decade.

Figure 2.1a Domestic and International MSc Students: Applications, Offers, Registrations, Selectivity and Yield, 2012–2013 to 2021–2022

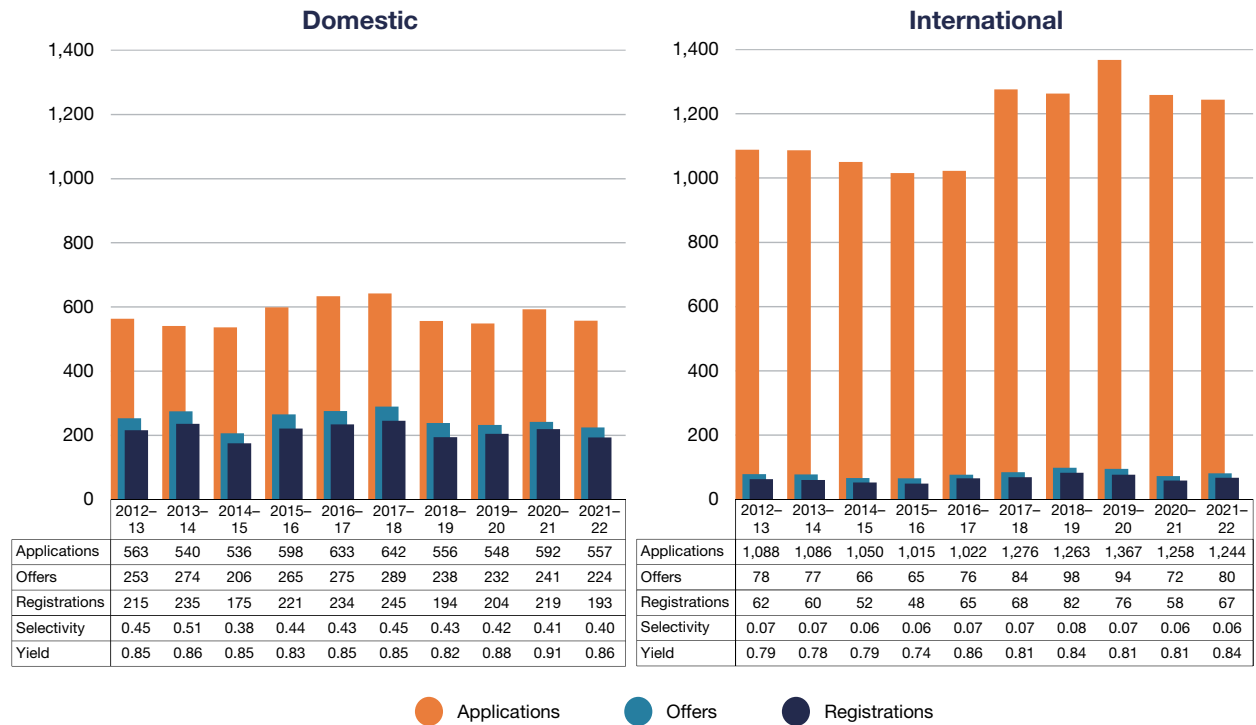
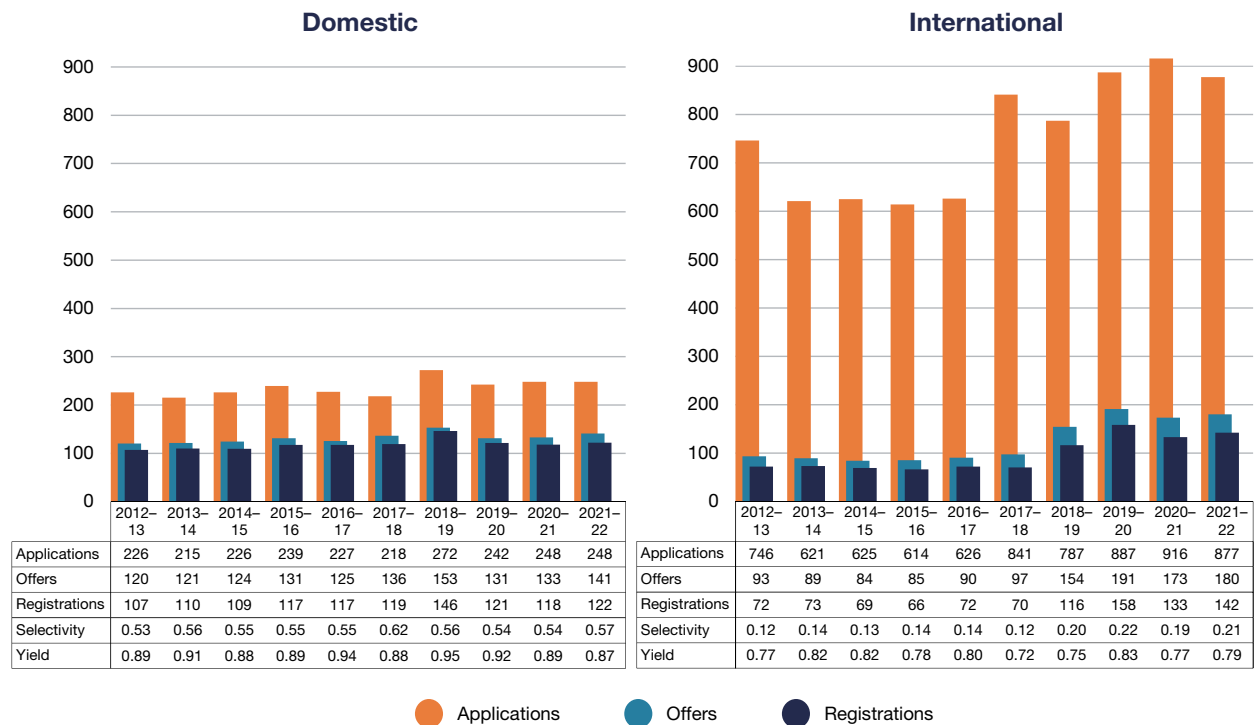


Figure 2.1b Domestic and International PhD Students: Applications, Offers, Registrations, Selectivity and Yield, 2012–2013 to 2021–2022



Data in this chapter are presented by academic year (September to August) unless otherwise noted.

Figure 2.1c Domestic and International MEng and MHS students: Applications, Offers, Registrations, Selectivity and Yield, 2012–2013 to 2021–2022

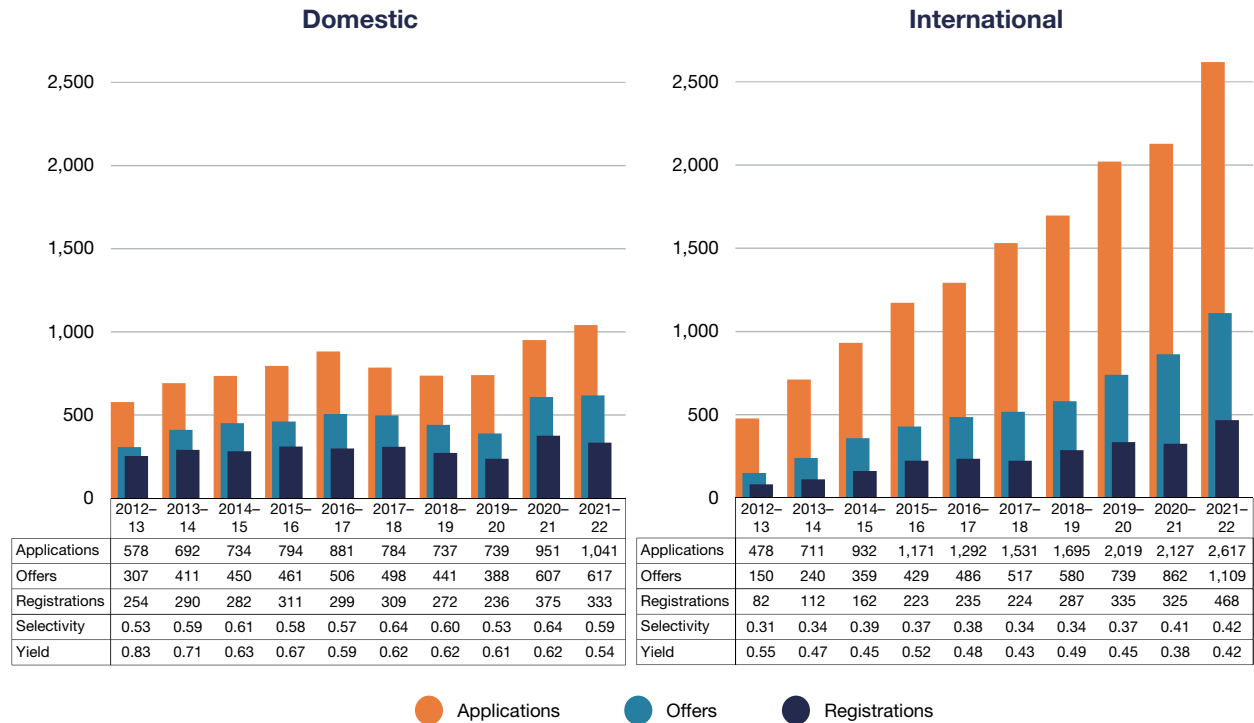
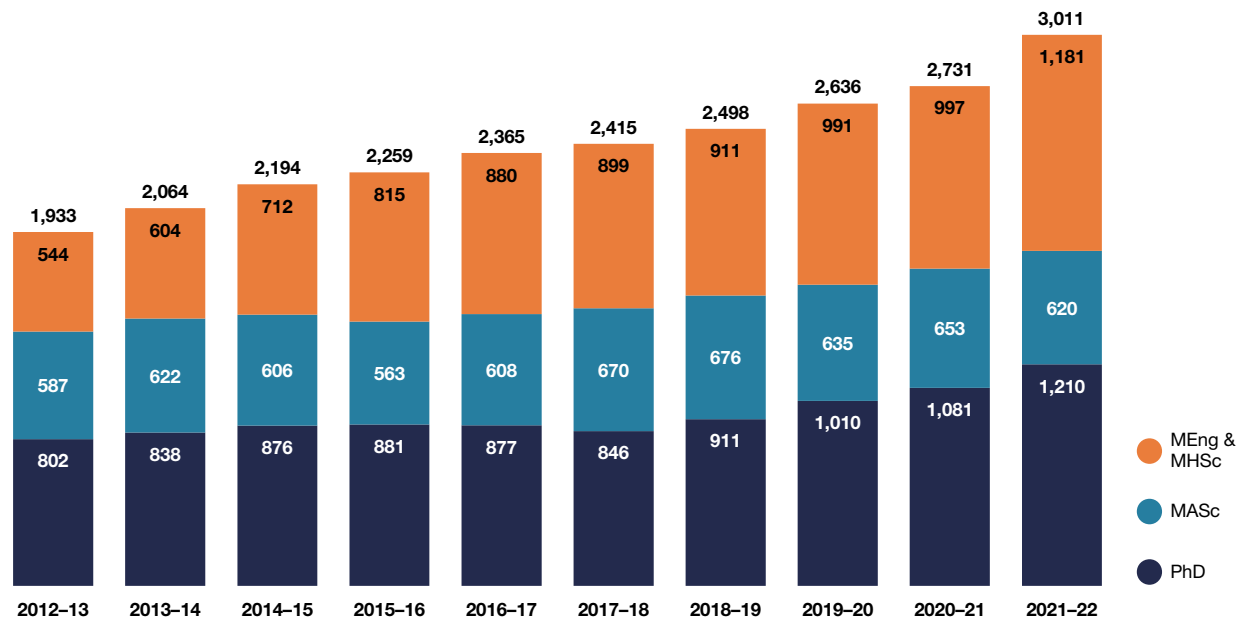


Figure 2.2a Graduate Students by Degree Type, 2012–2013 to 2021–2022

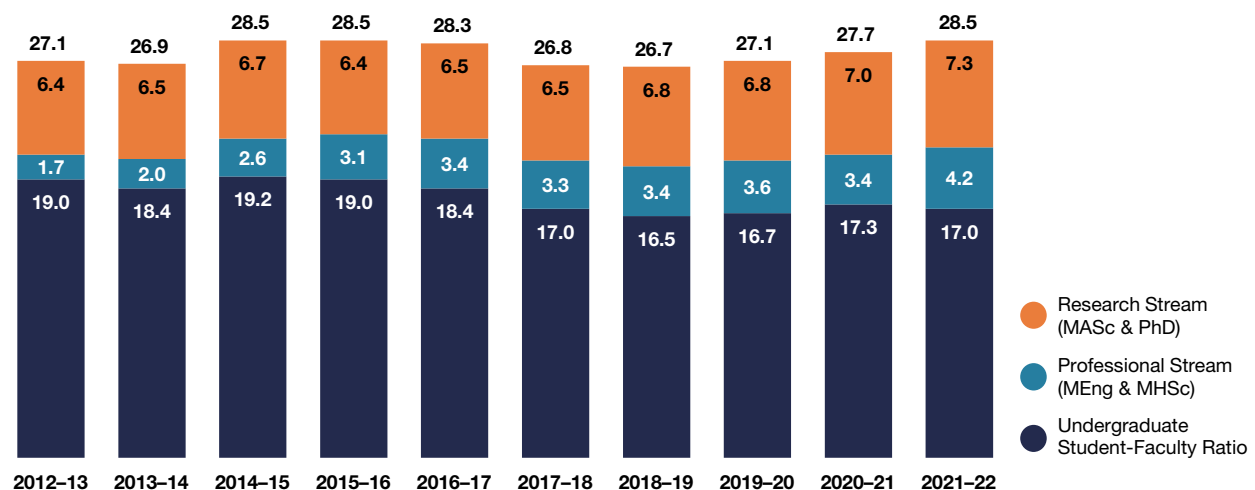


Note 2.1a,b,c: Applications and offers include those received between May and April of the listed academic year. Registrations are shown as of November 1. Selectivity = offers ÷ applications and represents the proportion of applicants who were offered admission. Yield = registration ÷ offers. Domestic students are defined as citizens (living in Canada or abroad) or permanent residents of Canada. Students who have fast-tracked from MASc programs into PhD programs are counted in these figures as applications, offers and admissions.

Figure 2.2b Graduate Enrolment by Full-Time Equivalent (FTE) and Headcount (HC) by Academic Area, 2012–2011 to 2021–2022

		UTIAS	BME	ChemE	CivMin	ECE	MIE	MSE	Total
2012–13	FTE	146.7	208.3	193.2	243.3	504.8	387.2	68.2	1,751.7
	HC	153	209	203	279	565	453	71	1,933
2013–14	FTE	162.1	219.0	209.9	290.5	509.8	436.2	90.9	1,918.4
	HC	167	219	219	322	556	488	93	2,064
2014–15	FTE	182.4	228.0	238.0	293.1	531.5	511.2	80.3	2,064.5
	HC	188	228	245	312	577	563	81	2,194
2015–16	FTE	143.2	241.0	253.0	299.4	591.5	532.9	79.0	2,140.0
	HC	146	241	260	326	637	570	79	2,259
2016–17	FTE	178.2	269.0	245.0	306.3	577.0	580.3	92.3	2,248.1
	HC	181	269	252	335	619	616	93	2,365
2017–18	FTE	170.1	296.0	246.7	313.0	551.5	602.8	94.9	2,275.0
	HC	175	303	253	348	597	642	97	2,415
2018–19	FTE	191.4	283.3	219.5	304.0	618.8	658.0	94.9	2,369.9
	HC	197	291	223	332	658	700	97	2,498
2019–20	FTE	226.2	327.1	235.0	349.9	630.2	641.8	95.6	2,505.8
	HC	236	332	242	380	668	681	97	2,636
2020–21	FTE	258.8	350.9	229.0	371.8	613.8	657.8	101.9	2,584.0
	HC	270	353	236	404	653	711	104	2,731
2021–22	FTE	279.6	360.5	239.0	396.7	664.0	812.6	117.2	2,869.6
	HC	288	364	246	424	706	863	120	3,011

Figure 2.3a Graduate and Undergraduate Full-Time Equivalent Student-to-Faculty Ratios, 2012–2013 to 2021–2022



Note 2.2a, b: Student counts are shown as of November 1, 2021.

Note 2.3a: To allow more accurate comparisons, undergraduate FTEs are determined by counting each part-time student as 0.3 FTE.

Figure 2.3b Full-Time Equivalent Graduate Student-to-Faculty Ratios by Academic Area and Degree Type, 2021–2022

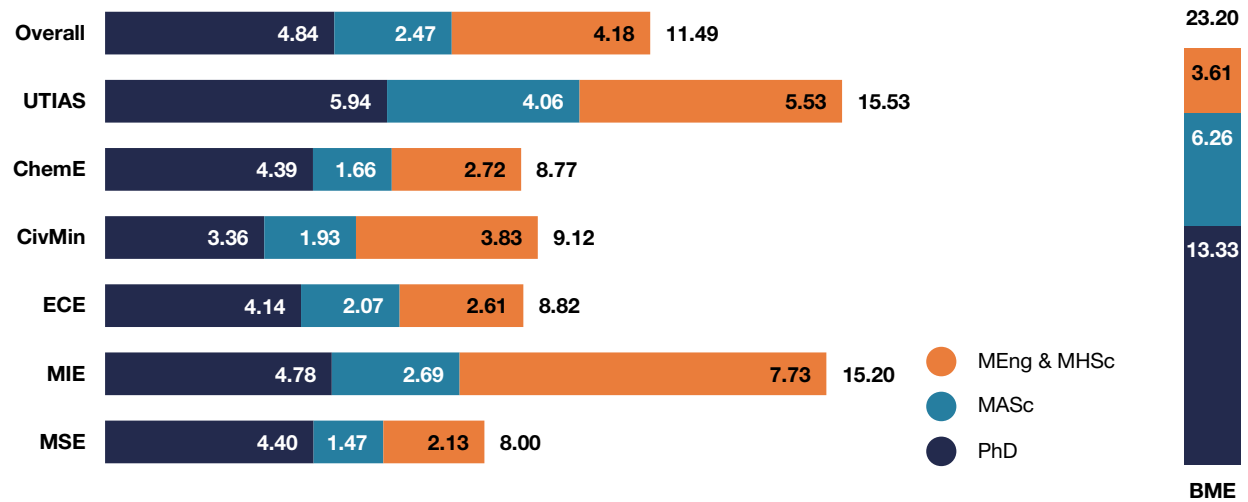
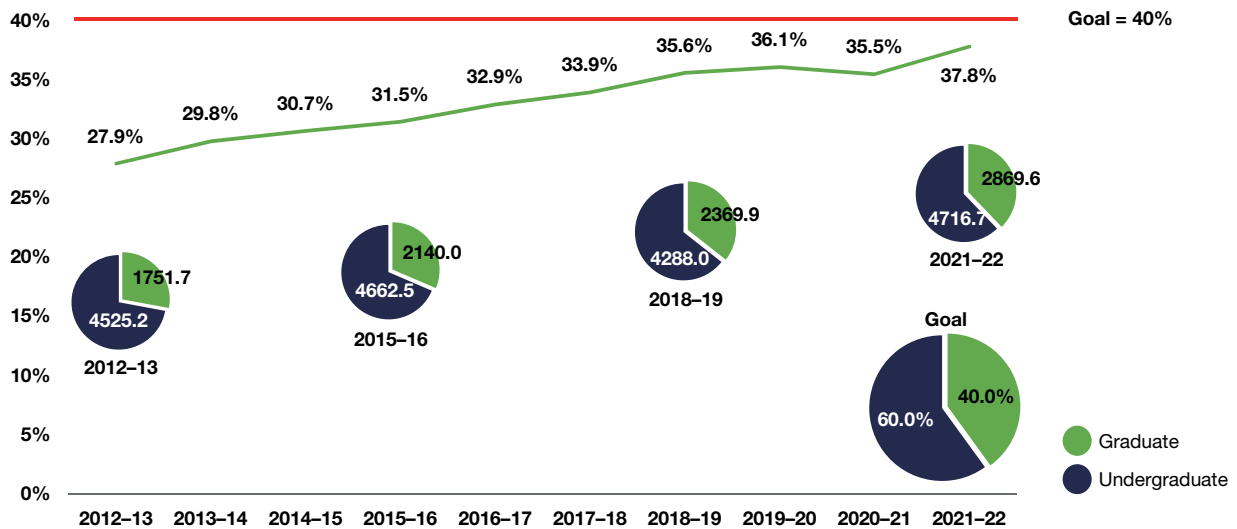


Figure 2.3c Ratio of Undergraduate to Graduate Full-Time Equivalent Students, 2012–2013 to 2021–2022



Note 2.3b: Some students in BME are supervised by faculty members from the Faculties of Medicine and Dentistry and affiliated hospitals, as well as from other departments within U of T Engineering. Because the ratio includes only faculty with a budgetary appointment in BME, comparisons with other Engineering departments are not possible. For that reason, this figure shows BME in a visually distinct way. In cases of inter-departmental supervision within the Faculty, PhD and MASc students are assigned 100% to their primary supervisor's department.

Note 2.3c: Students on PEY Co-op are not included in this count.

Figure 2.4a Graduate Student Funding by Category, 2011–2012 to 2020–2021

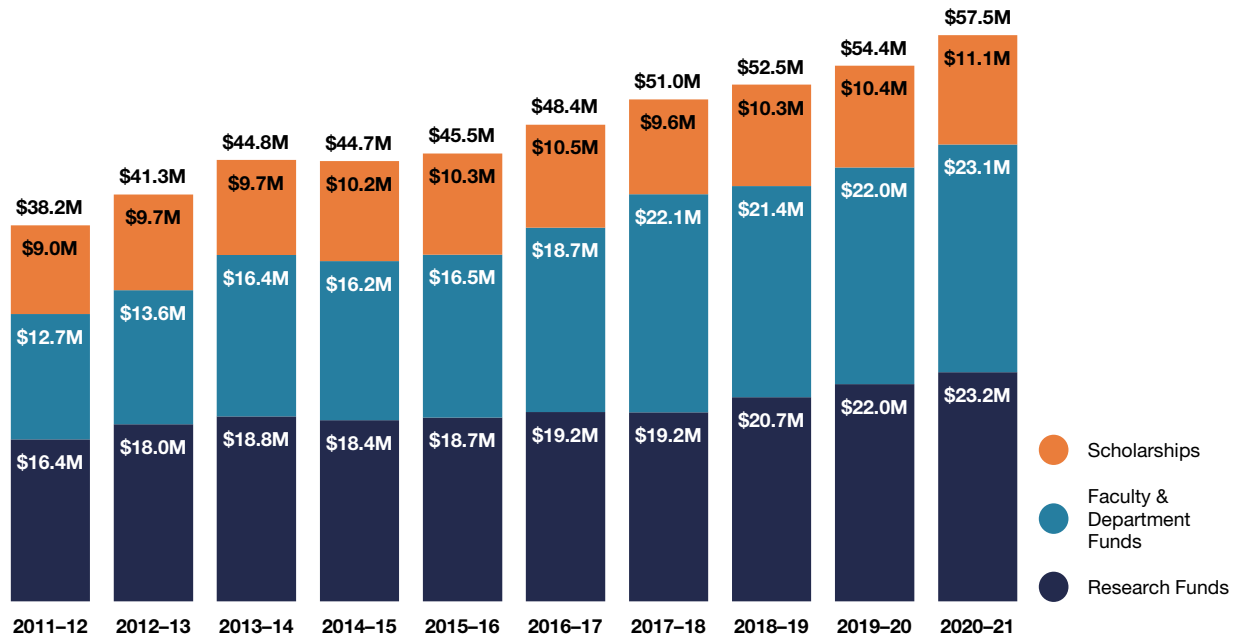
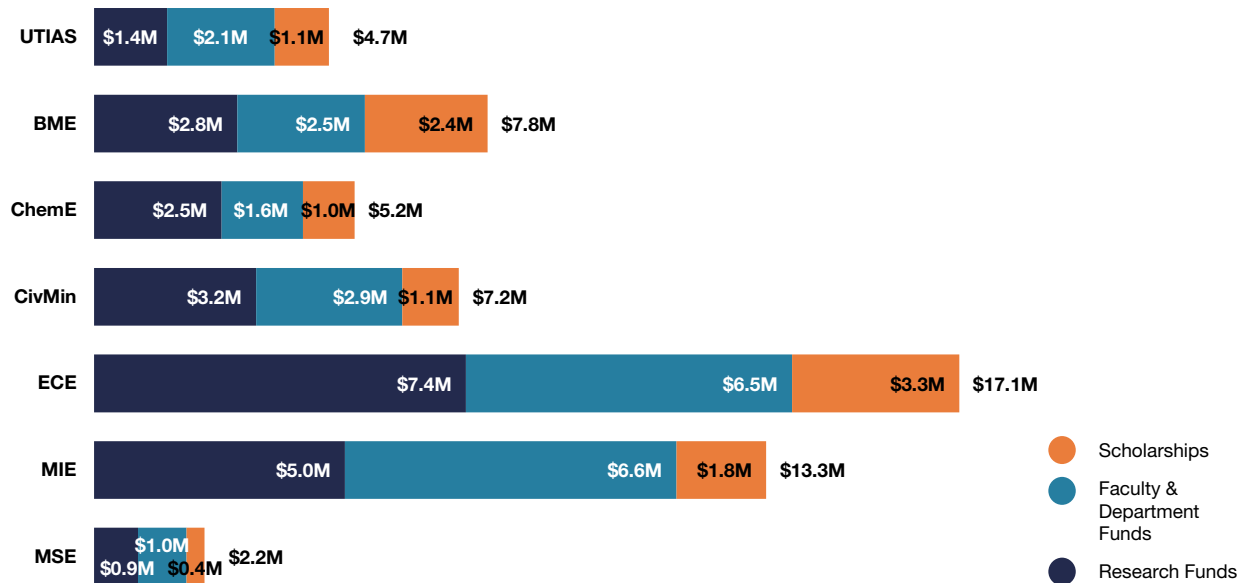


Figure 2.4b Graduate Student Funding by Category and Academic Area, 2020–2021

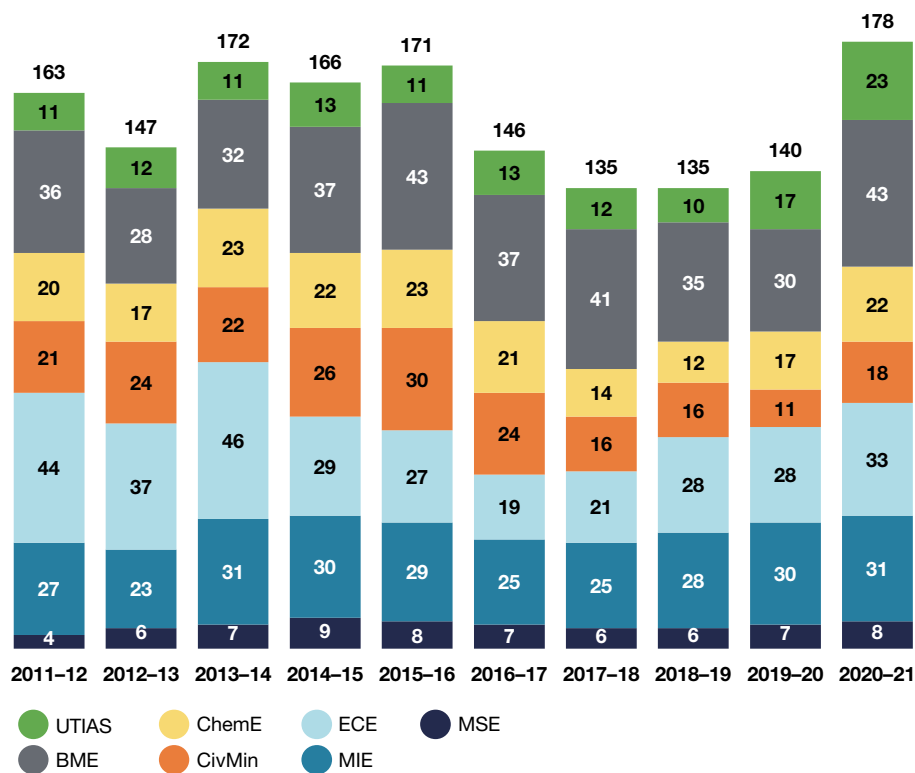


Note 2.4a, b: For graduate student funding figures, a slip year is used to allow for the inclusion of funding received during the summer term.

Figure 2.5a Total External Graduate Student Scholarships by Source, 2011–2012 to 2020–2021

	NSERC and CIHR	OGS	External – Other	Internal	Total
2011–12	\$3,912,883	\$1,593,328	\$118,832	\$3,390,632	\$9,015,675
2012–13	\$3,513,185	\$1,583,333	\$171,154	\$4,428,250	\$9,695,922
2013–14	\$4,016,673	\$1,236,666	\$386,763	\$4,019,715	\$9,659,817
2014–15	\$3,975,701	\$1,336,670	\$403,762	\$4,440,236	\$10,156,369
2015–16	\$3,875,675	\$1,223,331	\$366,335	\$4,808,859	\$10,274,200
2016–17	\$3,539,878	\$1,360,004	\$333,919	\$5,227,193	\$10,460,994
2017–18	\$3,259,319	\$1,525,000	\$286,908	\$4,561,595	\$9,632,822
2018–19	\$3,390,489	\$1,443,333	\$508,399	\$4,976,213	\$10,318,433
2019–20	\$3,593,330	\$1,491,670	\$490,855	\$4,776,569	\$10,352,424
2020–21	\$3,818,085	\$1,418,336	\$543,783	\$5,331,799	\$11,112,003

Figure 2.5b Number of NSERC and CIHR Graduate Student Award Recipients by Academic Area, 2011–2012 to 2020–2021



Note 2.5a, b: For graduate student funding figures, a slip year is used to allow for the inclusion of funding received during the summer term.

Figure 2.6a Number of Students Fast-Tracked from MASc or MEng to PhD by Academic Area, 2012–2013 to 2021–2022

	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20	2020–21	2021–22
UTIAS	5	6	10	1	3	10	5	6	9	11
BME	8	8	12	14	8	11	15	4	11	7
ChemE	7	14	8	5	7	5	6	6	7	3
CivMin	2	3	1	5	5	7	3	2	4	3
ECE	2	4	5	4	3	6	14	11	12	13
MIE	6	5	2	8	13	6	3	3	7	12
MSE	1	3	4	2	2			2		3
Total	31	43	42	39	41	45	46	34	50	52

Figure 2.6b Number of Direct-Entry PhD students by Academic Area, 2012–2013 to 2021–2022

	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20	2020–21	2021–22
UTIAS								2	1	
BME	5	7	3	5	7	11	9	21	23	19
ChemE				5	1		12	7	6	7
CivMin					1		2	4	2	3
ECE			2	2	2	2	2	4	3	3
MIE	1				4		2	3	3	2
MSE									5	2
Total	6	7	5	12	15	13	27	41	43	36

Note 2.6a, b: For counting purposes, the academic year is from May to April.

Figure 2.7a Time to Completion for PhD, MAsc, MEng and MHSc Students, 2012–2013 to 2021–2022

	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20	2020–21	2021–22
PhD	5.3	5.2	5.3	5.3	5.3	5.0	5.3	5.0	5.3	5.3
MAsc	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
MEng & MHSc (FT)	1.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
MEng (ExtFT)			1.3	1.7	1.7	1.7	1.7	1.7	1.7	1.7
MEng (PT)	2.0	2.0	2.0	2.0	2.3	2.0	2.0	2.0	2.0	2.0

Figure 2.7b Time to Completion for Graduate Students – University of Toronto Institute for Aerospace Studies, 2012–2013 to 2021–2022

	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20	2020–21	2021–22
PhD	5.3	5.3	5.7	6.3	5.3	5.0	5.8	6.0	5.7	6.0
MAsc	2.0	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
MEng (FT)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
MEng (Ext FT)			1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
MEng (PT)	1.7	1.3	2.0	2.3	3.0	3.0		2.3	2.0	2.2

Figure 2.7c Time to Completion for Graduate Students – Institute of Biomedical Engineering, 2012–2013 to 2021–2022

	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20	2020–21	2021–22
PhD	5.0	5.0	6.0	5.7	5.2	5.3	5.5	6.0	6.0	5.7
MAsc	2.0	2.0	2.3	2.0	2.0	2.3	2.0	2.0	2.3	2.0
MEng (FT)						1.0	1.0	1.0	1.0	1.0
MEng (PT)							1.3	1.7	1.7	1.3
MHSc (FT)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3

Figure 2.7d **Time to Completion for Graduate Students – Department of Chemical Engineering & Applied Chemistry, 2012–2013 to 2021–2022**

	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20	2020–21	2021–22
PhD	5.2	5.5	5.7	5.7	5.5	5.8	5.5	6.3	5.3	5.0
MASc	2.0	2.0	2.0	2.3	2.0	2.0	2.0	2.0	2.3	2.3
MEng (FT)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
MEng (Ext FT)			1.5	1.7	1.7	1.7	1.7	1.8	1.7	2.0
MEng (PT)	2.0	2.0	1.8	1.5	2.0	1.7	1.7		2.0	3.0

Figure 2.7e **Time to Completion for Graduate Students – Department of Civil & Mineral Engineering, 2012–2013 to 2021–2022**

	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20	2020–21	2021–22
PhD	5.3	5.0	5.3	5.3	5.7	5.0	5.2	4.3	5.3	5.7
MASc	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
MEng (FT)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
MEng (Ext FT)			1.3	1.7	1.3	1.3	1.3	1.3	1.3	1.5
MEng (PT)	2.0	2.0	1.7	2.0	2.2	2.0	1.7	2.3	2.2	2.0
MEngCEM (FT)			1.3	1.3	1.3	1.3	1.3	1.3		1.0
MEngCEM (Ext FT)						1.3	1.5	1.7	1.3	1.7

Figure 2.7f **Time to Completion for Graduate Students – The Edward S. Rogers Sr. Department of Electrical & Computer Engineering, 2012–2013 to 2021–2022**

	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20	2020–21	2021–22
PhD	5.5	5.3	5.0	5.0	5.3	5.0	5.3	5.0	5.5	5.7
MASc	2.0	2.0	2.3	2.0	2.0	2.3	2.3	2.0	2.3	2.0
MEng (FT)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
MEng (Ext FT)			1.3	1.3	1.3	1.7	1.3	1.3	1.7	1.3
MEng (PT)	2.2	2.0	2.0	2.0	2.3	2.7	2.3	2.3	2.3	2.3

Figure 2.7g Time to Completion for Graduate Students – Department of Mechanical & Industrial Engineering, 2012–2013 to 2021–2022

	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20	2020–21	2021–22
PhD	5.7	5.0	4.8	5.0	4.7	5.0	4.7	4.3	5.0	4.8
MASc	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
MEng (FT)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
MEng (Ext FT)			1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
MEng (PT)	2.0	2.0	2.0	1.7	2.3	2.0	1.7	1.7	2.0	2.0
MEngDM (PT)	2.5	2.7	2.3	3.5	2.8	3.0				

Figure 2.7h Time to Completion for Graduate Students – Department of Materials Science & Engineering, 2012–2013 to 2021–2022

	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20	2020–21	2021–22
PhD	5.7	4.7	5.3	5.5	5.8	5.3	5.3	7.0	4.7	5.3
MASc	2.0	2.3	2.0	2.0	2.0	2.0	2.0	2.3	2.5	2.5
MEng (FT)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
MEng (Ext FT)			1.3	1.7	1.7	1.7	1.7	1.7	1.8	2.0
MEng (PT)	2.0	2.7	2.8				2.0			

Figure 2.8 Graduate Degrees Awarded by Degree Type, 2012–2013 to 2021–2022

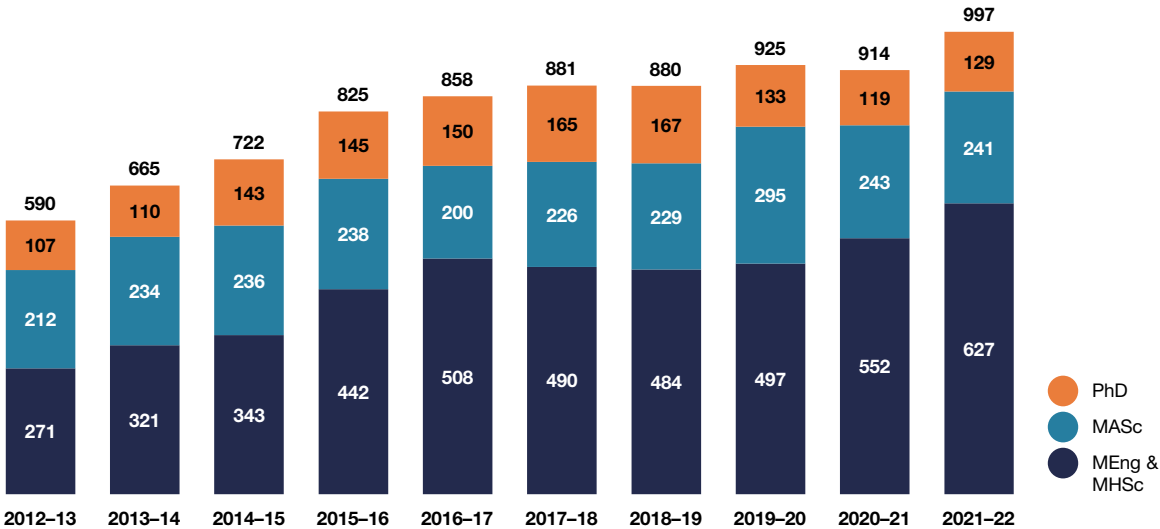


Figure 2.9 **New Graduate Courses Launched, 2021–2022**

Course Code	Course Title
AER1307	Fundamentals of Aeroacoustics
APS1053	Case Studies in AI in Finance
APS1081	Quantum Machine Learning
APS1410	Waterpower Essentials
APS1411	Renewal of Waterpower Facilities
BME1500	Topics in Neuromodulation
BME1510	Data Science for Biomedical Engineers
CHE1152	Materials-Drive Separations
CHE3010	PhD Research
CIV1196, CIV1296, CIV1396, CIV1496, CIV1596	Special Studies in Civil & Mineral Engineering
CIV1197, CIV1297, CIV1397, CIV1497, CIV1597	New Topics in Civil & Mineral Engineering
CIV1283	Advances Asset Management: Quantitative Tools and Methods
CIV1285	Building Information Modeling
CIV1322	Quantitative Methods for Decision Making
ECE1658	Geometric Nonlinear Control of Robotics Systems
ECE1659	Robust and Optimal Control
ECE1785	Empirical Software Engineering
ECE1786	Creative Applications of Natural Language Processing
MIE1625	Machine Learning for Medical Image Analysis
MIE1626	Data Science Methods and Quantitative Analysis
MIE1666	Machine Learning for Mathematical Optimization
MIE1709	Continuum Mechanics
MIE1745	Surface Engineering
MIE1769	AI in Automotive Manufacturing

CHAPTER 3 COMMUNITY

FACTS AND FIGURES

10

Number of Blueprint graduates who have joined U of T Engineering as undergraduate students since its inception in 2020.

36.0%

Percentage of all students who are women, including 38.8% of undergraduate students and 30.8% of graduate students.

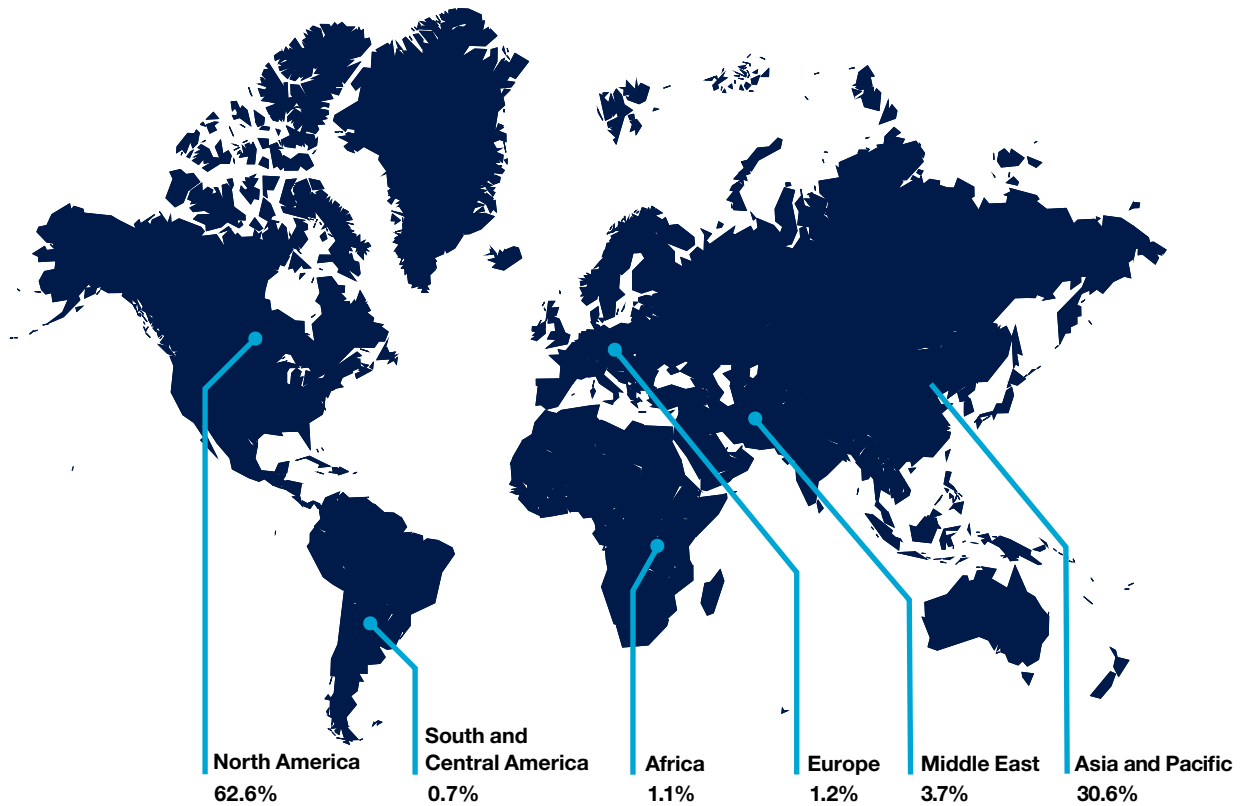
34.5%

Percentage of all students who come from outside of Canada, including 29.3% of undergraduate students and 44.3% of graduate students.

90+

Number of undergraduate and graduate student clubs and teams, from the Skule™ Orchestra to aUToronto, our self-driving vehicles development team.

Figure 3.1 Continent of Origin: Undergraduate Students, Fall 2021



Data in this chapter are presented by academic year (September to August) unless otherwise noted.

Note 3.1: Proportions are as of November 1, 2021. Country of origin is based on citizenship, and does not necessarily indicate current Canadian immigration status, which is used to determine domestic/international student status for tuition and funding purposes, as reported elsewhere in this report. Canadian permanent residents are counted as domestic students while retaining their citizenship elsewhere.

Figure 3.2a Incoming First-Year Undergraduates with Percentage of Women, 2012 to 2021

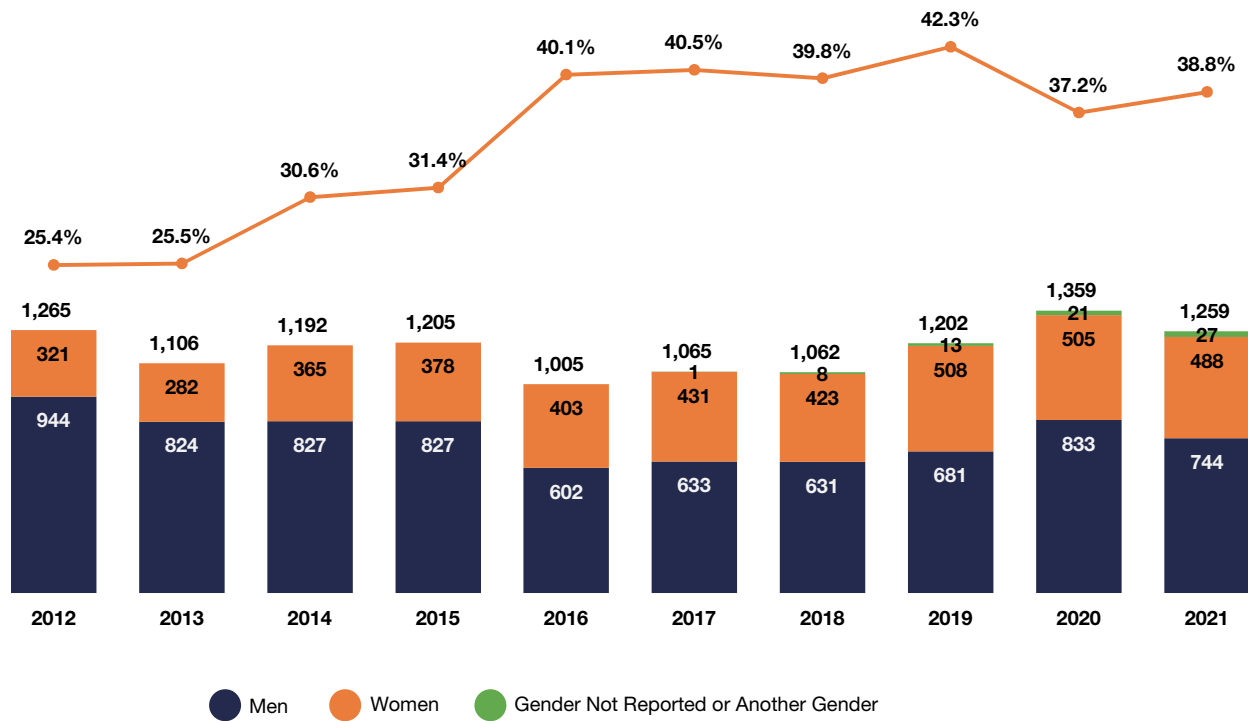
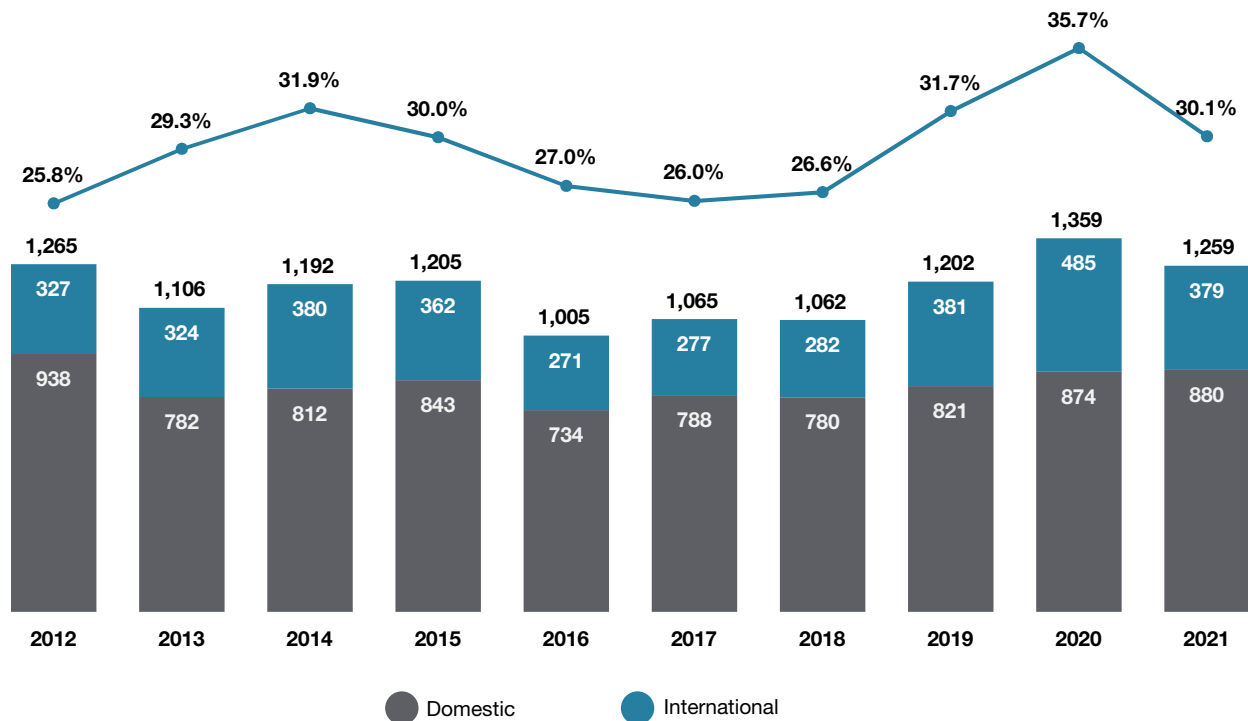


Figure 3.2b Incoming First-Year Undergraduates with Percentage of International Students, 2012 to 2021



Note 3.2a: Student counts are shown as of November 1. Data on student gender comes from the U of T Historical Enrolment Count Tool; the options to report “another gender” or to not report gender were added in 2017.

Note 3.2b: Student counts are shown as of November 1. Domestic students are defined as citizens or permanent residents of Canada.

Figure 3.2c Incoming First-Year Domestic and International Undergraduates, 2012 to 2021

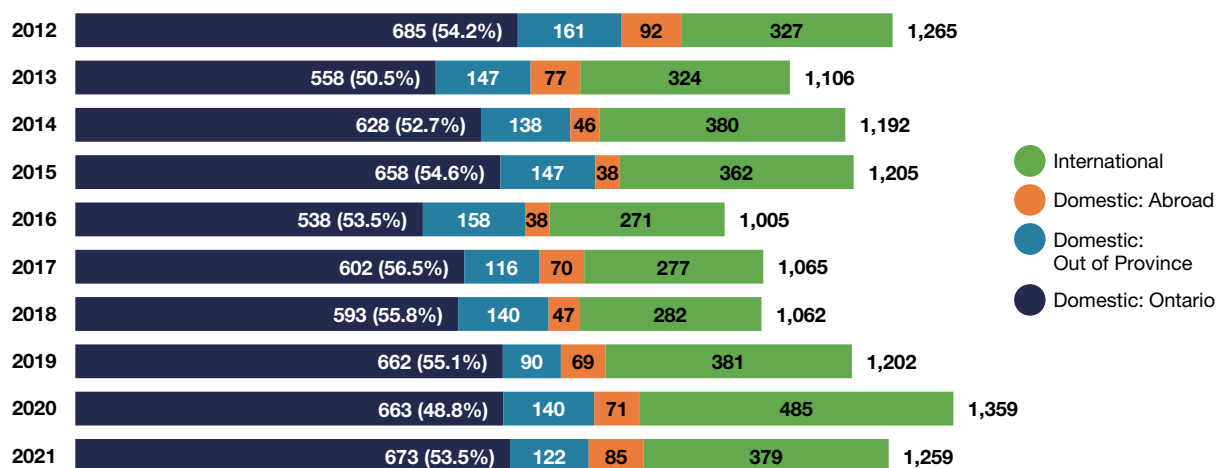
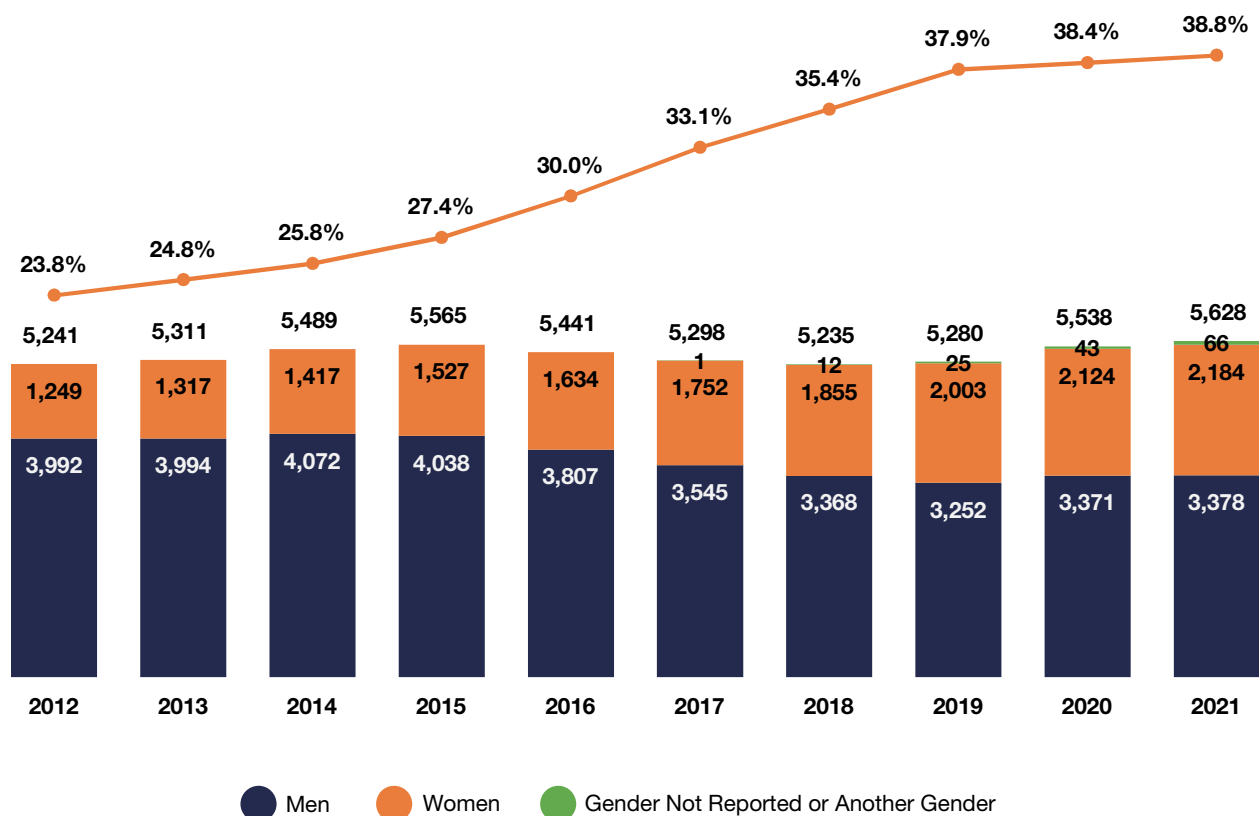


Figure 3.3a Undergraduate Enrolment with Percentage of Women, 2012 to 2021



Note 3.2c: Does not count students with special (non-degree) status. Student counts shown as of November 1. Domestic students are defined as citizens or permanent residents of Canada.

Note 3.3a: Includes full- and part-time students and those working full time through the Professional Experience Year Co-op Program (PEY Co-op). Does not count students with special (non-degree) status. Student counts shown as of November 1. Domestic students are defined as citizens or permanent residents of Canada. Data on student gender comes from the U of T Historical Enrolment Count Tool; the options to report "another gender" or to not report gender were added in 2017.

Figure 3.3b Percentage of Women by Undergraduate Program, 2012–2013 to 2021–2022

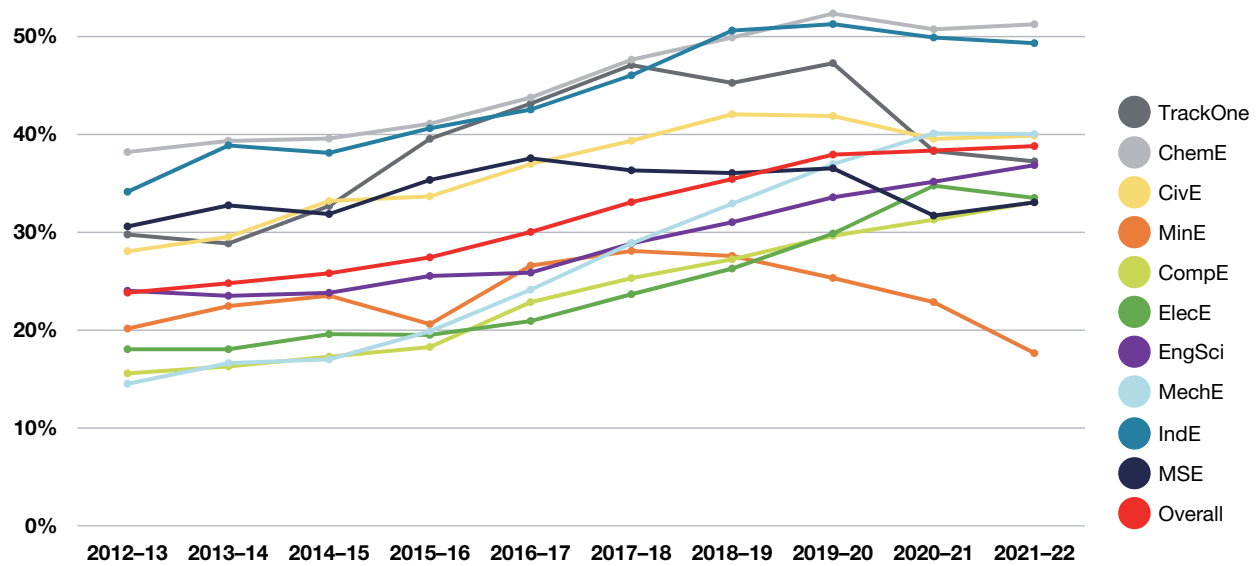
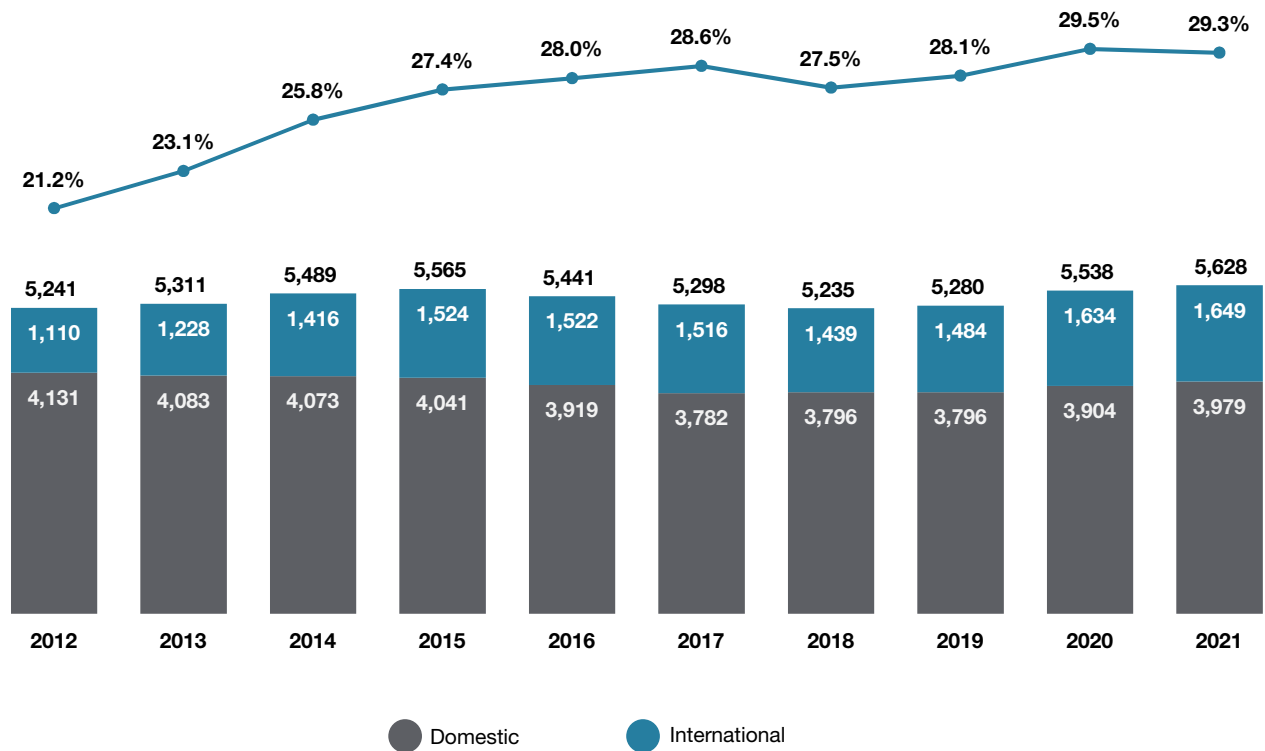


Figure 3.3c Undergraduate Enrolment with Percentage of International Students, 2012 to 2021



Note 3.3b: Includes full- and part-time students and those working full time through the Professional Experience Year Co-op Program (PEY Co-op). Does not count students with special (non-degree) status. Student counts shown as of November 1. Data on student gender comes from the U of T Historical Enrolment Count Tool; the options to report “another gender” or to not report gender were added in 2017.

Figure 3.4 Undergraduate Degrees Awarded by Gender, 2012–2013 to 2021–2022

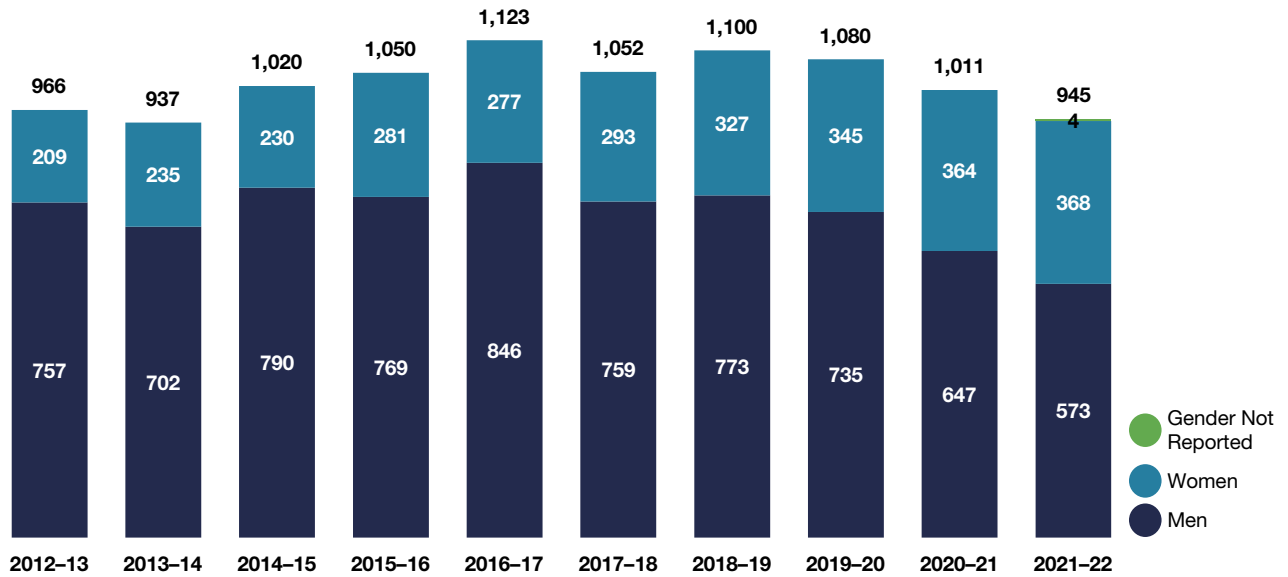


Figure 3.5 Continent of Origin: Graduate Students, Fall 2021

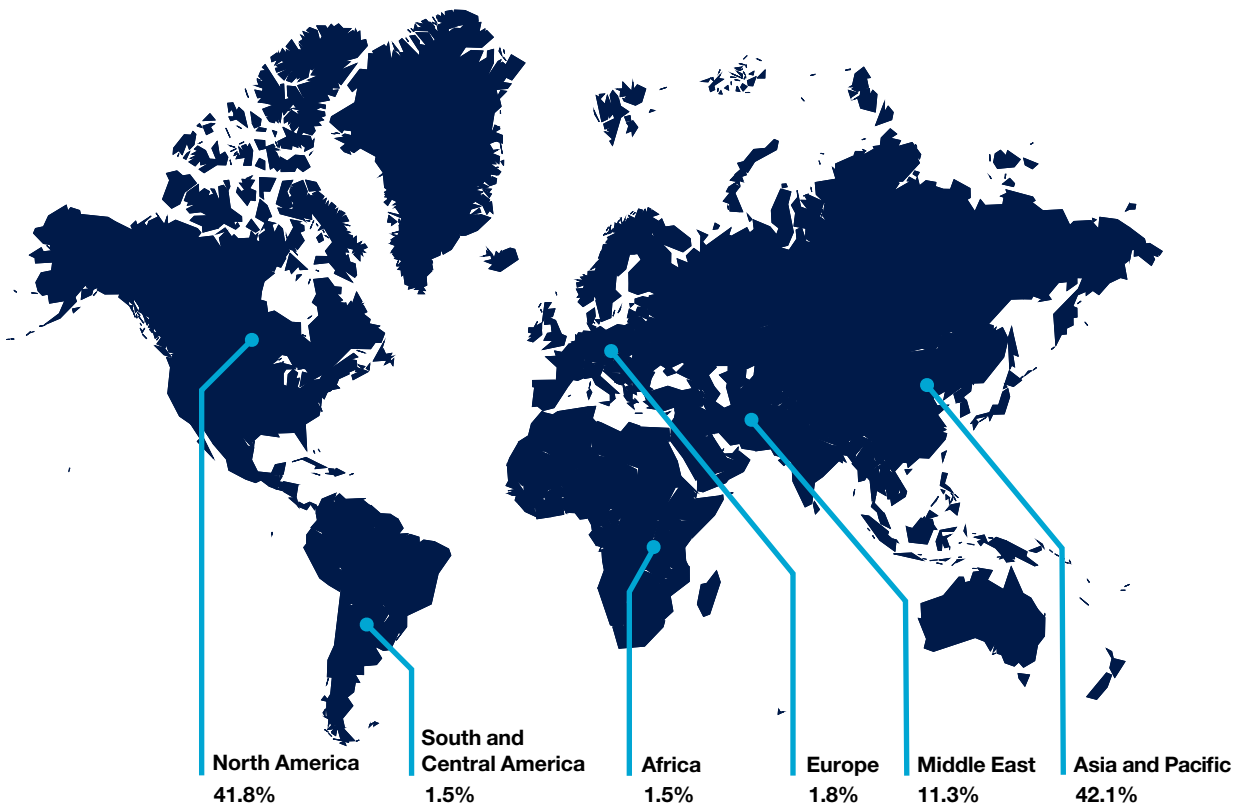
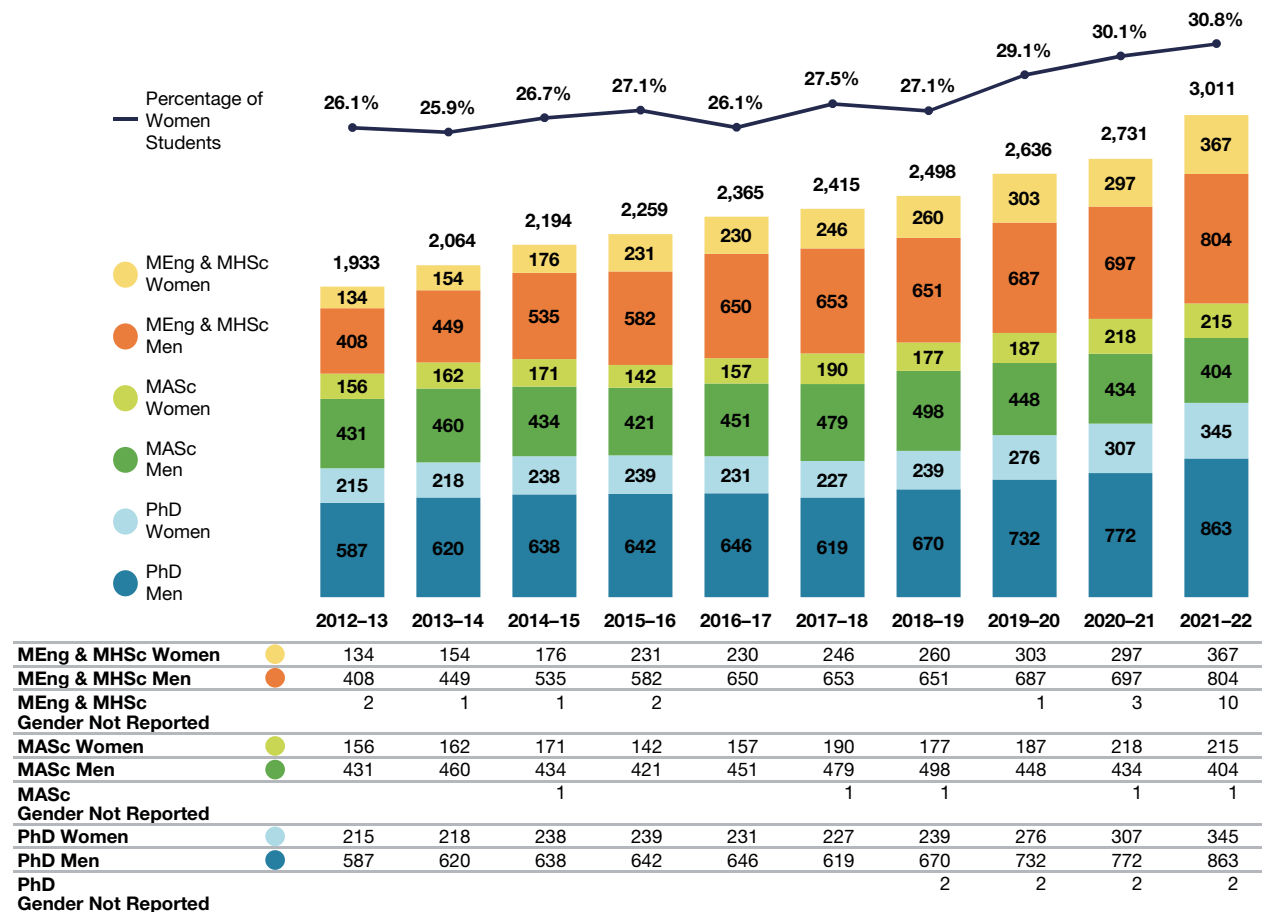


Figure 3.4: Data reported by academic year (September to August). Data on student gender comes from the U of T Historical Enrolment Count Tool; the options to report “another gender” or to not report gender were added in 2017.

Note 3.5: Proportions are as of November 1, 2021. Country of origin is based on citizenship, and does not necessarily indicate current Canadian immigration status, which is used to determine domestic/international student status for tuition and funding purposes, as reported elsewhere in this report. Canadian permanent residents are counted as domestic students while retaining their citizenship elsewhere.

Figure 3.6a Graduate Students by Degree Type and Gender with Percentage of Women Students, 2012–2013 to 2021–2022



Note 3.6a: Student counts are shown as of November 1. Data on gender comes from the School of Graduate Studies' student enrolment cube, where gender is an optional category. Students who opted not to report their gender appear in the data table, but are not visible in the graph presented above.

Figure 3.6b Graduate Students by Degree Type and Domestic/International Status with Percentage of International Students, 2012–2013 to 2021–2022

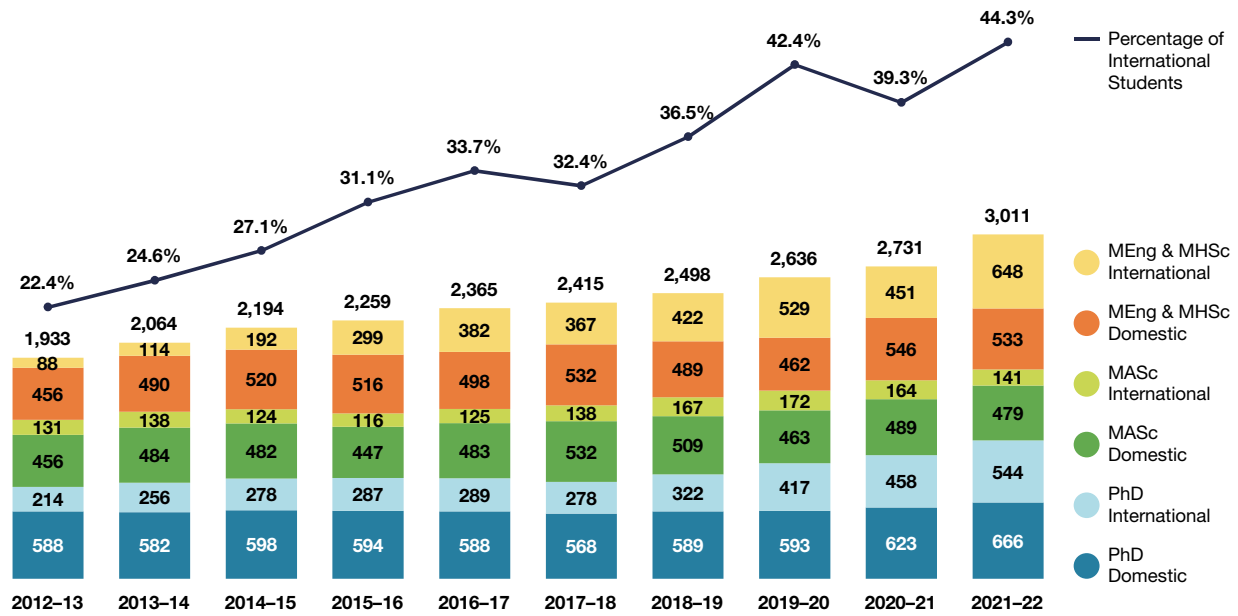
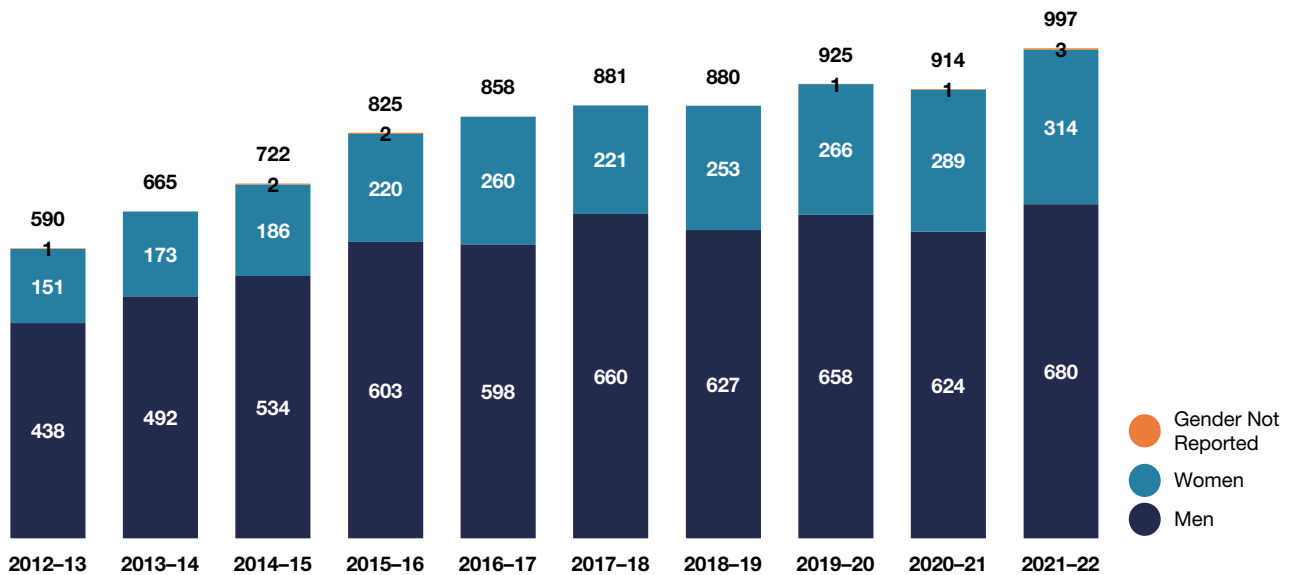


Figure 3.7 Graduate Degrees Awarded by Gender, 2012–2013 to 2021–2022



Note 3.6b: Student counts are shown as of November 1.

Figure 3.8 Engineering Undergraduate and Graduate Clubs and Teams, 2021–2022

Arts

- Fly with Origami, Learn to Dream
- Humans of Skule™
- Skule™ Arts Festival
- Skule™ Choir
- Skule™ Dance Club
- Skule™ EDM Club / U of T Digital Music Sphere
- Skule™ Orchestra
- Skule™ Stage Band

Athletics

- Skule™ Badminton Club (SBC)
- Skule™ Ski Club
- Skule™ Tennis Club
- U of T Engineering Iron Dragons

Societal/Community/Charity

- Engineers in Action — U of T Student Chapter
- Engineers Without Borders — U of T Chapter
- Global Spark — U of T
- Let's Talk Science (U of T, St. George Campus)
- PEARS Engineering Branch
- Power to Change – Engineers
- QueerSphere
- U of T Emergency First Responders
- Volunteer Engineering Experience Program

Cultural

- Association of Chinese Engineers
- Bangladeshi Students' Association
- Catholic Engineering Students' Association
- Indian Students' Society (ISS)
- Jewish Engineering Society

Design & Competition

- aUToronto
- Blue Sky Solar Racing
- CloudClub
- Data Science Toronto
- Design Team Association
- Future-Living Lab
- Human Powered Vehicles Design Team
- Ontario Engineering Competition 2022
- Robotics For Space Exploration
- Spark Design Club
- Troitsky Bridge Design Team
- U of T Aerospace Team

- U of T Baja SAE
- U of T Biomedical Engineering Design Team (UT BIOME)
- U of T Chemical Vehicle Club (UTCV)
- U of T Concrete Canoe Team
- U of T Concrete Toboggan Team
- U of T Design League
- U of T Engineering Competitions
- U of T Formula Racing Team
- U of T Hyperloop Team
- U of T Machine Intelligence Student Team
- U of T Robotics Association (UTRA)
- U of T Seismic Design Team
- U of T Supermileage Team
- UoTWind

Hobby & Special Interest

- Astronomy and Space Exploration Society
- Brew of T
- Hide and Seek
- Hopeful Romantics Society
- Interplanetary Space Exploration Team
- Skule™ D & D Club
- Skule™ Financial Literacy Club
- Skule™ Lettuce Club
- Skule™ Smash Club
- Skule™ Strategy Game Club
- SkuleCraft
- U of T Engineering Fashion Club
- U of T Outing Club
- U of T Project Holodeck
- U of T Sky Association

Professional Development & Industry

- 1% Inspiration Podcast
- Bioengineering Student Association (BEST)
- Biomedical Engineering Student Association (BESA)
- Canadian Association of Food Engineers
- Canadian Electrical Contractors Association (CECA) — U of T Student Chapter
- Canadian Society for Chemical Engineering (CSChE) — U of T Student Chapter
- Canadian Society for Civil Engineering (CSCE) — U of T Chapter

- Chemical Engineering Graduate Students Association (CEGSA)
- Civil and Mineral Engineering Graduate Student Association
- Civil Engineering Discipline Club
- Club for Undergraduate Biomedical Engineering (CUBE)
- Electrical and Computer Engineering Club
- Graduate Engineering Council of Students (GECoS)
- Industrial Engineering Club
- Institute for Leadership Education in Engineering: Graduate (ILead:Grad)
- Institute of Electrical and Electronics Engineers (IEEE) — U of T Student Branch
- Institute of Industrial & Systems Engineers — U of T Chapter
- Materials Science and Engineering Graduate Students' Association (MSEGSA)
- Mechanical Engineering Club
- Materials Science Engineering Club
- National Society of Black Engineers U of T Chapter (NSBE)
- NeurotechUofT
- Super Women Engineers U of T (SWE U of T)
- Sustainable Building Network
- Sustainable Engineers Association
- TechXplore
- Toronto Science Policy Network
- Undergraduate Chemical Engineering Council
- U of T Business Association
- U of T BizTech Association
- U of T Consulting Association (UTCA)
- U of T Ethical Principles in AI Team
- U of T Engineering Students Consulting Association (UTESCA)
- U of T Engineering Finance Association (UTEFA)
- U of T Materials Industry Club
- U of T Ontario Water Works Association Student Chapter
- U of T Quantum Computing
- U of T Sports Analytics Group
- U of T Web Project Club
- U of T Women in Finance
- Water Environment Association of Ontario
- Women in Science and Engineering (WISE)

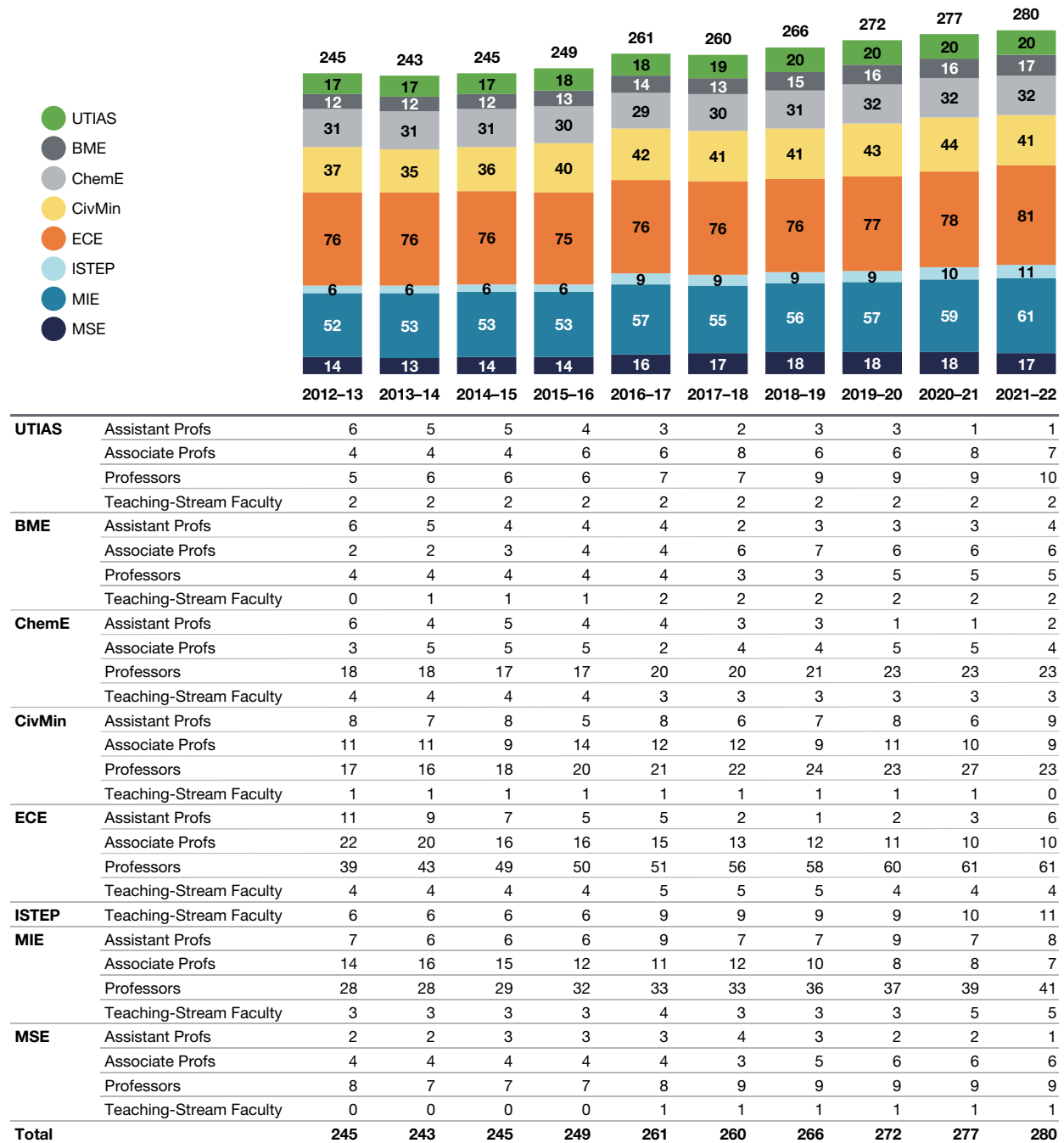
Note 3.8: This list includes the 89 undergraduate and graduate student clubs and teams that shared \$366,725.16 in funding through the Centralized Process for Student Initiative Funding (CPSIF), as well as U of T Engineering groups that got their funding from other sources. Beyond the groups presented here, our students also participate in hundreds more clubs and teams across U of T.

Figure 3.9 Pre-University Outreach Programs, 2021–2022

Program	Date	Audience	Female	Male	Another Gender or Gender Not Reported	Total # of Participants
SUMMER						
Blueprint 2021	Summer 2021	Grades 9–12	20	28	0	48
Global Engineering Challenge	Summer 2021	Grades 9–12	39	86	1	126
U of T Engineering Academy (UTEA) · Chemistry · Computer Programming · Math · Physics	Summer 2021	Incoming first-year students	N/A	N/A	N/A	· 810 · 861 · 845 · 880
STEAM@Home	June 17 – July 29	Grades 5–8	N/A	N/A	N/A	25
Online Junior Coding Workshops – Level 1	July 2 – August 20	Grades 6–8	108	157	1	266
Online Junior Coding Workshops – Level 2	July 2 – August 22	Grades 6–8	52	93	0	145
Online Junior Coding Workshops – Girls	July 2 – August 22	Grades 6–8	95	0	3	98
Virtual Minecraft: Build, Design, Discover!	July 5 – August 26	Grades 5–6	33	66	2	101
Girls in Innovation	July 5 – July 28	Grades 3 – 5	99	0	0	99
STEM Enrichment Courses	July 5 – August 20	Grades 9–12	64	109	1	174
Destination STEM	August 10 – August 19	Grades 6–8	15	24	1	40
Indigenous Design and Engineering Academy (IDEA)	August 16 – August 27	Grades 10–12	12	8	3	23
FALL						
In-Person Coding Workshops (HTML/CSS & Python)	December 4 – December 5	Grades 6–8	8	19	0	27
Global Engineering Challenge	October 16 – December 4	Grades 9–12	7	29	0	36
STEM Enrichment Courses	October 16 – December 4	Grades 9-12	36	25	0	61
STEAM@Home	November 12 – December 3	Grades 5–8	N/A	N/A	N/A	24
Teacher Coding Workshops	Fall 2021	Teachers	N/A	N/A	N/A	500
WINTER						
Virtual Minecraft (Co-ed)	January 22 – February 12	Grades 5–6	3	13	0	16
Virtual Minecraft (Girls)	January 22 – March 19	Grades 5–6	4	0	0	4
Global Engineering Challenge	January 22 – March 19	Grades 9–12	14	25	0	39
STEM Enrichment Courses	January 22 – March 19	Grades 9–12	44	48	1	93
STEM Enrichment Courses (In-person)	March 6–March 27	Grades 9–12	26	35	0	61
Teacher Coding Workshops	Winter 2022	Teachers	N/A	N/A	N/A	266
STEAM@Home	Winter 2022	Grades 5-8	N/A	N/A	N/A	50
SPRING						
STEAM@Home	April 1 – April 29	Grades 5–8	N/A	N/A	N/A	23
Teacher Coding Workshops	Spring 2022	Teachers	N/A	N/A	N/A	50
YEAR-ROUND						
MAPPS - My Academic Planning Sessions	2021- 2022	Past and current Blueprint students	N/A	N/A	N/A	45
Total:			808	948	16	6,151

Note 3.9: Data include programs that started between June 2021 and May 2022.

Figure 3.10 Total Number of Faculty by Academic Area, 2012–2013 to 2021–2022



Note 3.10: Faculty counts are as of July 1, 2021 and do not include contractually limited term appointments (CLTAs).

Figure 3.11 Total Number of Faculty with Percentage of Women Overall and by Academic Rank, 2012–2013 to 2021–2022

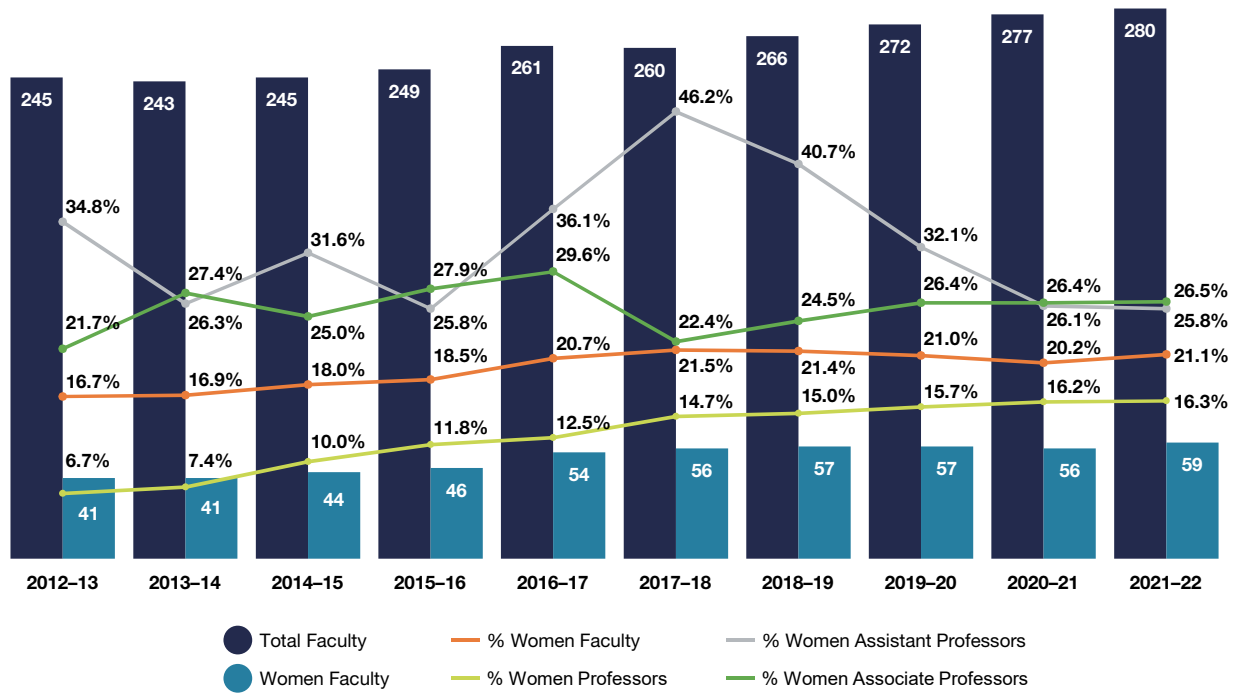
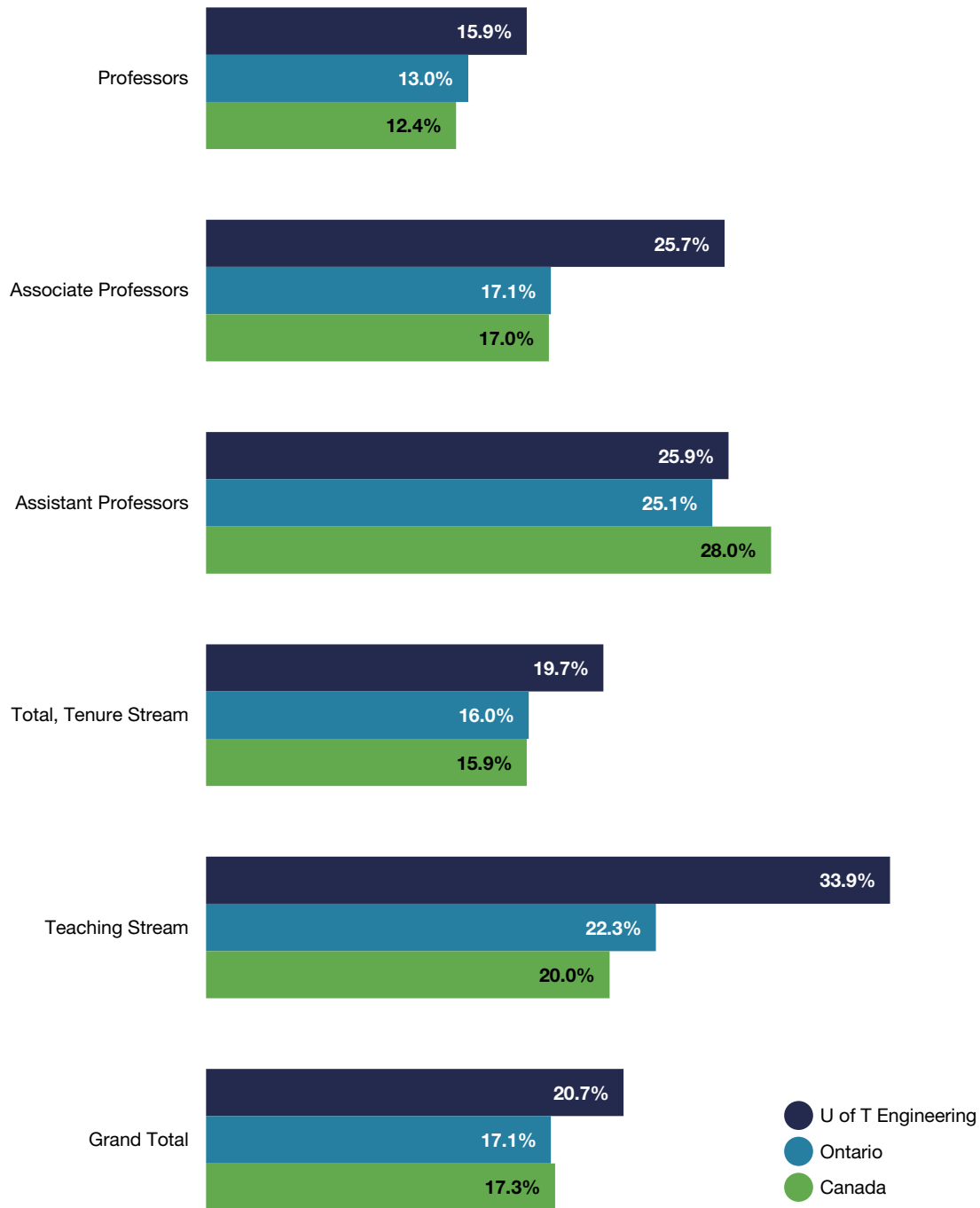


Figure 3.12 **Percentage of Women Faculty at U of T Engineering Compared with Women Faculty in Ontario and Canadian Engineering Faculties, 2020–2021**



Note 3.12: A slip year is used for this figure to account for the time it takes for data on faculty composition from other Ontario and Canadian engineering schools to become available.

Figure 3.13 Canada Research Chairs with Number and Percentage of Women Chairholders, 2013 to 2022

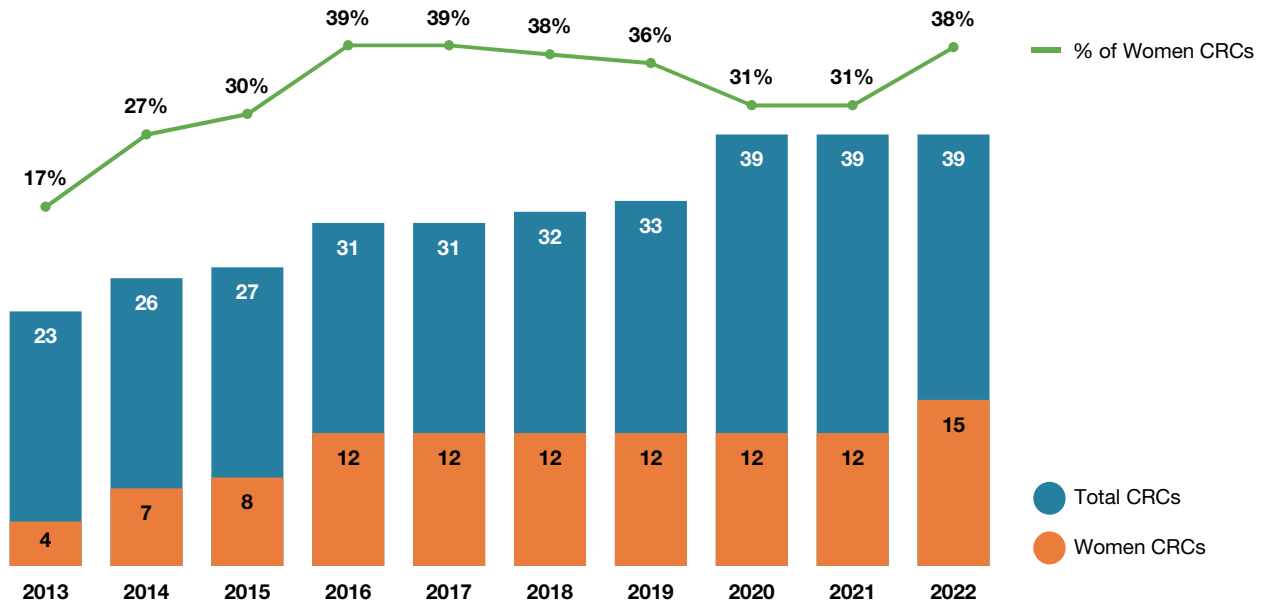
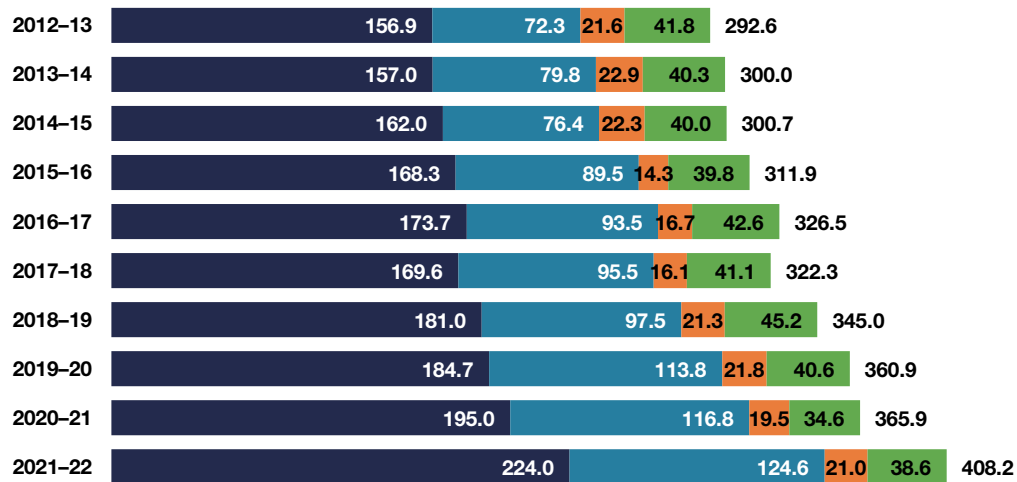


Figure 3.14 Total Staff by Type and Gender, 2012–2013 to 2021–2022



- Technical Staff - Men
- Technical Staff - Women
- Administrative Staff - Men
- Administrative Staff - Women

Figure 3.15 Summary of Progress Against the Recommendations of the *Blueprint for Action (2018)*, as prepared by the Eagles' Longhouse (Engineering Indigenous Initiatives Steering Committee), 2022

Immediate Actions (2018)		
Recommendation	Description	Progress
Faculty & Staff — 1	Create an Indigenous administrative position to begin the process of taking responsibility for the calls to action of the TRC.	Role defined and job posting written. Recruitment begun through personal networks. Next steps: increased recruitment efforts and job posting.
Faculty & Staff — 2	Support a program focused on the recruitment and hiring of Indigenous faculty and staff.	In 2018, 2019 and 2020, a U of T Engineering delegation went to the Canadian Indigenous Science and Engineering Society annual gathering, meeting with current Indigenous community members with potential to become U of T Engineering undergraduate and graduate students, faculty and staff. Two recent Teaching Stream positions were advertised via the job board of the Native American and Indigenous Scholars Association, the world's largest association of scholars working on Indigenous issues and with Indigenous communities. No Indigenous applicants resulted, but the practice will continue for future positions.
Faculty & Staff — 3	Offer Indigenous Cultural Awareness seminars to all employee groups. Note: This action strongly overlaps with another recommendation, Indigenous Student Access — 1. Progress items for both actions are cross-referenced to each other.	The Indigenous Cultural Competency Toolkit (ICCT) launched in the summer of 2021. Modules included a two-part virtual session called 'Speaking Our Truths: The Journey Toward Reconciliation,' facilitated by John Croutch, a cultural competency training officer in U of T's Office of Indigenous Initiatives, as well as the KAIROS Blanket Exercise. All modules were offered to the U of T Engineering community (students, staff, faculty, alumni and external partners) several times throughout the 2021–2022 academic year and will continue in future years. In its first year, 99 community members completed the full module (KAIROS Blanket Exercise and Speaking Our Truths 1 and 2) and 330 completed at least one training within the module.
Indigenous Spaces — 1	Ensure the existence of plentiful spaces for Smudging Ceremonies.	A smudging ceremony was held in the Myhal Centre for Engineering Innovation & Entrepreneurship lobby in 2017. No additional advancements since then.
Indigenous Spaces — 2	Use a participatory design approach, with key members of Indigenous communities, to (re)develop existing spaces as Indigenous spaces.	The outdoor patio adjacent to the Bahen Centre is being redesigned. The design committee is discussing ways to feature the close connection between Indigenous people and the land, the importance of water in Indigenous culture and/or bring attention to the failing of the engineering infrastructure to supply safe drinking water to Indigenous communities. Early discussions have taken place on how U of T Engineering can be more connected to First Nations House and the Indigenous spaces there.

Indigenous Spaces — 3	Use a participatory design approach, with key members of Indigenous communities, to commission Indigenous artwork.	Anishinaabe artist Solomon King was commissioned to complete a sculpture (footprint 5' x 2') celebrating the Gull Lake experience. Currently on display in the Professional Masters' Student lounge on Level 6 of the Myhal Centre, it will be moved to the new structure at Gull Lake when complete. King was also commissioned to create a larger art piece, <i>Notes from the Earth</i> , to be permanently displayed on the wall of the southern staircase, Level 2, in the Myhal Centre. The unveiling took place in August 2022.
Indigenous Spaces — 4	Use a participatory design approach, with key members of Indigenous communities, to establish educational installations located within U of T Engineering space.	No advancement.
Indigenous Spaces — 5	Form an ongoing Indigenous Space committee, with Indigenous community members, with ongoing funding tasked to identify additional spaces for naming and/or (re)development as Indigenous spaces, locations for Indigenous artwork and educational installations.	No advancement.
Indigenous Spaces — 6	Work with Indigenous language experts to identify and display Indigenous names within the Faculty where appropriate.	No advancement.
Indigenous Spaces — 7	Create a prominent, permanent physical representation of the land acknowledgement.	No advancement.
Indigenous Student Access — 1	Implement ongoing cultural competency training for all staff and faculty. Note: This action strongly overlaps with another recommendation, Faculty & Staff — 3. Progress items for both actions are cross-referenced to each other.	The Indigenous Cultural Competency Toolkit launched in the summer of 2021. Modules included a two-part virtual session called 'Speaking Our Truths: The Journey Toward Reconciliation,' facilitated by John Croutch, a cultural competency training officer in U of T's Office of Indigenous Initiatives, as well as the KAIROS Blanket Exercise. All modules were offered to the U of T Engineering community (students, staff, faculty, alumni and external partners) several times throughout the 2021–2022 academic year and will continue in future years. In its first year, 99 community members completed the full module (KAIROS Blanket Exercise and Speaking Our Truths 1 and 2) and 330 completed at least one training within the module.

Indigenous Student Access — 2	Begin targeted recruiting for Indigenous students.	<p>Multiple U of T Engineering entrance scholarships for Indigenous students (domestic tuition plus stipend) have been created. They are renewable for four years. The details of the qualifications and application process are still being developed with representatives of the Student Access Working Group.</p> <p>All self-declared Indigenous applicants were contacted by Professor Jason Bazylak offering a personal connection and specific assistance with the application.</p> <p>Welcome to Engineering events specifically for Indigenous students were offered online in 2020 and 2021, and in-person in 2022. They have been successful in connecting incoming Indigenous students with existing Indigenous communities on campus.</p>
Indigenous Student Access — 3	Create a full-time position, to be held by an Indigenous hire, to coordinate cultural competency training and outreach and recruitment of Indigenous students.	See progress for Faculty & Staff — 1
Indigenous Student Access — 4	Create a separate Access Pathway to engineering studies for Indigenous students.	No advancement.
Indigenous Student Access — 5	Begin building relationships with Indigenous communities.	Several U of T Engineering professors are currently in the relationship-building phase for potential future research projects with various Ontario First Nations. These relationships may lead to future opportunities for student access.
Indigenous Student Access — 6	Determine if a process is needed to verify student applicant claims for Indigenous background.	Under development.
Indigenous Curriculum — 2	Run regular Blanket Exercise events for U of T Engineering students, staff and faculty.	See progress for Faculty & Staff — 3 and Indigenous Student Access — 1
Short-Term Actions (2019–2021)		
Recommendation	Description	Progress
Faculty & Staff — 4	Work toward making U of T an employer of choice for the Indigenous community.	Outreach to Indigenous communities, for example, through the Native American and Indigenous Scholars Association, has begun.
Faculty & Staff — 5	Provide support for Indigenous employees.	No advancement.
Faculty & Staff — 6	Community outreach. Expand and develop relationships with communities. Create community partnerships. Establish connections with Indigenous professionals in the community, such as Aboriginal Professionals Association of Canada.	<p>Several U of T Engineering professors are currently in the relationship-building phase for potential future research projects with various Ontario First Nations.</p> <p>The Indigenous Design & Engineering Academy (IDEA) is an enrichment program created through the U of T Engineering Outreach Office. IDEA offers Land-based learning to inspire Indigenous secondary students to pursue an engineering education and career, while reinforcing the many ways scientific knowledge is ingrained in Indigenous culture and traditions. More than 20 students participated in IDEA in 2021, and a second iteration is planned for summer 2022.</p>

Faculty & Staff — 7	Provide financial support for Elder services. Work with First Nations House and the Provost's Office of Indigenous Initiatives to determine how best to provide Elder support at U of T Engineering.	No advancement.
Indigenous Spaces — 8	Create an Indigenous Office within U of T Engineering.	Negotiations about organizational structure and space have begun and continue between U of T Engineering Indigenous community and the Faculty.
Indigenous Student Access — 7	Initiate a pilot engineering outreach program for Indigenous high school students.	No advancement.
Indigenous Student Access — 8	Create a transition program for Indigenous students.	An informal community of Indigenous undergraduate students has been established, with communication taking place via a Discord server. A common experience interest in beading was identified through that online community and expanded into a beading workshop in December 2021.
Indigenous Student Access — 9	Expand the Indigenous outreach program.	The Indigenous Design & Engineering Academy (IDEA) is an enrichment program created through the U of T Engineering Outreach Office. IDEA offers Land-based learning to inspire Indigenous secondary students to pursue an engineering education and career, while reinforcing the many ways scientific knowledge is ingrained in Indigenous culture and traditions. More than 20 students participated in IDEA in 2021, and a second iteration is planned for summer 2022.
Indigenous Student Access — 10	Create an Indigenous Office within U of T Engineering.	See progress for Faculty & Staff — 1
Indigenous Student Access — 11	Work with colleges in northern and remote areas to increase engineering programming in colleges (such as first year engineering design) and facilitate the transfer of college credits.	Discussions are underway regarding a Diploma to Degree program being developed for the Sciences at U of T. It is possible that U of T Engineering could participate in this program as a first step towards a transition program. While this specific program is not targeting a northern or remote area, it could generate expertise within the Faculty that could then be extended to northern and remote areas.
Indigenous Curriculum — 1	U of T Engineering should take an integrated approach to bringing Indigenous content to the engineering curriculum, and NOT add additional courses.	A recorded short lecture was created for APS111 that gives a Land Acknowledgement but also explains the purpose and history of Land Acknowledgements. Professor Jason Bazylak gave a lecture on Design Stakeholders using the case study of the Shoal Lake 40 First Nation and the Winnipeg aqueduct. Bazylak has connected with other institutions to develop this into a learning module that could be widely distributed.

Indigenous Curriculum — 4	Better communicate engineering as a community builder.	A presentation to incoming Indigenous students on the importance of Indigenous engineers to build infrastructure for Indigenous communities was incorporated into the Welcome to Engineering event. This material could also be shared via the IDEA program being developed at Engineering Outreach.
Indigenous Curriculum — 5	Hire one or more Indigenous curriculum developers.	No advancement.
Long-Term Actions (2022–2023)		
Recommendation	Description	Progress
Faculty & Staff — 8	Take a Seven Generations approach to the Faculty’s relationship with Indigenous Peoples.	No advancement.
Indigenous Spaces — 9	Spearhead the call for the Front Campus redesign to incorporate prominent Indigenous space.	No advancement.
Indigenous Spaces — 10	Create a symbol of Indigenous Engineering Positive Space.	No advancement.
Indigenous Student Access — 12	Establish a pilot engineering program in a remote community.	The Reconciliation Through Engineering Initiative (RTEI) aims to find sustainable engineering solutions through community-driven, multidisciplinary and Two-Eyed Seeing collaborations, leveraging the expertise of both Indigenous community members and U of T researchers specializing in diverse fields. Overseen by the Centre for Global Engineering, RTEI will ultimately identify six projects to improve access to clean drinking water, food security, housing, health care, transportation and communication systems in Indigenous communities across Canada.
Indigenous Curriculum — 3	Create an Indigenous culture infusion lecture series.	A talk titled <i>Indigenous Engineering Design, Ethics, and Role Models</i> was given in November 2021 by John Desjarlais and Matthew Dunn, co-presidents of the Saskatchewan Professional Chapter of the Canadian Indigenous Science and Engineering Society. ISTEP also hosted a presentation titled <i>The Role of Professional Engineers in Truth & Reconciliation</i> by a presentation by Jessica Vandenberghe, Industry Professor, Indigenous Engineering at the University of Alberta.

Figure 3.16 **Summary of Progress Against the Recommendations of *Striving Toward Black Inclusivity* (2019) as prepared by the Black Inclusion Steering Committee (BISC), 2022**

Interim Recommendations (From November 2018)	
Description	Progress
Establish an Equity, Diversity & Inclusion (EDI) office	<p>A new role of Assistant Dean and Director, Diversity, Inclusion and Professionalism was established in 2019.</p> <p>In 2021–2022, the Office for Diversity, Inclusion and Professionalism (DIP) leveraged new casual staff roles for an environmental scan and development of a proposal for additional cultural competency modules. These will build on the model of the Indigenous Cultural Competency toolkit launched in 2021 and will include modules on Black inclusivity.</p> <p>The office continues to grow with the classification of a new permanent role: Associate Director, Access and Inclusive Pedagogy. The Dean’s Advisor roles within the Faculty have been restructured to be a faculty appointment. The Dean’s Advisor roles (including the position for Black Inclusivity) will remain connected to the DIP office.</p>
Collect race-based data	<p>The Engineering Applicant Census (EAC) pilot was led by a working group consisting of members of the Engineering Equity, Diversity and Inclusion Action Group (EEDIAG), the Registrar’s Office, the Dean’s Advisors on Black and Indigenous Inclusion and the Office of Diversity, Inclusion and Professionalism.</p> <p>During the process of applying for undergraduate studies at U of T Engineering, over 75% of applicants opted to complete the EAC, allowing the Faculty to create a demographic profile of applicants. The data was not used in admissions decisions, but instead was used by the Registrar’s Office and the Office of Diversity, Inclusion and Professionalism to send recruitment and admissions resources and entrance awards information to applicants upon request, and to understand potential barriers in the engagement and admission process for different communities. A report will be issued in 2022 that will help identify additional recruitment strategies and supports to reach underrepresented demographics.</p> <p>The EAC was piloted in the 2020–2021 application cycle, is continuing for the 2021–2022 applicant cycle, and was adopted University-wide as the Student Applicant Census (SAC) for the 2021–2022 applicant cycle by the VP Students and University registrars.</p>
Acknowledge and support Black History Month (BHM)	<p>Led by Engineering Strategic Communications, with input from the DIP Office, BHM communications campaigns have been developed and executed annually since 2019.</p> <p>The BHM 2022 campaign included reflections from Black students, staff and faculty, coverage of the fourth edition of the GTA’s first Black student-run hackathon, as well as a podcast interview with key organizers of Blueprint, an Engineering Outreach program aimed at students in Grades 9 to 11.</p>
Enhance and streamline communication to advertise and build inclusivity efforts	<p>The EDI webpage, including a joint statement by the Dean and the Engineering Society President on “Our Shared Values of Diversity, Equity, and Inclusivity” launched in 2018.</p> <p>In January 2021, U of T Engineering launched a webpage and form to allow community members to make a confidential disclosure of an incident of bias, discrimination, harassment or harmful unprofessionalism. This portal was publicized on the main Faculty website, in the Faculty & Staff Newsletter and on social media.</p>
Have Black representation at departmental and Faculty seminar/lecture series	<p>The co-chairs of BISC brought a proposal to display scholarship of Black academics via departmental seminar or lecture series to the monthly Chairs and Directors meeting in March 2019.</p> <p>Departments/institutes such as ISTEP have brought in Black academics to speak on their research. However, no changes to current processes to facilitate intentional diversification have been implemented.</p> <p>In 2021, the University of Toronto Anti-Black Racism Task Force also recommended a lecture series to provide a platform for Black excellence in research.</p>

<p>Have targeted Black undergraduate student recruitment</p>	<p>In the summer of 2020, the Engineering Outreach Office launched Blueprint, a four-week summer program for highly motivated Black students in Grades 9 to 12. Blueprint built on the success of other outreach programs, such as ENGage, which has run for more than a decade.</p> <p>Due to the COVID-19 pandemic, Blueprint was held online in 2020, 2021 and 2022, with an anticipated return to in-person activities in 2023. More than 50 students from across Canada participated each summer, and engagement with Grade 12 students continued during the academic school year. Four Blueprint alumni joined U of T Engineering as undergraduate students in 2021, and six more have accepted their offers for Fall 2022.</p> <p>The Recruitment Office has continued to collaborate closely with NSBE U of T on increasing visibility of the Black student community and creating connections for prospective students, including dedicated student panels, and representation in clubs, fairs and open houses. In addition, Recruitment has also provided admissions presentations and promotion for NSBE outreach efforts such as the High School Conference and NSBE Hacks.</p> <p>Data from the Engineering Applicant Census (EAC) further enabled the creation of Black Student Community Welcome events to celebrate Black admitted students and facilitate connections to the U of T Engineering community.</p> <p>Work is also underway in the development of a collaborative initiative (including Outreach, Recruitment and Registrar offices) known as the Black Applicant Community of Support (BACS). This program seeks to scale access and broaden support components of Blueprint’s year-long engagement program My Academic Planning Sessions (MAPS) to all eligible applicants who opt-in and self-identify as Black. This program (and the analogous Indigenous Applicant Community of Support) is expected to launch for the beginning of the 2022–2023 applicant cycle.</p>
<p>Increase involvement at the NSBE National Convention</p>	<p>The Faculty — through the Office of Diversity, Inclusion and Professionalism and Troost ILead — provided financial support to the NSBE U of T chapter to subsidize student attendance to the 2022 NSBE National Convention in Anaheim, California.</p> <p>U of T Engineering was a sponsor for the 2022 NSBE National Convention and engaged in recruitment activities virtually. The intention is for Faculty recruitment to reengage in-person for the 2023 National Convention.</p>

Additional Recommendations (From September 2019)

Prospective and Current Undergraduate Students

<p>Continual review of broad-based admission goals and procedures to further enhance the equitable and inclusive nature of general admissions</p>	<p>BISC highlighted key questions that the admissions committee should consider when reviewing and updating admission procedures through an equitable lens.</p> <p>In the summer of 2021, the Registrar’s Office formed a sub-committee with the purpose of reviewing and enhancing the use of broad-based and extracurricular admission metrics, including with respect to Black inclusivity. Findings and recommendations from this sub-committee are currently pending.</p>
<p>Develop alternative, gap-spanning admission and/or access pathways into U of T Engineering</p>	<p>While no direct changes to current processes have yet been implemented, modules for an online initiative called Preparing for University Math Program (PUMP) have been developed by math instructors from both U of T Engineering and the Faculty of Arts & Science, in collaboration with the EdTech Office.</p> <p>In the 2021–2022 academic year, the Woodsworth Academic Bridging Program introduced a new pathway into the Bachelor of Science program at the Faculty of Arts & Science. U of T Engineering is in discussions to join a pilot initiative, led by Queen’s University, to build college bridging pathways into university engineering programs in Ontario.</p> <p>These programs could serve as a component of future access pathway programming into engineering.</p>

<p>Develop a centralized peer mentorship initiative</p>	<p>The successful Engineering Campus Experience Officer (Eng CEO) program, with mentors representing a wide range of disciplines, years of study, racial and gender diversity, continued into a fourth year.</p> <p>In 2021, the Office for Diversity, Inclusion and Professionalism (DIP) hired a student-staff member to consult on building specific Black mentorship opportunities within the Faculty, in collaboration with the Assistant Dean, Director of Diversity, Inclusion and Professionalism and the Advancement Office.</p>
<p>Create infrastructure to increase faculty engagement in Outreach</p>	<p>BISC suggested the Office of the Vice-Dean, Research, the Office of the Vice-President, Research and the Engineering Student Outreach Office should collaborate to develop a framework and resource for faculty involved in outreach programming.</p> <p>No changes to current processes have been implemented.</p>
<p>Increase access to financial aid and scholarships</p>	<p>U of T Engineering has increased its efforts with prospective donors and alumni interested in providing funding for initiatives and awards.</p> <p>In 2020–2021, Advancement reached a gift agreement with CGI, an IT consulting company, to fund the CGI Scholarship for the Advancement of Black Women in Engineering.</p> <p>In February 2022, U of T Engineering launched the U of T Engineering Entrance Scholarship for Black Students. The program will provide 10 annual scholarships valued at \$10,000 each, renewable for four years for a total of \$40,000, to incoming domestic Black students for the next three academic years.</p>
<p>Prospective and Current Graduate Students</p>	
<p>Develop targeted workshop series to promote graduate school and support current graduate students</p>	<p>The Office of the Vice-Dean, Graduate has worked with the programs chair of NSBE U of T to offer workshops and info sessions on graduate school, providing information on the application process and facilitating panel discussions with Black alumni to provide insight on the graduate school experience.</p> <p>The first Indigenous and Black Engineering & Technology (IBET) Momentum Fellowships were awarded in Fall 2021 (see progress under “Continue to develop targeted recruitment strategies” below).</p> <p>As part of this program, collaborative efforts between the Office of the Vice Dean, Graduate, the Office of Diversity, Inclusion and Professionalism, Mitacs and the central administrators of the IBET program have begun to scaffold supports and programming for IBET fellows to leverage. These program offerings for IBET fellows could act as a foundation for potential offerings to the wider Black student community.</p>
<p>Create targeted undergraduate research opportunities</p>	<p>In early 2022, a high-level proposal was drafted by the Dean’s Advisor on Black Inclusivity Initiatives for “Pathways to Research,” a program that would create supported research opportunities targeted for Black students. Next steps could include sourcing sustainable funding and programmatic development.</p>

<p>Continue to develop targeted recruitment strategies</p>	<p>In January 2021, U of T Engineering joined six other Ontario engineering faculties to create the Indigenous and Black Engineering & Technology (IBET) Momentum Fellowships. U of T Engineering allocated two of these fellowships per year, each providing \$25,000 per year for up to four years for incoming Black or Indigenous PhD students.</p> <p>So far, four students have received IBET Fellowships: D’Andre Wilson-Ihejirika (ChemE/ ISTEP PhD candidate), Mai Ali (ECE PhD candidate), Gaius St. Marie (ChemE PhD candidate) and Eboseremen Osemenkian Ebewele (ChemE MASc candidate).</p> <p>Based on discussions with the Dean’s Advisors on Black Inclusivity and Indigenous Initiatives on the IBET fellowship for the 2021–2022 cycle, work is underway to consider recruitment and support pathways for Black and Indigenous students who do not have traditional academic credentials for research.</p> <p>Departments such as MIE are currently developing departmental fellowships and follow-up mechanisms for those students who had strong applications for the IBET fellowship but who did not ultimately receive an award.</p> <p>Other recruitment strategies include a strong U of T Engineering presence at the NSBE National Convention, the NSEBE U of T Hackathon (NSEBEHacks) and the Graduate Research Days (GRD) event. Participants in GRD have the option to self-declare their racial/ ethnic identity for targeted outreach.</p>
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Additional Recommendations (From September 2019)

Prospective and Current Faculty

<p>Intentional utilization of Provost Office diversity-driven initiatives</p>	<p>Between June 2020 and June 2022, four new faculty members who self-identify as Black were hired in the following units: EngSci, ChemE, MIE and CivMin.</p> <p>Two of these hires leveraged the Provost’s new faculty funding program and the Office of Diversity, Inclusion and Professionalism recommends that other departments and divisions follow this model.</p>
<p>Develop a framework to facilitate diverse candidate pool formulation and consideration</p>	<p>BISC recommends that departments/institutes follow the Office of the Vice-Provost, Faculty & Academic Life document <i>Strategies for Recruiting an Excellent & Diverse Faculty Complement: A guide for enhancing the diversity of applicant pools and minimizing the impact of unconscious bias in assessing candidates.</i></p> <p>While no formal Faculty-wide mechanisms are in place, inclusive and holistic hiring practices are being implemented at a departmental level, which have led to an increase in Black faculty hiring over the last two years.</p>
<p>Define the means to value and incentivize EDI and mentoring work for faculty</p>	<p>No changes to current processes have been implemented.</p>

Prospective and Current Staff

<p>Develop avenues for formal mentorship</p>	<p>In the final <i>Report of the University of Toronto Anti-Black Racism Task Force</i>, one recommendation for staff was “that central Human Resources offices conduct an equity-focused review of all central mentorship programs, examining selection criteria, inclusion, and outcomes, with the goal of creating updated programs that are inclusive of Black, Indigenous, and racialized employees’ needs and aspirations.”</p> <p>No changes to current processes have been implemented.</p>
<p>Provide opportunities for affinity group community building</p>	<p>Engineering Positive Space exists as a de facto affinity group for the 2SLGBTQ+ community within the Faculty at all levels (students, staff, faculty).</p> <p>Since 2020, an informal community of Black staff, faculty and graduate students has developed and grown. This community meets several times a year to network and provide mutual support.</p>

<p>Improve access to secondment and professional development opportunities</p>	<p>In the <i>Report of the University of Toronto Anti-Black Racism Task Force</i>, one recommendation made for staff was for HR offices to “leverage existing programs and talent pools to identify suitable Black staff for special project/secondment/promotional opportunities” across the University that are not only related to EDI issues, but that are focused on core operational projects.</p> <p>No changes to current processes have been implemented with regards to targeted communication to underrepresented staff highlighting opportunities and supports.</p>
<p>General</p>	
<p>Integrate broader EDI considerations into Alumni and Advancement Office operations</p>	<p>In September 2020, the Engineering Advancement & Alumni Relations Office hosted an online event, “Skule™ Voices: Striving for Black Inclusivity” to provide a platform for Black alumni to share their perspectives and recommendations with senior Faculty administrators and discuss ways to provide support to current/prospective Black students.</p> <p>The Advancement & Alumni Relations Office is working with Outreach Office and the Office of Diversity, Inclusion and Professionalism to identify and develop funding proposals for access and support initiatives for the 2022–2023 academic year.</p>
<p>Develop more equitable and accessible modes of financial reimbursement and invoice generation</p>	<p>The Engineering Equity, Diversity and Inclusion Action Group (EEDIAG) has mediated conversation between the managers/directors in Decanal offices and Decanal Finance Team responsible for overseeing the mechanisms for financial reimbursement, invoice generation and acknowledgement of EDI-based expenditures in operational budgets.</p> <p>Following these conversations and the work of advocates within the Faculty, the Faculty has provided some funding and is a participant in a pilot program for Social Procurement.</p>
<p>Offer and incentivize more equity and cultural competency training for staff/faculty</p>	<p>EEDIAG continues to offer learning opportunities for the Faculty, including a session titled “Addressing Anti-Black Racism & Unpacking Active Allyship” in June 2020. EEDIAG also compiled resources to address Anti-Black Racism.</p> <p>There is still opportunity to better highlight the various workshops held by the Anti-Racism and Cultural Diversity Office (ARCDO) and provide more opportunity for staff/faculty to engage them.</p>
<p>Establish hard targets for representation at all Faculty levels</p>	<p>The collection of more baseline data, including demographic data collected in the Engineering Applicant Census, provides a starting point for potential targets to be set. However, no changes to current processes have been implemented.</p>

Figure 3.17 Summary of Progress against the Recommendations of the Final Report (2019) of the Joint Task Force on Academic Advising and Mental Health, 2022

- No Action Taken
- In Progress
- Complete

Recommendations – Undergraduate Experience		
Recommendation	Status	Progress
1 – Continue to foster a culture of caring and support at U of T Engineering and destigmatize mental health challenges.	•	<p>Over the past year U of T Engineering has continued to foster a culture of care and support and has worked towards destigmatizing mental health challenges.</p> <p>While progress has been made in this area, there is always more work to be done and continual improvements to be made. For this reason, the status of this recommendation will continue to remain as in progress.</p>
2 – Creation of a Dean’s Advisory Committee on Student Mental Health and new Mental Health Officer position in the Faculty.	•	<p>In May 2020, U of T Engineering welcomed Melissa Fernandes into the new Mental Health Officer Position at the Faculty. In February 2021, Melanie Carrington was hired into the new Faculty Critical Incident Coordinator role.</p> <p>While there has been on going consultation among staff and faculty on student mental health, a formal Dean’s Advisory Committee on Student Mental Health has not been created.</p>
3 – Offer and promote more mental health training resources to U of T Engineering staff and faculty.	•	<p>Over the past year the following mental health trainings and resources have been made available to staff and faculty through the Faculty:</p> <ul style="list-style-type: none"> – U of T Engineering’s Student Well-being Resources Guide – LivingWorks Start Suicide Prevention Training – Supporting Student Mental Health: An Update for our Current Context <p>U of T Engineering is developing a certificate program for staff and faculty on supporting student mental health and well-being with distribution planned for 2022–2023.</p>
4 – Identify student mental health and wellness training for all student-facing staff (academic advisors, front line student services, instructors, teaching assistants, etc.)	•	<p>Student-facing staff are encouraged to take the following mental health and wellness trainings to prepare for their roles:</p> <ul style="list-style-type: none"> – Identify, Assist, Refer Online Training – LivingWorks Start Suicide Prevention Training – Three University resources to assist students in distress: SCRAP, CSO and CP (Found in the LMS Catalog Offerings from the Centre for Learning, Leadership & Culture) – Sexual Violence & Education Prevention Module (Found in the LMS Catalog Offerings from the Centre for Learning, Leadership & Culture) <p>U of T Engineering is developing a certificate program for staff and faculty on supporting student mental health and well-being, with distribution planned for 2022–2023. Student-facing staff will be encouraged to complete this certificate.</p>
5 – Ensure new job postings and interview questions for academic advisors include language related to advising-based competencies.	•	<p>New job postings and interview questions have been suggested to U of T Engineering’s HR department for inclusion and use when hiring Academic Advisors.</p>

<p>6 — Create a full-time academic advisor position to support first-year international students in the First Year Office and make Engineering Science's new academic advisor position permanent after the one-year contract ends.</p>	<ul style="list-style-type: none"> • 	<p>In August 2019, the Undergraduate Advisor (Engineering Science Years 1 & 2) position became a continuing position and welcomed Stephen Johns into the role.</p> <p>In March 2020, the First Year Office welcomed JesusMiracle Chiadika into the new position of First Year Advisor, Intercultural Learning & Experience.</p> <p>In April 2020, the Division of Engineering Science created the new position of Undergraduate Student Advisor (Engineering Science Years 1 & 2, International).</p>
<p>7 — Review academic advising caseloads, frequency of complex cases and petition volume by department/division.</p>	<ul style="list-style-type: none"> • 	<p>An initial review of caseloads, frequency of complex cases and petition volume was completed in 2019. These items are continually monitored and discussed in monthly academic advising network meetings with the Assistant Registrar, Student Records and Services.</p>
<p>8 — Development of a proactive advising notification system in the Academic Advising Portal.</p>	<ul style="list-style-type: none"> • 	<p>The Registrar's Office piloted the development of a proactive advising notification system with the First Year Office. This tool is being integrated in other departments (e.g., MIE) for second-year students as well.</p> <p>Additional proactive advising measures will be reviewed through the strategic planning process of the Registrar's Office in Summer 2022.</p>
<p>9 — Standardize academic advisors' out-of-office and auto-response messages to include links to helpful resources and services. This effort could be applied to all staff who regularly interact with students.</p>	<ul style="list-style-type: none"> • 	<p>A standardized out-of-office and auto-response message was created and promoted to Academic Advisors and added to the Academic Advisors Handbook.</p>
<p>10 — Increase the number of scholarships that recognize U of T Engineering students who have overcome challenges.</p>	<ul style="list-style-type: none"> • 	<p>To date, the following in-course scholarships recognize U of T Engineering students who have overcome challenges:</p> <ul style="list-style-type: none"> – Aaron Botelho Memorial Scholarship (CivMin) – The John Karl Hergovich Memorial Scholarship (ChemE) – The Glenn & Richard Hauck Memorial Scholarship (EngSci) – Eric Dittmar Scholarship (MIE) <p>Additional in-course scholarships of this nature are still needed for MSE, ECE and TrackOne.</p> <p>The Skule™ Mental Health Bursary was initiated in 2021 as a collaboration between the Engineering Society (EngSoc) and the Faculty of Applied Science & Engineering. This bursary provides financial aid to undergraduate engineering students experiencing challenging or unforeseen circumstances, with particular focus on students in need of increased mental health and wellness financial support.</p> <p>The Graduate Academic Wellness Bursary was initiated in 2021 as a joint initiative between the Graduate Engineering Council of Student (GECoS) and the Office of the Vice-Dean, Graduate to provide some financial support to graduate students who have faced difficulties in maintaining their academic progress due to mental and physical health challenges during the last year.</p> <p>The QueerSphere Graduate Crisis Counselling Fund was piloted in Winter 2022 in partnership with the Office of the Vice-Dean, Graduate and QueerSphere's Graduate Chapter. This fund is intended for members of QueerSphere's Graduate Chapter if they find themselves in need of financial aid to cover the cost of counselling care after they have expended their coverage through the UTGSU Health and Dental Insurance, the CUPE 3902 Unit 1 Health and Dental Top Up Plan, or any other extended benefit coverage plans or free services offered by the University (e.g., Health & Wellness, MySSP) they may have attempted to use.</p>

Recommendations — Graduate Experience

Recommendation	Status	Progress
1 — Increase specificity and consistency of graduate student orientations across the Faculty.	●	<p>In August/September 2021, all first-time TAs were provided asynchronous training on: Academic Integrity; Equity, Diversity & Inclusion; Supporting Student Mental Health; Student Privacy & Protection and Student Privacy & Protection for Virtual Instruction. This was the second year this training was provided.</p> <p>The Office of the Vice Dean, Graduate also collaborated with the Graduate Engineering Council of Students to develop an orientation template containing helpful information new incoming students should know about. These slides were shared with individual graduate units once again in Fall 2021 so they could add their own specific programming and information to the slides that pertain to their own students. Additionally, all grad units were strongly encouraged to host a winter orientation session as well.</p>
2 — Explore options for graduate chairs to assess the levels of support available for research-stream graduate students and the climate created by their supervisors.	●	<p>The Office of the Vice-Dean, Graduate piloted a system to receive anonymous feedback from graduate students in MSE on their student experience, including their supervision experience. The results were shared with faculty by the chair to bring awareness to student concerns.</p>
3 — Clarify supervisory expectations by setting guidelines for personal time off and by promoting best practices in graduate supervision within the Faculty.	●	<p>The SGS document on best practices in graduate supervision has been promoted to new faculty members during the yearly orientation session organized by the Office of the Vice-Dean, Research. Guidelines regarding time off were also discussed.</p> <p>Recent changes to the domains of the Engineering Graduate Education Committee, a standing committee of the Faculty, will make it possible in the future to reinforce best practices and uniformity across U of T Engineering in these areas.</p> <p>In collaboration with GECoS, two town halls with the Dean were organized in 2021-2022. In preparation for those town halls, student surveys were conducted which provided questions that could be answered by the Dean and Vice-Deans about topics such as supervisor expectations and wellness resources.</p>
4 — Reduce barriers for research-stream graduate students who need to take medical leaves of absence.	●	<p>Course syllabus templates were distributed to instructors. These templates include links to SGS policies that pertain to leaves of absence.</p> <p>A webpage has been dedicated to mental health and wellness resources on the graduate studies website of the Faculty. This page include links to SGS policies.</p>
5 — All graduate administrators should complete Identify, Assist, Refer (IAR) Training and be encouraged to take additional health and wellness training.	●	<p>Graduate administrators are encouraged to take the following mental health and wellness trainings to prepare for their roles:</p> <ul style="list-style-type: none"> – Identify, Assist, Refer Online Training – LivingWorks Start Suicide Prevention Training – Three University resources to assist students in distress: SCRAP, CSO and CP (Found in the LMS Catalog Offerings from the Centre for Learning, Leadership & Culture) – Sexual Violence & Education Prevention Module (Found in the LMS Catalog Offerings from the Centre for Learning, Leadership & Culture) <p>U of T Engineering is also developing a certificate program for staff and faculty on supporting student mental health and well-being with distribution planned for 2022-2023.</p>

<p>6 — Create clear policies for missed work and late withdrawal in graduate and 500-level courses.</p>	<ul style="list-style-type: none"> • 	<p>Recently, the domains of the Engineering Graduate Education Committee and also the Undergraduate Examination Committee, two standing committees of the Faculty, have been modified to address and clarify the process to petition 500-level courses. These changes will become effective in the 2021-2022 academic year.</p>
<p>7 — Make the graduate course schedule available on a centralized website prior to course registration.</p>	<ul style="list-style-type: none"> • 	<p>All department courses are listed online, with a link from the main Faculty website for easy access.</p>
<p>8 — Continue to support graduate student mental wellness groups.</p>	<ul style="list-style-type: none"> • 	<p>The Faculty has continued to provide funding for the Graduate Engineering Council of Students (GECoS) to support their Mental Health and Wellness Commission.</p> <p>The Faculty is working on funding to help students who have unanticipated COVID-19 related expenses regarding health and wellness supports.</p> <p>The Faculty has regular meetings with GECoS to receive updates on student concerns, including wellness of students.</p>

CHAPTER 4 RESEARCH

FACTS AND FIGURES

100+

U of T Engineering spinoff companies launched over the past two decades.

93

U of T Engineering research chairs and professorships, held by 85 individual chairholders.

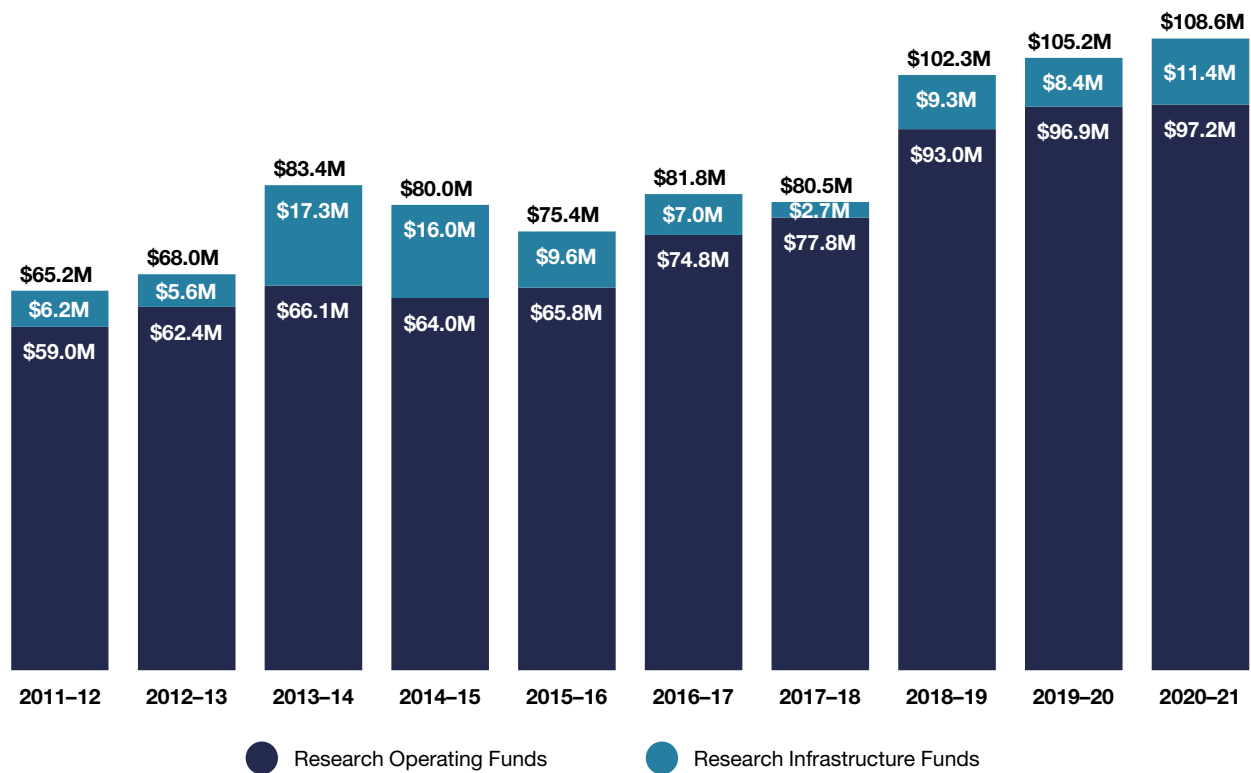
148.8%

Increase in industry research funding over the past five years, reaching a total of \$19.9M for 2020–2021.

\$108.6M

Total research infrastructure and research operating funding for 2020–2021, an increase of 44.0% over the past five years.

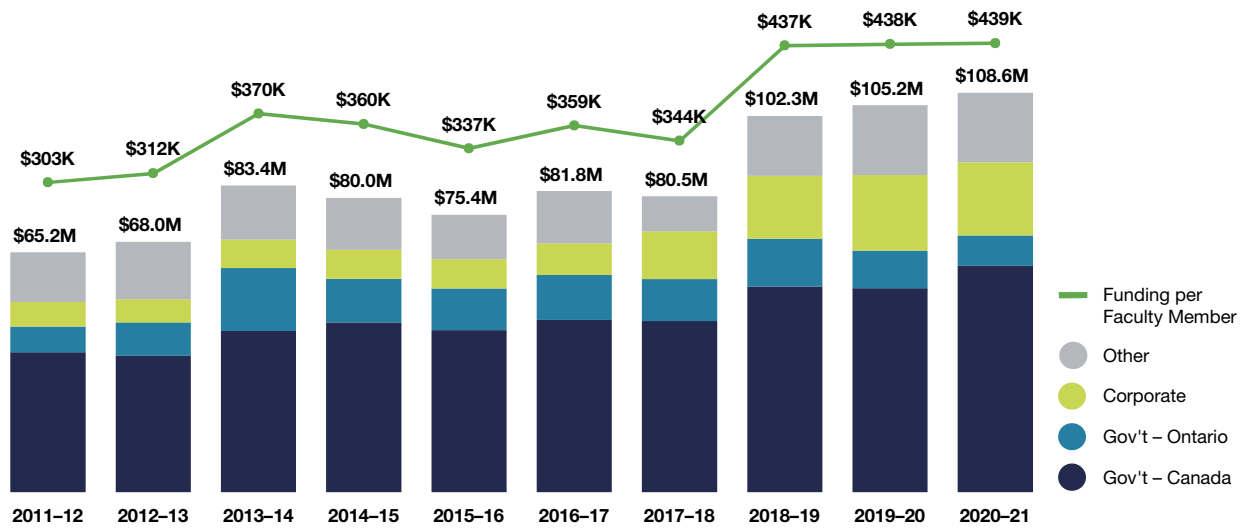
Figure 4.1a Total Research Funding (Infrastructure + Operating), 2011–2012 to 2020–2021



Data is based on grant years (April to March). The figures in this chapter report research funding the Faculty received in 2020–2021. Because it takes some time after the completion of a fiscal year for research funding data to become final, this is the most recent year for which data are available.

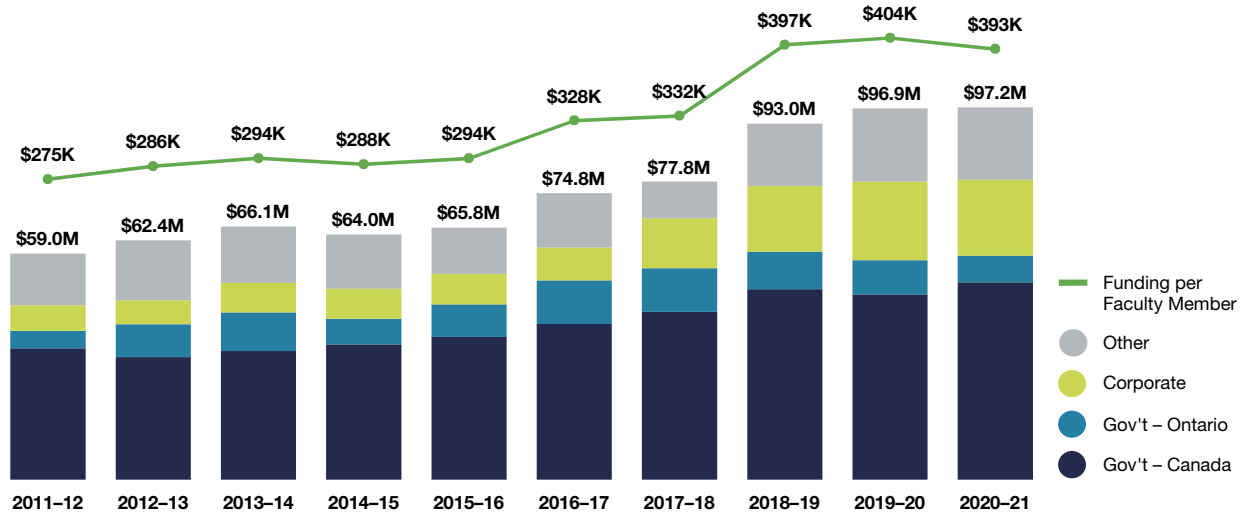
Note 4.1: Research operating funding excludes grants received under the following research infrastructure programs: Canada Foundation for Innovation (except the CFI Career Award); NSERC Research Tools & Instruments program for faculty; Ontario Innovation Trust; and Ontario Research Fund – Research Infrastructure.

Figure 4.1b Total Research Funding (Infrastructure + Operating) by Year, Source and Funding per Faculty Member, 2011–2012 to 2020–2021



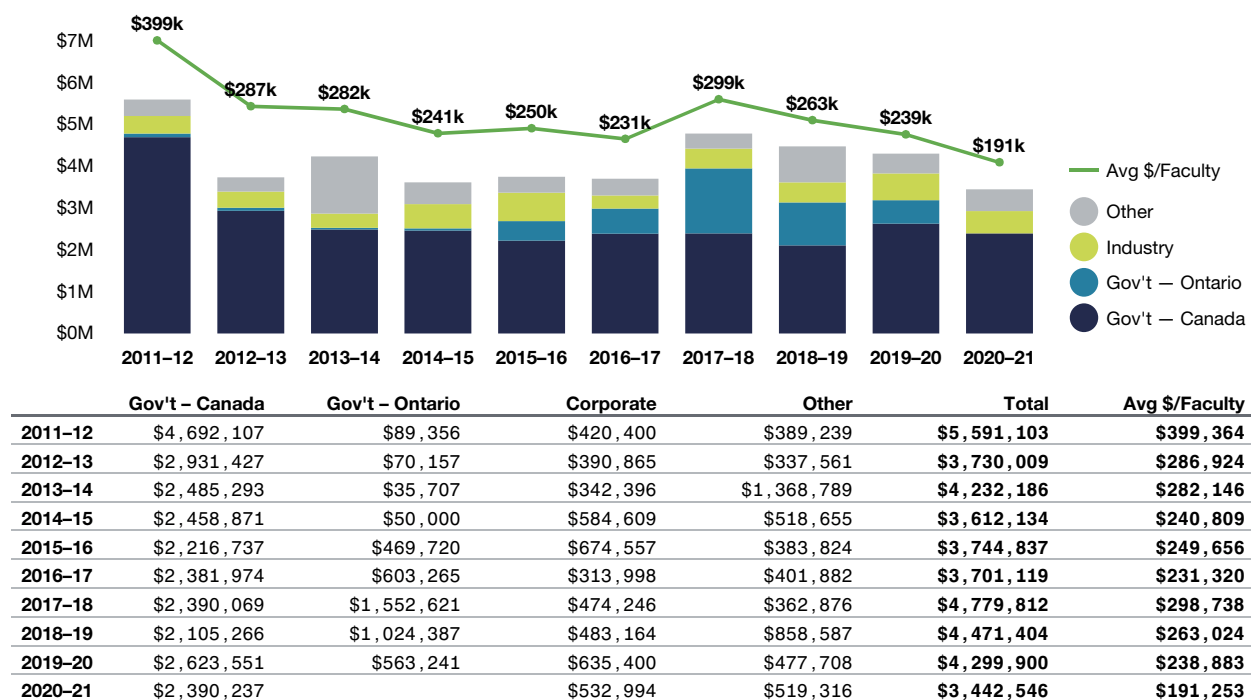
	Gov't – Canada	Gov't – Ontario	Corporate	Other	Total	Funding per Faculty Member
2011–12	\$38,022,095	\$6,969,732	\$6,702,708	\$13,507,723	\$65,202,257	\$303,266
2012–13	\$37,100,533	\$9,035,997	\$6,277,980	\$15,621,407	\$68,035,916	\$312,091
2013–14	\$43,788,987	\$17,138,393	\$7,749,947	\$14,683,976	\$83,361,303	\$370,495
2014–15	\$46,127,701	\$11,858,254	\$7,917,673	\$14,075,827	\$79,979,456	\$360,268
2015–16	\$44,038,639	\$11,307,741	\$7,952,218	\$12,090,798	\$75,389,396	\$336,560
2016–17	\$46,838,977	\$12,204,142	\$8,547,459	\$14,244,259	\$81,834,837	\$358,925
2017–18	\$46,523,676	\$11,391,063	\$13,007,020	\$9,552,343	\$80,474,103	\$343,906
2018–19	\$55,870,887	\$12,985,421	\$17,153,282	\$16,293,418	\$102,303,008	\$437,192
2019–20	\$55,416,469	\$10,266,990	\$20,522,389	\$19,033,630	\$105,239,478	\$438,498
2020–21	\$61,541,572	\$8,251,500	\$19,910,850	\$18,848,924	\$108,552,846	\$439,485

Figure 4.1c **Research Operating Funding by Year, Source and Funding per Faculty Member, 2011–2012 to 2020–2021**



	Gov't – Canada	Gov't – Ontario	Corporate	Other	Total	Funding per Faculty Member
2011–12	\$34,284,430	\$4,535,363	\$6,702,708	\$13,507,723	\$59,030,224	\$274,559
2012–13	\$32,008,870	\$8,511,021	\$6,277,980	\$15,621,407	\$62,419,278	\$286,327
2013–14	\$33,553,784	\$10,084,984	\$7,749,947	\$14,683,976	\$66,072,691	\$293,656
2014–15	\$35,298,439	\$6,661,150	\$7,917,673	\$14,075,827	\$63,953,090	\$288,077
2015–16	\$37,246,309	\$8,462,936	\$7,952,218	\$12,090,798	\$65,752,260	\$293,537
2016–17	\$40,620,860	\$11,388,721	\$8,547,459	\$14,244,259	\$74,801,300	\$328,076
2017–18	\$43,815,559	\$11,391,063	\$13,007,020	\$9,552,343	\$77,765,985	\$332,333
2018–19	\$49,680,508	\$9,831,591	\$17,153,282	\$16,293,418	\$92,958,799	\$397,260
2019–20	\$48,300,680	\$8,998,584	\$20,522,389	\$19,033,630	\$96,855,282	\$403,564
2020–21	\$51,515,634	\$6,894,569	\$19,910,850	\$18,848,924	\$97,169,976	\$393,401

Figure 4.2a Research Operating Funding by Year, Source and Funding per Faculty Member – University of Toronto Institute for Aerospace Studies, 2011–2012 to 2020–2021



Note 4.2a-g: Figures 4.2a-g show research operating funding only. Research operating funding excludes grants received under the following research infrastructure programs: Canada Foundation for Innovation (except the CFI Career Award); NSERC Research Tools & Instruments program for faculty; Ontario Innovation Trust; and Ontario Research Fund – Research Infrastructure.

Figure 4.2b Research Operating Funding by Year, Source and Funding per Faculty Member – Institute of Biomedical Engineering, 2011–2012 to 2020–2021

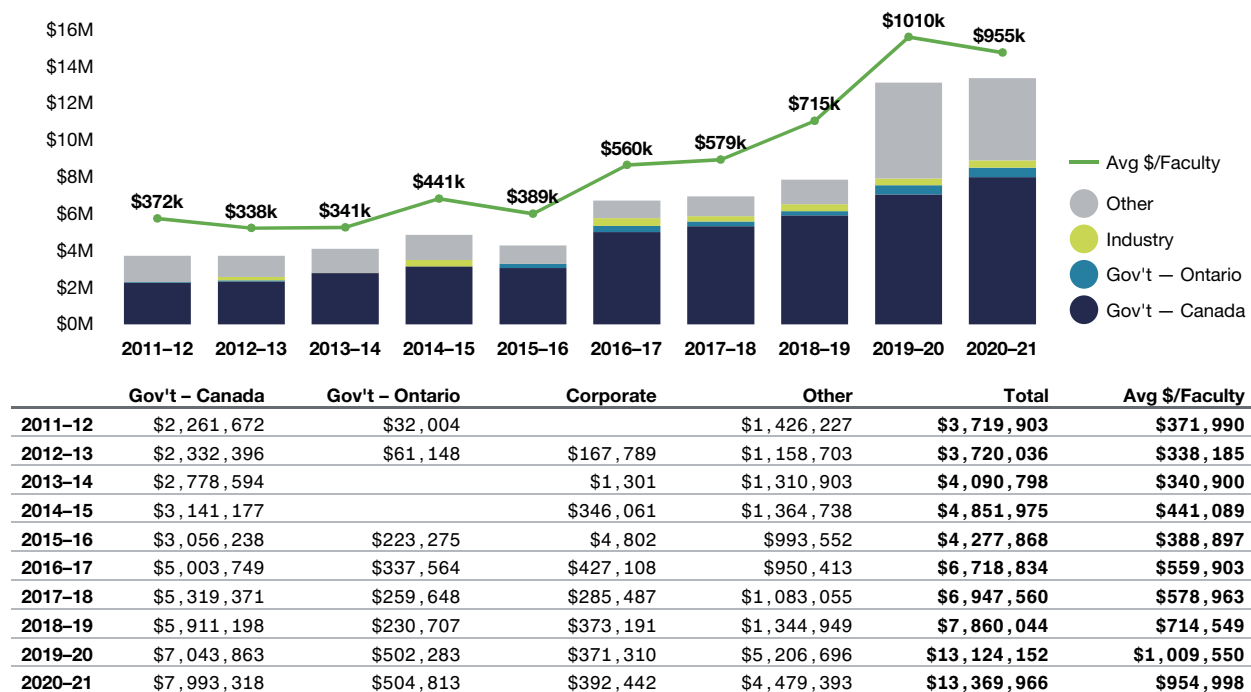


Figure 4.2c Research Operating Funding by Year, Source and Funding per Faculty Member – Department of Chemical Engineering & Applied Chemistry, 2011–2012 to 2020–2021

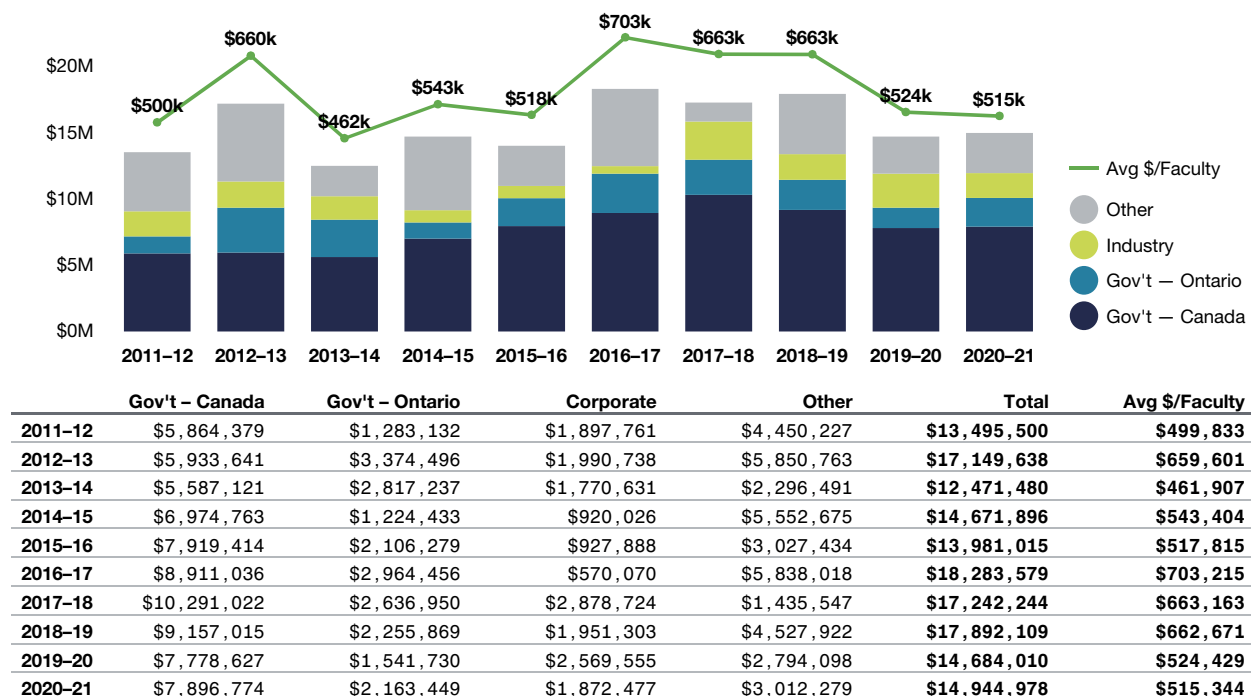


Figure 4.2d **Research Operating Funding by Year, Source and Funding per Faculty Member – Department of Civil & Mineral Engineering, 2011–2012 to 2020–2021**

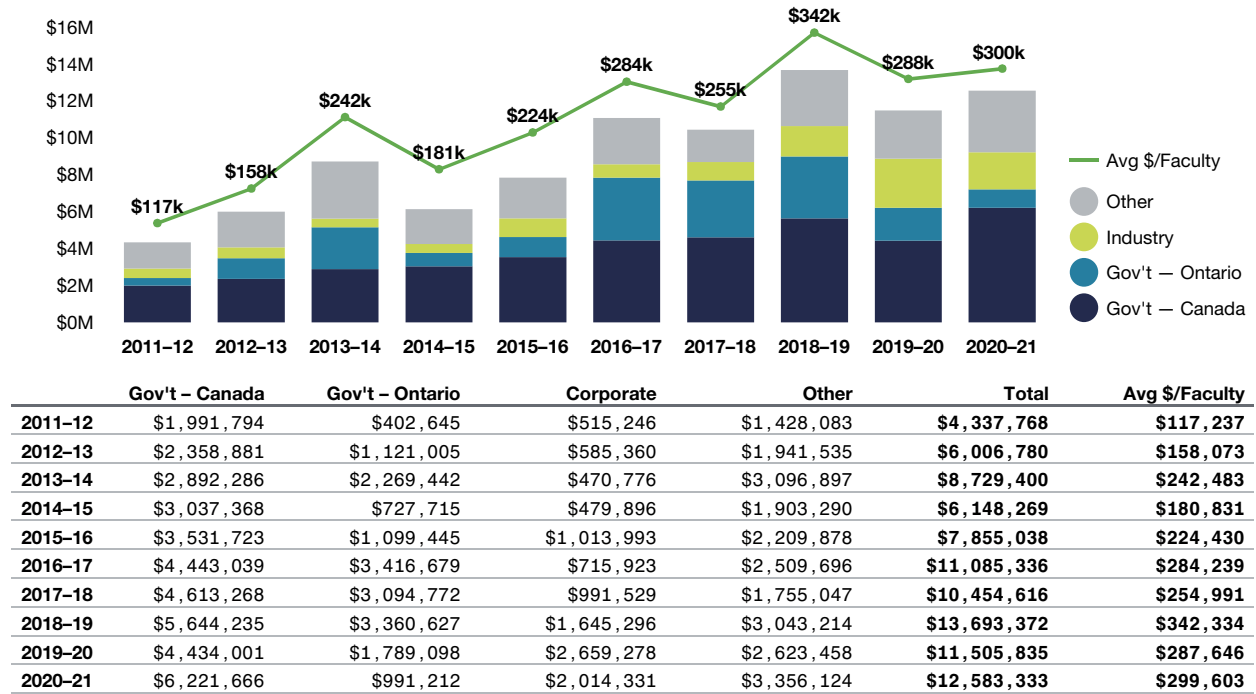


Figure 4.2e **Research Operating Funding by Year, Source and Funding per Faculty Member – The Edward S. Rogers Sr. Department of Electrical & Computer Engineering, 2011–2012 to 2020–2021**

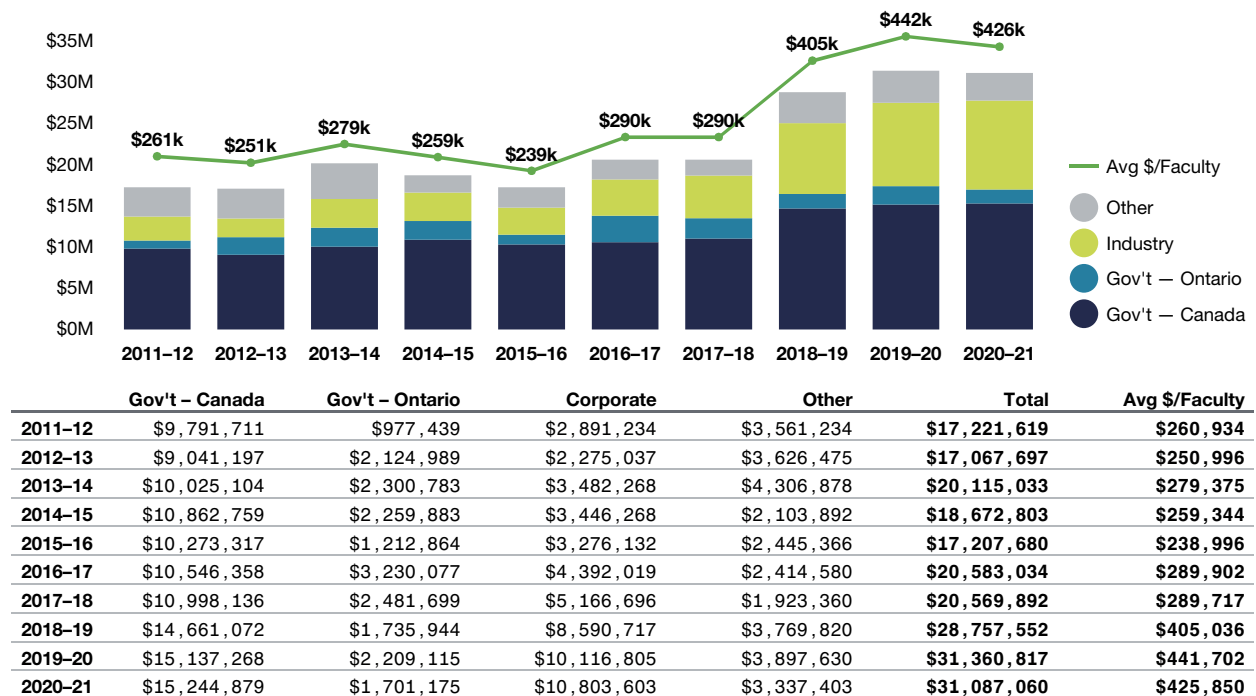


Figure 4.2f Research Operating Funding by Year, Source and Funding per Faculty Member – Department of Mechanical & Industrial Engineering, 2011–2012 to 2020–2021

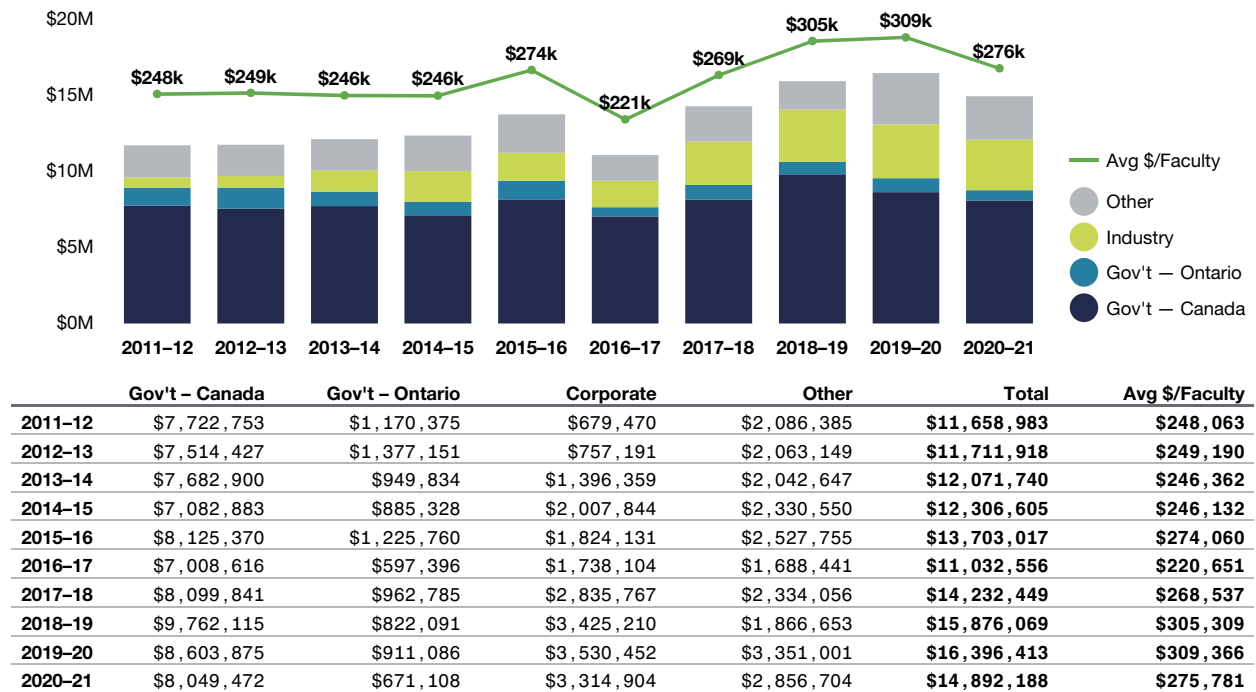


Figure 4.2g Research Operating Funding by Year, Source and Funding per Faculty Member – Department of Materials Science & Engineering, 2011–2012 to 2020–2021

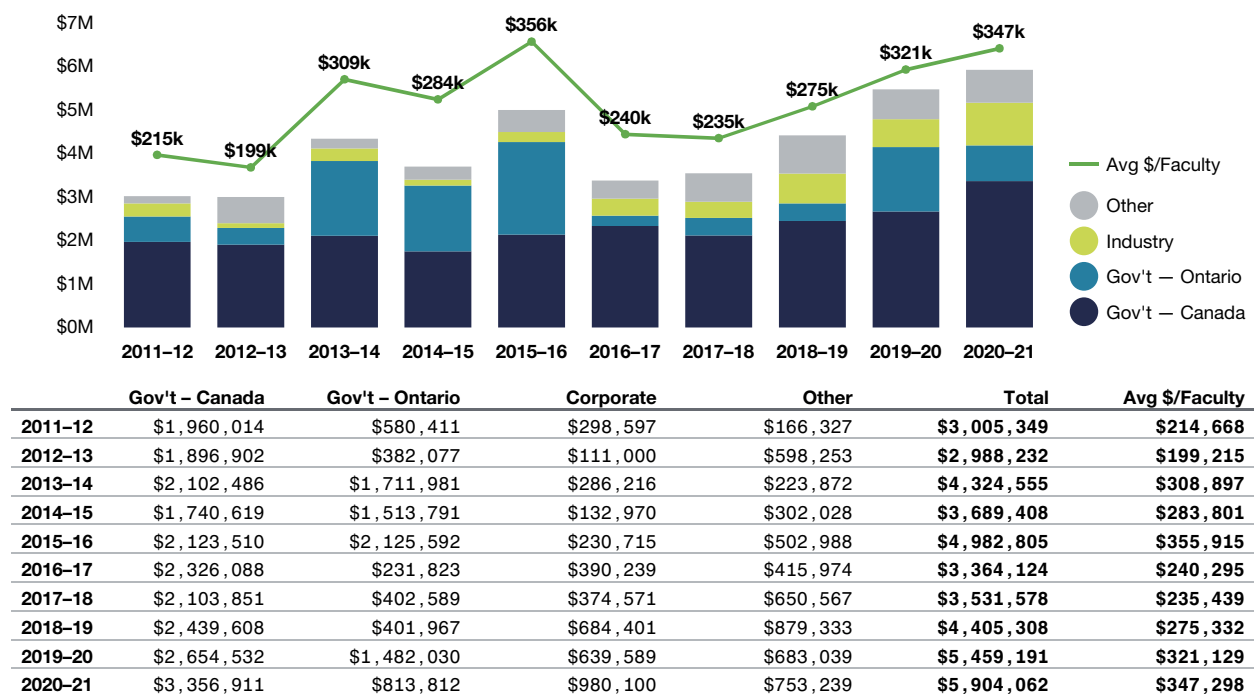
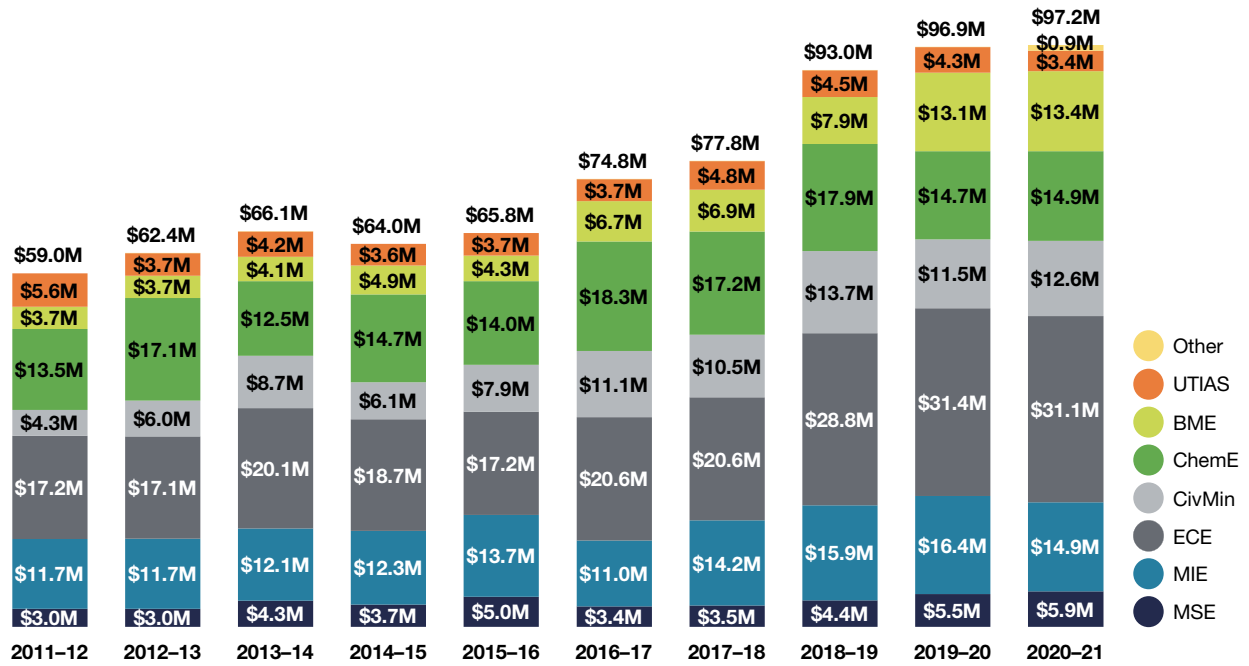


Figure 4.3 Distribution of Research Operating Funding by Academic Area, 2011–2012 to 2020–2021



Note 4.3: Totals include a small amount of additional funding not shown in the breakdown by academic areas (e.g. Dean's Office, ISTEP).

Figure 4.4a Tri-Agency and NCE Support: CIHR, NSERC and NCE Funding, 2011–2012 to 2020–2021

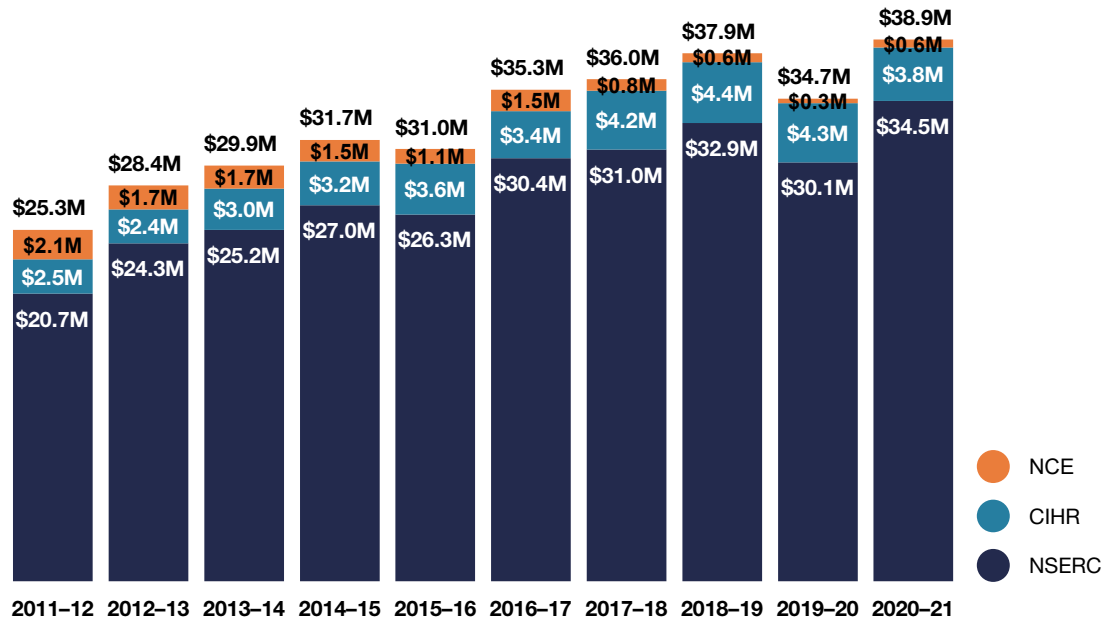
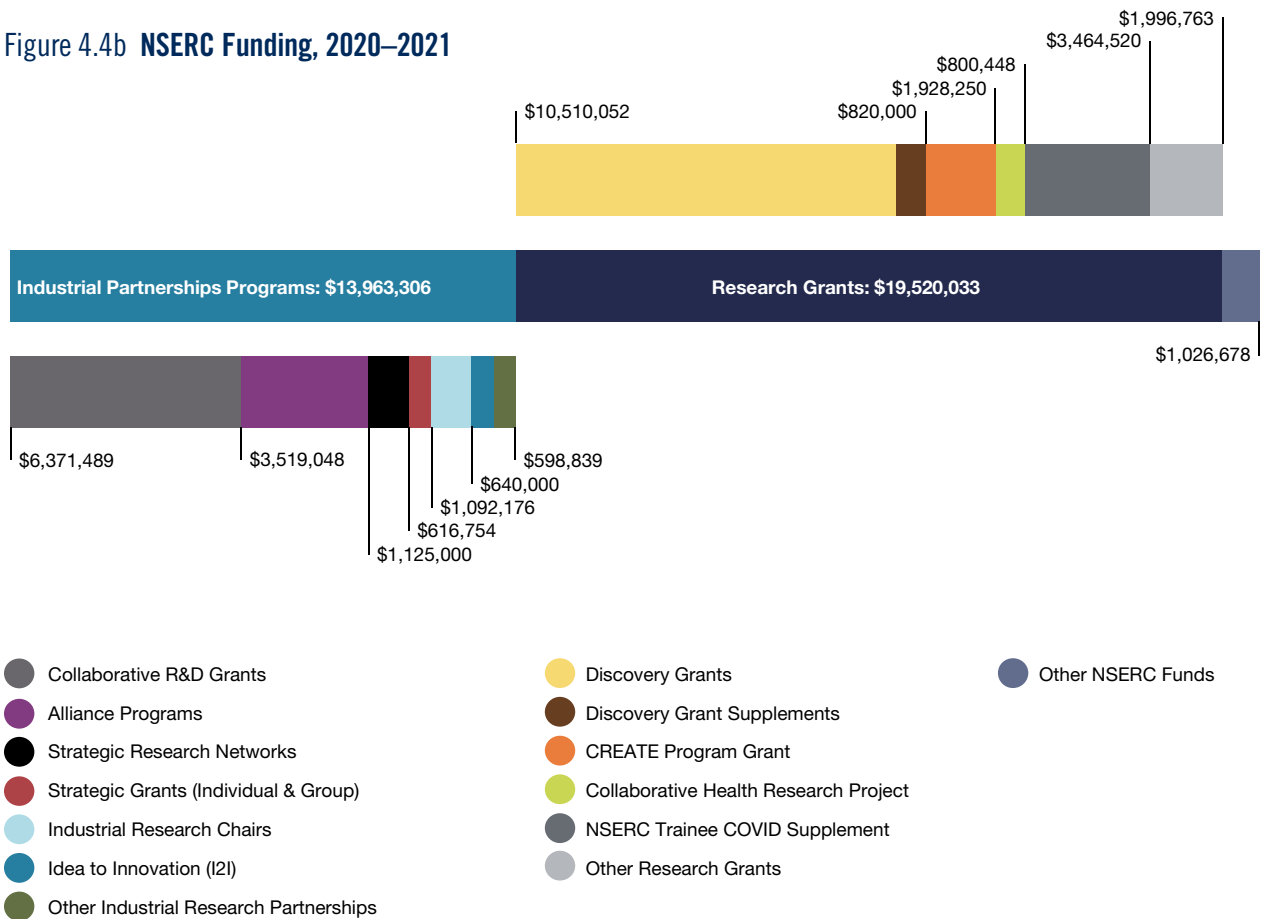
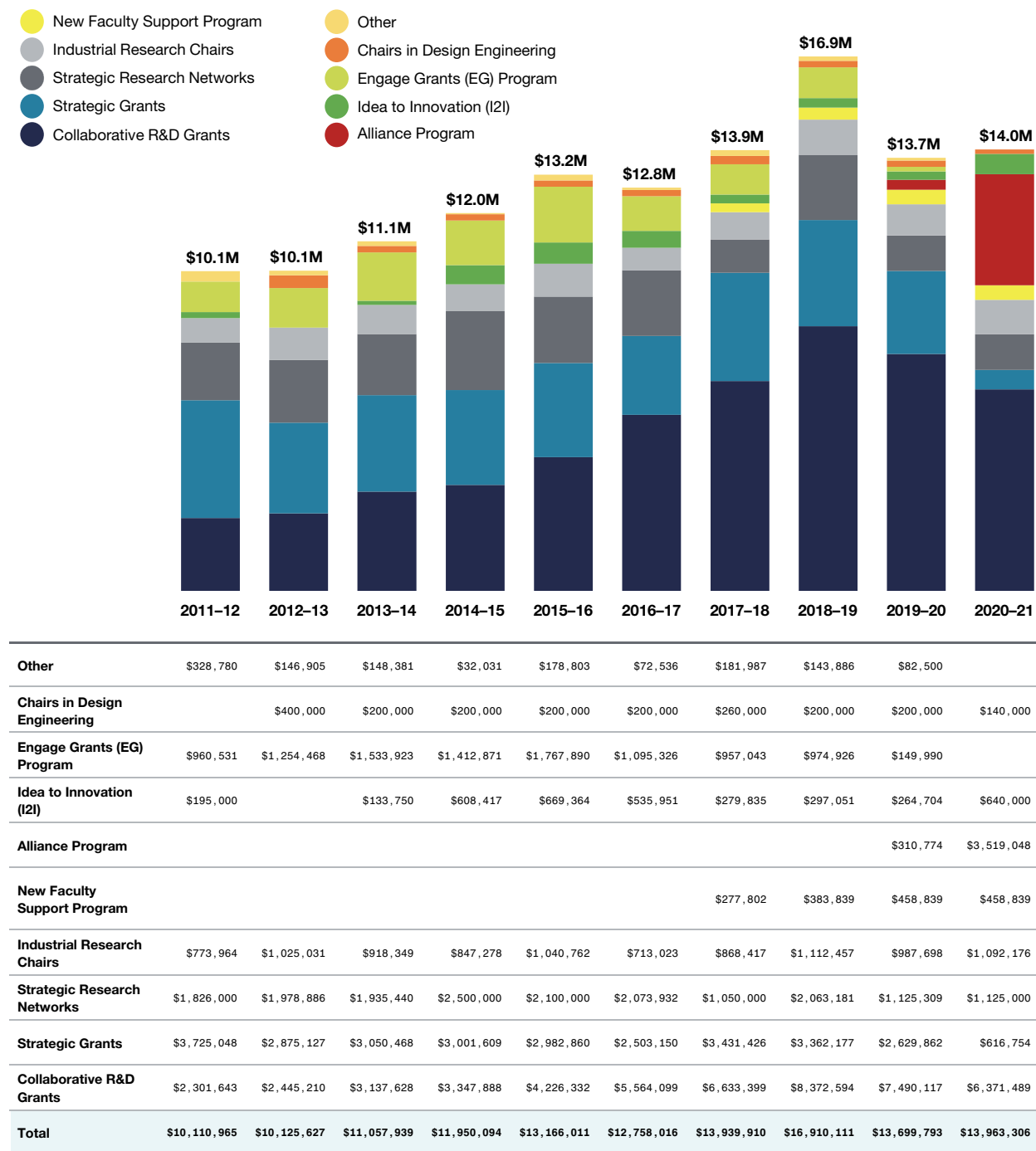


Figure 4.4b NSERC Funding, 2020–2021



Note 4.4b: Data as of May 2022 and based on grant year (April to March).

Figure 4.4c NSERC Industrial Partnership Funding by Program, 2011–2012 to 2020–2021



Note 4.4c: The NSERC Alliance Program replaces several older programs, such as Collaborative Research and Development (CRD) Grants, Strategic Grants, Strategic Research Networks, Industrial Research Chairs (IRC), Engage Grants and Connect Grants, which are being phased out accordingly. For a detailed listing, please visit the NSERC website.

Figure 4.4d Industrial Partnerships as Percentage of Total NSERC Funding, 2011–2012 to 2020–2021

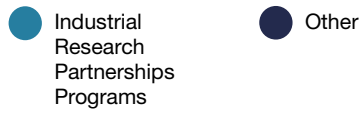
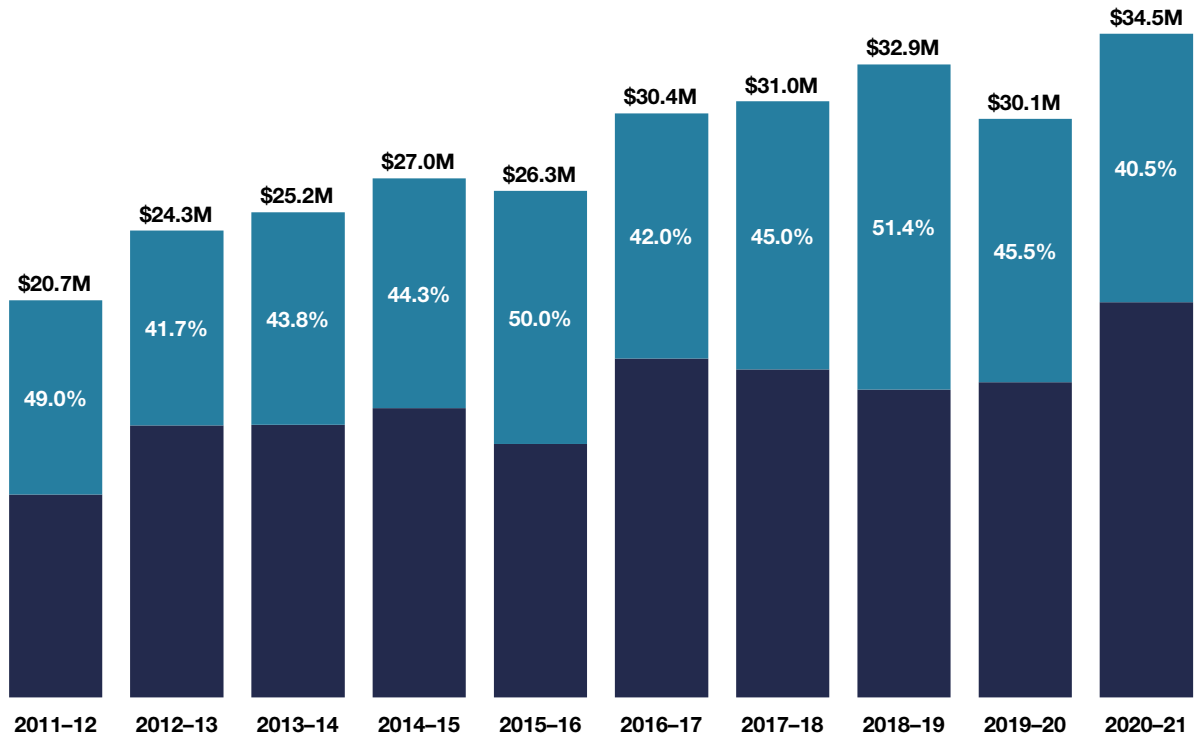
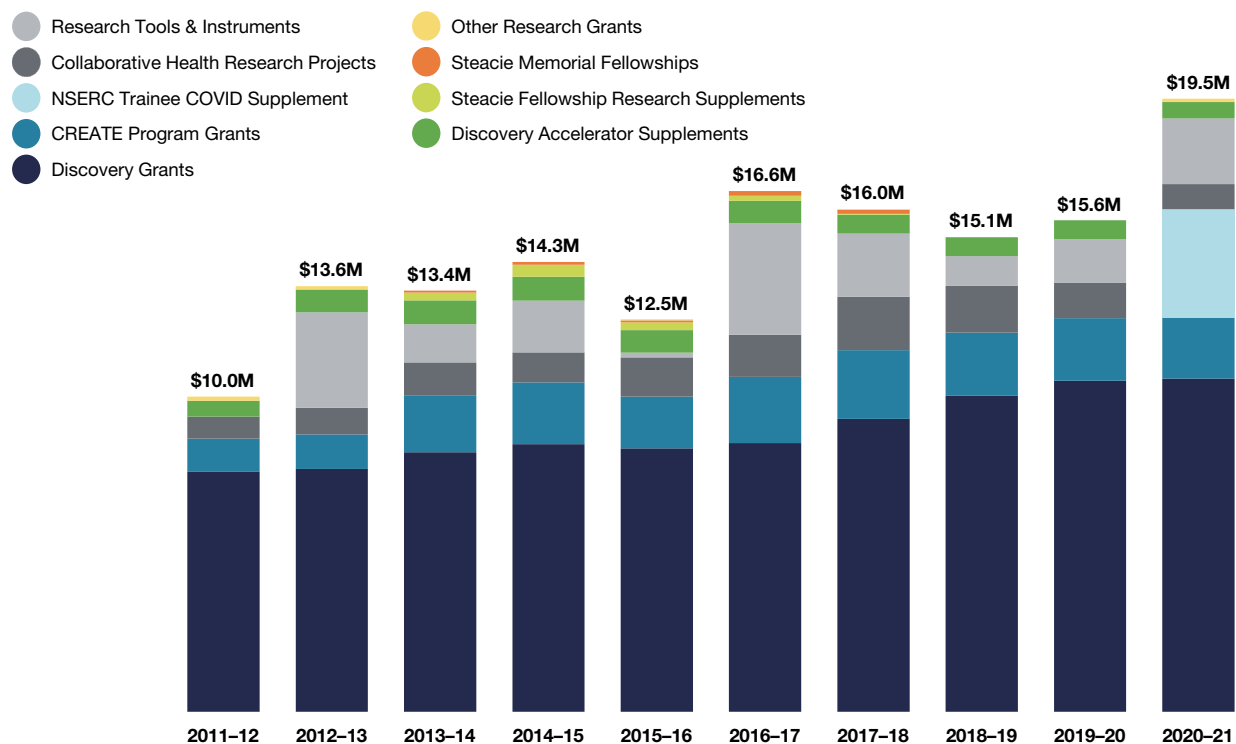


Figure 4.4e NSERC Research Grant Funding by Program, 2011–2012 to 2020–2021



Other Research Grants	\$132,000	\$111,000			\$40,000		\$25,000			\$110,000
Steacie Memorial Fellowships			\$60,000	\$90,000	\$60,000	\$155,000	\$125,000			
Steacie Fellowship Research Supplements			\$250,000	\$375,000	\$250,000	\$155,000	\$30,000			
Discovery Accelerator Supplements	\$504,000	\$720,000	\$760,000	\$760,000	\$716,285	\$719,970	\$600,000	\$597,629	\$600,000	\$520,000
Research Tools & Instruments		\$3,043,029	\$1,218,076	\$1,654,682	\$146,872	\$3,553,291	\$2,010,920	\$948,685	\$1,382,217	\$2,086,763
Collaborative Health Research Projects	\$696,536	\$846,731	\$1,060,212	\$950,376	\$1,248,480	\$1,338,873	\$1,699,697	\$1,489,331	\$1,136,575	\$800,448
NSERC Trainee COVID Supplement										\$3,464,520
CREATE Program Grants	\$1,050,000	\$1,095,969	\$1,797,084	\$1,969,779	\$1,648,885	\$2,100,000	\$2,189,233	\$2,000,767	\$1,992,674	\$1,928,250
Discovery Grants	\$7,647,932	\$7,734,942	\$8,264,362	\$8,518,417	\$8,387,179	\$8,558,937	\$9,327,300	\$10,069,078	\$10,535,814	\$10,610,052
Total	\$10,030,468	\$13,551,671	\$13,409,734	\$14,318,254	\$12,497,701	\$16,581,070	\$16,007,150	\$15,105,490	\$15,647,280	\$19,520,033

Figure 4.5a **Canadian Peer Universities vs. University of Toronto Share of NSERC Funding for Engineering Cumulative Five-Year Share, 2016–2017 to 2020–2021**

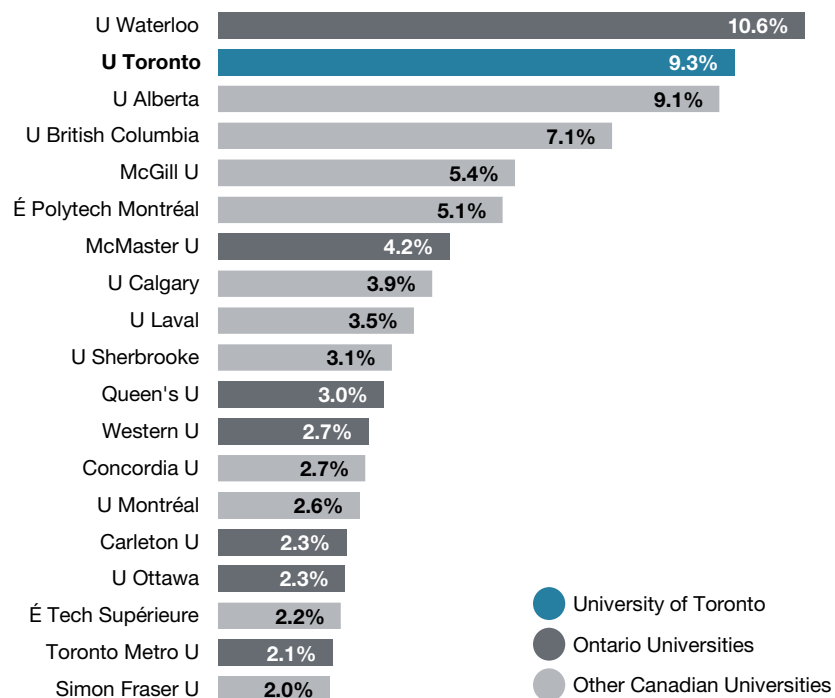
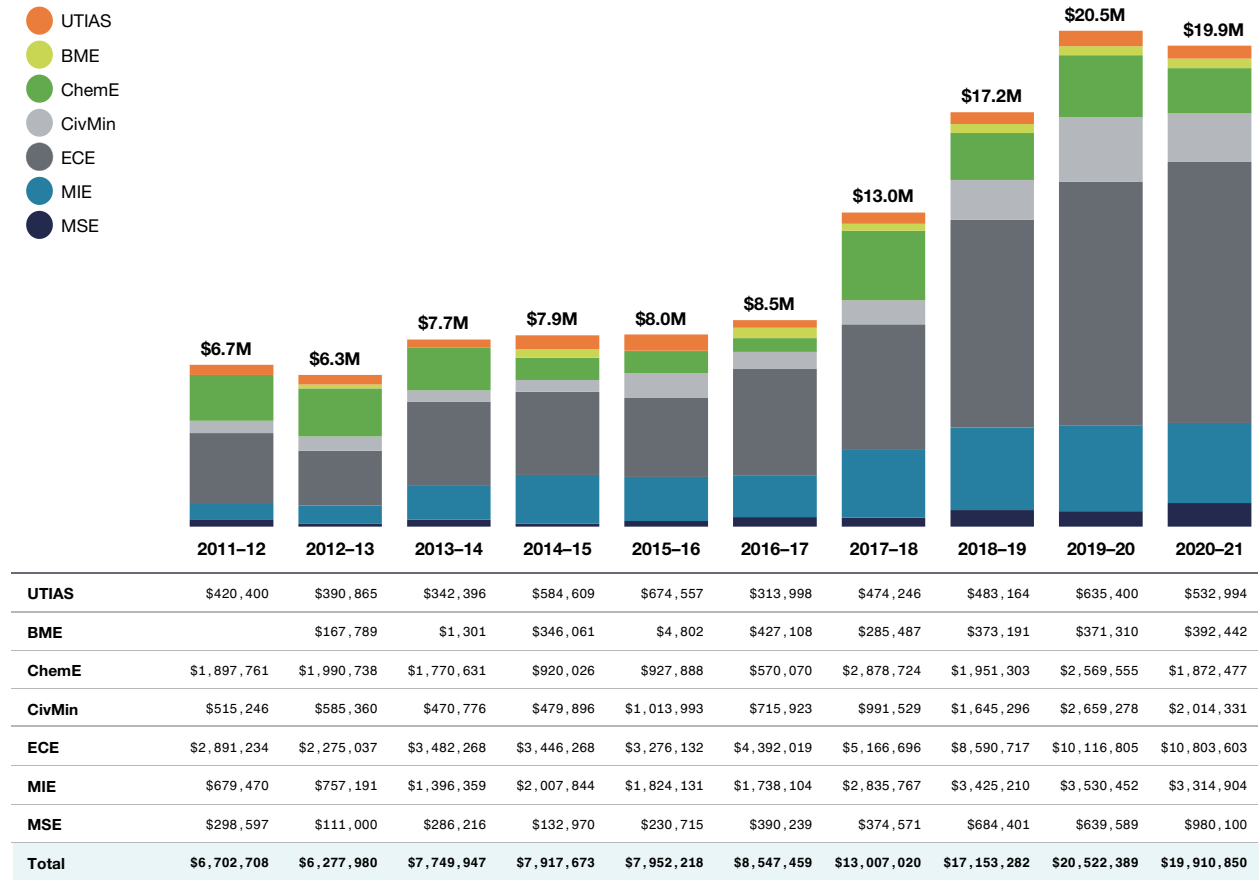


Figure 4.5b **U of T Annual Share of NSERC Funding in Engineering, 2011–2012 to 2020–2021**

2011–12	9.5%
2012–13	9.0%
2013–14	9.6%
2014–15	9.5%
2015–16	10.0%
2016–17	9.9%
2017–18	10.1%
2018–19	9.4%
2019–20	8.8%
2020–21	8.8%

Note 4.5a, b: Data are from the NSERC advanced search website and are shown by NSERC's fiscal year (April to March).

Figure 4.6a Industry Research Funding by Academic Area, 2011–2012 to 2020–2021



Note 4.6a: ISTEP does not currently receive any direct industry funding, but will be included in future reports.

Figure 4.6b Industry Partnerships, 2021–2022

- 3E Nano Inc.
- ABB Group
- Advanced Measurement and Analysis Group Inc.
- Advanced Micro Devices Inc.
- Advanced Polymer Materials Research
- Advanis
- Aerodyne
- Afsan Engineering Co.
- AGFA
- Agnico-Eagle Mines Ltd.
- Agrium Inc.
- Airbus SAS
- Alcan Aluminum International
- Alcohol Countermeasure Systems
- Altera Corp.
- AMAG Ltd.
- AMEC Foster Wheeler
- Americas Styrenics LLC
- Analog Devices Inc.
- Andec Manufacturing Ltd.
- Andritz Group
- Anemol Technologies Inc.
- Angstrom Engineering Inc.
- Antex Western
- Apotex Inc.
- Applanix
- Apple
- Aquafor Beech
- Arauco
- ArcelorMittal Dofasco
- ARKEMA Inc.
- Armacell
- Artium Technologies
- Atomic Energy of Canada Ltd.
- AUG Signals Ltd.
- Autodesk
- AV Nackawic Group
- Avalon Rare Metals
- Avertus Epilepsy Technologies Inc.
- Babcock & Wilcox Ltd.
- BaoWu Steel Group Corp.
- Barrick Gold Corp.
- Bell Helicopter Textron Inc.
- BEMISA
- BetterMilk Inc.
- Bickell Foundation (J. P. Bickell)
- BioCardia Inc.
- BiomeRenewables
- BionX International Inc.
- Bio-Rad Laboratories Canada Ltd.
- Blackberry
- BMW
- Boeing
- Boise Cascade
- Bombardier Aerospace
- Bombardier Inc.
- Braskem
- Bresotec Inc.
- Brican Automated Systems Inc.
- Brigham & Women's Hospital
- Brown and Caldwell
- CAE
- Calera
- CalEnergy Generation
- Calgary Transit
- Calgon Carbon Corp.
- Canadian Institute of Steel Construction
- Canadian Kraft Paper
- Canadian Nuclear Safety Commission
- Canadian Precast/Prestressed Concrete Institute
- Canadian Renewable Fuels Association
- Canadian Solar Inc.
- Canadian Urban Transit Research & Innovation Consortium
- Candu Energy Inc.
- Candu Owners Group
- Candura Instruments
- CanSyn Chem Corp.
- Carbon Cure Technologies
- Cardinal Health
- Carter Holt Harvey Ltd.
- Cascades
- Cast Connex Corp.
- CD Nova
- Celestica
- CellScale Biomaterials Testing
- Celulose Nipo-Brasileira
- Cement Association of Canada
- CENIBRA
- Center for Automotive Materials and Manufacturing
- Centre Line Ltd.
- Chemetry
- Christie Digital Systems Canada Inc.
- Chrysler Canada Inc.
- Ciena Canada Inc.
- CIMA Canada Inc.
- Clearpath Robotics
- Clyde-Bergemann Inc.
- CMC Electronics
- CMPC
- Colibri Technologies
- COM DEV International Ltd.
- Commissariat à l'énergie atomique
- ConCast Pipe
- Concretec Ltd.
- Connaught Foundation
- Cook Medical
- Coraltec Inc.
- CPCI
- Createx Technology (Suzhou) Co., Ltd.
- Crosswing Inc.
- Curiousitate
- Cyberworks Robotics
- Daishowa-Marubeni International (DMI) Ltd.
- Dana Canada Corp.
- Daniels Group
- Dasaerospace Inc.
- Datatrends Research Corp.
- DCL International
- Defence Science & Technology Lab (UK)
- Dell
- Detour Gold Corp.
- Deveron
- Dionex
- Dongwon Technology Co. Ltd.
- Domtar Inc.
- Dr. Robot Inc.
- Drone Delivery Canada
- Droplet Measurement Technologies
- DSO National Laboratories
- DuPont Canada Inc.
- Eavor Technologies Inc.
- eCamion Incorporated
- Eclipse Scientific Inc.
- Ecobee Inc.
- EcoSynthetix
- Eco-Tec Inc.
- Eldorado Brasil
- Electrovaya Inc.
- Eli Lilly Research Laboratories
- EllisDon
- Enbridge Gas Distribution Inc.
- Energent Inc.
- Engineering Services Inc.
- ENMAX Power Corp.
- Ensyn Technologies Inc.
- Epson Canada Ltd.
- ERCO Worldwide
- Ericsson Canada Inc.
- ESG Solutions
- exactEarth Inc.
- Exigence Technologies
- Expert Process Solutions (XPS)
- Explora Foundation
- Exxon Mobil Corp.
- Facca Inc.
- Fibria Celulose
- Fidelity Canada

- Finisar Corp.
- FITNIR
- Flight Safety International
- Food BioTek Corp.
- Ford Motor Company (USA)
- Ford Motor Company of Canada
- Fortress Advanced Bioproducts
- FP Innovations
- Fuji Electric Co., Ltd.
- Fujitsu Laboratories Ltd.
- Fujitsu Labs of America Inc.
- Futurebound Corp.
- Futurewei Technologies Inc.
- G. Cinelli – Esperia Corp.
- GE Energy
- GE Global Research
- GE Zenon
- Gedex Inc.
- Gener8 Inc.
- General Dynamics Canada
- General Electric Canada
- General Electric Inc.
- General Motors of Canada Ltd.
- Genpak
- Georgia-Pacific
- Geosyntec Consultants
- Gerdau Long Steel North America
- GHGSat Inc.
- GlaxoSmithKline Inc.
- Glencore Canada Corp.
- Goodrich Landing Gear
- Gradient Wind Engineering Inc.
- Grafoid Inc.
- Greencore Composites
- Groupe Mequaltech Inc.
- G.S. Dunn Dry Mustard Millers
- GTAA Toronto Pearson
- GVA Lighting
- Hanwha Solutions Corp.
- Hard Rock Innovations Inc.
- Hatch Ltd.
- Havelaar Canada
- Hawker Siddeley Canada
- HDR Corp.
- Hedgefog Research Inc.
- HIT Robot Group
- Hitachi High-Technologies Canada
- Holcim Inc.
- Honeywell
- Huawei Technologies Co. Ltd.
- Hunch Manifest Inc.
- Huron Digital Pathology
- Hydro One Networks
- Hydro Quebec
- Hydrogenics
- Hyundai Motor Company
- IBI Group
- IBM Canada Ltd.
- IBM T. J. Watson Research Center
- iBwave Solutions Inc.
- IGPC Ethanol
- IMAX Corp.
- Imperial Oil Ltd.
- iNAGO Corp.
- Independent Electricity System Operator (IESO)
- Indian Oil Company
- Industrial Thermo Polymers Ltd.
- Ingenia Polymers Corp.
- Inphi Corp.
- Institute for Energy Technology (Norway)
- Integran Technologies Inc.
- Intel Corp.
- Interface Biologics Inc.
- International Business Machines (IBM)
- International Paper Company
- Ionicon
- Ionics Mass Spectrometry Group Inc.
- IRISNDT Corp.
- Irving Pulp & Paper Ltd.
- JDS Uniphase Inc.
- Jiangsu FGY Energy Storage Research
- JITRI Micro and Nano Automation
- JNE Chemicals
- Johnson & Johnson Inc.
- Johnson Matthey
- Kapik Integration
- Kasai Kogyo Co. Ltd.
- Kevin Quan Studios
- Keysight Technologies Canada Inc.
- Kiln Flame Systems Ltd.
- Kimberly-Clark Corp.
- Kinetica Dynamics
- Kinross Gold Corp.
- KIRCHHOFF Automotive
- Klabin
- Klohn Crippen Berger Ltd.
- Korea Atomic Energy Research Institute
- KQS Inc.
- Krauss Maffei Corp.
- Kumho Petrochemical R & D Center
- Laboratoire d'essai Mequaltech
- LaFarge Canada
- Lallemand Inc.
- Lancaster Homes Inc.
- Lattice Semiconductor Ltd.
- Leader's Circle
- LG Electronics
- LightMachinery Inc.
- Lisgar Construction Company
- Litens Automotove Group
- Lorama Group Inc.
- Lubrizol
- Lumentra Inc.
- Lynx Biosciences, Inc.
- MacDonald, Dettwiler and Associates (MDA) Ltd.
- MacRae Imaging Inc.
- Magellan Aerospace
- Magna Closures
- Magna Exteriors and Interiors
- Magna International Inc.
- Magna Powertrain
- Manitoba Hydro
- Mantech Inc.
- Marmak Information Technologies
- Materials & Manufacturing Ontario
- Maxim Integrated Products Inc.
- McEwen Mining Inc.
- Meadow Lake Mechanical Pulp
- MeadWestvaco (MWV) Corp.
- Mercedes-Benz Research and Development North America
- Mercer
- Messier-Bugatti-Dowty
- Messier-Dowty Inc.
- Metso Pulp, Paper and Power
- Microbonds Inc.
- Micropilot
- Millipore
- Mine Environment Neutral Drainage
- Minerva Canada Safety Management
- Mitsubishi Rayon Co. Ltd.
- MODAL AG
- Moldflow Corp.
- Monaghan Biosciences Ltd.
- Nanowave
- NanoXplore Inc.
- National Aeronautical Establishment (USA)
- National Research Council: C-CRAFT
- National Research Council: C-GEM
- NatureWorks LLC
- NCE: Nanomedicines Innovation Network
- NCK Engineering
- Neo Performance Materials
- Nestle Canada Inc.
- New World Laboratories
- Newterra
- Nike Inc.
- Noram
- Nordion International Inc.
- Northern Yashi Engineering Construction, Ltd.
- NUCAP Global
- Nuclear Waste Management Organization
- Nutrien
- NXP Semiconductors Netherlands BV
- OCMR

- Olympus Canada
- Olympus NDT Canada
- Ontario Clean Water Agency
- Ontario Power Generation Inc.
- Ontario Renal Network
- ON Semiconductor
- Opal-RT Technologies Inc.
- ORNGE Medical Transport
- Ossur Canada Inc.
- OtoSim
- OZ Optics Ltd
- Pall Corp.
- Perkin Elmer Canada
- Petronas Canada
- Pfizer Inc.
- Philips Electronics North America Corp.
- Plasco Energy Group
- Platinum Unlimited Inc.
- Pliant Therapeutics, Inc.
- Polumiros Inc.
- Polycon Industries
- Porewater Solutions
- Potent Group Inc.
- Pratt & Whitney Canada Inc.
- PrecisionHawk
- Process Research Ortech Inc.
- Procter & Gamble
- Prothena Biosciences Inc.
- Purolator
- QD Solar Inc.
- Qoo Studio
- Qualcomm Canada Inc.
- Qualcomm Technologies Inc.
- Quanser Inc.
- Quantum Dental Technologies (QDT) Inc.
- Questor Technologies Inc.
- Quorum Technologies Inc.
- Rayonier Advanced Materials
- RBC – Royal Bank of Canada
- Regeneron Pharmaceuticals
- RESCON
- Resertrac Inc.
- Resolute Forest Products
- Resonance Ltd.
- Resource Systems Group Inc.
- Rianta Solutions
- Rio Tinto Alcan Inc.
- Rio Tinto Fer it Titane
- Robert Bosch Corp.
- Rockwell International
- Rocscience Inc.
- Rohto Pharmaceutical
- Rolls Royce Canada Ltd.
- Royal Bank of Canada
- Rubikloud Technologies Inc.
- RWDI
- Safety Power Inc.
- Safran Electronics Canada
- Samsung Advanced Institute of Technology
- Samsung Display
- Samsung Electronics Co., Ltd.
- Sanofi Pasteur
- Sappi
- Saudi Basic Industries Corp. (SABIC)
- Sceye Inc.
- Schlumberger Canada Ltd.
- SCINTIL Photonics
- Sealed Air Corp.
- Semiconductor Research Corp.
- Sensor Technology Ltd.
- S-FRAME Software Inc.
- ShawCor Ltd.
- Shinil Chemical Industry Co. Ltd.
- Side Effects Software
- Sidewalk Toronto Employees Ltd.
- Siemens ADGT
- Siltech Corp.
- Sinclair Interplanetary
- Sinclair Technologies Inc.
- Södra
- Solantro Semiconductor Corp.
- Solar Ship Inc.
- Solvay Specialty Polymers
- Sony Corp.
- SPP Canada Aircraft, Inc.
- Stelco Inc.
- St Mary's Cement Group
- Stackpole International
- Stantec Inc.
- Steel Structures Education Foundation
- StemCell Technologies Inc.
- StoraEnso
- Sulzer Metco
- Suncor Energy Inc.
- Sunnybrook Health Sciences Centre
- Sunwell Technologies
- Suzano Papel e Celulose
- Synbra
- Syncrude Canada Ltd.
- Tantalus Rare Earths AG
- Teck Resources Ltd.
- Teledyne ISCO
- TELUS
- Telus Mobility
- Tembec Industries Inc.
- Tenova GoodFellow Inc.
- Tessonics Inc.
- Thales Canada Inc.
- The Iron Ore Company of Canada (IOC)
- The Miller Group
- Theralase Inc.
- ThermoFisher Scientific
- Tolko Industries Ltd.
- Toronto Hydro
- Toronto Nano Instrumentation Inc.
- Total American Services Inc.
- Tower Automotive
- Tower Solutions
- Toyota Collaborative Safety Research Center (CSRC)
- Toyota Technical Center USA Inc.
- TransCanada
- Trapeze Software ULC
- Trojan Technologies Inc.
- TSI
- Ultrasonix
- Uncharted Software Inc.
- Unisearch Associates Inc.
- Universal Matter Inc.
- US Steel Canada
- VAC Aero International Inc.
- Vale Canada Ltd.
- Valmet Ltd.
- Vicicog
- VisImage Systems Inc.
- Visual8 Corp.
- Volkswagen Canada Inc.
- VTT Technical Research Centre of Finland
- Waterloo Instruments Inc.
- Westport Innovations
- Westrock
- Whitemud Resources
- WSP Canada Inc.
- Wugang Canada Resources Invest. Ltd.
- Wurth Elektronik eiSos GmbH & Co. KG
- Wuzhong Instrument Company
- Xesto
- Xilinx Inc.
- Xiphos Technologies Inc.
- XOR-Labs Toronto
- Xstrata Nickel
- Xylitol Canada
- Zhejiang Tmall Technology
- Zotefoams PLC

Note 4.6b: The list above includes companies from U of T's Research Information System, along with collaborators that fund research through a number of industrial research consortia, including those associated with many of our Industrial Research Chairs. It does not include companies that hire our students through the Professional Experience Year Co-op program, work with them on Multidisciplinary Capstone Projects, or provide philanthropic support.

Figure 4.7a U of T Engineering Invention Disclosures by Academic Area, 2017–2018 to 2021–2022

	2017–18	2018–19	2019–20	2020–21	2021–22	5-Yr Total
UTIAS	1.0	0.0	1.0	2.0	2.0	6.0
BME	8.0	18.0	20.0	10.0	13.0	69.0
ChemE	7.0	16.0	19.0	8.0	20.0	70.0
CivMin	3.0	3.0	7.0	4.0	5.0	22.0
ECE	48.0	43.0	53.0	43.0	41.0	228.0
EngSci	2.0	1.0	1.0	1.0	2.0	7.0
MIE	17.0	21.0	24.0	21.0	23.0	106.0
MSE	6.0	10.0	4.0	5.0	10.0	35.0
Annual Total	92.0	112.0	129.0	94.0	116.0	543.0
University Annual Total	161.0	192.0	182.0	122.0	160.0	817.0
Engineering Percentage	57%	58%	71%	77%	73%	66%

Figure 4.7b Patent Applications by Faculty, 2021–2022

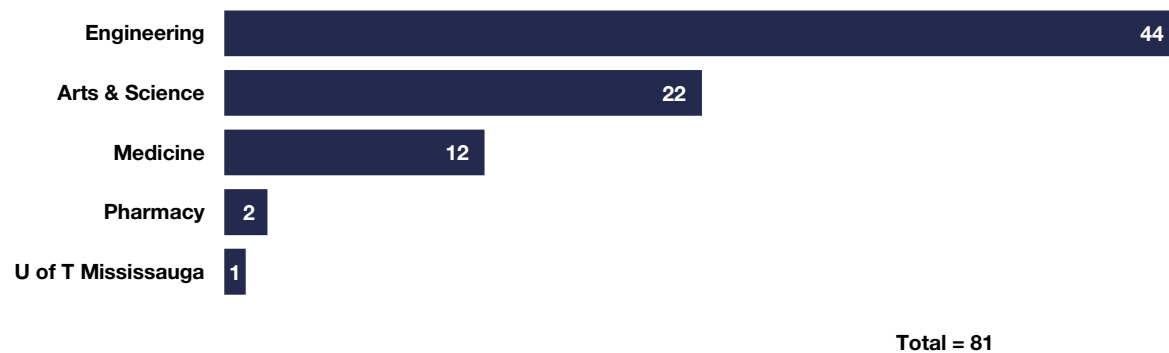


Figure 4.8 Spinoff Companies, 2004 to 2022

Est.	Company Name	Engineering Affiliation	Department
2022	TissueCraft	Milica Radisic	BME, ChemE
2022	Biosense Tex	Hani Naguib	MIE
2021	iTunePower Inc.	Reza Iravani	ECE
2021	Infera, Inc.	Prasanth Nair	UTIAS
2021	Mazlite	Nasser Ashgriz	MIE
2021	NerveX Neurotechnologies	Roman Genov	ECE
2021	Neuraviolet Inc.	Shahrokh Valaee	ECE
2020	CerebTalk	Tom Chau	BME
2020	CERT Systems Inc.	Ted Sargent & David Sinton	ECE, MIE
2020	hedQTRS	Deepa Kundur	ECE
2020	Quantum Bridge Technologies Inc.	Hoi-Kwong Lo	ECE
2020	Stim49	Paul Yoo	BME
2020	Synakis	Molly Shoichet	ChemE, BME
2020	Tartan AI Ltd.	Andreas Moshovos	ECE
2020	Undu Wearables	Charlie Katrycz	MSE
2019	Amber Molecular Inc.	Tim Bender	ChemE
2019	Exactly Eyewear	Haonan "Alan" Li	ECE
2019	Micellae Delivery Systems Inc.	Mehdi Nouraei	ChemE
2018	Sankoya Technologies	Yu-Ling Cheng	ChemE
2018	BIM2Network	Tamir El-Diraby	CivMin
2018	Mesosil	Benjamin Hatton & Yoav Finer	MSE
2018	Micromensio	Glenn Gulak	ECE
2018	Phenomic AI	Brendan Frey	ECE
2018	Phycus Biotechnologies	Vikram Pandit & Christian Euler	ChemE
2017	Centivizer	Mark Chignell	MIE
2017	Quthero Inc.	Milica Radisic	BME, ChemE
2017	Shield Crypto Systems Inc.	Glenn Gulak	ECE
2016	2488138 Ontario Inc.	Roman Genov	ECE
2016	3E Nano Inc.	Nazir Kherani	ECE
2016	AmacaThera Inc. (formerly Hammock Pharmaceuticals Inc.)	Molly Shoichet & Michael Cooke	ChemE, BME
2016	Ardra Bio Inc.	Radhakrishnan Mahadevan	ChemE
2016	Crowd2Know Inc.	Tamer El-Diraby	CivMin
2016	Interface Fluidics	David Sinton	MIE
2016	Knitt Labs, Inc. (formerly FlexCube Technology Inc.)	Shuze Zhao	ECE
2016	LegUp Computing Inc.	Jason Anderson & Stephen Brown	ECE
2016	Polumiros Inc.	Soror Sharifpoor & Kyle Battiston	BME
2016	Sheba Microsystems Inc.	Ridha Ben Mrad & Faez BaTis	MIE
2016	Sonare Inc.	David Steinman & Luis Aguilar	MIE
2015	Appulse Inc. (formerly ICE3 Power Technologies Inc.)	Aleksander Prodic	ECE
2015	Deep Genomics Inc.	Brendan Frey	ECE
2015	Enhanced Biomodulation Technologies Inc.	Paul Yoo	BME
2015	ExCellThera Inc.	Peter Zandstra	BME
2015	Rheo Technologies	Craig Simmons	MIE
2015	Tara Biosystems, Inc.	Milica Radisic	BME
2014	Arrowonics Technology Ltd.	Hugh Liu	UTIAS
2014	Enceladeus Imaging	Steve Mann	ECE
2014	IQ Biomedical	David Sinton	MIE

2014	Pragmatek Transport Innovations, Inc.	Baher Abdulhai	CivMin
2014	QD Solar Inc.	Sjoerd Hoogland & Ted Sargent	ECE
2014	Toronto Nano Instrumentation Inc. (TNI Inc.)	Yu Sun	MIE
2014	xCELLpure Inc.	Milica Radisic	BME, ChemE
2014	XTouch Inc.	Parham Aarabi	ECE
2013	CoursePeer	Hadi Aladdin	ECE
2013	eQOL Inc.	Binh Nguyen	ECE
2013	Kydo Engineering	John Ruggieri	ChemE
2013	Lullyn Technologies Inc.	Michael Joy	BME
2013	Sonas Systems Inc.	Joyce Poon	ECE
2013	SpineSonics Medical Inc.	Richard Cobbold	BME
2013	Whirlscape Inc.	Will Walmsley	MIE
2012	Kinetica Dynamics Inc.	Constantin Christopoulos	CivMin
2012	MyTrak Health Systems	Sean Doherty	CivMin
2012	OTI Lumionics Inc.	Zheng-Hong Lu	MSE
2012	XTT	Parham Aarabi	ECE
2011	Aereus Technologies Inc. (formerly Aereus Wood)	Javad Mostaghimi	MIE
2011	Bionym Inc.	Karl Martin	ECE
2011	Filaser Inc.	Peter Herman	ECE
2011	Luminautics Inc. (formerly Ensi Solutions)	Graham Murdoch	MSE
2011	Nymi (Formerly Bionym Inc.)	Karl Martin	ECE
2011	Ojiton Inc.	Tom Chau	BME
2011	PRISED Solar Inc.	Wahid Shams-Kolahi	ECE
2011	RenWave	Mohamed Kamh	ECE
2011	Sense Intelligent	Brian Hu	ECE
2011	Xagenic Canada Inc.	Ted Sargent	ECE
2010	Arda Power Inc.	Peter Lehn	ECE
2010	FOTA Technologies	Tony Chan Carusone	ECE
2009	Chip Care Corp.	J. Stewart Aitchison	ECE
2009	Cyodiagnosics	Warren Chan	BME
2009	Peraso Technologies Inc.	Sorin Voinigescu	ECE
2008	Ablazeon Inc.	Javad Mostaghimi	MIE
2008	Arch Power Inc.	Mohammad (Reza) Iravani	ECE
2008	AXAL Inc.	Milos Popovic & Egor Sanin	BME
2008	Incise Photonics Inc.	Peter Herman	ECE
2008	Quantum Dental Technologies	Andreas Mandelis	MIE
2008	Simple Systems Inc.	Milos Popovic, Aleksandar Prodic & Armen Baronijan	ECE, BME
2007	002122461 Ontario Inc.	Harry Ruda	MSE
2007	Cast Connex Corp.	Jeffrey Packer & Constantin Christopoulos	CivMin
2007	Elastin Specialties	Kimberly Woodhouse	ChemE
2007	Inometrix Inc.	Michael Galle	ECE
2007	Modiface Inc.	Parham Aarabi	ECE
2007	Neurochip Inc.	Berj Bardakjian	BME
2007	Viewgenie Inc.	Parham Aarabi	ECE
2006	Anviv Mechatronics Inc. (AMI)	Andrew Goldenberg	MIE
2006	InVisage Technologies Inc.	Ted Sargent	ECE
2006	Metabacus	Jianwen Zhu	ECE
2006	Vennsa Technologies Inc.	Andreas Veneris & Sean Safarpour	ECE
2005	Greencore Composites	Mohini Sain	Forestry, ChemE
2004	Field Metrica Inc. (FMI)	Tim DeMonte, Richard Yoon	BME
2004	Tissue Regeneration Therapeutics Inc. (TRT)	J.E. Davies	BME
2003	1484667 Ontario Inc.	Brad Saville	ChemE

Figure 4.9 Chairs and Professorships

Title	Chairholder	Sponsor	Tier	Department
Alumni Chair in Bioengineering	Cristina Amon	Endowed		MIE
Bahen/Tanenbaum Chair in Civil Engineering	Jeffrey Siegel	Endowed		CivMin
Bahen/Tanenbaum Chair in Civil Engineering	Amer Shalaby	Endowed		CivMin
Bell Canada Chair in Computer Engineering	Baochun Li	Endowed		ECE
Bell Canada Chair in Multimedia	Kostas Plataniotis	Endowed		ECE
Bell Canada Chair in Software Engineering	Michael Stumm	Endowed		ECE
Canada Research Chair in Advanced Catalysis for Sustainable Chemistry	Cathy Chin	NSERC	Tier 2	ChemE
Canada Research Chair in Anaerobic Biotechnology	Elizabeth Edwards	NSERC	Tier 1	ChemE
Canada Research Chair in Atmospheric Chemistry and Health	Arthur Chan	NSERC	Tier 2	ChemE
Canada Research Chair in Cellular Hybrid Materials	Glenn Hibbard	NSERC	Tier 2	MSE
Canada Research Chair in Collaborative Robotics	Jonathan Kelly	NSERC	Tier 2	UTIAS
Canada Research Chair in Computer Architecture	Natalie Enright Jerger	NSERC	Tier 2	ECE
Canada Research Chair in Diffusion-Wave Sciences and Technologies	Andreas Mandelis	NSERC	Tier 1	MIE
Canada Research Chair in Electric Power Systems	Ali Hooshyar	NSERC	Tier 2	ECE
Canada Research Chair in Endogenous Repair	Penney Gilbert	NSERC	Tier 2	BME
Canada Research Chair in Engineered Soft Materials and Interfaces	Arun Ramchandran	NSERC	Tier 2	MIE
Canada Research Chair in Environmental Engineering and Stable Isotopes	Elodie Passeport	NSERC	Tier 2	ChemE, CivMin
Canada Research Chair in Freight Transportation and Logistics	Matthew Roorda	NSERC	Tier 2	CivMin
Canada Research Chair in Human Factors and Transportation	Birsen Donmez	NSERC	Tier 2	MIE
Canada Research Chair in Information Processing and Machine Learning	Brendan Frey	NSERC	Tier 1	ECE
Canada Research Chair in Information Theory and Wireless Communications	Wei Yu	NSERC	Tier 1	ECE
Canada Research Chair in Machine Learning for Robotics and Control	Angela Schoellig	NSERC	Tier 2	UTIAS
Canada Research Chair in Metabolic Systems Engineering	Radhakrishnan Mahadevan	NSERC	Tier 1	ChemE
Canada Research Chair in Micro and Nano Engineering Systems	Yu Sun	NSERC	Tier 2	MIE
Canada Research Chair in Microfluidics and Energy	David Sinton	NSERC	Tier 1	MIE
Canada Research Chair in Modelling of Electrical Interconnects	Piero Triverio	NSERC	Tier 2	ECE
Canada Research Chair in Nanobioengineering	Warren Chan	NSERC	Tier 1	BME
Canada Research Chair in Nanotechnology	Edward Sargent	NSERC	Tier 1	ECE
Canada Research Chair in Network Information Theory	Ashish Khisti	NSERC	Tier 2	ECE
Canada Research Chair in Novel Optimization and Analytics in Health	Timothy Chan	NSERC	Tier 2	MIE
Canada Research Chair in Nucleic Acid Therapeutics	Omar Khan	NSERC	Tier 2	BME
Canada Research Chair in Organ-on-a-Chip Engineering	Milica Radisic	NSERC	Tier 1	BME, ChemE
Canada Research Chair in Power Electronic Converters	Olivier Trescases	NSERC	Tier 2	ECE
Canada Research Chair in Quantitative Cell Biology and Morphogenesis	Rodrigo Fernandez-Gonzalez	NSERC	Tier 2	BME
Canada Research Chair in Robots for Society	Goldie Nejat	NSERC	Tier 2	MIE
Canada Research Chair in Secure and Reliable Computer Systems	David Lie	NSERC	Tier 1	ECE

Title	Chairholder	Sponsor	Tier	Department
Canada Research Chair in Sustainable Bioproducts	Ning Yan	NSERC	Tier 1	ChemE
Canada Research Chair in Sustainable Infrastructure	Shoshanna Saxe	NSERC	Tier 2	CivMin
Canada Research Chair in Synthetic Biology	Michael Garton	CIHR	Tier 2	BME
Canada Research Chair in Sustainable Systems and Technology Assessment	Heather MacLean	NSERC	Tier 2	CivMin
Canada Research Chair in System-Scale Environmental Impacts of Energy and Transport Technologies	Daniel Posen	NSERC	Tier 2	CivMin
Canada Research Chair in Systems Software	Ding Yuan	NSERC	Tier 2	ECE
Canada Research Chair in Thermofluidics for Clean Energy	Aimy Bazylak	NSERC	Tier 2	MIE
Canada Research Chair in Transportation and Air Quality	Marianne Hatzopoulou	NSERC	Tier 2	CivMin
Canada Research Chair in Urban Mining Innovations	Gisele Azimi	NSERC	Tier 2	ChemE, MSE
Celestica Chair in Materials for Microelectronics	Doug Perovic	Endowed		MSE
Clarice Chalmers Chair of Engineering Design	Greg Jamieson	Endowed		MIE
Claudette MacKay-Lassonde Chair in Mineral Engineering	Lesley Warren	Endowed		CivMin
Decanal Chair in Innovation	Christopher Yip	Endowed		Dean's Office
Edward S. Rogers Sr. Chair in Engineering	Brendan Frey	Endowed		ECE
Eugene V. Polistuk Chair in Electromagnetic Design	Sean Hum	Endowed		ECE
Frank Dottori Chair in Pulp and Paper Engineering	D. Grant Allen	Endowed		ChemE
Gerald R. Heffernan Chair in Materials Processing	Mansoor Barati	Endowed		MSE
J. Armand Bombardier Foundation Chair in Aerospace Flight	Chris Damaren	Endowed		UTIAS
Joseph C. Paradi Chair in Information Engineering	Yuri Lawryshyn	Endowed		ChemE
L. Lau Chair in Electrical and Computer Engineering	Ben Liang	Endowed		ECE
Meek Family Chair in Advanced Nanotechnology	Harry Ruda	Endowed		MSE
Michael E. Charles Chair in Chemical Engineering	Molly Shoichet	Endowed		ChemE, BME
Nortel Institute Chair in Emerging Technology	J. Stewart Aitchison	Endowed		ECE
Nortel Institute Chair in Network Architecture and Services	Shahrokh Valaee	Endowed		ECE
NSERC Chair in Multidisciplinary Engineering Design	Kamran Behdinin	NSERC		MIE
NSERC Industrial Research Chair in Nanomaterials and Nanomedicine (with Johnson & Johnson Medical Products)	Frank Gu	NSERC		ChemE
NSERC Industrial Research Chair in Source Water Quality Monitoring and Advanced/Emerging Technologies for Drinking Water Treatment	Robert Andrews	NSERC		CivMin
NSERC Industrial Research Chair in Technologies for Drinking Water Treatment	Ron Hofmann	NSERC		CivMin
NSERC Industrial Research Chair in the Role and Fate of Inorganics in the Industrial Processing of Woody Biomass	Nikolai DeMartini	NSERC		ChemE
NSERC/Altera Industrial Research Chair in Programmable Silicon	Vaughn Betz	NSERC/ Altera		ECE
NSERC/Cement Association of Canada Industrial Research Chair in Concrete Durability and Sustainability	Doug Hooton	NSERC/ CAC		CivMin
NSERC-Energi Simulation Industrial Research Chair and Foundation CMG Industrial Research Chair in Fundamental Petroleum Rock Physics and Rock Mechanics	Giovanni Graselli	NSERC/ Energi Simulation		CivMin
NSERC/NanoXplore Industrial Research Chair in Multifunctional Graphene-based Nanocomposites and Foams	Chul Park	NSERC/ NanoXplore		MIE
NSERC/UNENE Industrial Research Chair in Corrosion Control and Materials Performance in Nuclear Power Systems	Roger Newman	NSERC/ UNENE		ChemE
PERDC Chair in Sustainable Materials	Mohini Sain	Endowed		MIE
Pierre Lassonde Chair in Mining Engineering	John Hadjigeorgiou	Endowed		CivMin

Title	Chairholder	Sponsor	Tier	Department
Robert M. Smith Chair in Geotechnical Mine Design and Analysis	Kamran Esmaeili	Endowed		CivMin
Skoll Chair in Computer Networks and Enterprise Innovation	Elvino Sousa	Endowed		ECE
Skoll Chair in Software Engineering	Jason Anderson	Endowed		ECE
Stanley Ho Professorship in Microelectronics	Sorin Voinigescu	Endowed		ECE
Ted Rogers Chair in Cardiovascular Engineering	Daniel Franklin	Endowed		BME
U of T Distinguished Professor of Digital Communications	Frank Kschischang			ECE
U of T Distinguished Professor of Mechanobiology	Craig Simmons			MIE, BME
U of T Distinguished Professor of Microcellular Engineered Plastics	Chul Park			MIE
U of T Distinguished Professor of Nanobioengineering	Warren Chan			BME
U of T Distinguished Professor of Urban Systems Engineering	Mark Fox			MIE
U of T Distinguished Professor of Computational Aerodynamics and Sustainable Aviation	David Zingg			UTIAS
U of T Distinguished Professor in Forest Biomaterials Engineering	Ning Yan			ChemE
University Professor	Cristina Amon			MIE
University Professor	Michael Collins			CivMin
University Professor	Elizabeth Edwards			ChemE
University Professor	Edward Sargent			ECE
University Professor	Michael Sefton			ChemE, BME
University Professor	Molly Shoichet			ChemE, BME
Velma M. Rogers Graham Chair in Engineering	George Eleftheriades	Endowed		ECE
W. M. Keck Chair in Engineering Rock Mechanics	John Harrison	Endowed		CivMin
Wallace G. Chalmers Chair of Engineering Design	Li Shu	Endowed		MIE

Note 4.9: Chairs and Professorships are listed as of July 1, 2022.

CHAPTER 5

AWARDS & RANKINGS

FACTS AND FIGURES

#1

U of T Engineering's rank within Canada for both the QS and Times Higher Education world rankings.

Top 10

U of T Engineering's rank among North American public universities across all major ranking systems.

12.7%

U of T Engineering's share of major awards for which Canadian engineering professors are eligible (2021). Our faculty make up 5.4% of the Canadian total.

34

International, national and regional awards for research and teaching earned by U of T Engineering faculty members in 2021–2022.

Figure 5.1 Summary of University of Toronto Engineering Performance in World Rankings, 2021–2022

Ranking Organization	Release Date	Canada	North American Public	World
QS World University Ranking for Engineering and Technology	April 2022	1	7	34
QS World University Ranking by Subject	April 2022			
– Chemical Engineering		1	7	28
– Civil & Structural Engineering		2	8	30
– Computer Science & Information Systems		1	2	12
– Electrical & Electronic Engineering		1	5	19
– Materials Science		1	9	38
– Mechanical, Aeronautical & Manufacturing Engineering		1	9	31
– Mineral & Mining Engineering		5	7	21
Times Higher Education (THE) – Elsevier World University Ranking for Engineering & Technology	October 2021	1	7	26
Academic Ranking of World Universities (ARWU) for Engineering Subjects	August 2021			
– Aerospace Engineering		1	7	21
– Biomedical Engineering		1	6	24
– Chemical Engineering		4	25	160
– Civil Engineering		3	11	37
– Computer Science and Engineering		1	3	13
– Electrical & Electronic Engineering		2	15	43
– Materials Science & Engineering		1	15	75
– Mechanical Engineering		2	16	80
– Mining & Mineral Engineering		1	3	20
National Taiwan University (NTU) Performance Ranking of Scientific Papers for World Universities	August 2021	2	8	70
NTU Performance Ranking by Subject	August 2021			
– Chemical Engineering		6	21	182
– Civil Engineering		3	9	56
– Computer Science		3	7	70
– Electrical Engineering		4	10	71
– Materials Science		1	10	84
– Mechanical Engineering		3	9	74

Rankings data are current as of the date indicated in Figure 5.1. Awards data are presented for the 2021 calendar year (January to December). Selected faculty, alumni and staff awards were received between summer 2021 and summer 2022.

Figure 5.2a **QS World University Rankings: Top 50 Universities for Engineering & Technology, 2022**

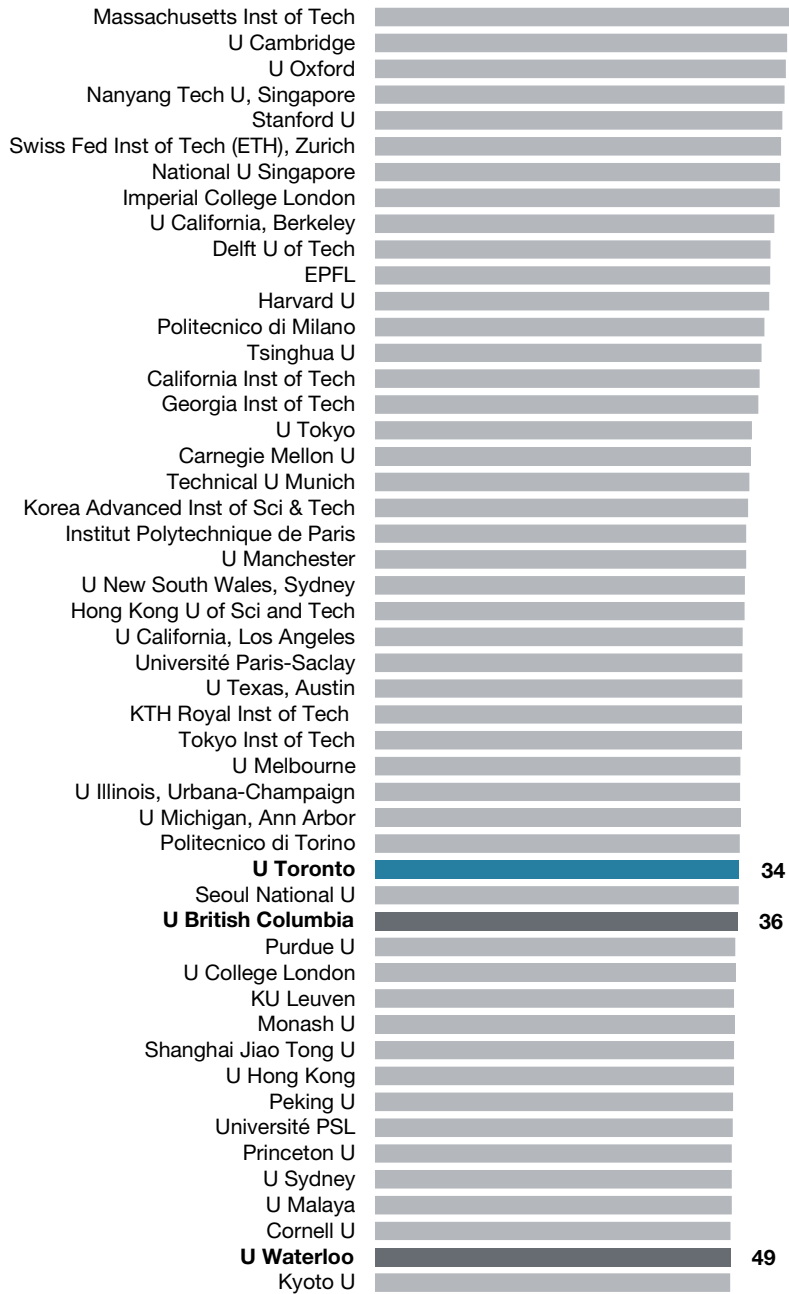


Figure 5.2b **QS World University Rankings: Top North American Public Universities for Engineering & Technology, 2022**

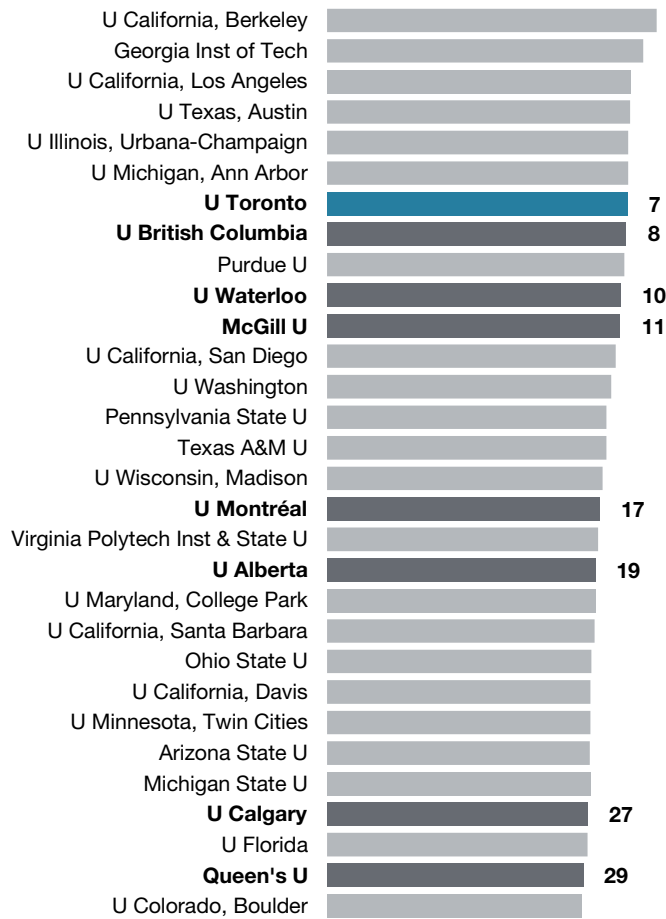


Figure 5.2c **QS World University Rankings: Canadian U15 in Top 200, 2022**

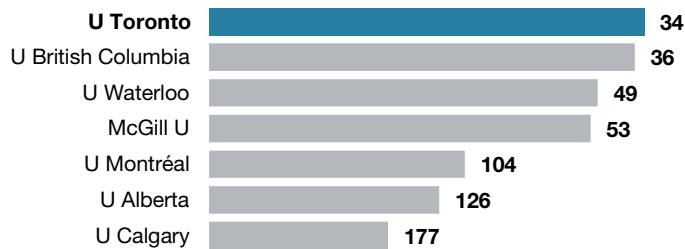
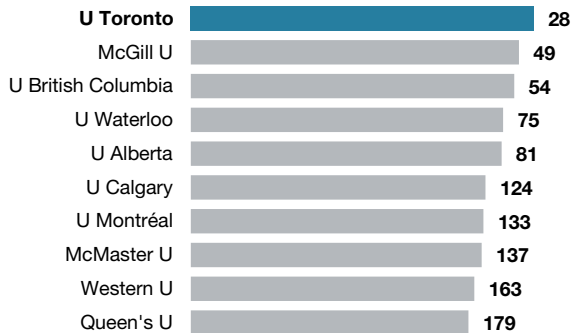
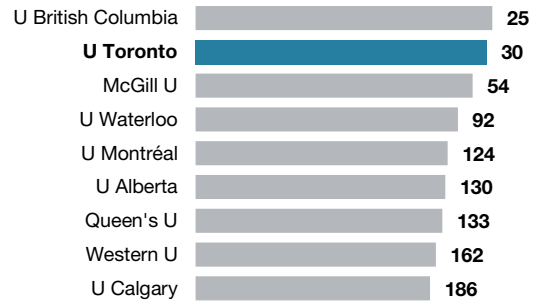


Figure 5.2d QS World University Rankings: Canadian Universities in QS by Subject, 2022

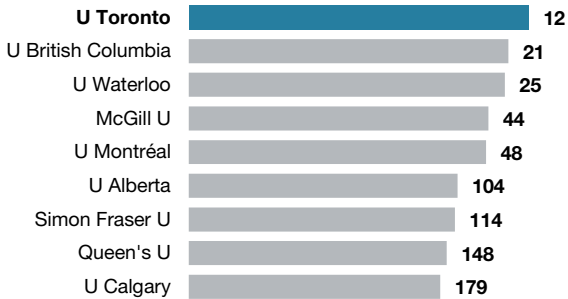
Chemical Engineering



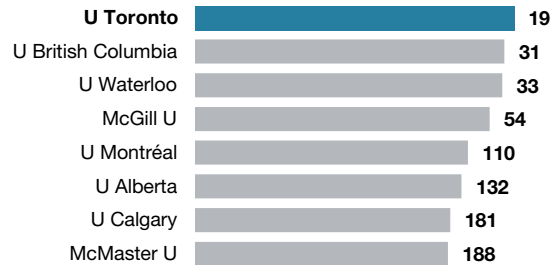
Civil & Structural Engineering



Computer Science & Information Systems



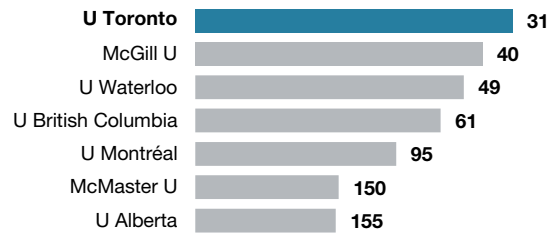
Electrical & Electronic Engineering



Materials Sciences



Mechanical, Aeronautical & Manufacturing Engineering



Mineral & Mining Engineering

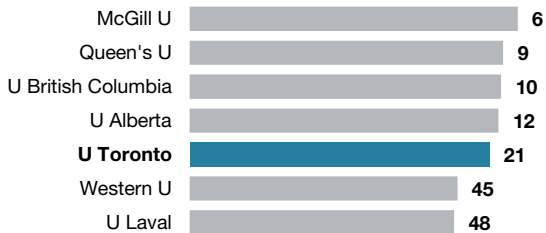


Figure 5.3a THE World University Rankings: Top 50 Universities for Engineering, 2022

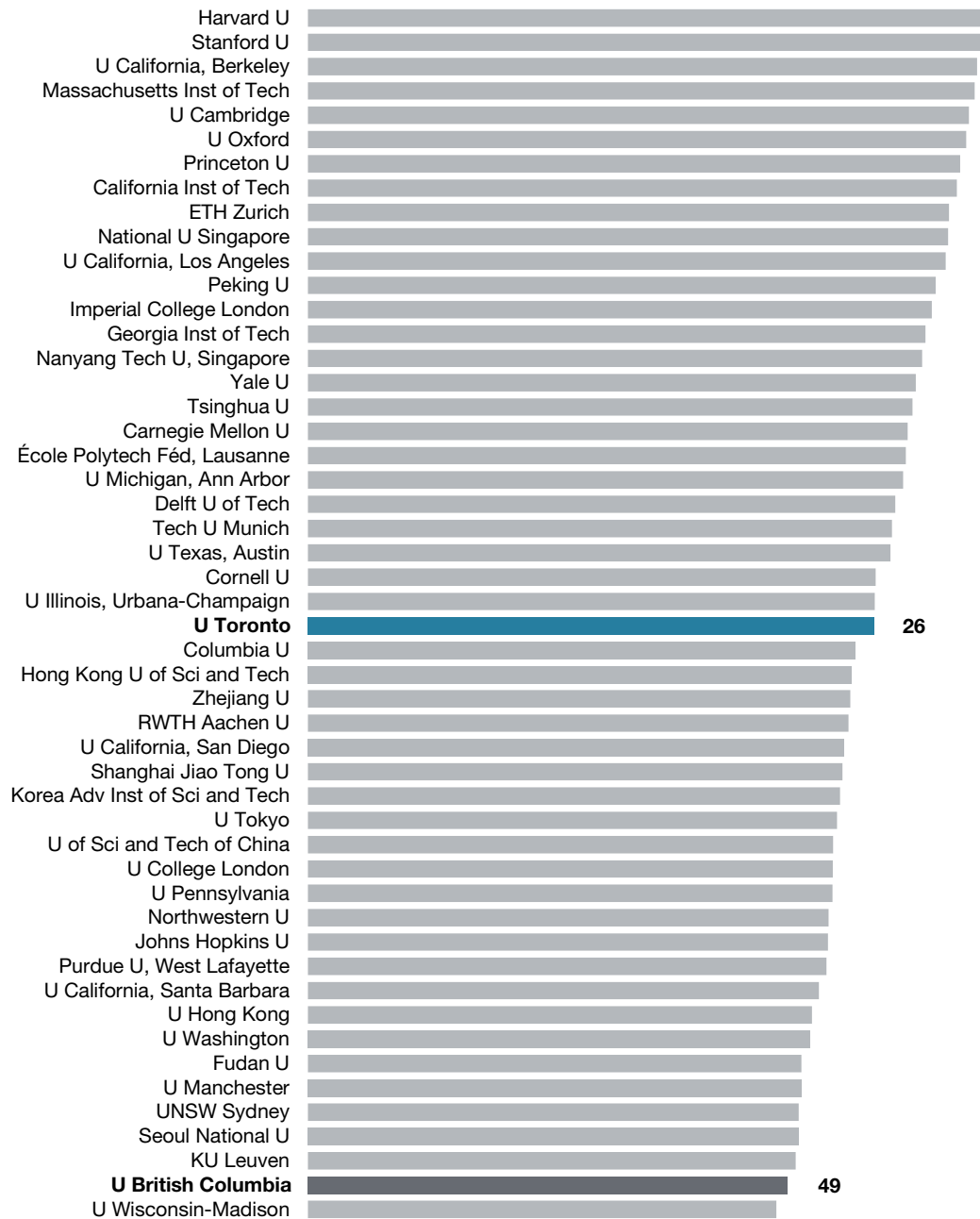


Figure 5.3b THE World University Rankings: Top North American Public Universities for Engineering, 2022

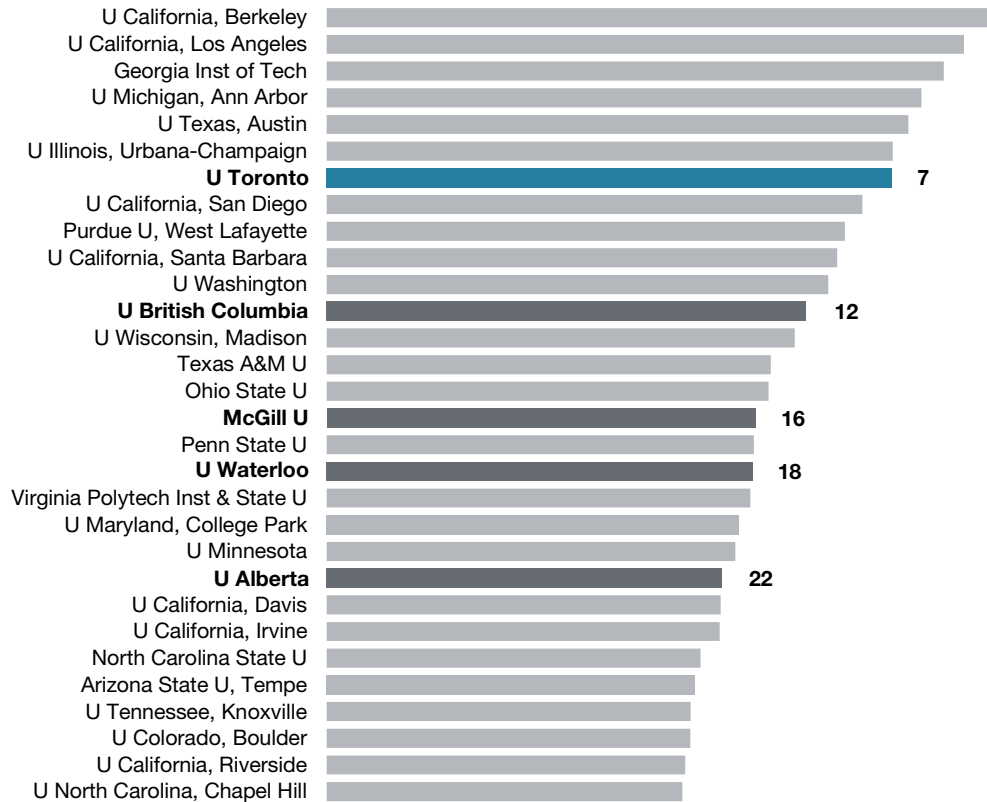


Figure 5.3c THE World University Rankings: Canadian U15 in Top 200 Universities for Engineering, 2022

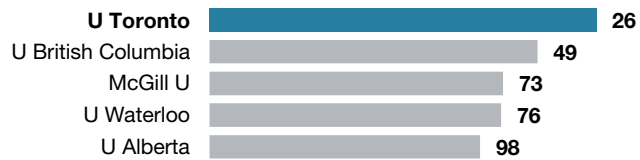
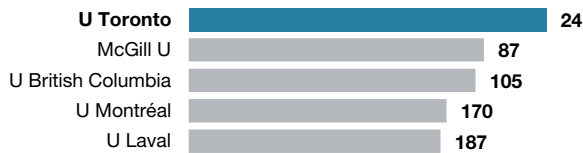


Figure 5.4 Canadian Universities in the Top 200 of the Academic Ranking of World Universities (ARWU) by Subject, 2021

Aerospace Engineering



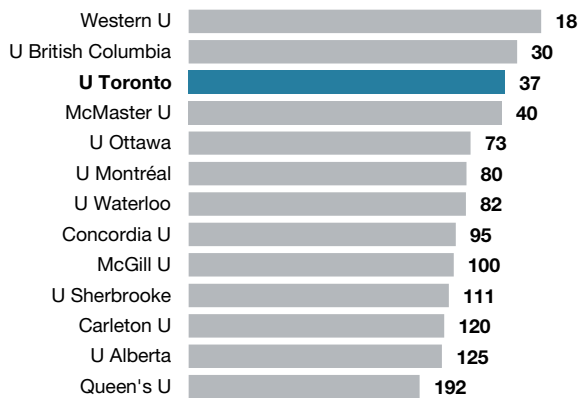
Biomedical Engineering



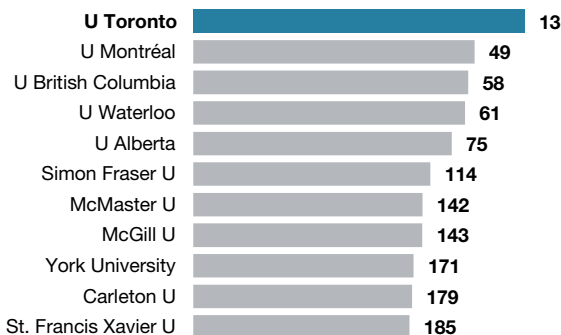
Chemical Engineering



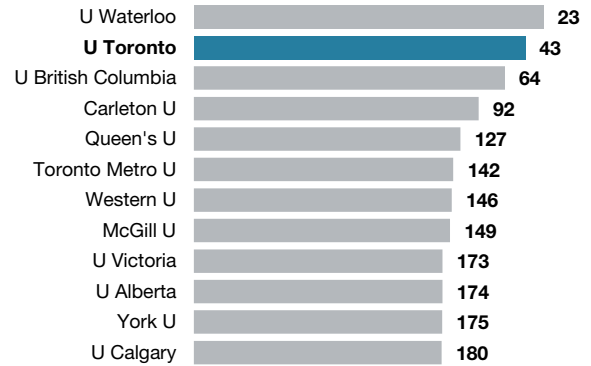
Civil & Structural Engineering



Computer Science & Engineering



Electrical Engineering



Materials Science & Engineering



Mechanical Engineering



Mineral Engineering



Figure 5.5a NTU Top 80 World Universities for Engineering, 2021

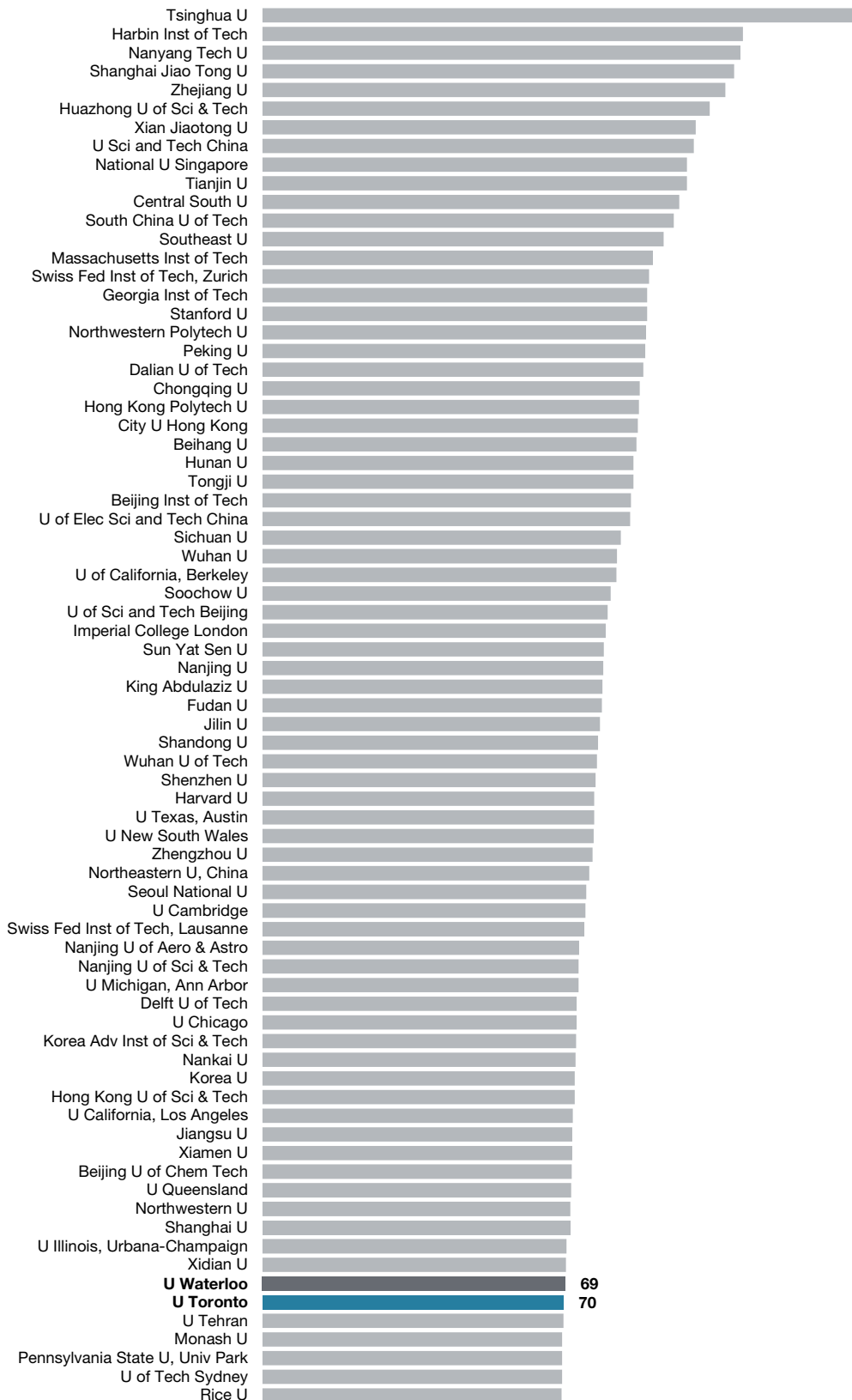


Figure 5.5b NTU Top North American Public Universities for Engineering, 2021

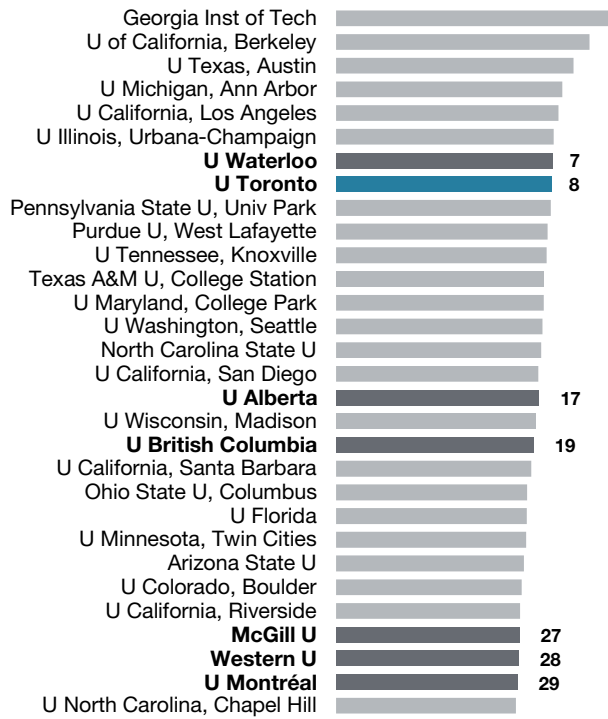


Figure 5.5c Canadian U15 Universities in NTU Top 200 for Engineering, 2021

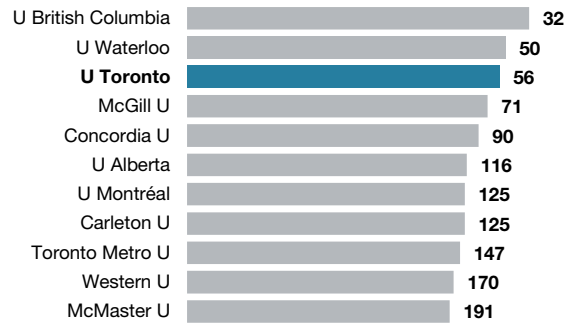


Figure 5.5d Canadian Universities in NTU by Subject, 2021

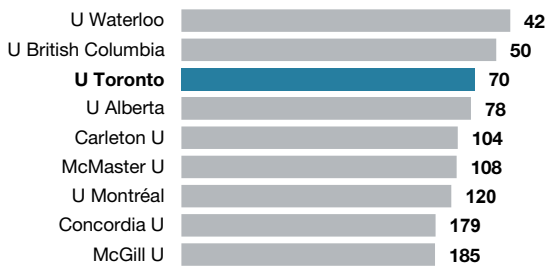
Chemical Engineering



Civil Engineering



Computer Science



Electrical Engineering



Materials Science



Mechanical Engineering

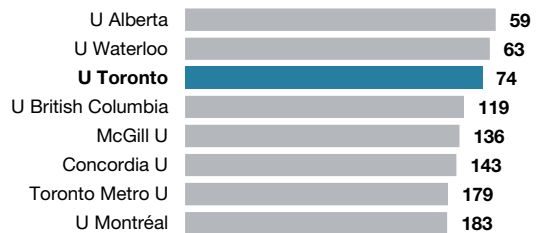


Figure 5.6a **Number of Engineering Publications Indexed by Thomson Reuters for Association of American Universities (AAU) Public and Canadian Peer Institutions, 2016 to 2020**

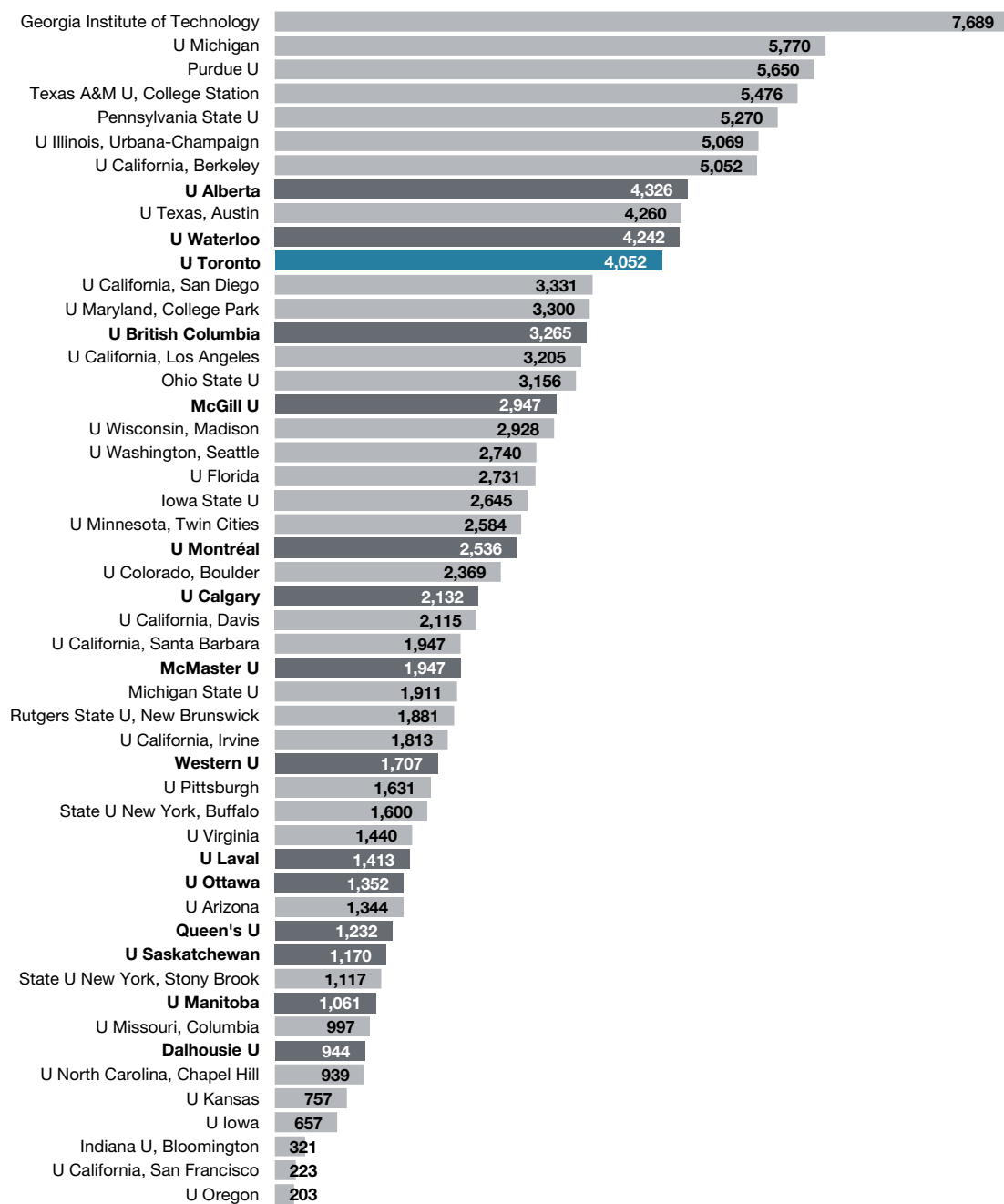


Figure 5.6b Summary of U15 Bibliometrics for Publications (Thomson Reuters/AAU, 2016 to 2020)

	Publications	Faculty Count	Publications per Faculty	Rank on Pub per Faculty
U Alberta	4,326	280	15.5	4
U Waterloo	4,242	322	13.2	7
U Toronto	4,052	273	14.9	6
U British Columbia	3,265	204	16.0	2
McGill U	2,947	189	15.6	3
U Montréal	2,536	469	5.4	15
U Calgary	2,132	100	21.3	1
McMaster U	1,947	159	12.2	9
Western U	1,707	114	15.0	5
Laval U	1,413	162	8.7	12
U Ottawa	1,352	139	9.7	11
Queens U	1,232	166	7.4	14
U Saskatchewan	1,170	93	12.6	8
U Manitoba	1,061	89	11.9	10
Dalhousie U	944	111	8.5	13

Figure 5.6c **Number of Engineering Citations Indexed by Thomson for Reuters Association of American Universities (AAU) Public and Canadian Peer Institutions, 2016 to 2020**

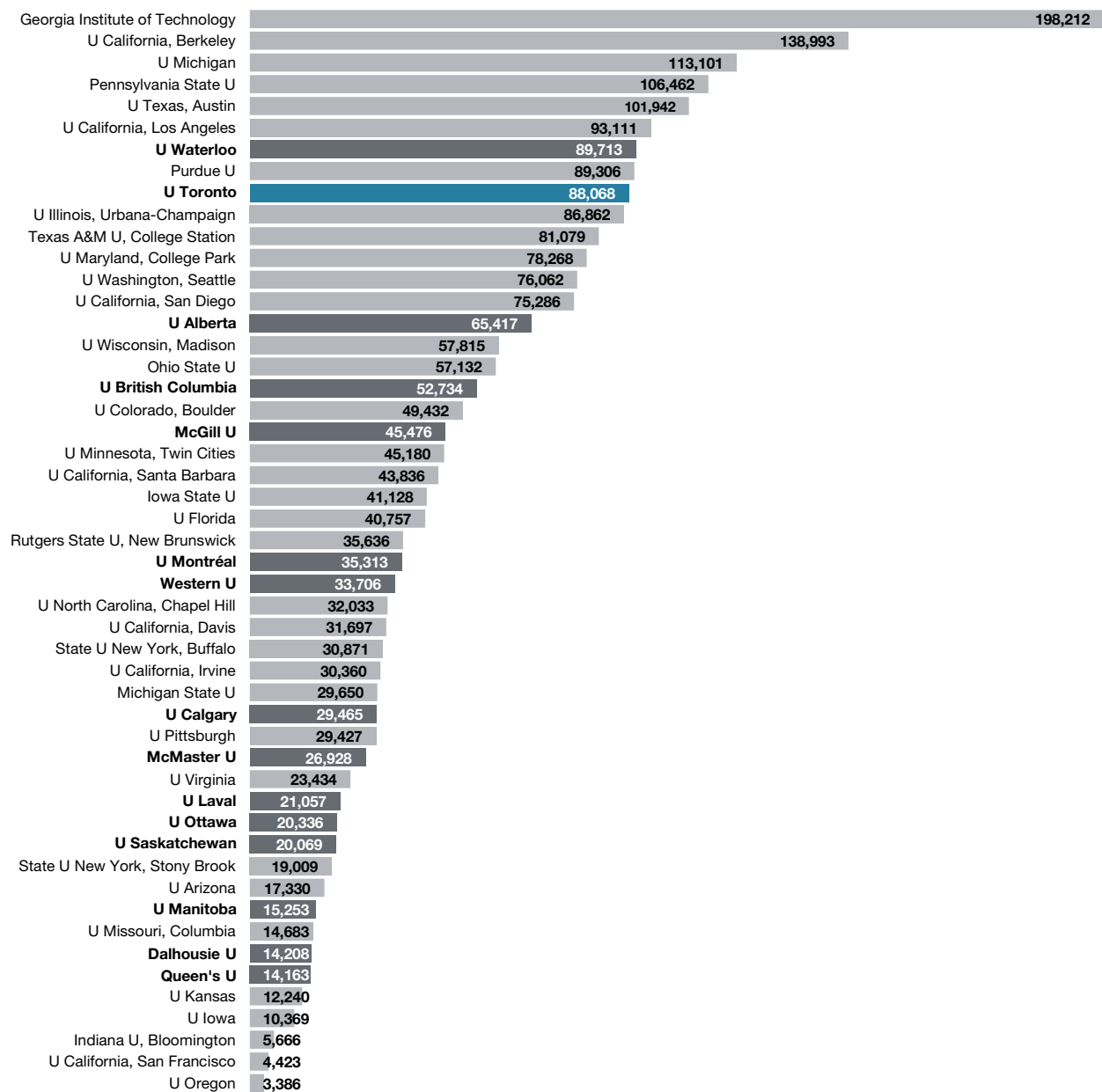


Figure 5.6d Summary of U15 Bibliometrics for Citations (Thomson Reuters/AAU, 2016 to 2020)

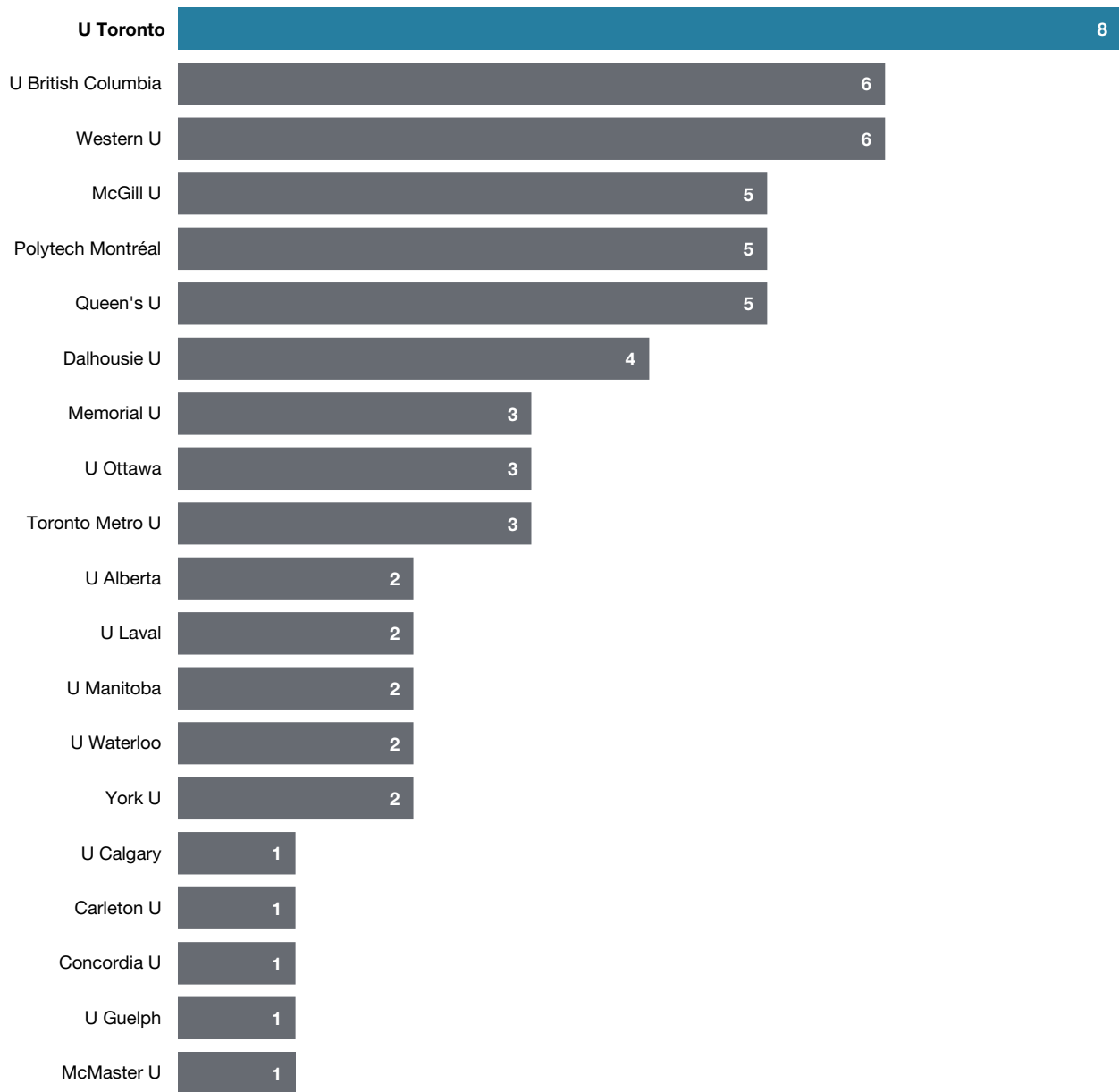
	Citations	Faculty Count	Citations per Faculty	Rank on Citations per Faculty	Citations per Publication	Rank on Citations per Publication
U Waterloo	89,713	322	279.0	4	21.1	2
U Toronto	88,068	273	322.8	1	21.7	1
U Alberta	65,417	280	233.7	7	15.1	7
U British Columbia	52,734	204	259.0	5	16.2	5
McGill U	45,476	189	241.3	6	15.4	6
U Montréal	35,313	469	75.3	15	13.9	12
Western U	33,706	114	295.7	2	19.7	3
U Calgary	29,465	100	294.7	3	13.8	14
McMaster U	26,928	159	169.0	10	13.8	13
Laval U	21,057	162	130.0	12	14.9	10
U Ottawa	20,336	139	146.3	11	15.0	9
U Saskatchewan	20,069	93	215.3	8	17.2	4
U Manitoba	15,253	89	171.4	9	14.4	11
Dalhousie U	14,208	111	128.3	13	15.1	8
Queens U	14,163	166	85.6	14	11.5	15

Figure 5.7 Summary of Major International, National and Provincial Awards and Honours, 2012 to 2021

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
International										
MIT Top 35 Under 35	1					1				
National Academy of Inventors							1		1	
Royal Academy of Engineering							1			
Royal Society, U.K.								1		
U.S. National Academies*			1		1				1	
National										
Brockhouse Prize					1					1
Canadian Academy of Engineering Fellowship	7	6	3	5	5	5	3	2	5	2
Engineering Institute of Canada Fellowship	3	3	3	2	3	1	1	3	4	1
Engineering Institute of Canada Awards	1	2		1	1	2		1		
Engineers Canada Awards	1	1	1	1		1	1	1	1	1
Governor General's Innovation Award						1	1			
Herzberg Prize									1	
Killam Prize*			1		1	1			1	
Order of Canada						2	1		2	1
Royal Society of Canada Fellowship*	3		2	2	1	2		2		1
Royal Society of Canada College of New Scholars, Artists and Scientists			1	1	1	1	1		1	
Steacie Fellowship*	2	1	1	1	1					
Steacie Prize*	1					1				
Synergy Award for Innovation	1									1
Provincial										
Ontario Professional Engineers Awards	3	2	2	1	2	3	1	3	1	2
OCUFA Teaching Award				1	1				1	1
Order of Ontario							1		1	
Total	23	15	15	15	18	21	12	13	20	11

Note 5.7: (*) denotes U of T performance indicator. Data shown are by calendar year (January to December) and include faculty award recipients only.

Figure 5.8a **Number of Major National and International Awards Received by U of T Engineering Compared to other Canadian Engineering Faculties, 2021**

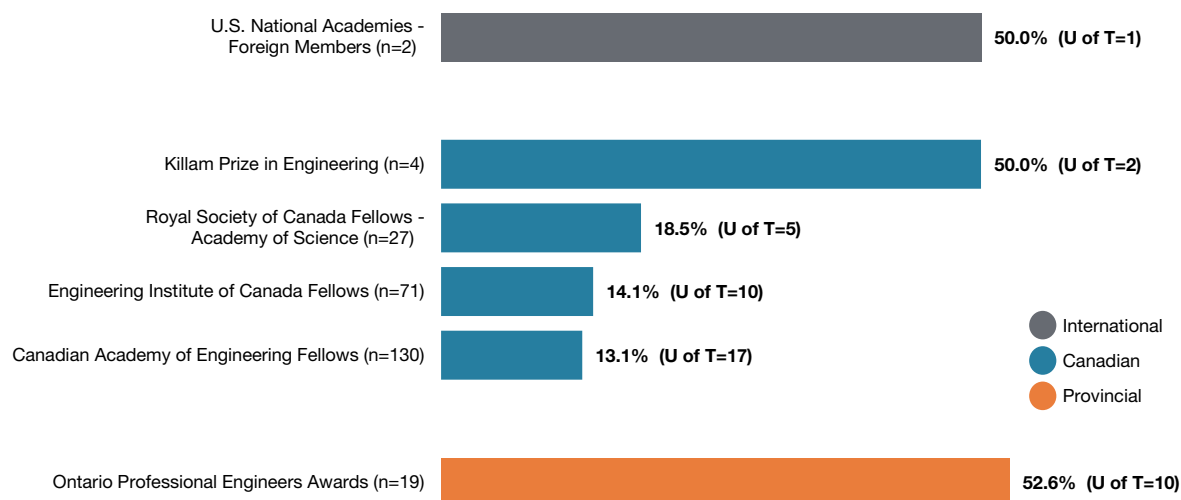


Note 5.8a, b: Data shown are by calendar year (January to December) and include faculty award recipients only. The following major awards are included: International — MIT Top 35 under 35, and the U.S. National Academies; National — NSERC Gerhard Herzberg Canada Gold Medal for Science and Engineering, Brockhouse Prize, Canadian Academy of Engineering Fellowship, Engineering Institute of Canada Awards, Engineering Institute of Canada Fellowship, Engineers Canada Awards, Killam Prize (Engineering), Order of Canada, Royal Society of Canada Fellowship (Engineering/Physical Sciences), Royal Society of Canada College of New Scholars, Artists and Scientists, Steacie Fellowships, Steacie Prize and Synergy Awards for Innovation.

Figure 5.8b **Percentage of Engineering Faculty and Total Major Awards Received in Canadian Engineering Faculties, 2021**

	Percentage of Total Full Time Equivalent Engineering Faculty in Canada	Percentage of Total Major Awards Received by Engineering Faculties
U Toronto	5.4%	12.7%
U British Columbia	4.0%	9.5%
Western U	2.2%	9.5%
McGill U	3.7%	7.9%
Polytech Montréal	9.2%	7.9%
Queen's U	3.3%	7.9%
Dalhousie U	2.2%	6.3%
Memorial U	1.4%	4.8%
U Ottawa	2.7%	4.8%
Toronto Metro U	2.9%	4.8%
U Alberta	5.5%	3.2%
U Laval	3.2%	3.2%
U Manitoba	1.8%	3.2%
U Waterloo	6.3%	3.2%
York U	2.1%	3.2%
U Calgary	2.0%	1.6%
Carleton U	2.7%	1.6%
Concordia U	4.4%	1.6%
U Guelph	1.2%	1.6%
McMaster U	3.1%	1.6%

Figure 5.9 **Number of Awards Received by U of T Engineering Faculty Compared to Other Canadian Engineering Faculties 2017 to 2021**



Note 5.8b: Faculty counts include all tenured, tenure-stream and teaching-stream faculty.

Note 5.9: Data shown are by calendar year (January to December) and include faculty award recipients only.

Figure 5.10 Selected Awards Received by Faculty and Staff, 2021-2022

Level	Organization	Award	Recipient
International	Alfred P. Sloan Foundation	Sloan Research Fellowship	Nicolas Papernot (ECE)
International	American Society of Mechanical Engineers	Ruth and Joel Spira Outstanding Design Educator Award	Kamran Behdinan (MIE)
International	Biomedical Engineering Society	Fellow	Craig Simmons (MIE, BME)
International	Institute of Electrical and Electronics Engineers	Fellow	Tony Chan Carusone (ECE)
International	Institute of Electrical and Electronics Engineers	Fellow	Joyce Poon (ECE)
International	International Academy of Wood Science	Fellow	Ning Yan (ChemE)
International	International Association of Business Communicators	Gold Quill Award of Excellence (COVID-19 Response and Recovery Campaign)	Engineering Strategic Communications
International	The Minerals, Metals & Materials Society	Early Career Faculty Fellow	Yu Zou (MSE)
National	Canadian Academy of Engineering	Fellow	Konstantinos Plataniotis (ECE)
National	Canadian Academy of Engineering	Fellow	Elvino Sousa (ECE)
National	Canadian Aeronautics and Space Institute	C.D. Howe Award	David Zingg (UTIAS)
National	Canadian Aeronautics and Space Institute	McCurdy Award	Hugh Liu (UTIAS)
National	Canadian Engineering Education Association	Fellow	Jason Bazylak (MIE)
National	Canadian Engineering Education Association	Fellow	Alan Chong (ISTEP)
National	Canadian Engineering Education Association	Fellow	Deborah Tihanyi (ISTEP)
National	Canadian Engineering Education Association	Ron Britton Engineering Education Vanguard Award	Chirag Variawa (ISTEP)
National	Canadian Institute of Steel Construction	Alfred F. Wong Lifetime Achievement Award	Jeffrey Packer (CivMin)
National	Canadian Society for Chemical Engineering	D.G. Fisher Award	Krishnan Mahadevan (ChemE)
National	Canadian Society for Mechanical Engineering	Manufacturing Medal	Chul Park (MIE)
National	Canadian Society for Mechanical Engineering	Solids Mechanics Medal	Tobin Filleter (MIE)
National	Chemical Institute of Canada	Fellow	Charles Jia (ChemE)
National	Government of Canada	Order of Canada, Member	Michael Collins (CivMin)
National	Engineering Institute of Canada	Fellow	Aimy Bazylak (MIE)
National	Engineering Institute of Canada	Fellow	Vaughn Betz (ECE)
National	Engineering Institute of Canada	Fellow	Frank Vecchio (CivMin)
National	Engineers Canada	Medal for Distinction in Engineering Education	Will Cluett (ChemE)
National	International Association of Business Communicators (Canada)	Silver Leaf Award of Excellence (COVID-19 Response and Recovery Campaign)	Engineering Strategic Communications
National	IEEE Canada	P. Ziogas Electric Power Award	Peter Lehn (ECE)
National	Natural Sciences and Engineering Research Council of Canada	Brockhouse Prize for Interdisciplinary Research in Science and Engineering	The Southern Ontario Centre for Atmospheric Aerosol Research (SOCAAR)
National	Natural Science and Engineering Research Council of Canada	Synergy Award for Innovation	Tobin Filleter (MIE) Jane Howe (MSE) Doug Perovic (MSE) Yu Sun (MSE)
National	Royal Society of Canada	Fellow	Mohini Sain (MIE)
Regional	Ontario Building Envelope Council	OBEC Rising Star Award	Marianne Touchie (MIE,CivMin)

Regional	Ontario Confederation of University Faculty Associations	OCUFA Teaching Award	Micah Stickel (ECE)
Regional	Ontario Professional Engineers Awards	Management Medal	Roderick Tennyson (UTIAS)
U of T	U of T	University Professor	Cristina Amon (MIE)
U of T	U of T	President's Impact Award	Levente Diosady (ChemE)
U of T	U of T	Joan E. Foley Quality of Student Experience Award	Matthew Mackay (MIE)
U of T	U of T	Excellence Through Innovation Award	Laura Brown (ECE) Melissa Fernandes (Dean's Office) Megan Tate (Dean's Office)

Figure 5.11a 2022 U of T Engineering Staff and Faculty Awards

Type	Award	Recipient
Administrative Staff Awards	Barbara McCann Quality of Student Experience Award for Frontline Staff	Jennifer Hsu (ChemE)
Administrative Staff Awards	Harpreet Dhariwal Emerging Leader Award	Jessica MacInnis (ECE)
Administrative Staff Awards	Agnes Kaneko Citizenship Award	Dan Grozea (MSE)
Administrative Staff Awards	Innovation Award	Aliz Karami, Celeste Francis Esteves, Oscar Del Rio (MIE)
Administrative Staff Awards	Catherine Gagne Sustained Excellence in Leadership Award	Brian Coates (Office of the Dean)
Research Awards	Safwat Zaky Research Leader Award	Andreas Moshovos (ECE)
Research Awards	McCharles Prize for Early Career Research Distinction	Scott Sanner (MIE)
Research Awards	McCharles Prize for Early Career Research Distinction	Marianne Touchie (CivMin, MIE)
Teaching Awards	TA Teaching Award	Xinyue Crystal Liu (MSE)
Teaching Awards	Early Career Teaching Award	Marianne Touchie (CivMin, MIE)
Teaching Awards	Faculty Teaching Award	Stephen Brown (ECE)
Teaching Awards	Sustained Excellence in Teaching Award	Grant Allen (ChemE)

Figure 5.11b 2021 Engineering Alumni Network Awards

Award	Recipient
Engineering Alumni Medal	Susan Doniz (IndE 9T3)
Engineering Alumni Hall of Distinction Award	Rami Rahim (ElecE 9T4)
Engineering Alumni Hall of Distinction Award	Ron Taylor (ElecE 6T1)
Engineering Alumni Hall of Distinction Award	Roderick Tennyson (EngPhys 6T0, UTIAS MSc 6T1, PhD 6T5)
Engineering Alumni Hall of Distinction Award	Honghi Tran (ChemE PhD 8T2)
2T5 Mid-Career Achievement Award	Tahir Mahmood (MechE 9T6, BME MSc 0T0)
2T5 Mid-Career Achievement Award	Vivienne Sze (ElecE 0T3 + PEY)
7T6 Early Career Award	Andrew N. Forde (MSE 1T1)
Malcolm F. McGrath Alumni Achievement Award	Paul Malozewski (ElecE 8T3)
L.E. (Ted) Jones Award of Distinction	Dana Kokoska (ElecE 2T0 + PEY)
Engineering Alumni Network Scholarship	Chetanya Choudhary (MechE 2T1 + PEY)

CHAPTER 6

ADVANCEMENT & COMMUNICATIONS

FACTS AND FIGURES

\$35.5M

Total philanthropic support generated in 2021–2022.

148.6M

Total reach of media stories mentioning U of T Engineering in 2021–2022.

5,737

Alumni engaged in 2021–2022.

43,633

Total followers across @uoftengineering Facebook, Instagram, Twitter and LinkedIn accounts, a 12.3% increase over the previous year.

Figure 6.1a Philanthropic Support, 2021–2022

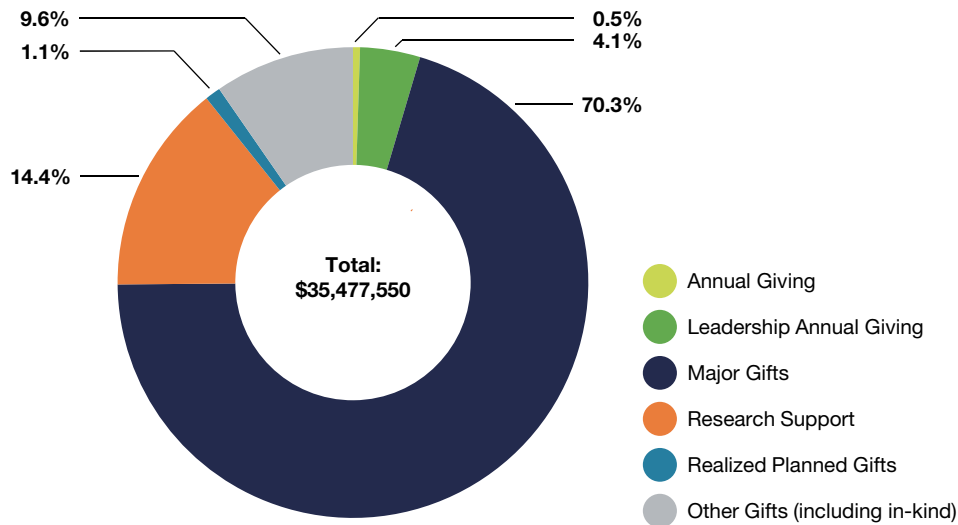
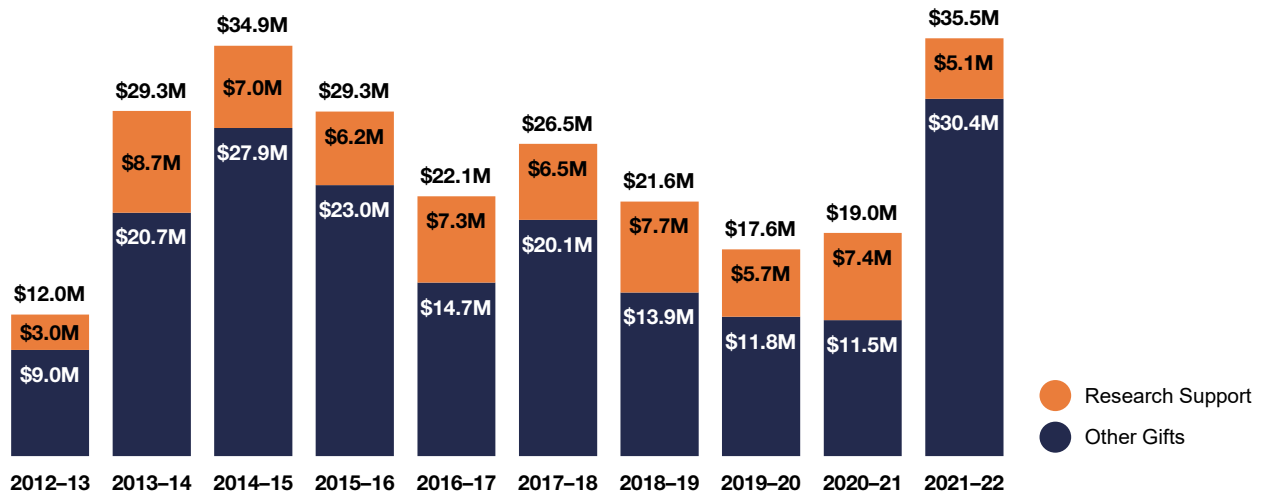


Figure 6.1b Philanthropic Support, 2012–2013 to 2021–2022



Data in this chapter are presented by fiscal year, May 1, 2021 to April 30, 2022.

Figure 6.1c Gift Designations, 2021–2022

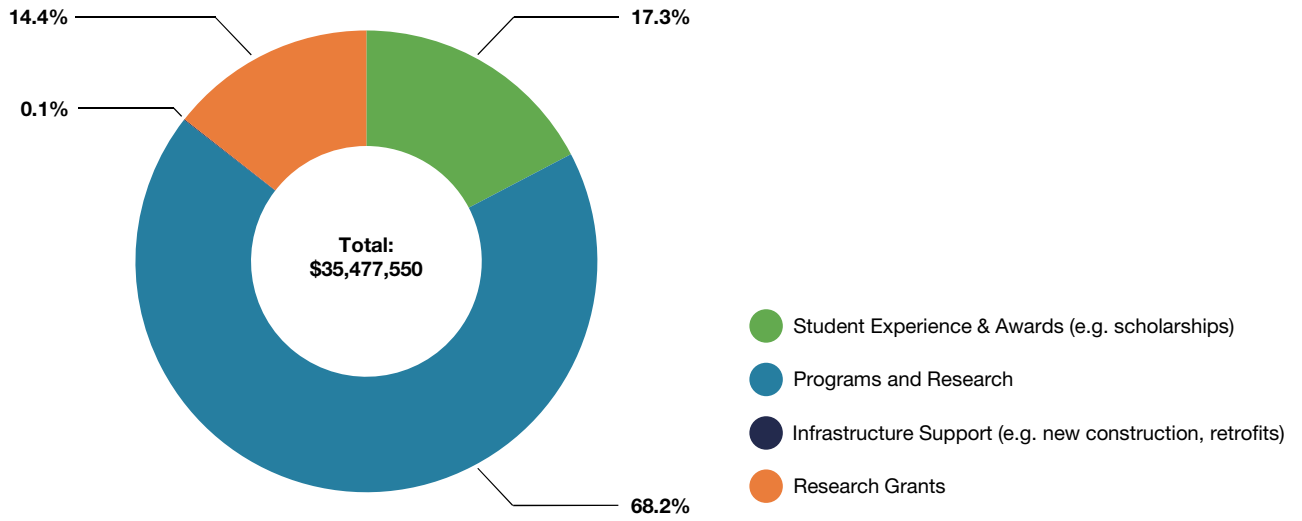
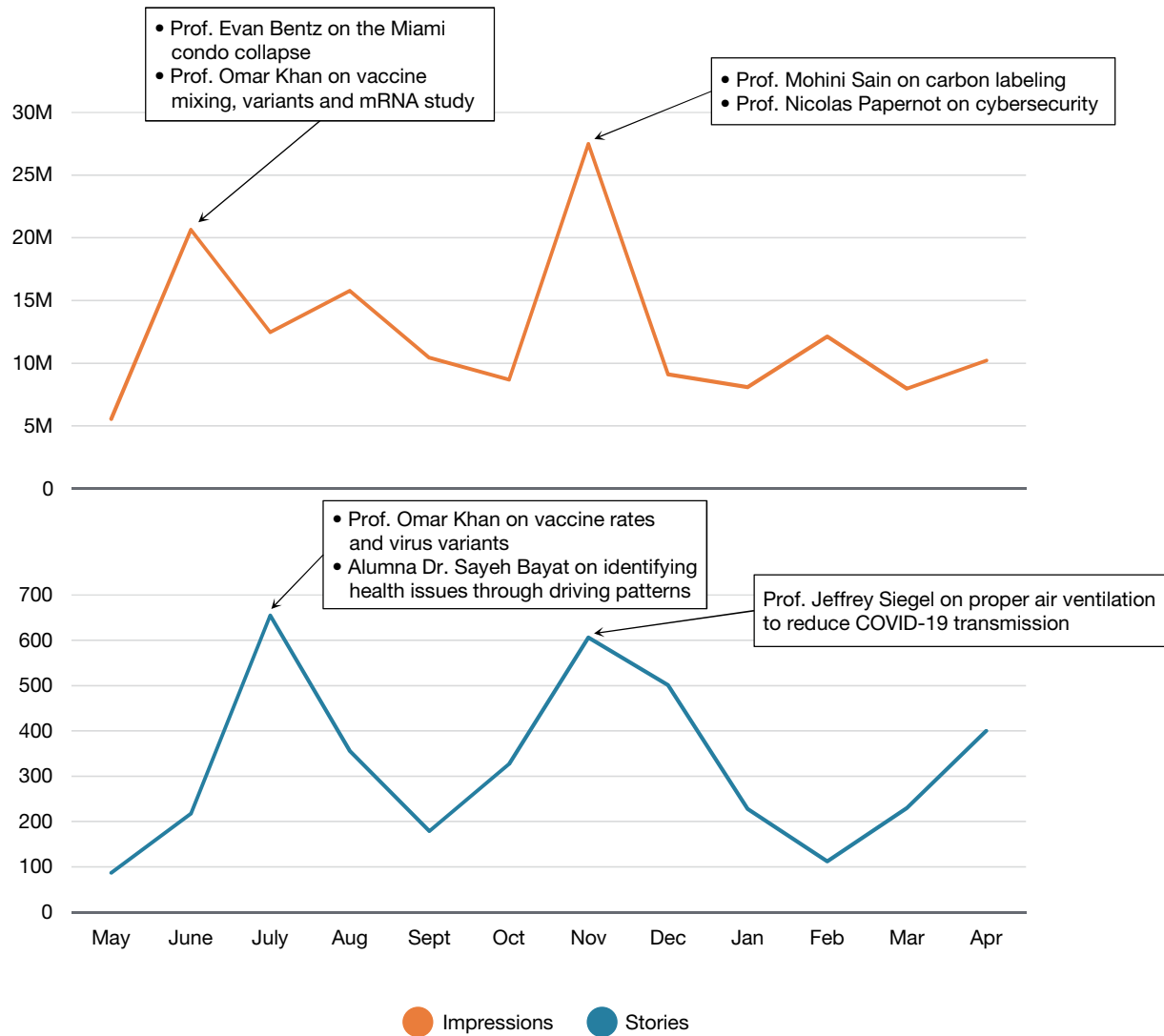


Figure 6.1d Alumni Engagement, 2021–2022

	Total
Newly engaged alumni	1,969
Total engaged alumni	5,737

Note 6.1d: Data are as of April 30, 2022

Figure 6.2a U of T Engineering Media Stories and Impressions, May 2021 to April 2022



Note 6.2a: A story refers to a single item in print or broadcast media. Impressions represent the number of viewers who could potentially have seen or interacted with those stories.

Figure 6.2b Proportion of U of T Engineering Media Impressions by Academic Area, 2021–2022

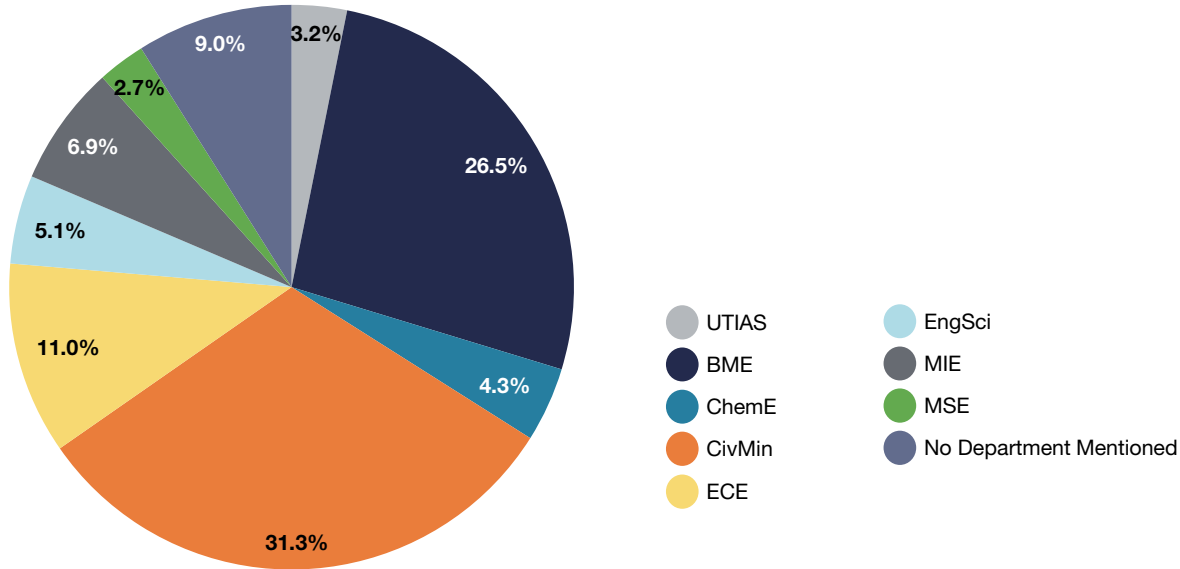
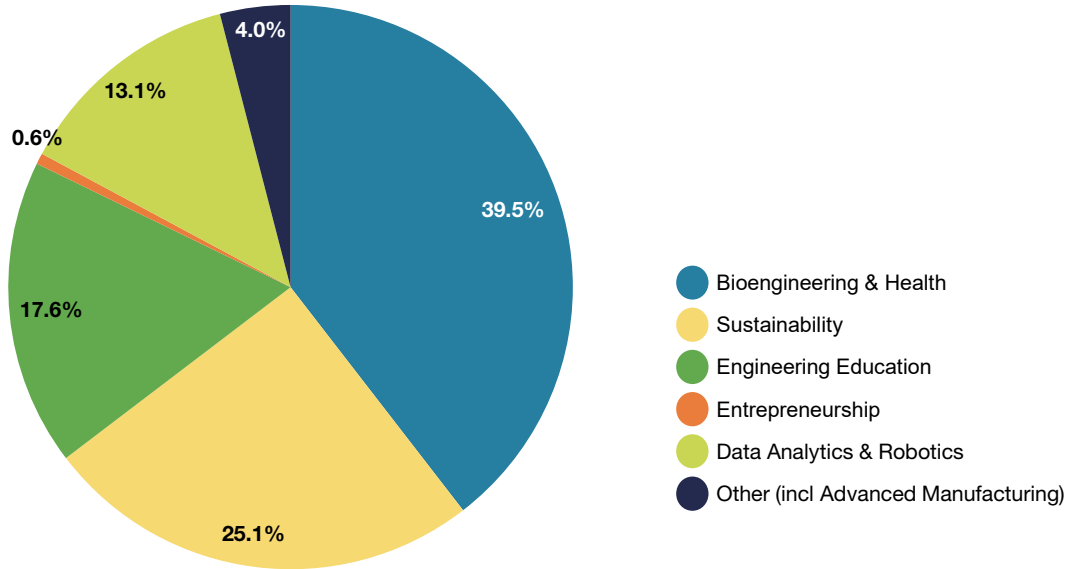


Figure 6.2c Proportion of U of T Engineering Media Impressions by Strategic Priority Area, 2021–2022



Note 6.2b: One media story can reference multiple academic areas. In those cases, the impressions are included in the counts for both areas.

Note 6.2c: One media story can reference multiple strategic priority areas. In those cases, the impressions are included in the counts for both areas.

Figure 6.2d Proportion of U of T Engineering Media Impressions by Outlet Location, 2021–2022

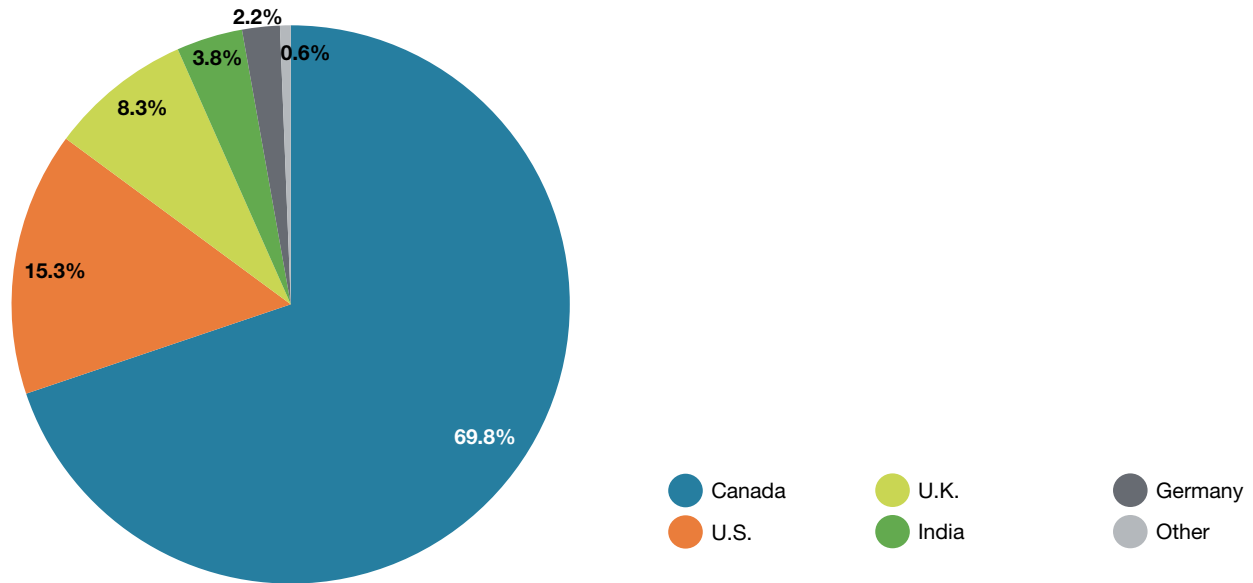
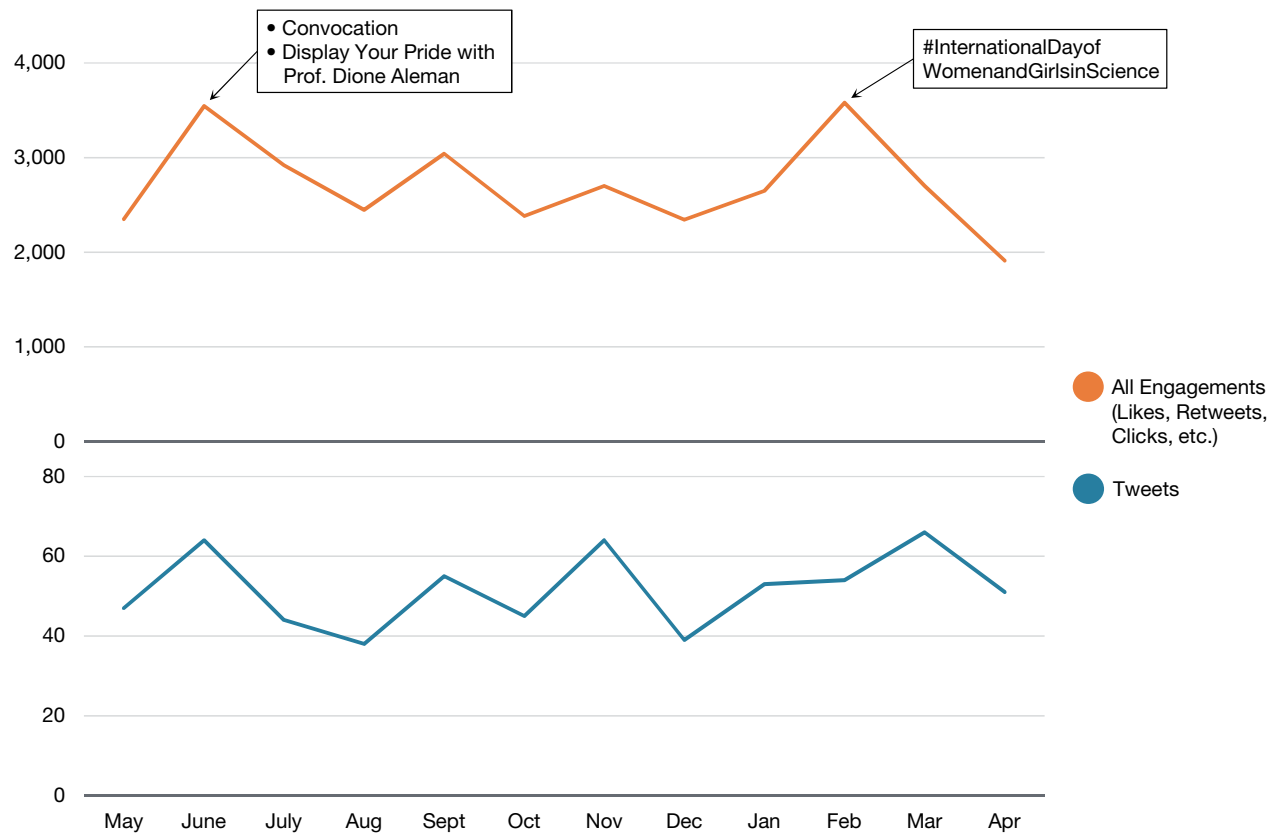


Figure 6.3a Twitter Statistics, May 2021 to April 2022



Note 6.2d: The impressions for one story may be included in the counts of multiple countries.

Notes 6.3a, b, c: Includes U of T Engineering accounts managed by Engineering Strategic Communications (@uoftengineering). In addition to these, many departments, divisions and institutes maintain their own accounts; this data is not reflected here.

Figure 6.3b Facebook Statistics, May 2021 to April 2022

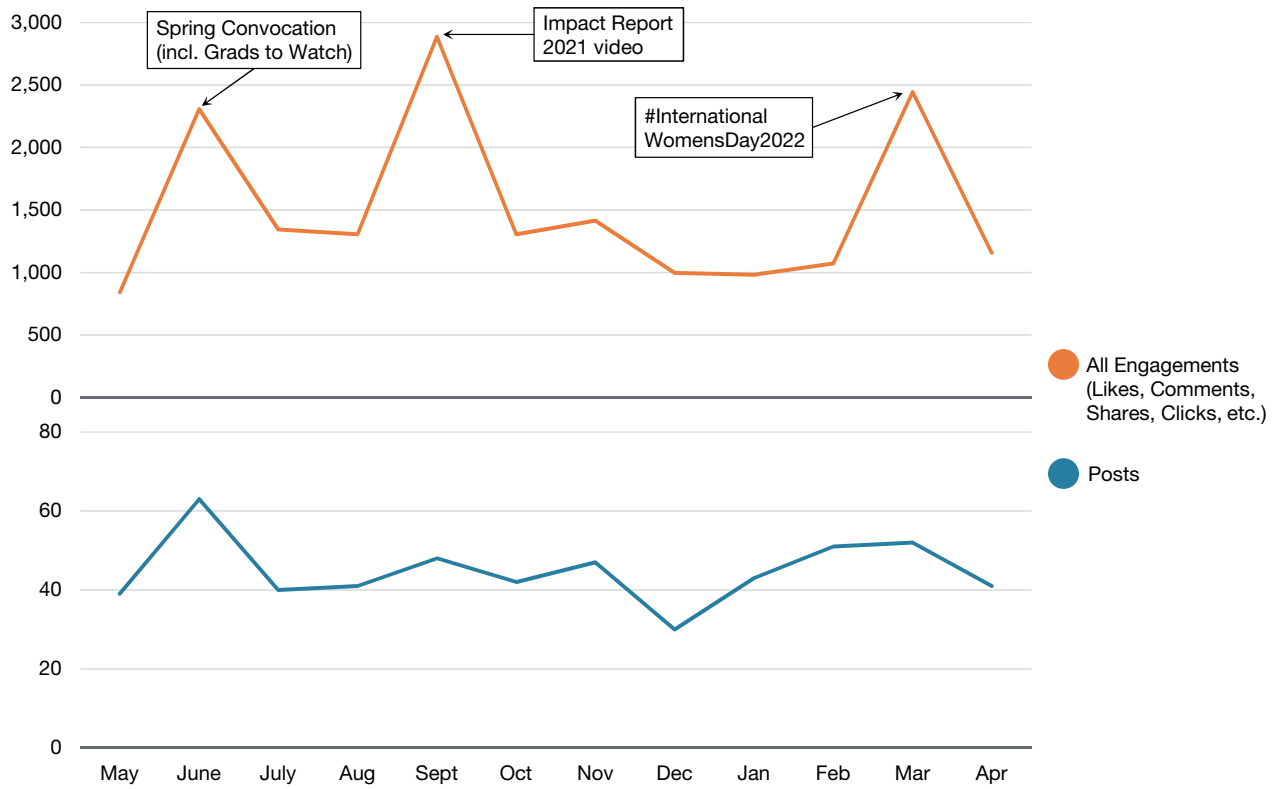


Figure 6.3c Instagram Statistics, May 2021 to April 2022

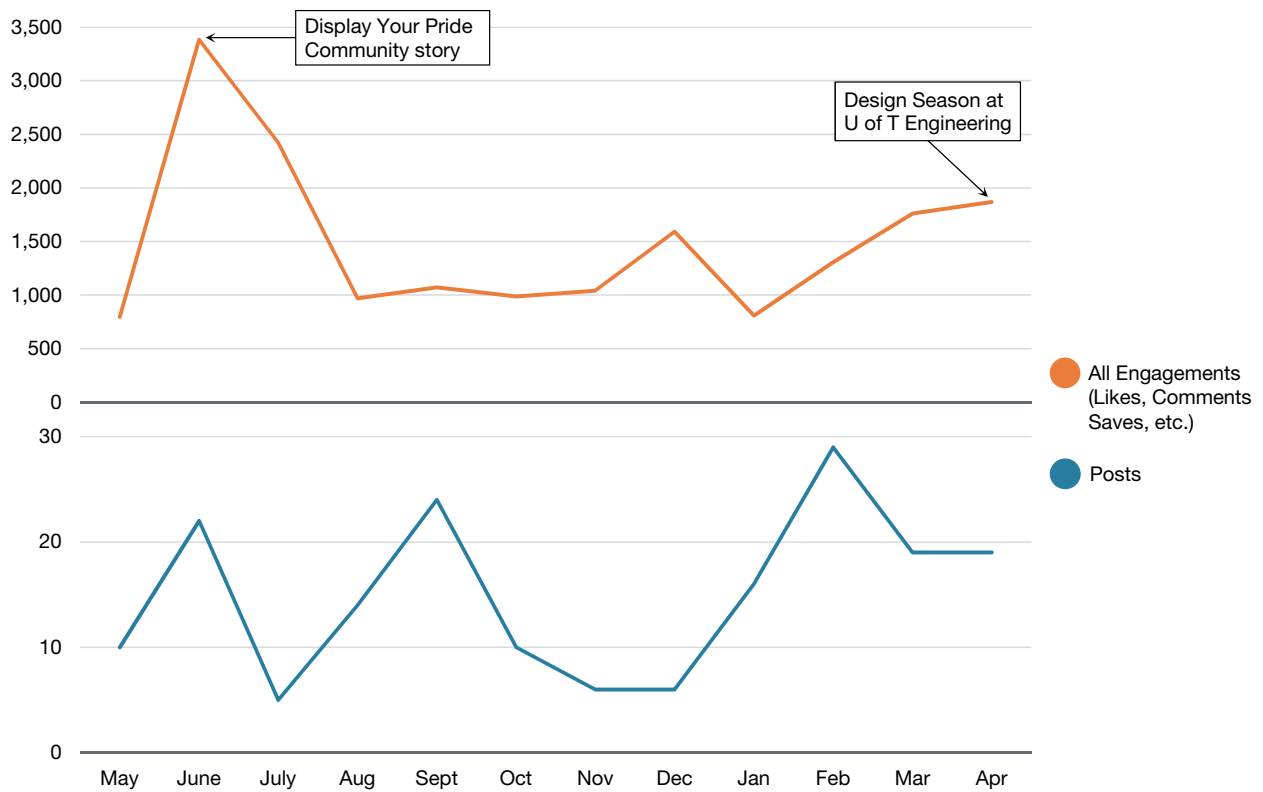


Figure 6.3d LinkedIn Statistics, May 2021 to April 2022

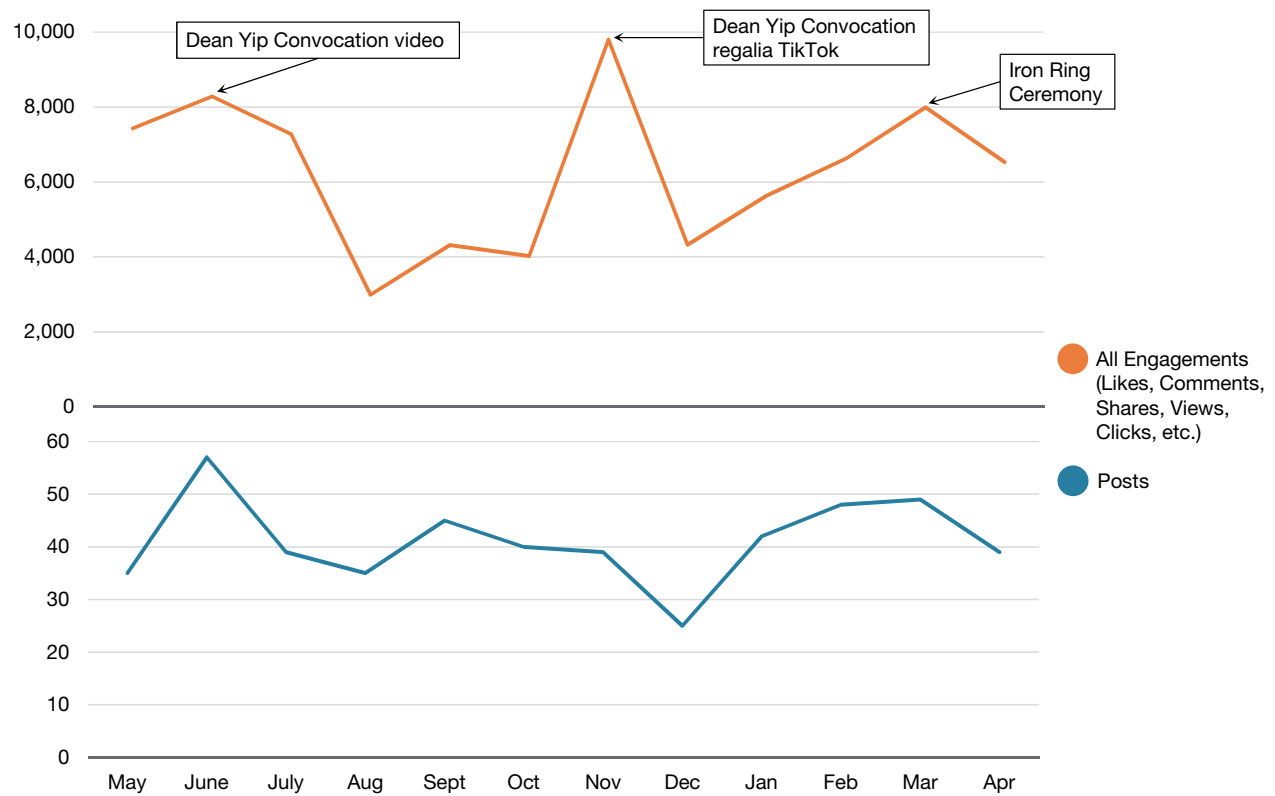


Figure 6.4 Summary of Analytics for Faculty Site and U of T Engineering News Site, 2020–2021

	Faculty site (engineering.utoronto.ca)	U of T Engineering News site (news.engineering.utoronto.ca)
Pageviews	368,206	167,277
Unique visitors	164,978	101,733
Average number of pageviews per session	1.50	1.29
Average amount of time spent on site	1:12 min	0:40 min
Cities of origin	5,796	5,391
Countries of origin	198	189

Note 6.4: A session is the period of time a user was actively engaged with our website. All usage data (pageviews, events, etc.) are associated with a session.

Figure 6.5 Social Media Referrals for U of T Engineering News, 2021–2022

Social Media Platform	Sessions
LinkedIn	11,001
Facebook	7,404
Twitter	4,396
Instagram	356

Figure 6.6 Summary of Analytics for Discover Engineering, You Belong Here and Graduate Studies Sites, 2021–2022

	Discover Engineering (discover.engineering.utoronto.ca)	Welcome to Skule™ (admit.engineering.utoronto.ca)	Graduate Studies (gradstudies.engineering.utoronto.ca)
Pageviews	959,972	27,625	215,001
Unique visitors	282,088	5,250	58,441
Average number of pageviews per session	2.21	2.59	2.01
Average amount of time spent on site	2:15 min	2:30 min	2:17 min
Cities of origin	8,249	670	3,138
Countries of origin	213	99	181

Note 6.6: A session is the period of time a user was actively engaged with our website. All usage data (pageviews, events, etc.) are associated with a session. *Discover Engineering* is for prospective students and *You Belong Here* is for applicants who were admitted to U of T Engineering for undergraduate studies. *The Graduate Studies* site serves both prospective and current graduate students.

Figure 6.7 Top 25 Stories on the Engineering News and U of T News Websites, 2021–2022

Page Title	Date Posted	Pageviews (U of T Engineering News)	Pageviews (U of T News)	Total
Grads to Watch 2021	June 21, 2021	3247	10907	14154
Spin-off company co-founded by U of T Engineering professor creates hydrogen without carbon dioxide emissions	December 1, 2021	5270	6625	11895
U of T Engineering alumna named to Forbes 30 Under 30	December 14, 2021	5698		5698
U of T Engineering alumnus patents tool created during PEY Co-op that optimizes rent bidding for tenants	May 7, 2021	488	4713	5201
Canada's largest urban georexchange system builds on legacy of Professor Frank Hooper	January 26, 2022	461	5574	6035
Could a 'virtual slime mould' design a better subway system?	January 25, 2022	498	3905	4403
U of T Engineering team earns US \$250,000 in global XPRIZE Carbon Removal Student Award	November 10, 2021	723	2908	3631
New U of T initiative to assess bias in AI systems	June 25, 2021	478	2235	2713
New trains and reduced friction braking improve air quality in Toronto's subways	July 30, 2021	1199	1427	2626
Q&A: Can green infrastructure keep microplastics out of the environment?	August 16, 2021	200	2181	2381
'High energy and optimism': International Pearson Scholars start at U of T Engineering	October 18, 2021	2225		2225
Researchers develop a quantum dot smartphone device to diagnose and track COVID-19	June 14, 2021	551	1562	2113
Seven U of T Engineering researchers awarded Canada Research Chairs	January 12, 2022	2067		2067
'Anywhere I want to go': How Blueprint opens doors for Black undergraduate students	August 19, 2021	246	1777	2023
New metamaterial with unusual reflective property could boost your Wi-Fi signal	September 22, 2021	803	916	1719
iSkin: The cold-tolerant, stretchable, sticky sensor that could power a new generation of wearable electronics and more	August 3, 2021	444	1239	1683
CivMin alumnus is finalist for £1-million Earthshot Prize	October 14, 2021	243	1427	1670
U of T Engineering professor on a mission to lower concrete's carbon footprint	October 14, 2021	521	1131	1652
A universal law of physiology emerges from professor's research	October 25, 2021	413	969	1382
AutoDrive Challenge™: U of T Engineering places first for the fourth straight year	June 15, 2021	383	1239	1622
IBET Momentum Fellow Mai Ali designs autonomously powered sensors for health care	September 10, 2021	451	889	1340
Meet 18 student leaders who enriched the U of T Engineering community this year	February 25, 2022	1314		1314
WinTOR: New partnership will train self-driving cars to handle tough winter conditions	July 6, 2021	446	862	1308
U of T Engineering team earns Brockhouse Prize for Interdisciplinary Research in Science and Engineering	November 17, 2021	1257		1257
Consumer pumps not the worst of Delhi's water woes	July 19, 2021	275	916	1191

Note 6.7: Pageviews obtained between May 1, 2021 and April 30, 2022

CHAPTER 7

FINANCIAL & PHYSICAL RESOURCES

FACTS AND FIGURES

\$236.0M

Total revenue,
2021–2022.

18

Buildings wholly or
partly occupied by U of T
Engineering, from the historic
Sandford Fleming Building to
the innovative Myhal Centre.

\$121.5M

Net revenue,
2021–2022.

71,914

Net assignable square
metres of space available
across the Faculty.

Figure 7.1 Total Revenue, 2012–2013 to 2021–2022

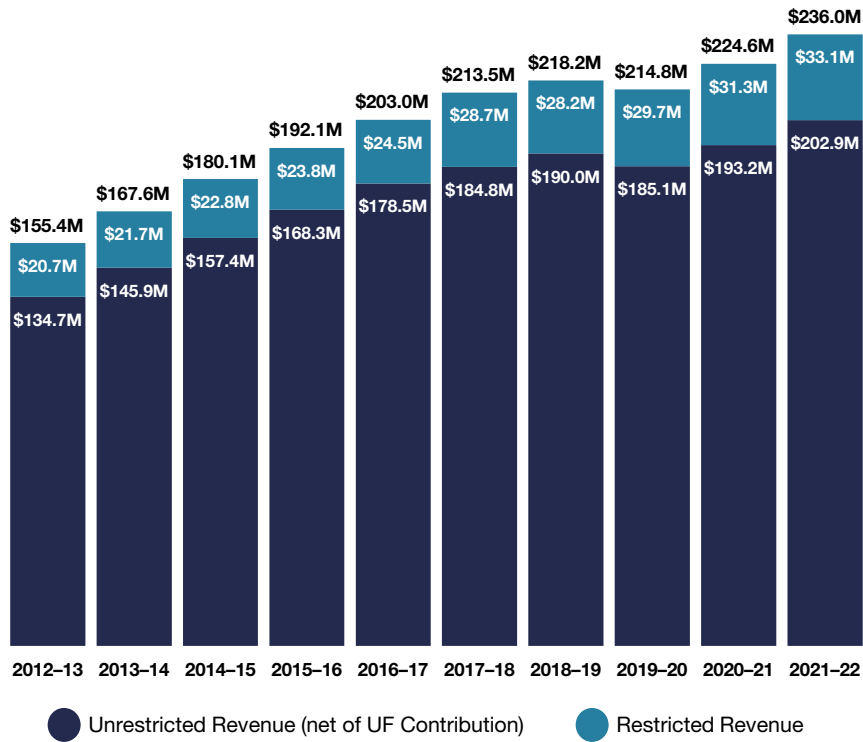
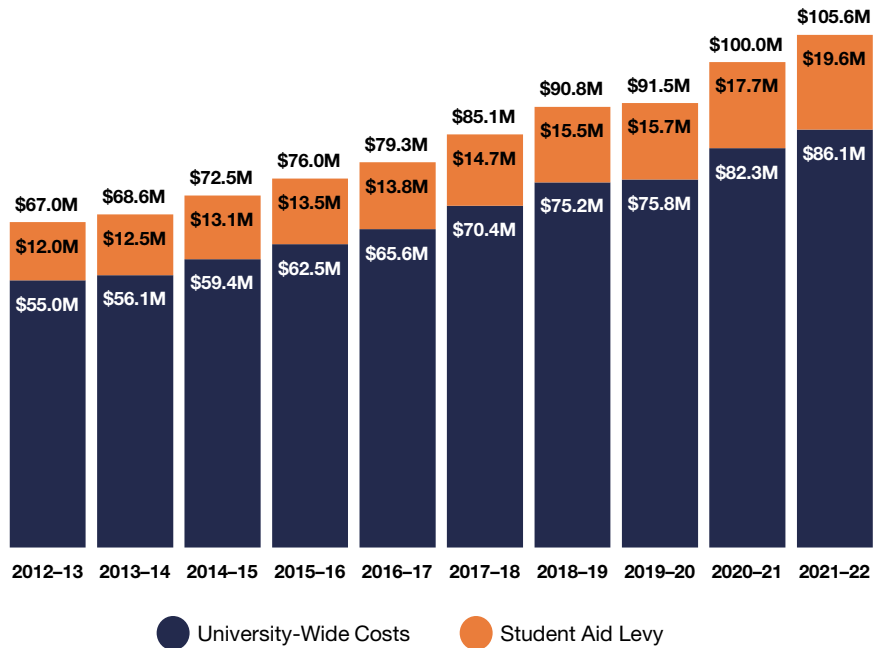


Figure 7.2 Total Central Costs, 2012–2013 to 2021–2022



Data in this chapter are presented by fiscal year (May to April)

Figure 7.3 Budget Data, 2012–2013 to 2021–2022

	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Unrestricted Revenue (net of UF Contribution)	\$134,654,090	\$145,880,955	\$157,376,069	\$168,313,333	\$178,459,435	\$184,836,509	\$189,960,978	\$185,052,620	\$193,218,344	\$202,902,197
Restricted Revenue	\$20,726,973	\$21,737,177	\$22,751,425	\$23,766,755	\$24,525,299	\$28,686,839	\$28,225,383	\$29,712,446	\$31,332,611	\$33,091,968
Total Revenue	\$155,381,063	\$167,618,132	\$180,127,494	\$192,080,088	\$202,984,733	\$213,523,348	\$218,186,361	\$214,765,067	\$224,550,955	\$235,994,165
Divisional Recovery for Interdivisional Teaching				\$6,042,335	\$5,084,764	\$5,028,443	\$11,067,206	\$10,910,265	\$8,720,807	\$8,828,754
University-Wide Costs	\$55,028,273	\$56,089,556	\$59,390,462	\$62,461,112	\$65,553,462	\$70,384,637	\$75,233,388	\$75,822,728	\$82,258,808	\$86,055,838
Student Aid Levy	\$11,995,084	\$12,539,417	\$13,093,888	\$13,541,938	\$13,793,571	\$14,716,594	\$15,542,692	\$15,703,617	\$17,749,925	\$19,562,608
Total Central Costs	\$67,023,357	\$68,628,973	\$72,484,350	\$76,003,050	\$79,347,033	\$85,101,231	\$90,776,080	\$91,526,344	\$100,008,733	\$105,618,445
Net Revenue	\$88,357,706	\$98,989,159	\$107,643,144	\$110,034,703	\$118,552,936	\$123,393,674	\$116,343,075	\$112,328,457	\$115,821,415	\$121,546,966

Figure 7.4 Revenue Sources, 2021–2022

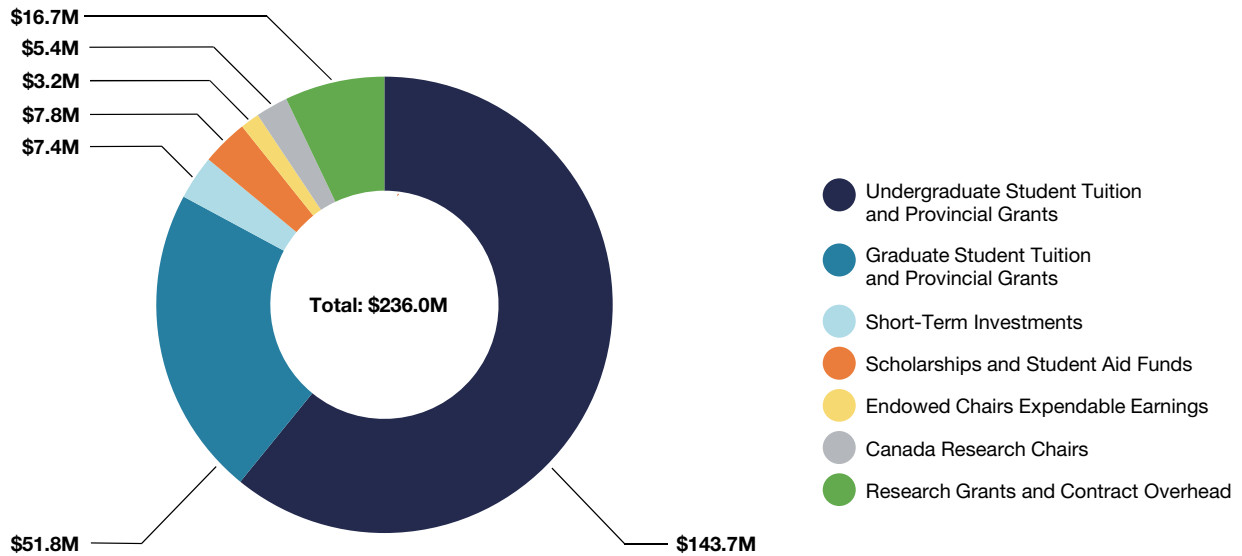


Figure 7.5 Revenue Distribution, 2021–2022

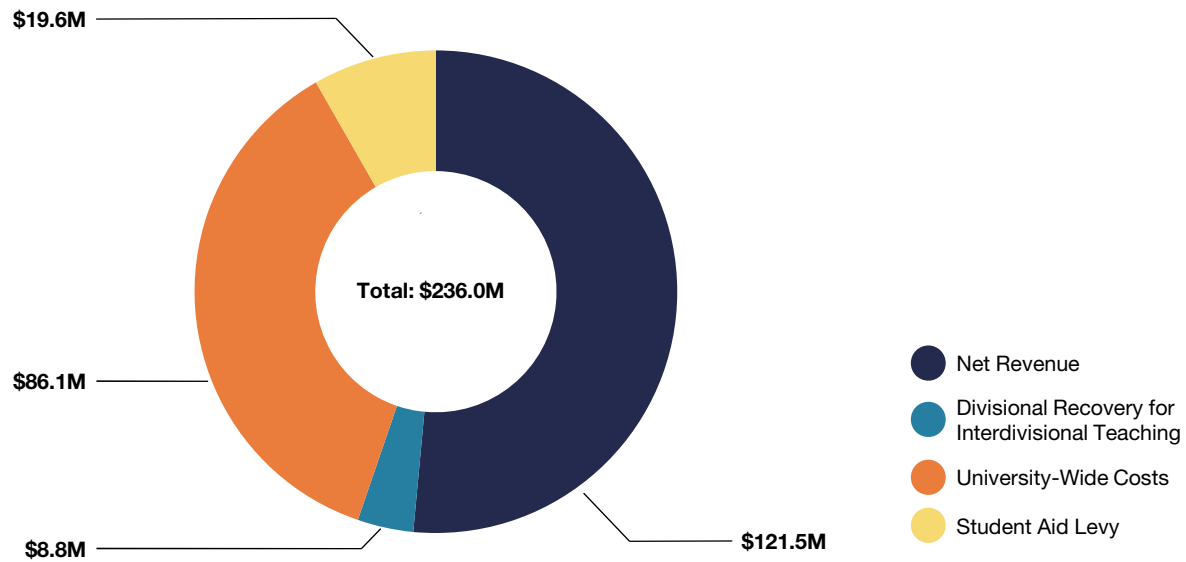


Figure 7.6 Total Operating Budget: Breakdown by Expenses (Net of Central University Costs), 2021–2022

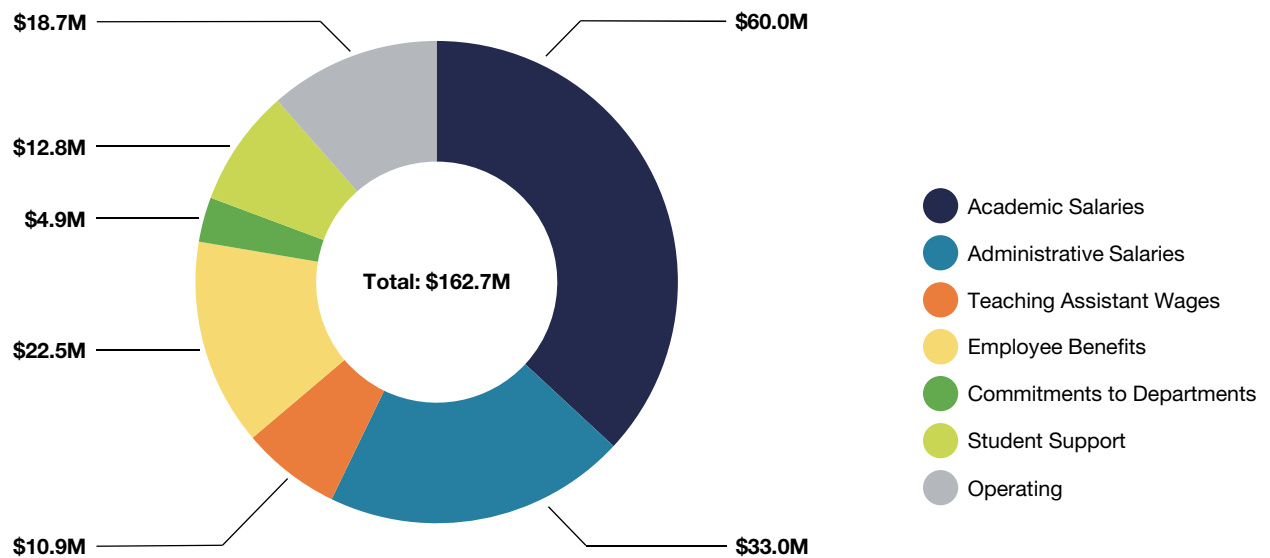


Figure 7.7 Summary of Buildings Occupied by Engineering, 2021–2022

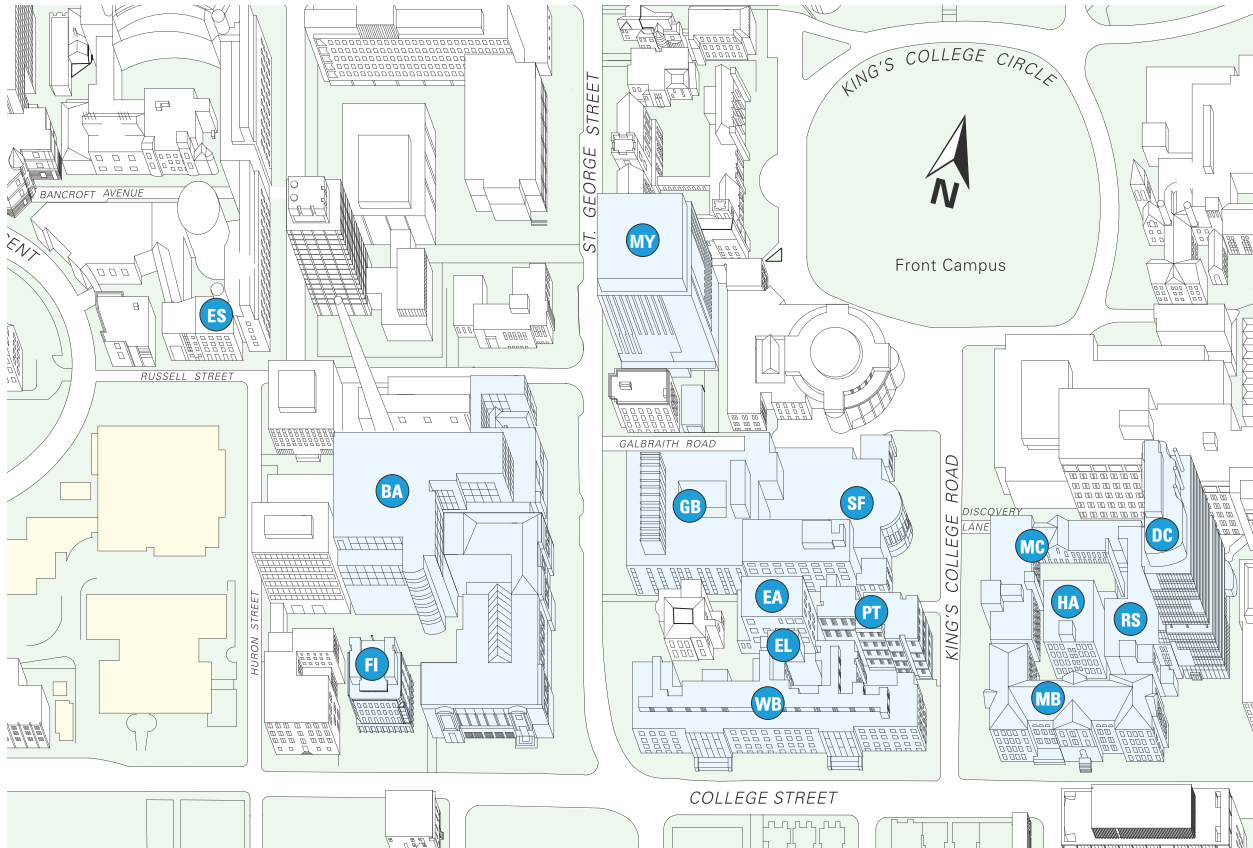
Code	Building	Office of the Dean	EngSci	UTIAS	ChemE	CivE & MinE	ECE	BME	ISTEP	MIE	MSE	Total NASMs
AS	Aerospace (Downsview)			5,292								5,292
BA	Bahen Centre	1,581	561		67		5,529			1,668		9,407
DC	Donnelly CCBR				667			889				1,556
ES	Earth Sciences				164							164
EA	Engineering Annex	221					944				91	1,256
EL	Electrometal										149	149
FI	Fields Institute	332										332
GB	Galbraith	1,505				5,312	4,318		55			11,190
HA	Haultain				198	110				727	721	1,755
M2	MaRS West Tower						136	791		183		1,110
MB	Lassonde Mining					1,138		1,362		1,890	832	5,222
MC	Mechanical Engineering	63								5,384		5,447
MY	Myhal Centre	5,228							579			5,807
PT	D.L. Pratt						1,327				1,488	2,815
RS	Rosebrugh							939		2,231		3,170
SF	Sandford Fleming	629		692		1,559	3,546		137			6,563
WB	Wallberg	375			8,264		130				1,381	10,151
RM	256 McCaul	528										528
	Total Area	10,462	561	5,984	9,361	8,118	15,931	3,981	771	12,084	4,662	71,914
		71,914 NASMs (Net Assignable Square Metre)										

Figure 7.8 Selected Infrastructure Investments, 2021–2022

Project	Description	Progress
EngX – New Space for Industry Partnerships	This new facility, to be located at 88 College Street, will provide external partners with leased space and direct access to U of T Engineering’s expertise. EngX aims to be the first Net Zero Deep Energy Retrofit of a heritage building on the St. George campus.	Current occupants are expected to vacate the building in 2023. University approval has been received to procure the services of both a design consultant team, as well as pre-construction services from a construction manager.
Experiential Learning Commons	A new joint collaborative career centre, located on the third and fourth floors of 255 Beverly Street, will include accommodations for the Engineering Career Centre, as well as career support programs from the Faculty of Arts & Science and the Employer Relations Team from U of T’s Student Services. It will house programs such as the Professional Experience Year Co-op Program and other work-experience offerings. The University’s design and operating intent is for the project to be LEED Gold certified.	Full approval was received from the University on May 14, 2021. The project work was tendered and a contract for construction was awarded. The general contractor has been working through 2021 and 2022, and occupancy is expected in August 2022.
Adjustable Multi-dimensional (AMD) Loading System & Upgrade of Structural Testing Facilities	The revitalization of the Structural Testing Facility in the Galbraith Building is part of a proposed long-term research project to establish a mega-scale Adjustable Multi-dimensional (AMD) experimental loading facility.	Following a feasibility study, a multidisciplinary architect team (DIALOG Architects) completed the design for demolition and alterations needed to accommodate the new AMD. With full project approval received from the University in March 2022, work has been tendered. This project is funded by the Dean’s Strategic Fund.
UTIAS High-Pressure Combustion Facility (HPCRF)	The HPCRF will enable researchers to perform high-pressure/high-temperature research involving a test-cell article designed and supplied by UTIAS that will use three fuel types: jet fuel, natural gas and hydrogen.	Reviews and variance approval by Ontario’s Technical Standards & Safety Authority (TSSA) are underway, along with site testing with fuels and commissioning. Completion is expected in the summer of 2022.
Upgrading of two research labs in MC120 – Phase 1	The first phase of a two-phase project to upgrade two spaces within the Energy Lab, MC120: <ul style="list-style-type: none"> • Led by Professor David Sinton (MIE), the CO2 Electrolyzer Pilot Plant (CERT) researches the removal of CO2 from the atmosphere using electrolytic principles and its subsequent conversion into commercially valuable products; • Led by Professor Cristina Amon (MIE), the Thermal Management Systems (TMS) Laboratory addresses the thermal management of battery and charging systems for electric vehicles. 	Phase 1 of the project is underway. Set for initiation in 2023, Phase 2 will address the renewal of undergraduate labs throughout the remainder of MC120 in support of electric and autonomous vehicles and related emerging green technologies.

<p>HR Division Renovation — BA 3008 / 3012</p>	<p>BA-3008 & BA-3012 were transferred from the Learning Space Management Office to U of T Engineering under the project agreement for the Myhal Centre. The will house four offices relocated from other parts of the Faculty:</p> <ul style="list-style-type: none"> • Divisional Human Resources • Assistant Director, Student Experience & Teaching Development • Mental Health Programs Officer • Faculty Health & Safety Advisor 	<p>The relocations are underway. Occupancy is expected to be achieved in either summer or fall of 2022.</p>
<p>Sandford Fleming Basement Atrium Renewal</p>	<p>A successful 2021 Student Spaces Enhancement Fund (SSEF) award enabled University Planning, Design & Construction to take on this joint Faculty/Engineering Society (EngSoc) project to renovate the basement area of Sandford Fleming, including the surrounding food court seating.</p>	<p>University approval was received in April 2022 to proceed with the design phase, funded jointly by the Faculty, EngSoc and the SSEF award. The procurement of an architect-led design team is underway. With a time allowance to assemble funding for the second phase of tendering and construction, these renewed and revitalized spaces should be completed by the start of the 2024 academic year.</p>

Figure 7.9 The Engineering Neighbourhood



BA	Bahen Centre for Information Technology	MC	Mechanical Engineering Building
DC	Donnelly Centre for Cellular and Biomolecular Research (CCBR)	MY	Myhal Centre for Engineering Innovation & Entrepreneurship
EA	Engineering Annex / Electro-Metallurgy Lab Building (South Side)	PT	D.L. Pratt Building
EL	Electrometallurgy Lab	RS	Rosebrugh Building
ES	Earth Sciences Centre	SF	Sandford Fleming Building
FI	Fields Institute	WB	Wallberg Building
GB	Galbraith Building	-	256 McCaul Street [not pictured]
HA	Haultain Building	-	MaRS Discover District West Tower [not pictured]
MB	Lassonde Mining Building	-	UTIAS (Downsview) [not pictured]

CHAPTER 8

DATA SOURCES

**Read U of T's *Impact Report 2022* at
uofteng.ca/2022**

This section indicates the sources for data and information presented throughout this report. Sources are organized in order of appearance by figure number and title.

Introduction

Comparison of U of T Engineering with Ontario and Canada, 2020–2021

Enrolment, degrees granted and faculty data are based on the 2020 calendar year and come from the Engineering Deans Canada (EDC) 2020 Resources Report, prepared by Engineers Canada and circulated to Canadian engineering deans in July 2021.

Undergraduate enrolment figures exclude non-degree students and those doing a Professional Experience Year Co-op (PEY Co-op). Full-time equivalent (FTE) enrolment statistics represent averages that include all three terms of the year (winter, summer and fall). Undergraduate FTE shows the three-term total divided by two; Graduate FTE shows the three-term total divided by three. Research funding data comes from the Natural Sciences and Engineering Research Council (NSERC) search engine (www.nserc-crsng.gc.ca/ase-oro/index_eng.asp) with the following parameters: Advanced Search; Selection Committees = Discovery Grants + Research Partnerships (excl CRCs & NCEs); Research Subjects = all engineering-related categories; Universities only; Fiscal Year = 2020–2021 (April to March). Major awards data comes from the Director, Awards and Honours, Faculty of Applied Science & Engineering, based on press releases and websites of individual awards for the 2021 calendar year.

Comparison of U of T Engineering with St. George Campus and University of Toronto, 2021–2022

All student counts are based on Head Count for Fall 2021 from the U of T Historical Enrolment Count Tool. St. George campus and U of T statistics do not include Toronto School of Theology. All statistics for degrees awarded come from the U of T Repository of Student Information (ROSI) and reflect September 2021 to June 2022 dates. St. George campus and U of T statistics do not include Toronto School of Theology. All sponsored-research funding statistics come from the U of T Research Reporting Dashboards, based on the 2020–2021 grant year, and exclude partner hospitals; includes all program types; data is current as of May 2022. Engineering academic staff statistics provided by the Assistant Dean, Administration, Faculty of Applied Science & Engineering (based on HRIS and published lists of faculty members). Engineering administrative and technical staff statistic provided by the Chief Financial Officer, Faculty of Applied Science & Engineering. U of T academic and administrative staff statistics come from U of T *Facts and Figures 2021*, available online at: data.utoronto.ca/reports/facts-and-figures. All budget data is provided by the Chief Financial Officer, Faculty of Applied Science & Engineering, and is taken from the U of T Budget Report 2021–22 (Feb 2021), Appendix B, Schedule 4: Revenue and Expense Allocations by Division 2021–22, prepared by the Office of the Vice-Provost, Planning & Budget and available online at: <https://planningandbudget.utoronto.ca/reports/>. Engineering space statistic from U of T Office of Space Management data, March 2022. U of T and St. George space statistics from U of T *Facts and Figures 2021*.

Faculty Leadership, 2021–2022

Information provided by the Assistant Dean, Administration, Faculty of Applied Science & Engineering. A current organizational chart is also available online at www.engineering.utoronto.ca/about/office-of-the-dean/#academiclead

Chapter 1: Undergraduate Studies

1.1a Applications, Offers, Registrations, Selectivity and Yield of First-Year Undergraduates, 2012 to 2021

All years' data for applications and offers are based on annual Admissions Committee reports to Engineering Faculty Council (November), counting new admissions only, FT and PT, all years of study. Registrations only are from the U of T Historical Enrolment Count Tool. Parameters: Faculty = Applied Science & Engineering; Year = Fall terms for 2012–2021; Degree Type = Undergraduate (excludes students with special status); Year of Study - Undergraduate (SESLEV) = Year 1; New Intake = Yes; Measure = Head Count.

1.1b	Applications, Offers, Registrations, Selectivity and Yield of Domestic First-Year Undergraduates, 2012 to 2021	All years' data for applications and offers are based on annual Admissions Committee reports to Engineering Faculty Council (November), counting new admissions only, FT and PT, all years of study. Registrations only are from the U of T Historical Enrolment Count Tool. Parameters: Faculty = Applied Science & Engineering; Year = Fall terms for 2012–2021; Degree Type = Undergraduate (excludes students with special status); Year of Study - Undergraduate (SESLEV) = Year 1; New Intake = Yes; Measure = Head Count; Tuition Fees / Domestic/International = Domestic.
1.1c	Applications, Offers, Registrations, Selectivity and Yield of International First-Year Undergraduates, 2012 to 2021	All years' data for applications and offers are based on annual Admissions Committee reports to Engineering Faculty Council (November), counting new admissions only, FT and PT, all years of study. Registrations only are from the U of T Historical Enrolment Count Tool. Parameters: Faculty = Applied Science & Engineering; Year = Fall terms for 2012–2021; Degree Type = Undergraduate (excludes students with special status); Year of Study - Undergraduate (SESLEV) = Year 1; New Intake = Yes; Measure = Head Count; Tuition Fees / Domestic/International = International.
1.2a	Ontario Secondary School Averages of Incoming First-Year Undergraduates, 2012 to 2021	Averages of incoming first-year students from Admissions Committee Report to Engineering Faculty Council (November).
1.2b	Two-Year Retention Rate, 2010 to 2019	Retention rate is the proportion of students who successfully move on to second year within two years of their first entry into the program.
1.3	Incoming First-Year Undergraduates by Program, 2012–2013 to 2021–2022	Student counts are from the U of T Historical Enrolment Count Tool. Parameters: Faculty = Applied Science & Engineering; Year = Fall terms for 2012–2021; Degree Type = Undergraduate (excludes students with special status); New Intake = Yes; Measure = Head Count; Programs of study based on [Program] field.
1.4a	All Undergraduates by Program, 2012–2013 to 2021–2022	Student counts are from the U of T Historical Enrolment Count Tool, including full-time students, part-time students and students on PEY Co-op. Parameters: Faculty = Applied Science & Engineering; Year = Fall terms for 2012–2021; Degree Type = Undergraduate (excludes students with special status); Year of Study - Undergraduate (SESLEV) = Years 1–4; Measure = Head Count; Programs of study based on [Program] field.
1.4b	All Undergraduates by Program, Year of Study and Professional Experience Year Co-op, 2021–2022	Student counts are from the U of T Historical Enrolment Count Tool, including full-time students, part-time students and students on PEY Co-op. Parameters: Faculty = Applied Science & Engineering; Year = Fall 2021; Degree Type = Undergraduate (excludes students with special status); Year of Study - Undergraduate (SESLEV) = Years 1–4; Programs of study based on [Program] field.
1.4c	Enrolment in Engineering Science Majors, 2012–2013 to 2021–2022	Student counts are from the U of T Historical Enrolment Count Tool. Parameters: Faculty = Applied Science & Engineering; Year = Fall 2021; Degree Type = Undergraduate (excludes students with special status); Associated Org = blank (excludes PEY Co-op); Year of Study - Undergraduate (SESLEV) = Years 1–4; EngSci Majors based on [Program Option] field.
1.4a	Undergraduate Student-to-Faculty Ratios by Academic Area, 2021–2022	Student counts are from the U of T Historical Enrolment Count Tool. Parameters: Faculty = Applied Science & Engineering; Year = Fall 2021, Degree Type = Undergraduate (excludes students with special status); Associated Org = blank (excludes PEY Co-op); Measure = Head Count. Faculty Total does not include teaching done for Engineering by extra-divisional units (especially Arts & Science departments). Results are not adjusted for departmental contributions to shared first-year curriculum, Engineering Science or Engineering minors. Faculty counts are provided by the Assistant Dean, Administration, Faculty of Applied Science & Engineering and used on a slip-year basis: totals from July 2021 are used to compare with 2021–2022 student counts. Calculation includes tenured, tenure-stream and teaching-stream faculty.

1.5b	Undergraduate Full-Time Equivalent Student-Faculty Ratios, 2012–2013 to 2021–2022	Student counts are from the U of T Historical Enrolment Count Tool. Excludes students on PEY Co-op and students with special status. Parameters: Faculty = Applied Science & Engineering; Year = Fall 2021, Degree Type = Undergraduate; Associated Org = blank (to exclude PEY Co-op); Measure = Head Count. Does not include teaching done for Engineering by extra-divisional units (especially Arts & Science departments). Faculty counts are provided by the Assistant Dean, Administration, Faculty of Applied Science & Engineering and used on a slip-year basis: totals from July 2021 are used to compare with 2021–2022 student counts. Calculation includes tenured, tenure-stream and teaching-stream faculty.
1.6a	Undergraduate Participation in Summer Research Opportunities, 2013 to 2022	Information regarding Canadian placements provided by the Registrar's Office, Faculty of Applied Science & Engineering, and the Faculty's departmental offices. International placement statistics provided by the U of T Centre for International Experience.
1.6b	Undergraduate Participation in Summer Research Opportunities by Academic Area, 2022	Information regarding Canadian placements provided by the Registrar's Office, Faculty of Applied Science & Engineering, and the Faculty's departmental offices. International placement statistics provided by the U of T Centre for International Experience.
1.7a	Number of Engineering Undergraduate Students Participating in PEY Co-op with Percentage Participation, 2012–2013 to 2021–2022	Statistics provided by the Engineering Career Centre, Faculty of Applied Science & Engineering.
1.7b	Number of Canadian and International PEY Co-op Positions, 2012–2013 to 2021–2022	Statistics provided by the Engineering Career Centre, Faculty of Applied Science & Engineering.
1.7c	Number of PEY Co-op Employers, 2012–2013 to 2021–2022	Statistics provided by the Engineering Career Centre, Faculty of Applied Science & Engineering.
1.8a	Number of Awards Received by Cohort with Total Number of Undergraduate Need-Based Award Recipients, 2012–2013 to 2021–2022	Award data from the U of T Student Accounts Analysis Cube. Parameters: Faculty = Applied Science & Engineering; Transaction Type: Hierarchy Level 1 = Income, Hierarchy Level 2 = Awards – Undergraduate; Need vs Merit Based = Needs Based Awards; Program Level = Undergraduate; Enrolment Status = All (e.g. FINCA, CANC, etc.); Year of Study = Years 1–4 (exclude any N/A); Sessions include most recent (current) academic year except for the Summer semester; Measure = Dollar amount
1.8b	Total Value of Undergraduate Financial Assistance and Percentage Distributed by Year of Study, 2012–2013 to 2021–2022	Award data from the U of T Student Accounts Analysis Cube. Parameters: Faculty = Applied Science & Engineering; Transaction Type: Hierarchy Level 1 = Income, Hierarchy Level 2 = Awards – Undergraduate; Need vs Merit Based = Needs Based Awards; Program Level = Undergraduate; Enrolment Status = All (e.g. FINCA, CANC, etc.); Year of Study = Years 1–4 (exclude any N/A); Sessions include most recent (current) academic year except for the Summer semester; Measure = Distinct student count
1.9	Undergraduate Degrees Awarded by Program, 2012–2013 to 2021–2022	All data from ROSI download: 5EA (Graduated Students); Faculty = APSC (Applied Science & Engineering). Includes Fall (Nov), Spring (March) and Summer (June) convocations.

1.10 U of T Engineering Degrees Awarded by Academic Area Compared with Canadian and North American Degree Totals, 2020	U of T and Canadian statistics are based on the 2020 calendar year and come from Engineers Canada Report of Enrolment & Degrees Granted (<i>Canadian Engineers for Tomorrow, Trends in Engineering Enrolment and Degrees Awarded 2016–2020</i>), released November 2021, and available online at: engineerscanada.ca/reports/enrolment-and-degrees-awarded-report . American statistics used to calculate North American percentages are based on the 2020–2021 academic year and come from the 2021 American Society of Engineering Educators (ASEE) Report, available online at: www.asee.org/papers-and-publications/publications/college-profiles
1.11a Number of Students and Percentage of Class Graduating with Honours, 2013 to 2022	Data provided by the Office of the Faculty Registrar, Faculty of Applied Science & Engineering. Based on ROSI download: 5EA (Graduated Students); Degree Citation Code = HON (Honours) or HHO (High Honours).
1.11b Number of Students on the Dean’s Honour List by Term and Academic Area, Fall 2017 to Winter 2022	Data provided by the Office of the Faculty Registrar, Faculty of Applied Science & Engineering. Based on ROSI data; Award Code = APHON. See footnote to Fig. 1.11b for an explanation regarding the impact of COVID-19 adaptations on the 2021 Winter term and 2021–2022 results.
1.12a Number of Students and Percentage of Graduating Class Completing an Engineering Minor, 2012–2013 to 2021–2022	Information provided by the Cross-Disciplinary Programs Office, Faculty of Applied Science & Engineering
1.12b Students Graduating with an Engineering Business Minor or Certificate, 2012–2013 to 2021–2022	Information provided by the Cross-Disciplinary Programs Office, Faculty of Applied Science & Engineering
1.13 New Undergraduate Courses Approved, 2021–2022	Data provided by the Vice-Dean Undergraduate Studies, Faculty of Applied Science & Engineering.

Chapter 2: Graduate Studies

2.1a Domestic and International MSc Students: Applications, Offers, Registrations, Selectivity and Yield, 2012–2013 to 2021–2022	All data from ROSI download: 4BEG (Graduate Admissions Statistics)
2.1b Domestic and International PhD Students: Applications, Offers, Registrations, Selectivity and Yield, 2012–2013 to 2021–2022	All data from ROSI download: 4BEG (Graduate Admissions Statistics). Students who have fast-tracked from MSc programs into PhD programs are calculated separately (see Fig. 2.6a) but have been included in this figure as applications, offers and admissions to more accurately reflect total PhD student intake.
2.1c Domestic and International MEng and MHSc Students: Applications, Offers, Registrations, Selectivity and Yield, 2012–2013 to 2021–2022	All data from ROSI download: 4BEG (Graduate Admissions Statistics)

2.2a	Graduate Students by Degree Type, 2012–2013 to 2021–2022	Student counts are from the U of T Historical Enrolment Count Tool. Parameters: Faculty = Applied Science & Engineering; Year = Fall terms for 2012–2021; Degree Type = Doctoral & Masters (excludes students with special status); Measure = Head Count.
2.2b	Graduate Enrolment by Full-Time Equivalent (FTE) and Headcount (HC) by Academic Area, 2012–2013 to 2021–2022	Student counts are from the U of T Historical Enrolment Count Tool. Parameters: Faculty = Applied Science & Engineering; Degree Type = Doctoral & Masters (excludes students with special status); Measure = Head Count or Total FTE. Headcounts are reported for all Fall terms from 2012–2021. FTEs are counted by academic year as reported in the cube (May to April).
2.3a	Graduate and Undergraduate Full-Time Equivalent Student-to-Faculty Ratios, 2012–2013 to 2021–2022	Student counts are from the U of T Historical Enrolment Count Tool. Undergraduate Parameters: Faculty = Applied Science & Engineering; Year = Fall terms 2012–2021; Associated Org = blank (excludes PEY Co-op); Degree Type = Undergraduate (excludes students with special status); Measure = Head Count. To calculate Undergraduate FTEs, part-time students are counted as 0.3 FTE. Graduate Parameters: Faculty = Applied Science & Engineering; Year = Fall terms 2012–2021; Measure = Total FTE; Degree Type = Doctoral & Masters (excludes students with special status). Number of faculty included in the calculation is provided by the Assistant Dean, Administration, Faculty of Applied Science & Engineering and used on a slip-year basis: totals from July 2021 are used to compare with 2021–2022 student counts. Graduate ratios include only tenured and tenure-stream faculty; Undergraduate ratios also include teaching stream faculty.
2.3b	Full Time Equivalent Graduate Student-to-Faculty Ratios by Academic Area and Degree Type, 2021–2022	Student counts are from the U of T Historical Enrolment Count Tool. Parameters: Faculty = Applied Science & Engineering; Year = Fall 2021; Degree Type = Doctoral & Masters (excludes students with special status); Measure = Total FTE. The number of graduate students per department is adjusted as per the budget calculation for inter-departmental graduate student supervision. Faculty counts are provided by the Assistant Dean, Administration, Faculty of Applied Science & Engineering, and are used on a slip-year basis: totals from July 2021 are used to compare with 2021–2022 student counts. Includes tenured and tenure-stream faculty only.
2.3c	Ratio of Undergraduate to Graduate Full-Time Equivalent Students, 2012–2013 to 2021–2022	Student counts are from the U of T Historical Enrolment Count Tool. Undergraduate Parameters: Faculty = Applied Science & Engineering; Year = Fall terms 2012–2021; Associated Org = blank (excludes PEY Co-op); Degree Type = Undergraduate (excludes students with special status); Measure = Head Count. To calculate Undergraduate FTEs, part-time students are counted as 0.3 FTE. Graduate Parameters: Faculty = Applied Science & Engineering; Year = Fall terms 2012–2021; Measure = Total FTE; Degree Type = Doctoral & Masters (excludes students with special status).
2.4a	Graduate Student Funding by Category, 2011–2012 to 2020–2021	Data from the U of T Student Accounts Reporting Cube. Parameters: Faculty = Applied Science & Engineering; Transaction Type: Hierarchy Level 1 = Income, Hierarchy Level 2 = Awards – Grad, HR Other, Stipend, UT Employment; excludes Awards – Undergraduate, Waiver. Student funding reported by academic year (September to August).
2.4b	Graduate Student Funding by Category and Academic Area, 2020–2021	Data obtained from the U of T Student Accounts Reporting Cube. Parameters: Faculty = Applied Science & Engineering; Transaction Type: Hierarchy Level 1 = Income, Hierarchy Level 2 = Awards – Grad, HR Other, Stipend, UT Employment; excludes Awards – Undergraduate, Waiver. Student funding reported by academic year (September to August).
2.5a	Total Graduate Student Scholarships by Source, 2011–2012 to 2020–2021	Data from the U of T Student Accounts Reporting Cube. Parameters: Faculty = Applied Science & Engineering; Transaction Type: Hierarchy Level 1 = Income, Hierarchy Level 2 = Awards – Grad; Award Income Source = External. Student funding reported by academic year (September to August).

2.5b	Number of NSERC and CIHR Graduate Student Award Recipients by Academic Area, 2011–2012 to 2020–2021	Data from the U of T Student Accounts Reporting Cube. Parameters: Faculty = Applied Science & Engineering; Transaction Type: Hierarchy Level 1 = Income, Hierarchy Level 2 = Awards – Grad; Award Income Source = Federal — Natural Sciences and Engineering Research Council; Measure = Distinct Student Count. Student funding reported by academic year (September to August).
2.6a	Number of Students Fast-Tracked from Masters to PhD by Academic Area, 2012–2013 to 2021–2022	All data from ROSI download: 4FF (Student Registrations). Fast-tracked students are identified by POST codes that end in 'PHD U' and are counted when prior session POST code was a Master's degree (MAsc or MEng). To reflect fast-tracking practice, an academic year is defined as Summer-Fall-Winter (May to April).
2.6b	Number of Direct-Entry PhD students by Academic Area, 2012–2013 to 2021–2022	All data from ROSI download: 4FF (Student Registrations). Include all PhD students where prior session POST code was blank or AE NDEGP (recently-completed undergraduate). Reported by academic year defined as Summer-Fall-Winter (May to April).
2.7a	Time to Completion for PhD, MAsc, MEng and MHSc Students, 2012–2013 to 2021–2022	All data from ROSI download: 4BEA (Years to Graduate), originally created for Ontario Council of Graduate Studies (OCGS) reporting purposes. The data reflects median values based on the total number of terms in which a student is registered. Leaves, lapses and (in most cases) the term in which the convocation occurs are excluded. Where a student is fast-tracked from the MAsc into a PhD, the total time for both programs is counted. Full-time, extended full-time and part-time MEng students are distinguished for greater clarity and accuracy.
2.7b to 2.7h	Time to Completion for Graduate Students by Academic Area, 2012–2013 to 2021–2022	All data from ROSI 4BEA downloads (Years to Graduate), originally created for Ontario Council of Graduate Studies (OCGS) reporting purposes. The data reflects median values based on the total number of terms in which a student is registered. Leaves, lapses and (in most cases) the term in which the convocation occurs are excluded. Where a student is fast-tracked from the MAsc into a PhD, the total time for both programs is counted. Full-time, extended full-time and part-time MEng students are distinguished for greater clarity and accuracy.
2.8	Graduate Degrees Awarded by Degree Type, 2012–2013 to 2021–2022	All data from ROSI download: 5EA (Graduated Students); Faculty = APSC (Applied Science & Engineering).
2.9	New Graduate Courses Launched, 2021–2022	Data provided by the Vice-Dean Graduate Studies, Faculty of Applied Science & Engineering.

Chapter 3: Community

3.1	Continent of Origin: Undergraduate Students, Fall 2021	Student counts are from the U of T Historical Enrolment Count Tool. Parameters: Faculty = Applied Science & Engineering; Year = Fall 2021; Degree Type = Undergraduate (excludes students with special status); Measure = Head Count; Calculations based on Continent/Country of Citizenship parameter.
3.2a	Incoming First-Year Undergraduates with Percentage of Women, 2012 to 2021	Student counts are from the U of T Historical Enrolment Count Tool. Parameters: Faculty = Applied Science & Engineering; Year = Fall terms for 2012–2021; Degree Type = Undergraduate (excludes students with special status); New Intake = Yes; Year of Study - Undergraduate (SESLEV) = 1; Measure = Head Count; Gender parameter used to calculate percentage of women students. The options to report "another gender" or to not report gender were added in 2017.
3.2b	Incoming First-Year Undergraduates with Percentage of International Students, 2012 to 2021	Student counts are from the U of T Historical Enrolment Count Tool. Parameters: Faculty = Applied Science & Engineering; Year = Fall terms for 2012–2021; Degree Type = Undergraduate (excludes students with special status); New Intake = Yes; Year of Study - Undergraduate (SESLEV) = 1; Measure = Head Count; Tuition Fees / Domestic/International parameter used to calculate percentage of international students.

3.2c	Incoming First-Year Domestic and International Undergraduates, 2012 to 2021	Student counts are from the U of T Enrolment Master Files, source of the Historical Enrolment Count Tool. Includes new and returning students. Parameters: Faculty = Applied Science & Engineering; Year = Fall terms for 2012–2021; Degree Type = Undergraduate (excludes students with special status); Year of Study - Undergraduate (SESLEV) = Year 1; New Intake = Yes; Measure = Head Count
3.3a	Undergraduate Enrolment with Percentage of Women, 2012 to 2021	Student counts are from the U of T Historical Enrolment Count Tool. Parameters: Faculty = Applied Science & Engineering; Year = Fall terms for 2012–2021; Degree Type = Undergraduate (excludes students with special status); Measure = Head Count. The options to report "another gender" or to not report gender were added in 2017.
3.3b	Percentage of Women by Undergraduate Program, 2012–2013 to 2021–2022	Student counts are from the U of T Historical Enrolment Count Tool. Parameters: Faculty = Applied Science & Engineering; Year = Fall terms for 2012–2021; Degree Type = Undergraduate (excludes students with special status); Measure = Head Count; Gender = Female; Programs of study based on [Program] field. The options to report "another gender" or to not report gender were added in 2017.
3.3c	Undergraduate Enrolment with Percentage of International Students, 2012–2013 to 2021–2022	Student counts are from the U of T Historical Enrolment Count Tool. Parameters: Faculty = Applied Science & Engineering; Year = Fall terms for 2012–2021; Degree Type = Undergraduate (excludes students with special status); Measure = Head Count; Tuition Fees / Domestic/International parameter used to calculate percentage of international students.
3.4	Undergraduate Degrees Awarded by Gender, 2012–2013 to 2021–2022	All data from ROSI download: 5EA (Graduated Students); Faculty = APSC (Applied Science & Engineering). Includes Fall (Nov), Spring (March) and Summer (June) convocations.
3.5	Continent of Origin: Graduate Students, Fall 2021	Student counts are from the U of T Historical Enrolment Count Tool. Parameters: Faculty = Applied Science & Engineering; Year = Fall 2021; Degree Type = Doctoral & Masters (excludes students with special status); Measure = Head Count; Calculations based on Continent/Country of Citizenship parameter.
3.6a	Graduate Students by Degree Type and Gender with Percentage of Women Students, 2012–2013 to 2021–2022	Student counts are from the U of T Historical Enrolment Count Tool. Parameters: Faculty = Applied Science & Engineering; Year = Fall terms for 2012–2021; Degree Type = Doctoral & Masters (excludes students with special status); Measure = Head Count. Gender parameter used to calculate percentage of women. The options to report "another gender" or to not report gender were added in 2017.
3.6b	Graduate Students by Degree Type and Domestic/International Status with Percentage of International Students, 2012–2013 to 2021–2022	Student counts are from the U of T Historical Enrolment Count Tool and exclude special status students. Parameters: Faculty = Applied Science & Engineering; Year = Fall terms for 2012–2021; Degree Type = Doctoral & Masters (excludes students with special status); Measure = Head Count. Tuition Fees / Domestic/International parameter used to calculate percentage of international students.
3.7	Graduate Degrees Awarded by Gender, 2012–2013 to 2021–2022	All data from ROSI download: 5EA (Graduated Students); Faculty = APSC (Applied Science & Engineering).
3.8	Engineering Undergraduate and Graduate Clubs and Teams, 2021–2022	Information from the Centralized Process for Student Initiative Funding (CPSIF), as well as the Engineering Society: www.skule.ca

3.9	Pre-University Outreach Programs, 2021–2022	Information provided by the Engineering Student Outreach Office, Faculty of Applied Science & Engineering.
3.10a 3.10h	Total Number of Faculty by Academic Area, 2012–2013 to 2021–2022	Information provided by the Assistant Dean, Administration, Faculty of Applied Science & Engineering. Women academic staff include all ranks of professors in both the tenure and teaching streams.
3.11	Total Number of Faculty with Percentage of Women Overall and by Academic Rank, 2012–2013 to 2021–2022	Information provided by the Assistant Dean, Administration, Faculty of Applied Science & Engineering.
3.12	Percentage of Women Faculty at U of T Engineering Compared with Women Faculty in Ontario and Canadian Engineering Faculties, 2020–2021	Information from the 2020 Resources Survey prepared for Engineering Deans Canada (EDC) by Engineers Canada and circulated to Canadian engineering deans in July 2021. Data represents faculty counts as of November 15, 2020.
3.13	Canada Research Chairs with Number and Percentage of Women Chairholders, 2013 to 2022	Information provided by the Senior Reporting and Budget Analyst, Faculty of Applied Science & Engineering. Includes data sourced from the Office of the Vice-President, Research & Innovation and from the Canada Research Chairs Program website: www.chairs-chaires.gc.ca/home-accueil-eng.aspx
3.14	Total Staff by Type and Gender, 2012–2022 to 2021–2022	Information provided by the Manager, Finance and Budget, Faculty of Applied Science & Engineering.
3.15	Summary of Progress Against the Recommendations of the <i>Blueprint for Action</i> (2018), as prepared by the Eagles' Longhouse (Engineering Indigenous Initiatives Steering Committee), 2022	Information provided by the Dean's Advisor on Indigenous Initiatives.
3.16	Summary of Progress Against the Recommendations of <i>Striving Toward Black Inclusivity</i> (2019) as prepared by the Black Inclusion Steering Committee (BISC), 2022	Information provided by the Dean's Advisor on Black Inclusivity Initiatives.
3.17	Summary of Progress against the Recommendations of the Final Report (2019) of the Joint Task Force on Academic Advising and Mental Health, 2022	Information provided by the U of T Engineering Mental Health Programs Officer.

Chapter 4: Research

4.1a	Total Research Funding (Infrastructure + Operating), 2011–2012 to 2020–2021	Data from the U of T Research Information System (RIS) is current as of May 2022 and organized by grant year (e.g., 2020–2021 = April 2020 to March 2021 = Grant Year 2021). Infrastructure Funding includes the following programs: Canada Foundation for Innovation (except the CFI Career Award), the Ontario Innovation Trust, the Ontario Research Fund (ORF) – Research Infrastructure, and the NSERC Research Tools and Instruments (RTI) Program.
4.1b	Total Research Funding (Infrastructure + Operating) by Year, Source and Funding per Faculty Member, 2011–2012 to 2020–2021	Data from the U of T Research Information System (RIS) is current as of May 2022 and adjusted to reflect each PI's department of budgetary appointment. Organized by grant year (e.g., 2020–2021 = April 2020 to March 2021 = Grant Year 2021). Faculty data is provided by the Assistant Dean, Administration, Faculty of Applied Science & Engineering, and here includes tenured and tenure-stream faculty only, as reported each July. Faculty counts are used on a slip-year basis: e.g. those reported in July 2020 (for academic year 2019–2020) are linked to Grant Year 2021 (Apr 2020 to Mar 2021).
4.1c	Research Operating Funding by Year, Source and Funding per Faculty Member, 2011–2012 to 2020–2021	Data from the U of T Research Information System (RIS) is current as of May 2022 and organized by grant year (e.g., 2020–2021 = April 2020 to March 2021 = Grant Year 2021). Research Operating Funding excludes the following infrastructure programs: Canada Foundation for Innovation (except the CFI Career Award), the Ontario Innovation Trust, the Ontario Research Fund (ORF) – Research Infrastructure, and the NSERC Research Tools and Instruments (RTI) Program. Faculty data is provided by the Assistant Dean, Administration, Faculty of Applied Science & Engineering, and here includes tenured and tenure-stream faculty only, as reported each July. Faculty counts are used on a slip-year basis: e.g. those reported in July 2020 (for academic year 2019–2020) are linked to Grant Year 2021 (Apr 2020 to Mar 2021).
4.2a to 4.2g	Research Operating Funding by Academic Area - Including Year, Source and Funding per Faculty Member, 2011–2012 to 2020–2021	Data from the U of T Research Information System (RIS) is current as of May 2022 and adjusted to reflect each PI's department of budgetary appointment. Organized by grant year (e.g., 2020–2021 = April 2020 to March 2021 = Grant Year 2021). Research Operating Funding excludes the following infrastructure programs: Canada Foundation for Innovation (except the CFI Career Award), the Ontario Innovation Trust, the Ontario Research Fund (ORF) – Research Infrastructure and the NSERC Research Tools and Instruments (RTI) Program. Faculty data is provided by the Assistant Dean, Administration, Faculty of Applied Science & Engineering, and here includes tenured and tenure-stream faculty only, as reported each July. Faculty counts are used on a slip-year basis: e.g. those reported in July 2020 (for academic year 2019–2020) are linked to Grant Year 2021 (Apr 2020 to Mar 2021).
4.3	Distribution of Research Operating Funding by Academic Area, 2011–2012 to 2020–2021	Data from the U of T Research Information System (RIS) is current as of May 2022 and adjusted to reflect each PI's department of budgetary appointment. Organized by grant year (e.g., 2020–2021 = April 2020 to March 2021 = Grant Year 2021). Research Operating Funding excludes the following infrastructure programs: Canada Foundation for Innovation (except the CFI Career Award), the Ontario Innovation Trust, the Ontario Research Fund (ORF) – Research Infrastructure and the NSERC Research Tools and Instruments (RTI) Program.
4.4a	Tri-Agency and NCE Support: CIHR, NSERC and NCE Funding, 2011–2012 to 2020–2021	Data from the U of T Research Information System (RIS) is current as of May 2022 and organized by grant year (e.g., 2020–2021 = April 2020 to March 2021 = Grant Year 2021).
4.4b	NSERC Funding, 2020–2021	Data from the U of T Research Information System (RIS) is current as of May 2022 and organized by grant year (e.g., 2020–2021 = April 2020 to March 2021 = Grant Year 2021). Sponsor = Natural Sciences & Engineering. Grant Year = 2021.
4.4c	NSERC Industrial Partnership Funding by Program, 2011–2012 to 2020–2021	Data from the U of T Research Information System (RIS) is current as of May 2022 and organized by grant year (e.g., 2020–2021 = April 2020 to March 2021 = Grant Year 2021). Sponsor = Natural Sciences & Engineering / Research Partnerships Programs

4.4d Industrial Partnerships as Percentage of Total NSERC Funding, 2011–2012 to 2020–2021	Data from the U of T Research Information System (RIS) is current as of May 2022 and organized by grant year (e.g., 2020–2021 = April 2020 to March 2021 = Grant Year 2021). Sponsor = Natural Sciences & Engineering.
4.4e NSERC Research Grant Funding by Program, 2011–2012 to 2020–2021	Data from the U of T Research Information System (RIS) is current as of May 2022 and organized by grant year (e.g., 2020–2021 = April 2020 to March 2021 = Grant Year 2021). Sponsor = Natural Sciences & Engineering.
4.5a Canadian Peer Universities vs. University of Toronto Share of NSERC Funding for Engineering Cumulative Five-Year Share, 2016–2017 to 2020–2021	All data from NSERC Award Search Engine: www.nserc-crsng.gc.ca/ase-oro/index_eng.asp . Based on Selection Committees for Discovery and Partnership Programs, but not Scholarships and Fellowships. Excludes Canada Research Chairs and Networks of Centres of Excellence and does not include Indirect Costs of Research. Research Subjects = all engineering and technology-related fields. Organized by grant year (e.g., 2020–2021 = April 2020 to March 2021 = Grant Year 2021).
4.5b U of T Annual Share of NSERC Funding in Engineering, 2011–2012 to 2020–2021	All data from NSERC Award Search Engine: www.nserc-crsng.gc.ca/ase-oro/index_eng.asp . Based on Selection Committees for Discovery and Partnership Programs, but not Scholarships and Fellowships. Excludes Canada Research Chairs and Networks of Centres of Excellence and does not include Indirect Costs of Research. Research Subjects = all engineering and technology-related fields. Organized by grant year (e.g., 2020–2021 = April 2020 to March 2021 = Grant Year 2021).
4.6a Industry Research Funding by Academic Area, 2011–2012 to 2020–2021	Data from the U of T Research Information System (RIS) is current as of May 2022 and organized by grant year (e.g., 2020–2021 = April 2020 to March 2021 = Grant Year 2021). Industry = Corporate.
4.6b Industry Partnerships, 2021–2022	Data from the U of T Research Information System (RIS) is current as of May 2022. Industry = Corporate. Additional information gathered from selected websites (e.g. those of Industrial Research Chairs and major research consortia) and provided by individual departments within the Faculty of Applied Science & Engineering.
4.7a U of T Engineering Invention Disclosures by Academic Area, 2017–2018 to 2021–2022	Data from the Research and Innovation Dashboards, provided by the Office of the Vice President, Research and Innovation. Data current as of May 1, 2022.
4.7b Patent Applications by Faculty, 2021–2022	Data from the Research and Innovation Dashboards, provided by the Office of the Vice President, Research and Innovation. Data current as of May 1, 2022.
4.8 Spinoff Companies, 2001 to 2022	Data from the Research and Innovation Dashboards, provided by the Office of the Vice President, Research and Innovation. Data current as of May 1, 2022.
4.9 Chairs and Professorships	<p>Chairholders are reported as of the HR turnover date at the end of the reporting cycle, in this case, July 1, 2022, except in cases where new allocations (e.g. CRCs) have not yet been made public. List compiled from the following sources:</p> <ul style="list-style-type: none"> – Canada Research Chairs website: www.chairs-chaires.gc.ca/home-accueil-eng.aspx – Industrial Research Chairs website: www.nserc-crsng.gc.ca/Professors-Professeurs/CFS-PCP/IRC-PCI_eng.asp – Faculty Trust and Restricted Fund Accountant (Endowed Chairs) – Office of the Vice-Dean, Research, Faculty of Applied Science & Engineering – Assistant Dean, Administration, Faculty of Applied Science & Engineering – Distinguished Professors and University Professors from the Office of the Vice-President & Provost websites: www.provost.utoronto.ca/distinguished-professors/ and www.provost.utoronto.ca/awards-funding/university-professors/

Chapter 5: Awards & Rankings

- 5.1 Summary of University of Toronto Engineering Performance in World Rankings, 2021–2022** Compiled from other figures in this chapter.

QS World University Rankings for Engineering and Technology

- 5.2a QS World University Rankings: Top 50 World Universities for Engineering & Technology, 2022** Data from QS World University Ranking website: www.topuniversities.com/university-rankings/university-subject-rankings/2022/engineering-technology
- 5.2b QS World University Rankings: Top North American Public Universities for Engineering & Technology, 2022** Data from QS World University Ranking website: www.topuniversities.com/university-rankings/university-subject-rankings/2022/engineering-technology
- 5.2c QS World University Rankings: Canadian U15 in Top 200, 2022** Data from QS World University Ranking website: www.topuniversities.com/university-rankings/university-subject-rankings/2022/engineering-technology
- 5.2d QS World University Rankings: Canadian Universities in QS by Subject, 2022** Data from QS World University Ranking website: www.topuniversities.com/university-rankings/university-subject-rankings/2022/engineering-technology

Times Higher Education (THE)–Elsevier World University Ranking for Engineering and Technology

- 5.3a THE World University Ranking: Top 50 Universities for Engineering, 2022** Data from THE World University Ranking website: www.timeshighereducation.com/world-university-rankings/2022/subject-ranking/engineering-and-IT
- 5.3b THE Top North American Public Universities for Engineering, 2022** Data from THE World University Ranking website: www.timeshighereducation.com/world-university-rankings/2022/subject-ranking/engineering-and-IT
- 5.3c Canadian U15 in THE Top 200 for Engineering, 2022** Data from THE World University Ranking website: www.timeshighereducation.com/world-university-rankings/2022/subject-ranking/engineering-and-IT

Academic Ranking of World Universities (ARWU) for Engineering Subjects

- 5.4 Canadian Universities in the Top 200 of the Academic Ranking of World Universities (ARWU) by Subject, 2021** Data from ARWU website: <http://www.shanghairanking.com/rankings/gras/2021>

National Taiwan University (NTU) Performance Ranking of Engineering Papers

5.5a	NTU Top 80 World Universities for Engineering, 2021	Data from National Taiwan University Performance Ranking of Scientific Papers for World Universities website: http://nturanking.csti.tw/ranking/ByField . Data compiled from Thomson Reuters' science citation indexes.
5.5b	NTU Top North American Public Universities for Engineering, 2021	Data from National Taiwan University Performance Ranking of Scientific Papers for World Universities website: http://nturanking.csti.tw/ranking/ByField . Data compiled from Thomson Reuters' science citation indexes.
5.5c	Canadian U15 Universities in NTU Top 200 for Engineering, 2021	Data from National Taiwan University Performance Ranking of Scientific Papers for World Universities website: http://nturanking.csti.tw/ranking/ByField . Data compiled from Thomson Reuters' science citation indexes.
5.5d	Canadian Universities in NTU by Subject, 2021	Data from National Taiwan University Performance Ranking of Scientific Papers for World Universities website: http://nturanking.csti.tw/ranking/ByField . Data compiled from Thomson Reuters' science citation indexes.

Rankings Based on Publications and Citations / Summary of Ranking Results

5.6a	Number of Engineering Publications Indexed by Thomson Reuters for Association of American Universities (AAU) Public and Canadian Peer Institutions, 2016 to 2020	Data from Thomson Reuters InCites™ covering 2016 to 2020. Includes public peer institutions in Canada (U15) and U.S. (AAU plus University of California at San Francisco). Schema = Essential Science Indicators (Engineering, Materials Science).
5.6b	Summary of U15 Bibliometrics for Publications (Thomson Reuters/AAU, 2016 to 2020)	Data from Thomson Reuters InCites™ covering 2016 to 2020. Includes public peer institutions in Canada (U15) and U.S. (AAU plus University of California at San Francisco). Schema = Essential Science Indicators (Engineering, Materials Science). Faculty counts for analysis of U15 citations per faculty member are from the Engineers Canada 2020 Resources Report.
5.6c	Number of Engineering Citations Indexed by Thomson Reuters for Association of American Universities (AAU) Public and Canadian Peer Institutions, 2016 to 2020	Data from Thomson Reuters InCites™ covering 2016 to 2020. Includes public peer institutions in Canada (U15) and U.S. (AAU plus University of California at San Francisco). Schema = Essential Science Indicators (Engineering, Materials Science).
5.6d	Summary of U15 Bibliometrics for Citations (Thomson Reuters/AAU, 2016 to 2020)	Data from Thomson Reuters InCites™ covering 2016 to 2020. Includes public peer institutions in Canada (U15) and U.S. (AAU plus University of California at San Francisco). Schema = Essential Science Indicators (Engineering, Materials Science). Faculty counts for analysis of U15 citations per faculty member are from the Engineers Canada 2020 Resources Report.
5.7	Summary of Major International, National and Provincial Awards and Honours, 2012 to 2021	Information provided by the Director, Awards and Honours, Faculty of Applied Science & Engineering.

5.8a	Number of Major National and International Awards Received by U of T Engineering Compared to Other Canadian Engineering Faculties, 2021	Information provided by the Director, Awards and Honours, Faculty of Applied Science & Engineering.
5.8b	Percentage of Engineering Faculty and Total Major Awards Received in Canadian Engineering Faculties, 2021	Information provided by the Director, Awards and Honours, Faculty of Applied Science & Engineering. Faculty FTEs are based on the Engineering Deans Canada (EDC) 2020 Resources Report prepared by Engineers Canada and circulated to Canadian engineering deans in July 2021.
5.9	Number of Awards Received by U of T Engineering Faculty Compared to Other Canadian Engineering Faculties, 2017 to 2021	Information provided by the Director, Awards and Honours, Faculty of Applied Science & Engineering.
5.10	Selected Awards Received by Faculty and Staff, 2021–2022	Information provided by the Director, Awards and Honours, Faculty of Applied Science & Engineering.
5.11a	2022 U of T Engineering Staff and Faculty Awards	Information provided by the Director, Awards and Honours, Faculty of Applied Science & Engineering.
5.11b	2021 Engineering Alumni Network Awards	Information provided by the Office of Advancement and Alumni Relations, Faculty of Applied Science & Engineering.

Chapter 6: Advancement & Communications

6.1a	Philanthropic Support, 2021–2022	Statistics provided by the Office of Advancement and Alumni Relations, Faculty of Applied Science & Engineering.
6.1b	Philanthropic Support, 2012–2013 to 2021–2022	Statistics provided by the Office of Advancement and Alumni Relations, Faculty of Applied Science & Engineering.
6.1c	Gift Designations, 2021–2022	Statistics provided by the Office of Advancement and Alumni Relations, Faculty of Applied Science & Engineering.
6.1d	Alumni Engagement, 2021–2022	Statistics provided by the Office of Advancement and Alumni Relations, Faculty of Applied Science & Engineering.
6.2a	U of T Engineering Media Stories and Impressions, May 2021 to April 2022	Information provided by Engineering Strategic Communications, Faculty of Applied Science & Engineering, and collected via RepTrak (May 1, 2021 to April 30, 2022).
6.2b	Proportion of U of T Engineering Media Impressions by Academic Area, 2021–2022	Information provided by Engineering Strategic Communications, Faculty of Applied Science & Engineering, and collected via RepTrak (May 1, 2021 to April 30, 2022).

6.2c	Proportion of U of T Engineering Media Impressions by Strategic Priority Area, 2021–2022	Information provided by Engineering Strategic Communications, Faculty of Applied Science & Engineering, and collected via RepTrak (May 1, 2021 to April 30, 2022).
6.2d	Proportion of U of T Engineering Media Impressions by Outlet Location, 2021–2022	Information provided by Engineering Strategic Communications, Faculty of Applied Science & Engineering, and collected via RepTrak (May 1, 2021 to April 30, 2022).
6.3a	Twitter Statistics, May 2021 to April 2022	Information provided by Engineering Strategic Communications, Faculty of Applied Science & Engineering, and collected via RepTrak (May 1, 2021 to April 30, 2022).
6.3b	Facebook Statistics, May 2021 to April 2022	Information provided by Engineering Strategic Communications, Faculty of Applied Science & Engineering, and collected via RepTrak (May 1, 2021 to April 30, 2022).
6.3c	Instagram Statistics, May 2021 to April 2022	Information provided by Engineering Strategic Communications, Faculty of Applied Science & Engineering, and collected via RepTrak (May 1, 2021 to April 30, 2022).
6.3d	LinkedIn Statistics, May 2021 to April 2022	Information provided by Engineering Strategic Communications, Faculty of Applied Science & Engineering, and collected via RepTrak (May 1, 2021 to April 30, 2022).
6.4	Summary of Analytics for U of T Engineering Faculty site and U of T Engineering News site, 2021–2022	Websites: engineering.utoronto.ca and news.engineering.utoronto.ca . Information provided by Engineering Strategic Communications, Faculty of Applied Science & Engineering. Website statistics sourced from Google Analytics (May 1, 2021 to April 30, 2022).
6.5	Social Media Referrals for U of T Engineering News, 2021–2022	Information provided by Engineering Strategic Communications, Faculty of Applied Science & Engineering. Website statistics sourced from Google Analytics (May 1, 2021 to April 30, 2022)
6.6	Summary of Analytics for Discover Engineering, You Belong Here and Engineering Graduate Studies sites, 2021–2022	Websites: discover.engineering.utoronto.ca , www.admit.engineering.utoronto.ca and gradstudies.engineering.utoronto.ca . Website statistics sourced from Google Analytics (May 1, 2021 to April 30, 2022).
6.7	Top 25 Stories on the Engineering News and U of T News Websites, 2021–2022	Information provided by Engineering Strategic Communications, Faculty of Applied Science & Engineering and University of Toronto Strategic Communications. Website statistics sourced from Google Analytics (May 1, 2021 to April 30, 2022)

Chapter 7: Financial & Physical Resources

7.1	Total Revenue, 2012–2013 to 2021–2022	Information provided by the Chief Financial Officer, Faculty of Applied Science & Engineering.
7.2	Total Central Costs, 2012–2013 to 2021–2022	Information provided by the Chief Financial Officer, Faculty of Applied Science & Engineering.
7.3	Budget Data, 2012–2013 to 2021–2022	Information provided by the Chief Financial Officer, Faculty of Applied Science & Engineering.

7.4	Revenue Sources, 2021–2022	Information provided by the Chief Financial Officer, Faculty of Applied Science & Engineering.
7.5	Revenue Distribution, 2021–2022	Information provided by the Chief Financial Officer, Faculty of Applied Science & Engineering.
7.6	Total Operating Budget: Breakdown by Expenses (Net of Central University Costs), 2021–2022	Information provided by the Chief Financial Officer, Faculty of Applied Science & Engineering.
7.7	Summary of Buildings Occupied by Engineering, 2021–2022	Data provided by the Director, Facilities & Infrastructure Planning, Faculty of Applied Science & Engineering.
7.8	Selected Infrastructure Investments, 2021–2022	Data provided by the Director, Facilities & Infrastructure Planning, Faculty of Applied Science & Engineering.
7.9	The Engineering Neighbourhood	Information from the Office of Space Management. Visit map.utoronto.ca for a full campus map.



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