BY THE NUMBERS 2020

UNIVERSITY OF TORONTO | Engineering

Table of Contents

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 most recently, the Mississaugas of the Credit River. 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 Engineering's *Impact Report 2020* at uofteng.ca/annualreport

*Researchers from the lab of Professor **Warren Chan** (BME) pose in the lobby of the Terrence Donnelly Centre for Cellular & Biomolecular Research. The team is working on a new approach to rapid, point-of-care testing for COVID-19, just one example of the many ways U of T Engineering researchers have leveraged their expertise in the fight against the pandemic.*

PHOTO: ALEXANDROS SKLAVOUNOS

Comparison of U of T Engineering with Ontario and Canada, 2018–2019

	U of T Engineering	Ontario	U of T % of Ontario	Canada	U of T % of Canada
Undergraduate					
Enrolment (FTE)	5,273	36,732	14.4%	88,278	6.0%
% Women	34.4%	23.8%		21.9%	
Degrees Awarded	1,057	7,648	13.8%	16,725	6.3%
% Women	27.5%	20.6%		21.0%	
Master's (MEng, MASc and MHSc)					
Enrolment (FTE)	1,296	7,624	17.0%	17,450	7.4%
Degrees Awarded	751	3,796	19.8%	7,768	9.7%
% Women	27.2%	24.6%		25.2%	
Doctoral (PhD)					
Enrolment (FTE)	849	3,676	23.1%	9,653	8.8%
Degrees Awarded	143	583	24.5%	1,576	9.1%
% Women	33.6%	25.0%		24.9%	
Faculty					
Tenured and Tenure-Stream	237	1,635	14.5%	3,798	6.2%
% Women	20.3%	17.7%		15.9%	
Major Awards					
Major Awards Received	10	29	34.5%	61	16.4%
Research Funding					
NSERC Funding for Engineering	$35.4M	$156.6M	22.6%	$378.8M	9.4%

Note: Enrolment and degrees awarded are based on the 2018 calendar year. Faculty data is as of November 2018 and include tenured and tenure-stream faculty only. NSERC research funding is based on the 2018–2019 grant year (April-March). Major award counts are based on the 2019 calendar year.

Comparison of U of T Engineering with St. George Campus and University of Toronto, 2019–2020

	U of T Engineering	St. George Campus	Engineering % of Campus	University of Toronto	Engineering % of U of T
Student Enrolment					
Undergraduate	5,280	38,526	13.7%	67,252	7.9%
Professional Master's (MEng and MHSc)	991	9,159	10.8%	9,845	10.1%
Research Master's (MASc)	635	2,982	21.3%	3,111	20.4%
Doctoral (PhD)	1,010	6,560	15.4%	6,966	14.5%
All Students	7,916	57,227	13.8%	87,174	9.1%
Degrees Awarded					
Undergraduate	1,080	8,323	13.0%	13,291	8.1%
Professional Master's (MEng and MHSc)	497	4,326	11.5%	4,724	10.5%
Research Master's (MASc)	295	1,453	20.3%	1,522	19.4%
Doctoral (PhD)	133	810	16.4%	845	15.7%
Total Degrees	2,005	14,912	13.4%	20,382	9.8%
Faculty and Staff					
Professoriate	266			3,163	8.4%
Administrative and Technical Staff	361			7,563	4.8%
Research Funding					
Sponsored Research Funding	$100.4M			$502.9M	20.0%
Industry Research Funding	$16.4M			$29.1M	56.4%
Space					
Space (NASMs)	70,638	640,881	11.0%	852,933	8.3%
Revenue					
University-wide Costs	$75.8M			$605.6M	12.5%
Total Operating Revenue	$215.9M			$2,336.4M	9.2%

Faculty Leadership, 2019–2020

Dean
Christopher Yip

Vice-Dean, Graduate Studies
Julie Audet

Vice-Dean, Undergraduate
Thomas Coyle

Vice-Dean, Research
Ramin Farnood

Associate Dean, Cross-Disciplinary Programs
Bryan Karney

Vice-Dean, First Year
Micah Stickel

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

Chair, Department of Civil & Mineral Engineering
Brent Sleep

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

Chair, Division of Engineering Science
Will Cluett (interim)

Chair, Department of Materials Science & Engineering
Glenn Hibbard

Chair, Department of Mechanical & Industrial Engineering
Markus Bussmann

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

Director, Facilities & Infrastructure Planning
Tom Saint-Ivany

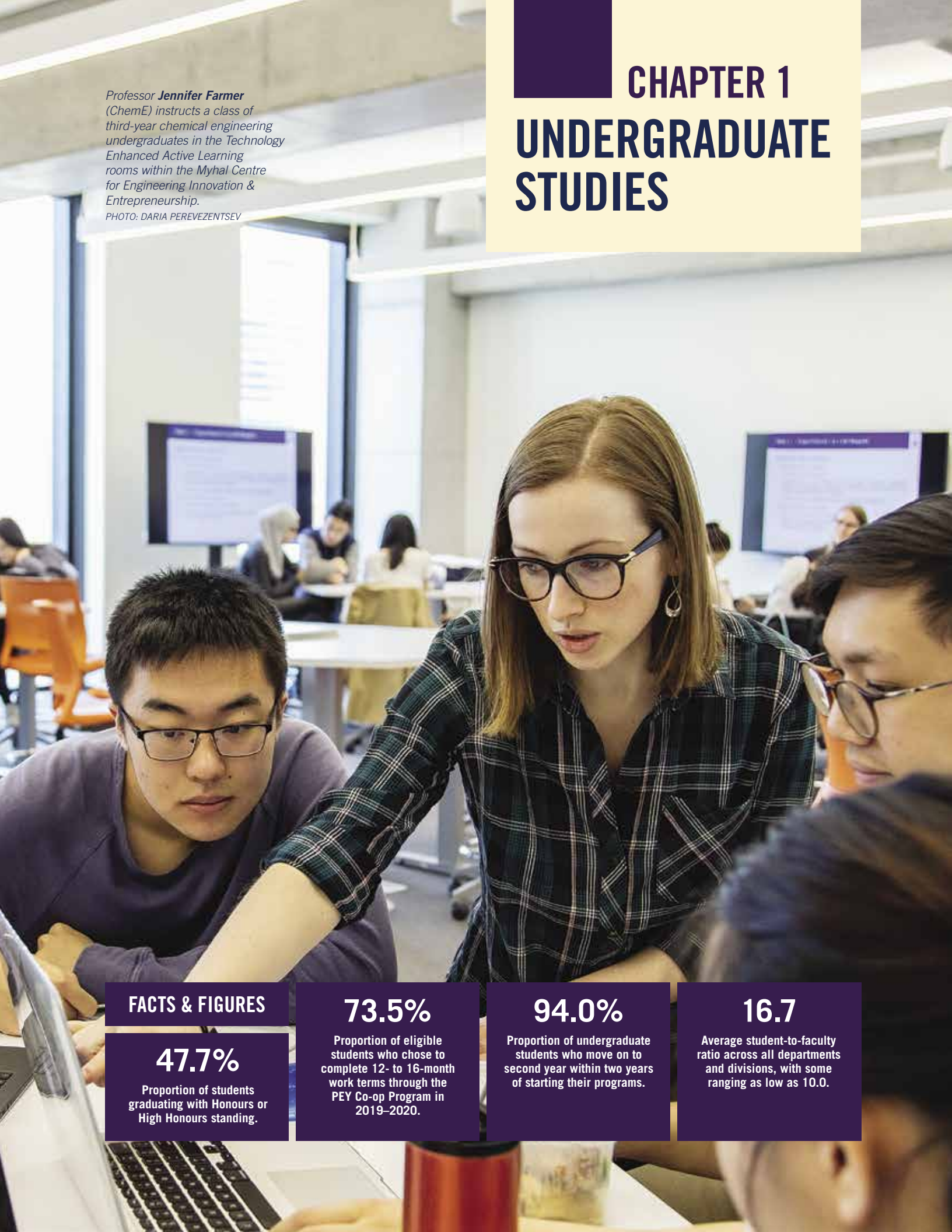
Director, Office of the Dean
Cathy Grilo

Executive Director, Communications
Marit Mitchell

Executive Director, Advancement
Georgette Zinaty (to January 30, 2020)
Mark Rittinger (as of May 4, 2020)

Faculty Registrar
Don MacMillan

CHAPTER 1
UNDERGRADUATE STUDIES



*Professor **Jennifer Farmer** (ChemE) instructs a class of third-year chemical engineering undergraduates in the Technology Enhanced Active Learning rooms within the Myhal Centre for Engineering Innovation & Entrepreneurship.*
PHOTO: DARIA PEREVEZENTSEV

FACTS & FIGURES

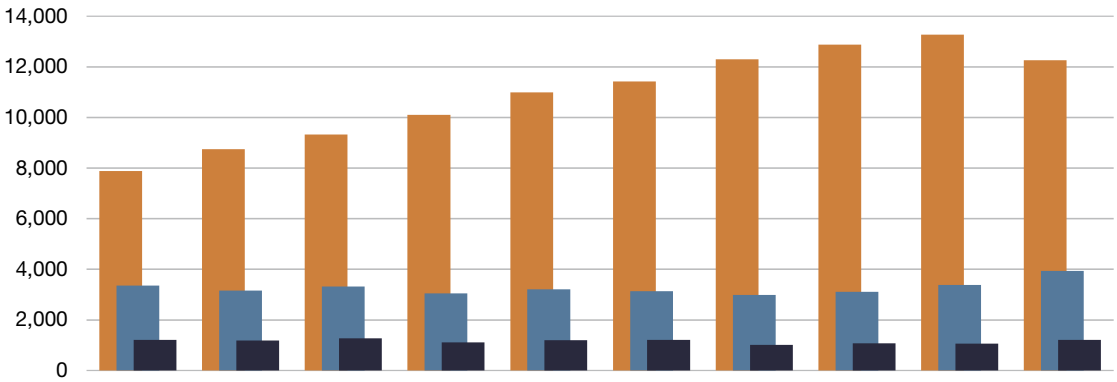
47.7%
Proportion of students graduating with Honours or High Honours standing.

73.5%
Proportion of eligible students who chose to complete 12- to 16-month work terms through the PEY Co-op Program in 2019–2020.

94.0%
Proportion of undergraduate students who move on to second year within two years of starting their programs.

16.7
Average student-to-faculty ratio across all departments and divisions, with some ranging as low as 10.0.

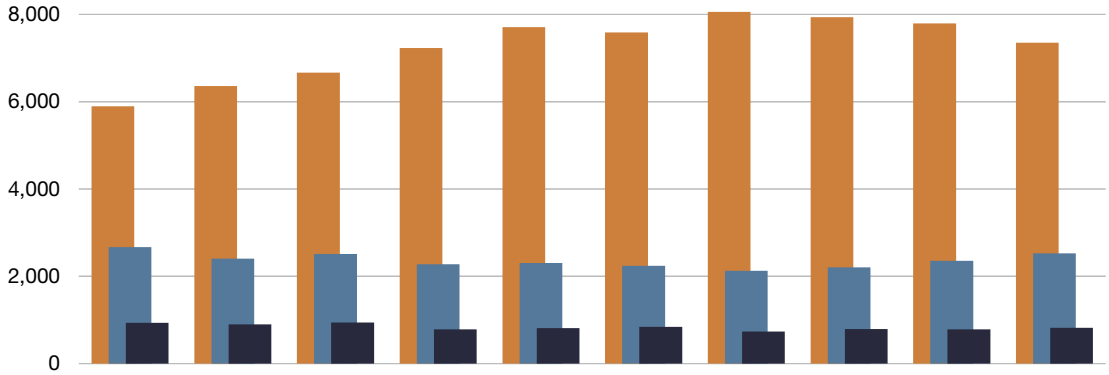
Figure 1.1a Applications, Offers, Registrations, Selectivity and Yield of First-Year Undergraduates, 2010 to 2019



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Applications	7,446	7,881	8,745	9,326	10,095	10,989	11,418	12,298	13,272	12,263
Offers	3,329	3,347	3,149	3,309	3,042	3,203	3,126	2,983	3,380	3,937
Registrations	1,188	1,203	1,180	1,265	1,106	1,192	1,205	1,005	1,062	1,202
Selectivity	0.45	0.42	0.36	0.35	0.30	0.29	0.27	0.24	0.25	0.32
Yield	0.36	0.36	0.37	0.38	0.36	0.37	0.39	0.34	0.31	0.31

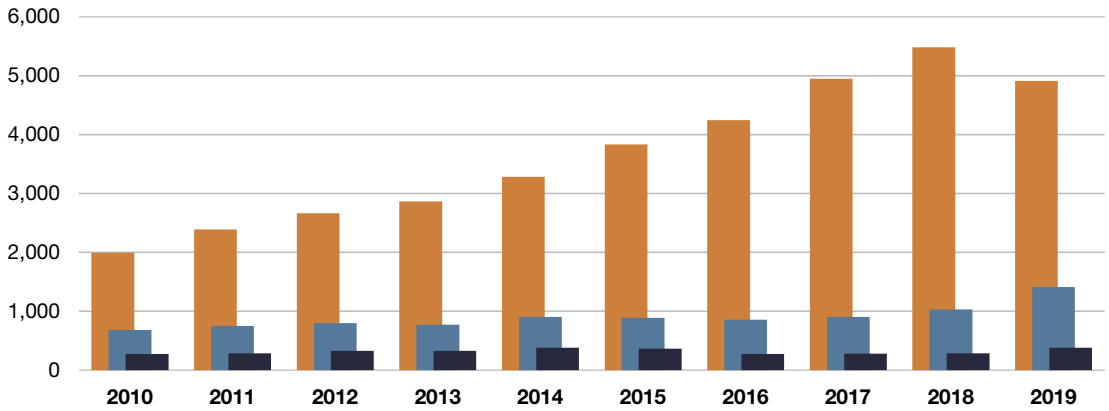
Data in this chapter are presented by academic year (September to August) unless otherwise noted.
Note 1.1a, b, c: Student counts are shown as of November 1. Applications and offers are for the fall admissions cycle. Selectivity = offers ÷ applications and represents the proportion of applicants who 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, 2010 to 2019**



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Applications	5,612	5,892	6,359	6,662	7,229	7,705	7,588	8,053	7,791	7,351
Offers	2,733	2,665	2,400	2,510	2,272	2,302	2,239	2,128	2,350	2,526
Registrations	967	931	894	938	782	812	843	734	780	821
Selectivity	0.49	0.45	0.38	0.38	0.31	0.30	0.30	0.26	0.30	0.34
Yield	0.35	0.35	0.37	0.37	0.34	0.35	0.38	0.34	0.33	0.33

Figure 1.1c **Applications, Offers, Registrations, Selectivity and Yield of International First-Year Undergraduates, 2010 to 2019**



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Applications	1,834	1,989	2,386	2,664	2,866	3,284	3,830	4,245	5,481	4,912
Offers	596	682	749	799	770	901	887	855	1,030	1,411
Registrations	221	272	286	327	324	380	362	271	282	381
Selectivity	0.32	0.34	0.31	0.30	0.27	0.27	0.23	0.20	0.19	0.29
Yield	0.37	0.40	0.38	0.41	0.42	0.42	0.41	0.32	0.27	0.27

Figure 1.2a **Ontario Secondary School Averages of Incoming First-Year Undergraduates, 2010 to 2019**

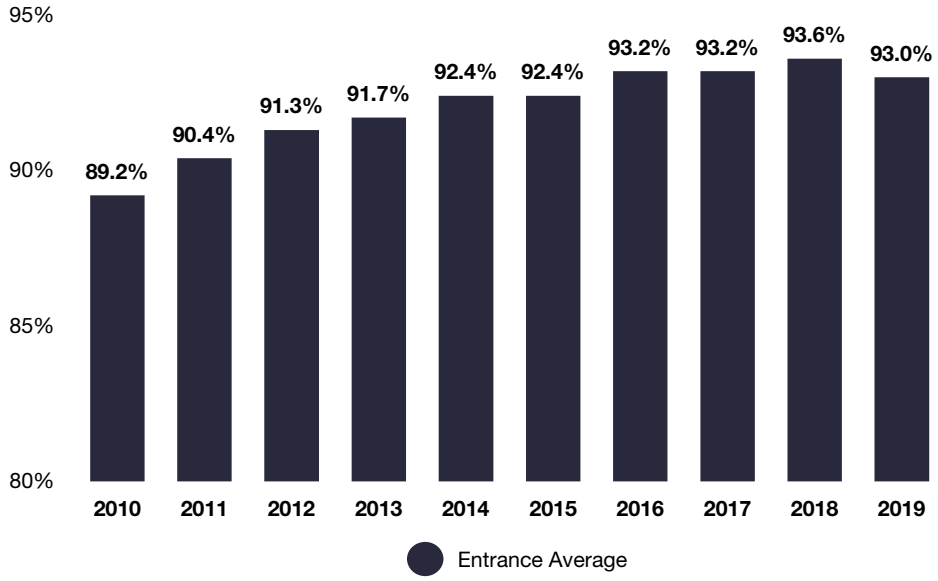
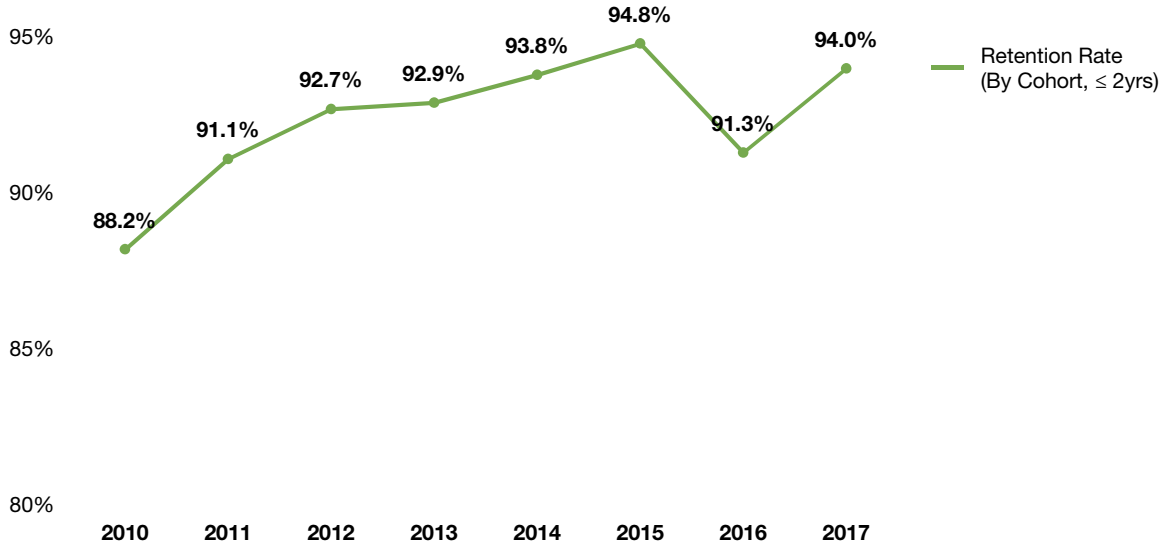


Figure 1.2b **Two-Year Retention Rate, 2010 to 2017**



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.

Figure 1.3 **Incoming First-Year Undergraduates by Program, 2010–2011 to 2019–2020**

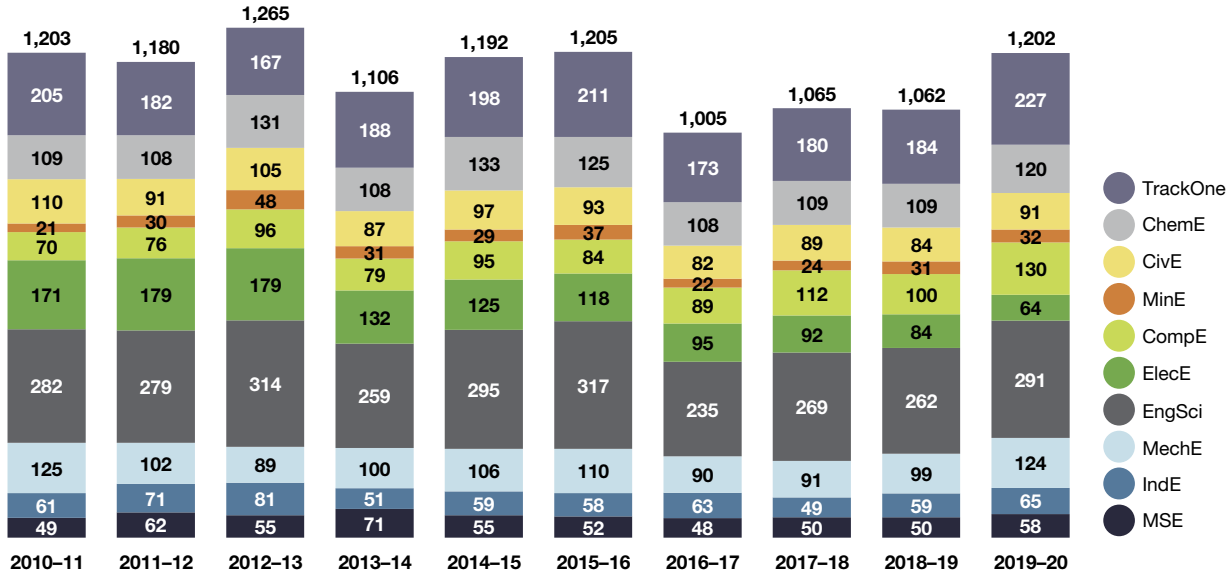
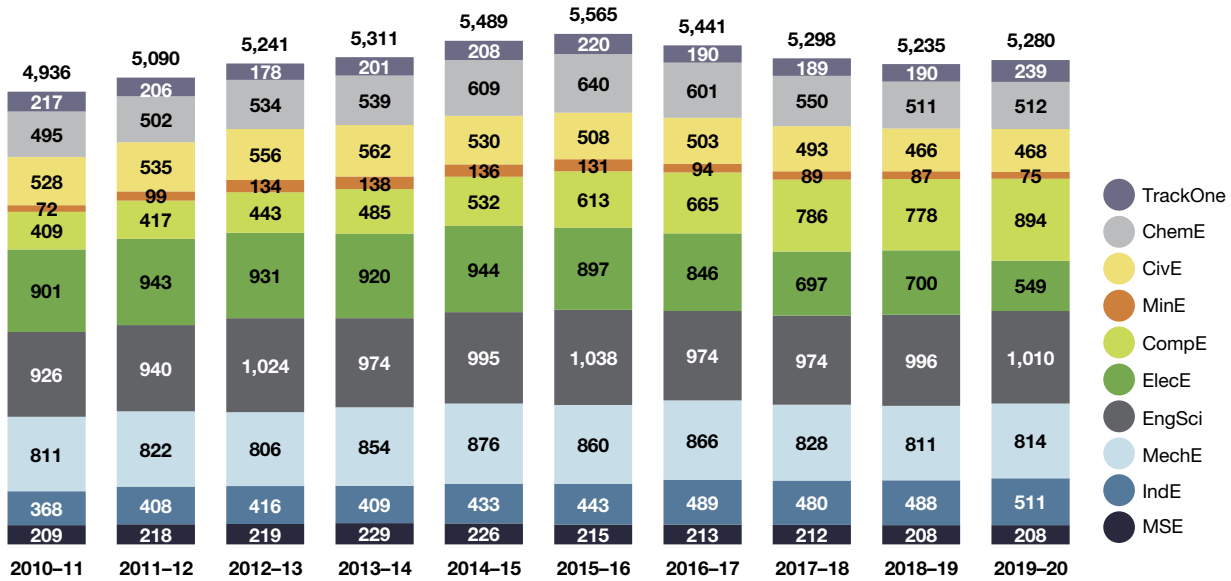


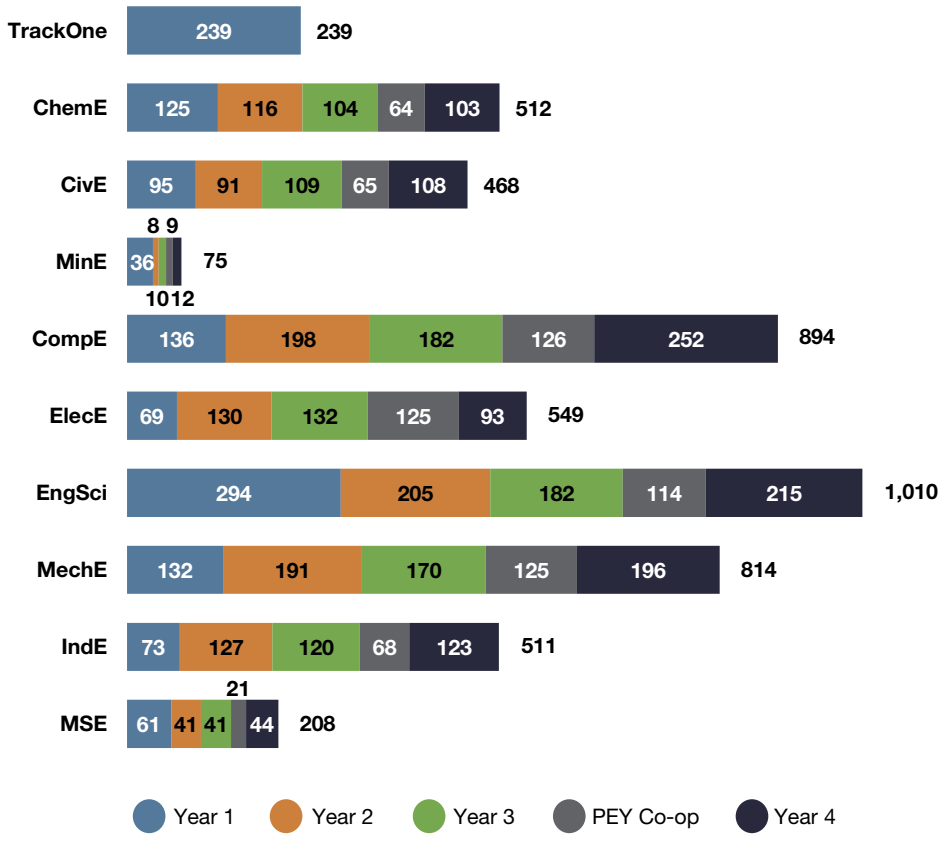
Figure 1.4a **All Undergraduates by Program, 2010–2011 to 2019–2020**



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, 2019–2020**



Engineering Science Majors	Enrolment
Aerospace Engineering	36
Biomedical Systems Engineering	53
Electrical and Computer Engineering	60
Energy Systems Engineering	8
Infrastructure Engineering	7
Machine Intelligence	59
Mathematics, Statistics and Finance	46
Engineering Physics	23
Robotics Engineering	107
Total:	**399**

Note 1.4b: Student counts are shown as of November 1, 2019. 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, 2019–2020**

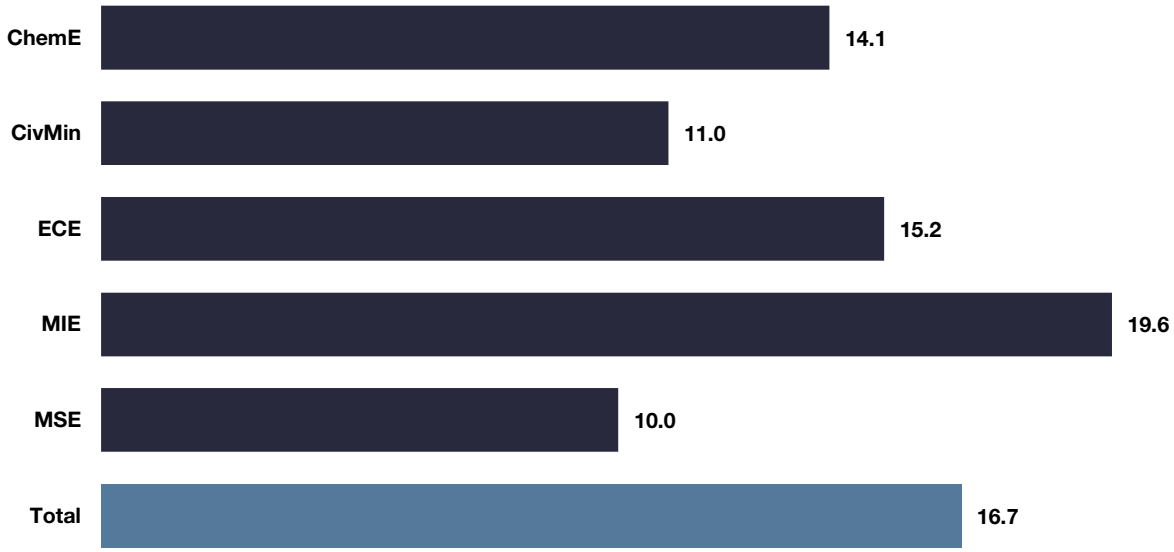
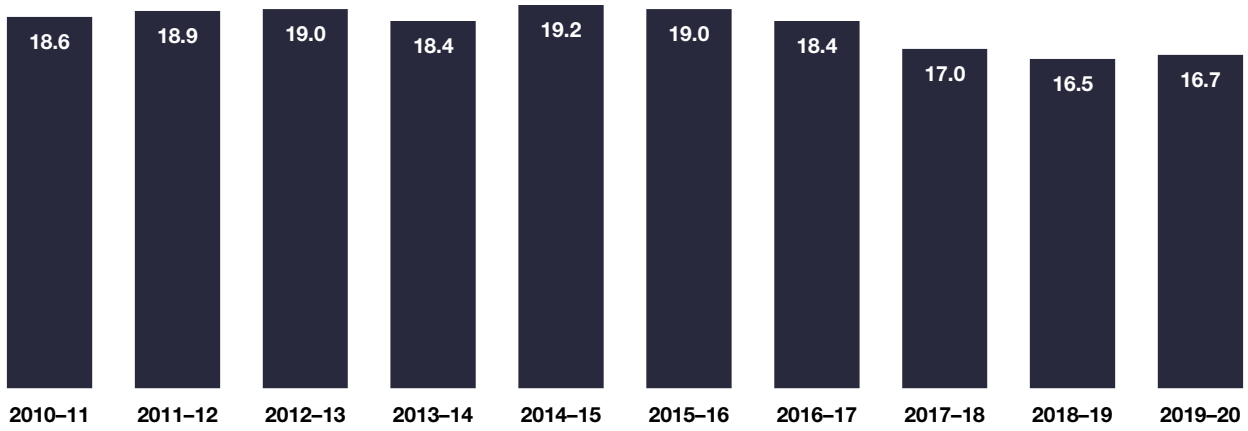


Figure 1.5b **Undergraduate Full-Time Equivalent Student-to-Faculty Ratios, 2010–2011 to 2019–2020**



Note 1.5a, b: Student and faculty counts are shown as of November 1, 2019. 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, 2011 to 2020**

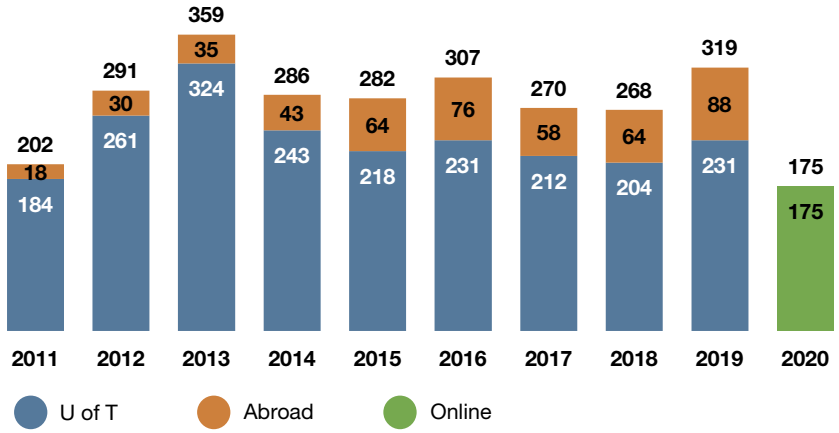
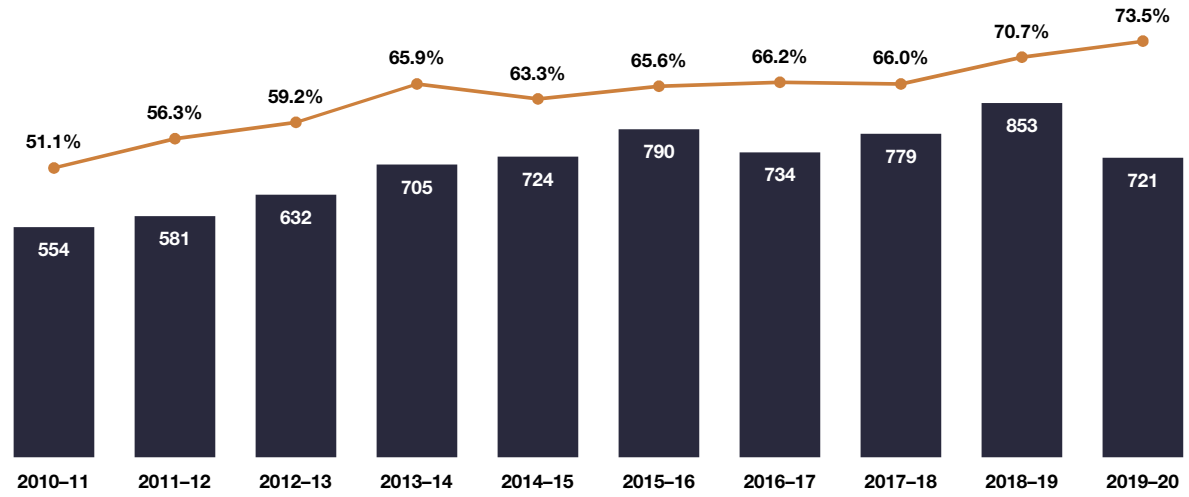


Figure 1.6b **Undergraduate Participation in Summer Research Opportunities by Academic Area, 2020**

Research Participation:	Online
ChemE	20
CivE & MinE	13
ECE	33
EngSci	77
MIE	21
MSE	8
TrackOne	3
Total	175

Figure 1.7a **Number of Engineering Undergraduate Students Participating in PEY Co-op with Percentage Participation, 2010–2011 to 2019–2020**



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, 2010–2011 to 2019–2020**

	Canadian Positions	U.S. Positions	Other International Positions	Total Positions
2010–11	530	11	13	**554**
2011–12	547	26	8	**581**
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**

Figure 1.7c **Number of PEY Co-op Employers, 2010–2011 to 2019–2020**

	PEY Co-op Employers who Hired Engineering Students
2010–11	185
2011–12	221
2012–13	241
2013–14	304
2014–15	317
2015–16	310
2016–17	337
2017–18	318
2018–19	368
2019–20	357

Figure 1.8a **Number of Awards Received by Cohort with Total Number of Undergraduate Need-Based Award Recipients, 2010–2011 to 2019–2020**

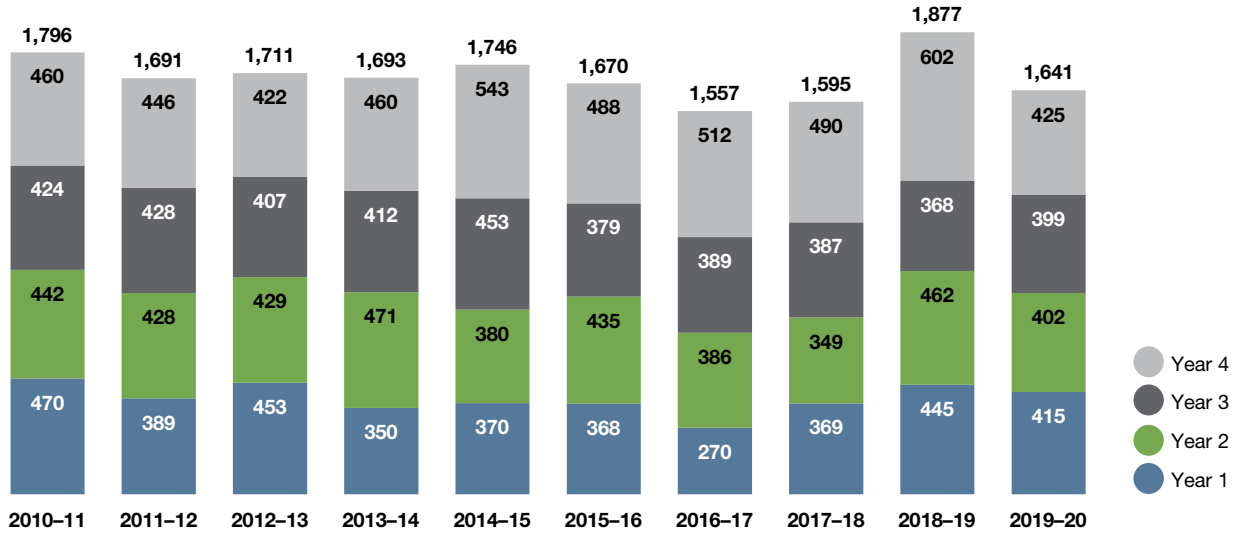
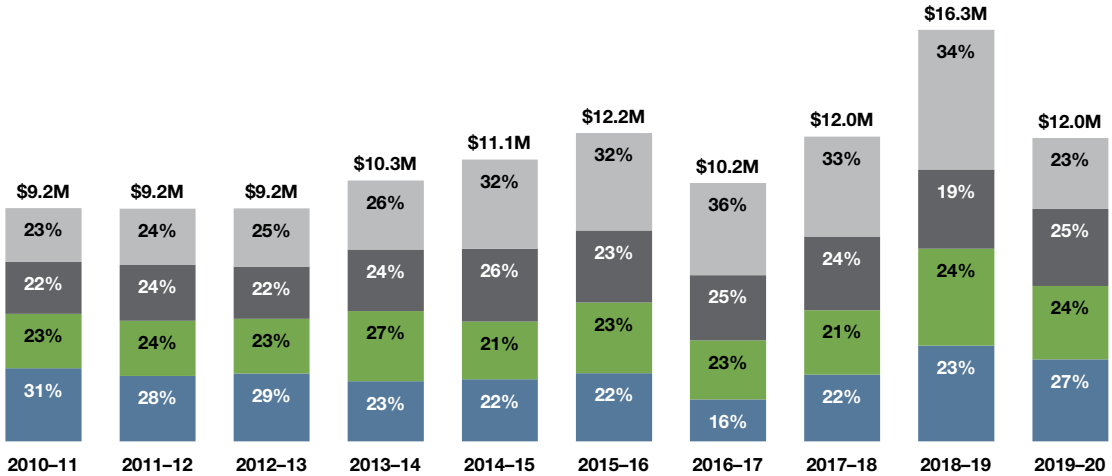


Figure 1.8b **Total Value of Undergraduate Financial Assistance and Percentage Distributed by Year of Study, 2010–2011 to 2019–2020**



	2010–11	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20
Year 4	$2,130,098	$2,229,278	$2,296,173	$2,725,785	$3,534,244	$3,853,161	$3,644,310	$3,940,729	$5,515,858	$2,804,242
Year 3	$2,049,237	$2,205,736	$2,061,174	$2,429,321	$2,871,229	$2,839,851	$2,570,428	$2,913,413	$3,132,480	$3,043,391
Year 2	$2,157,800	$2,185,640	$2,160,969	$2,781,695	$2,289,069	$2,792,715	$2,335,933	$2,545,499	$3,831,175	$2,911,406
Year 1	$2,886,898	$2,580,676	$2,687,414	$2,372,994	$2,450,470	$2,700,169	$1,662,682	$2,642,454	$3,788,693	$3,236,557
Total	$9,224,033	$9,201,330	$9,205,730	$10,309,795	$11,145,012	$12,185,896	$10,213,353	$12,042,095	$16,268,206	$11,995,596

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

Figure 1.9 **Undergraduate Degrees Awarded by Program, 2010–2011 to 2019–2020**

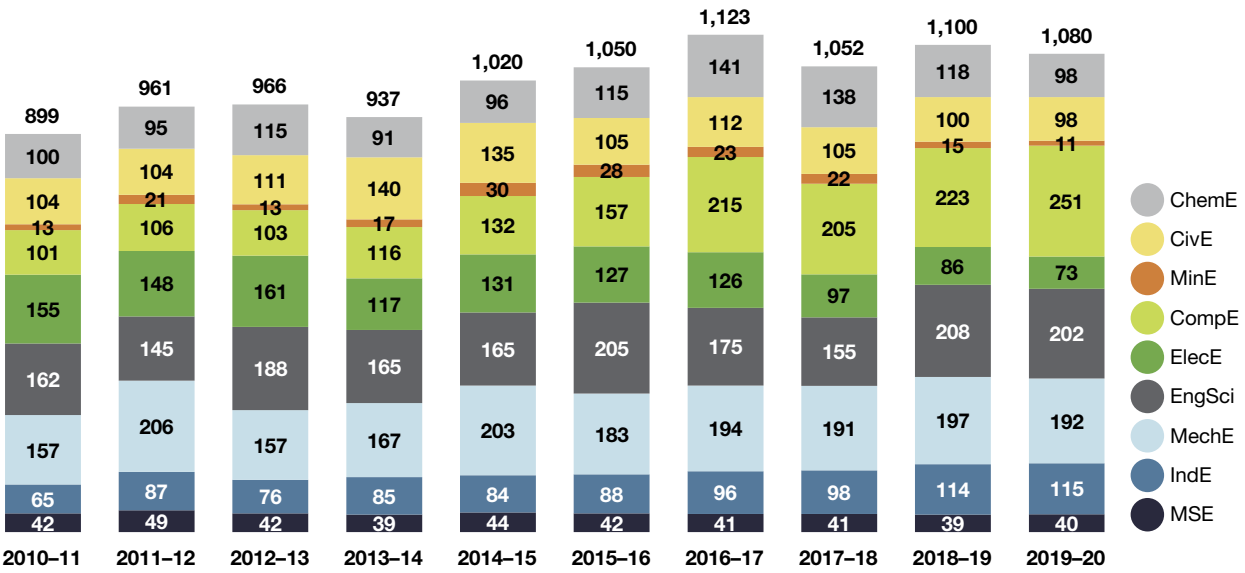
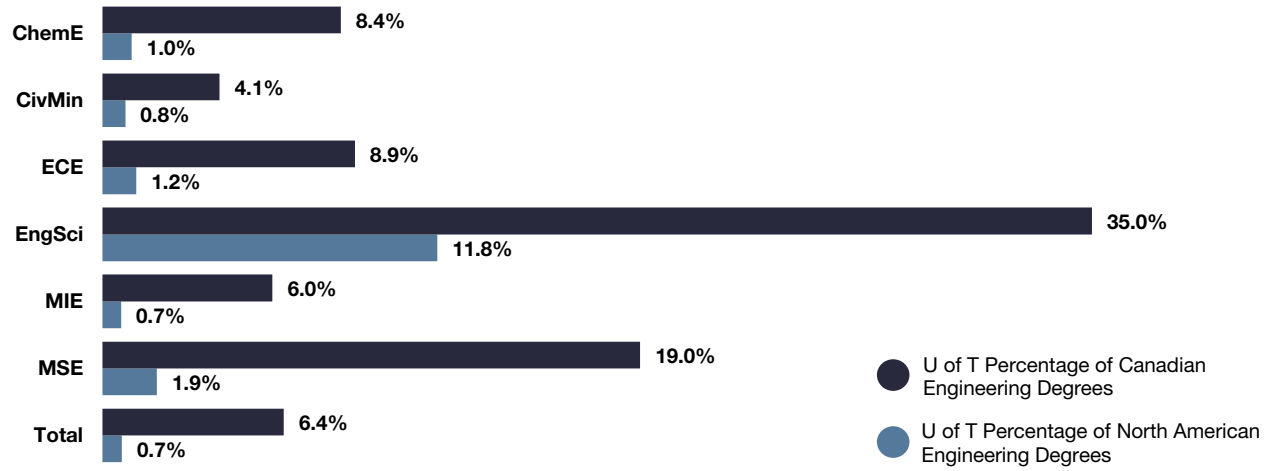


Figure 1.10 **U of T Engineering Degrees Awarded by Academic Area Compared with Canadian and North American Degree Totals, 2018**



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; 2018 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, 2011 to 2020**

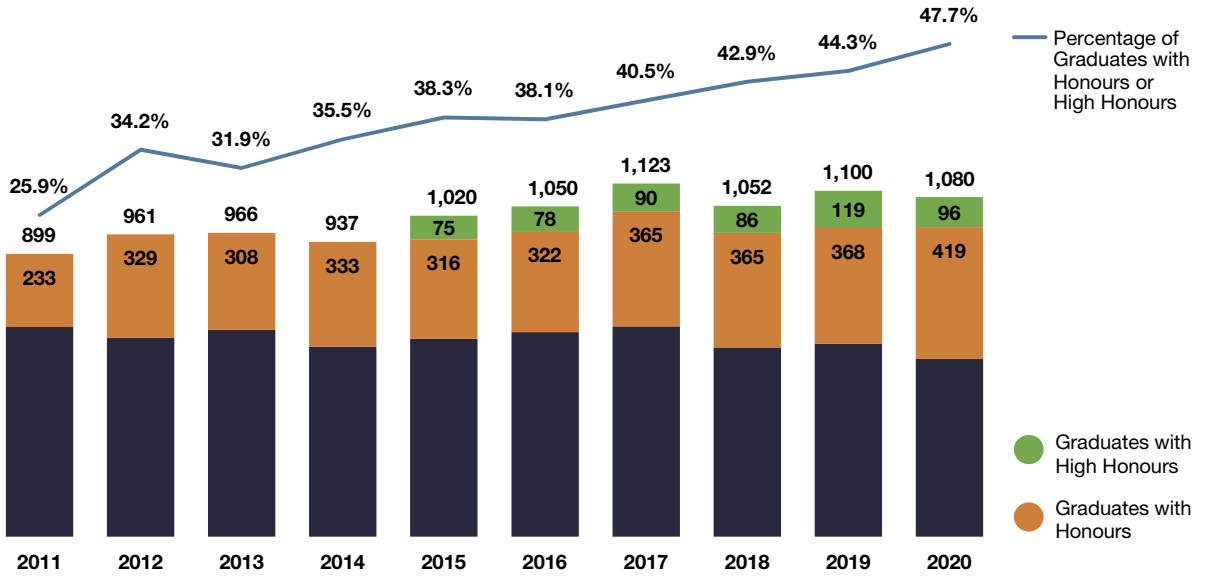
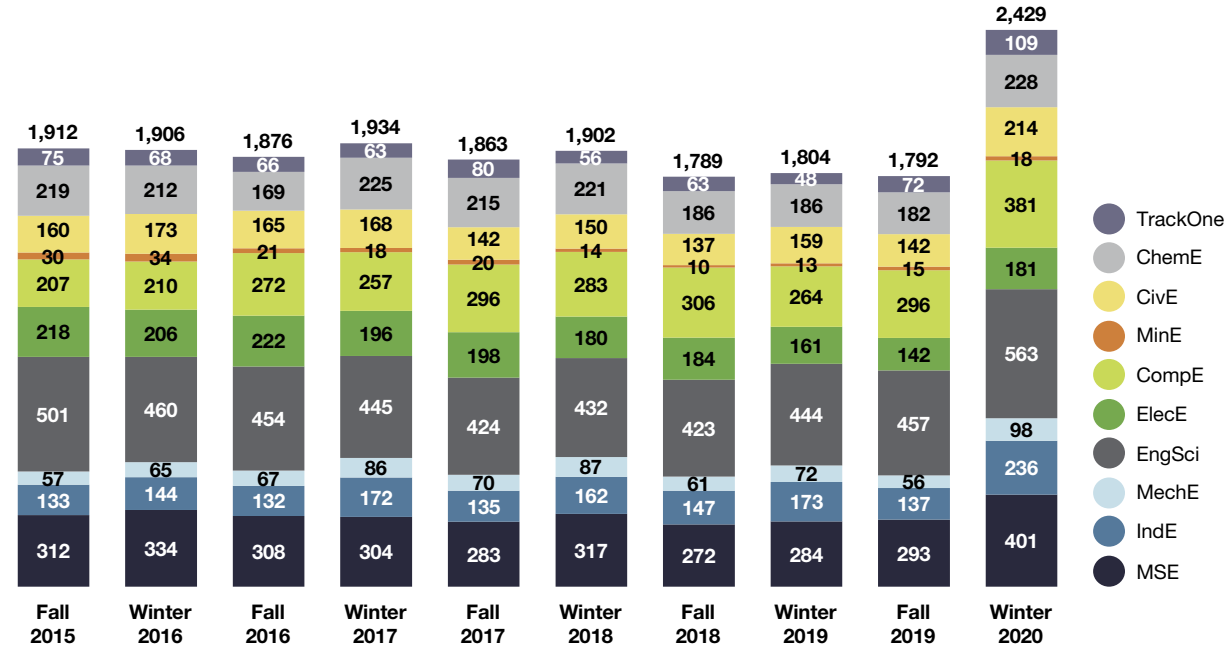


Figure 1.11b **Number of Students on the Dean's Honour List by Term and Academic Area, Fall 2015 to Winter 2020**



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 2020 Winter term results reflect several impacts due to COVID-19 adaptations. Moving all classes to online formats necessitated adjustments both to specific assignments and to overall grading schemes. Additionally, for this term 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.

Figure 1.12a **Number of Completed Minors and Percentage of Graduating Students Completing an Engineering Minor, 2010–2011 to 2019–2020**

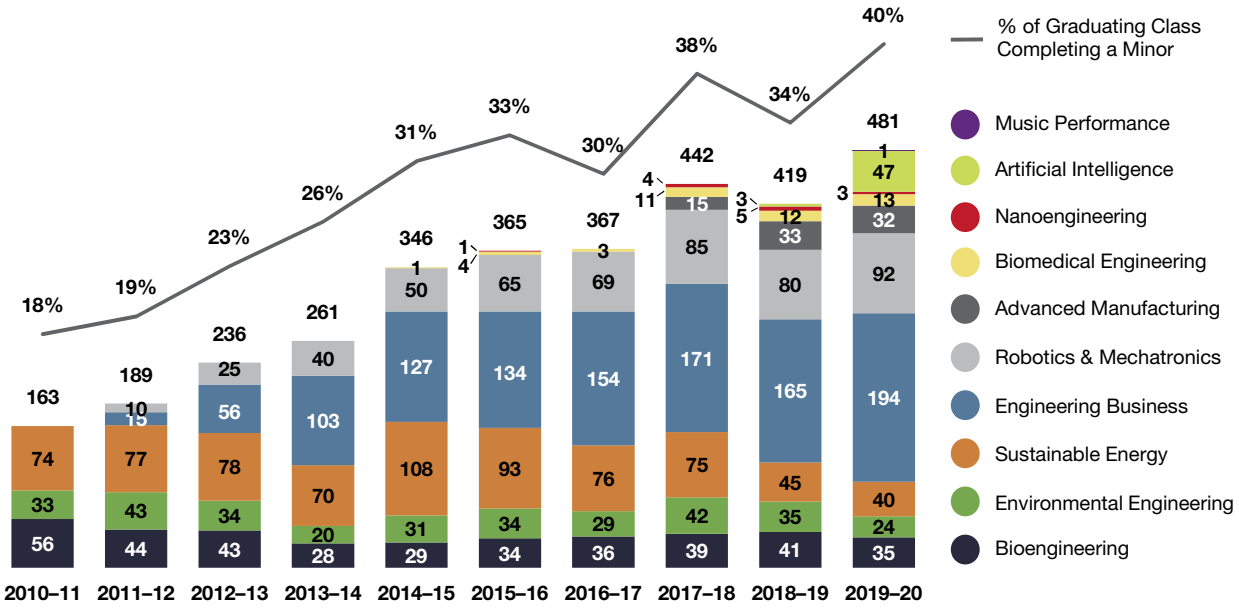
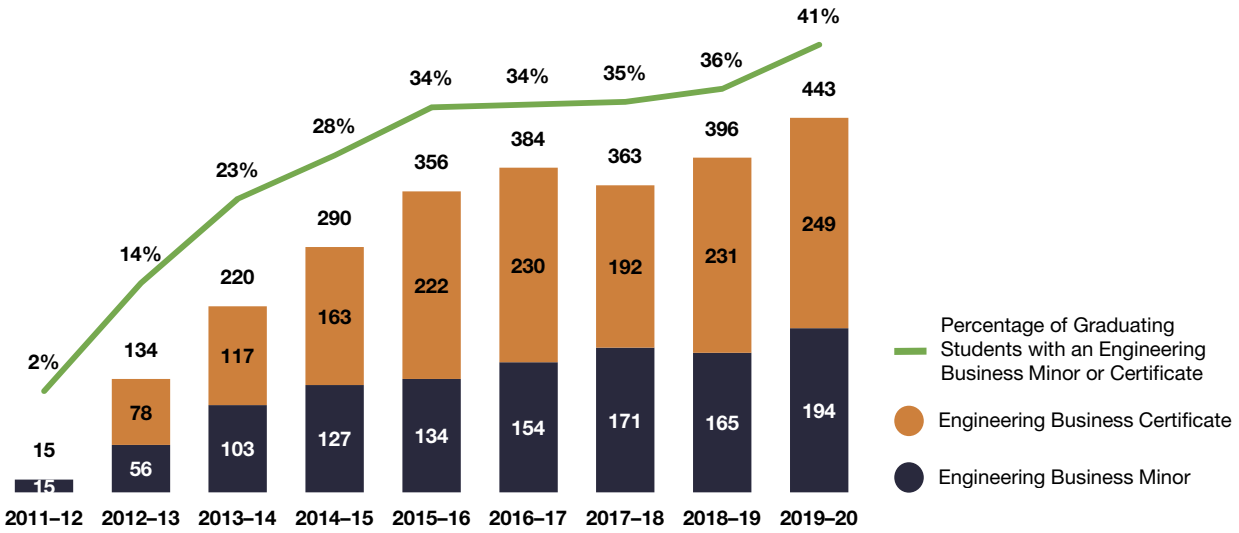


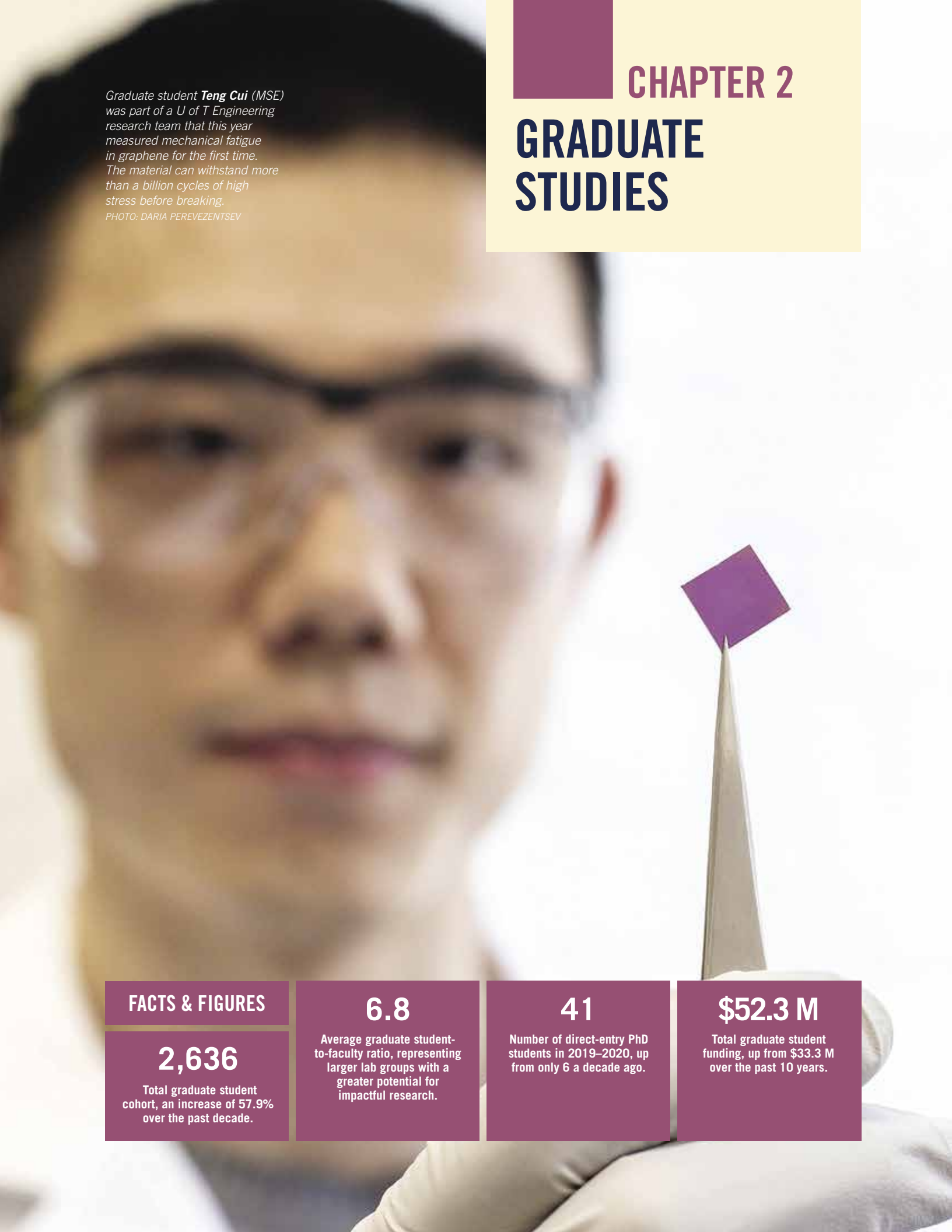
Figure 1.12b **Students Graduating with an Engineering Business Minor or Certificate, 2011–2012 to 2019–2020**



Note 1.12a: A total of 481 minors were completed by 431 students in 2019–2020, with many students completing more than one minor.

Figure 1.13 **New Undergraduate Courses Launched, 2019–2020**

Course	Term	Title
APS191H1	S	Track One Seminar
CHE191H1	S	Introduction to Chemical Engineering
CIV191H1	S	Introduction to Civil Engineering
ECE499H1	F/S	Thesis
ECE499Y1	Y	Thesis
ECE520H1	F	Power Electronics
ECE526H1	S	Power System Protection and Automation
MIE369H1	S	Introduction to Artificial Intelligence
MIN191H1	S	Introduction to Mineral Engineering
MSE120H1	S	Materials Engineering, Processing and Applications
MSE191H1	S	Introduction to Materials Science & Engineering
MSE296H1	F	Materials Paradigm at a Glance
MSE297H1	S	Materials Paradigm at a Glance
MSE478H1	S	Materials Manufacturing and Design
TEP327H1	S	Engineering & Law
TEP448H1	S	System Mapping



*Graduate student **Teng Cui** (MSE) was part of a U of T Engineering research team that this year measured mechanical fatigue in graphene for the first time. The material can withstand more than a billion cycles of high stress before breaking.*
PHOTO: DARIA PEREVEZENTSEV

CHAPTER 2
GRADUATE STUDIES

FACTS & FIGURES

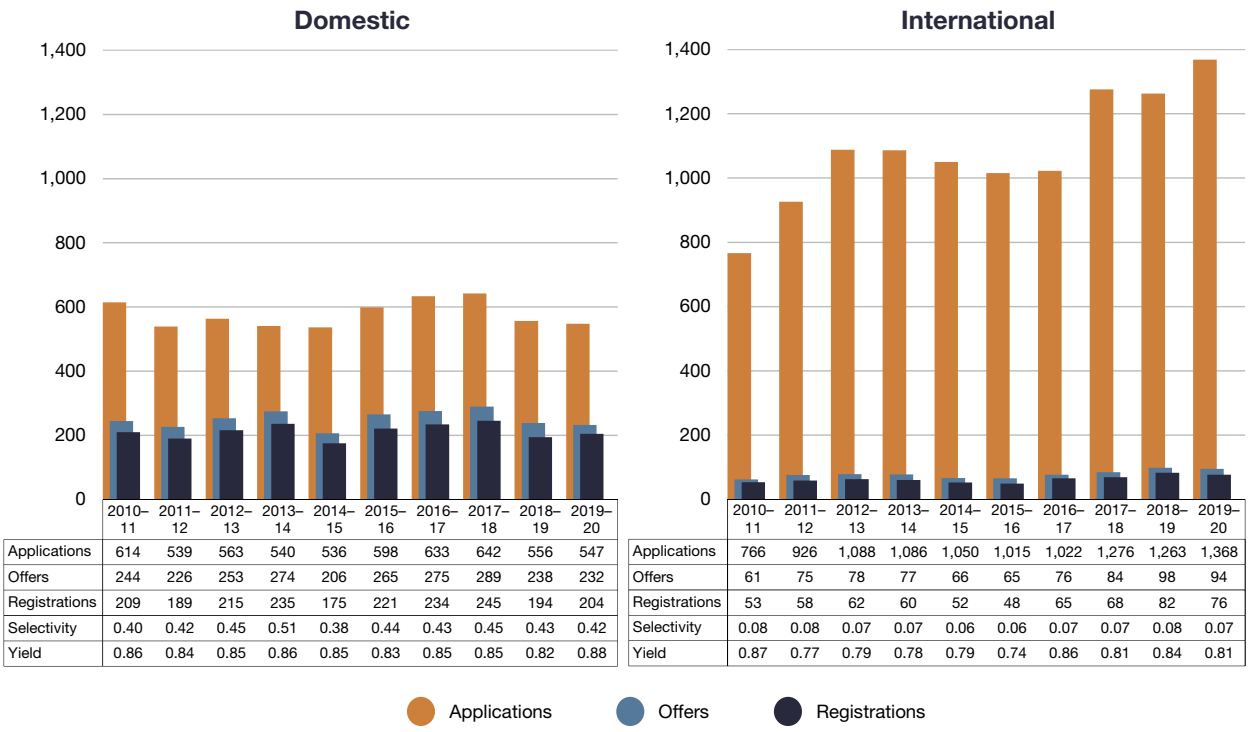
2,636
Total graduate student cohort, an increase of 57.9% over the past decade.

6.8
Average graduate student-to-faculty ratio, representing larger lab groups with a greater potential for impactful research.

41
Number of direct-entry PhD students in 2019–2020, up from only 6 a decade ago.

$52.3 M
Total graduate student funding, up from $33.3 M over the past 10 years.

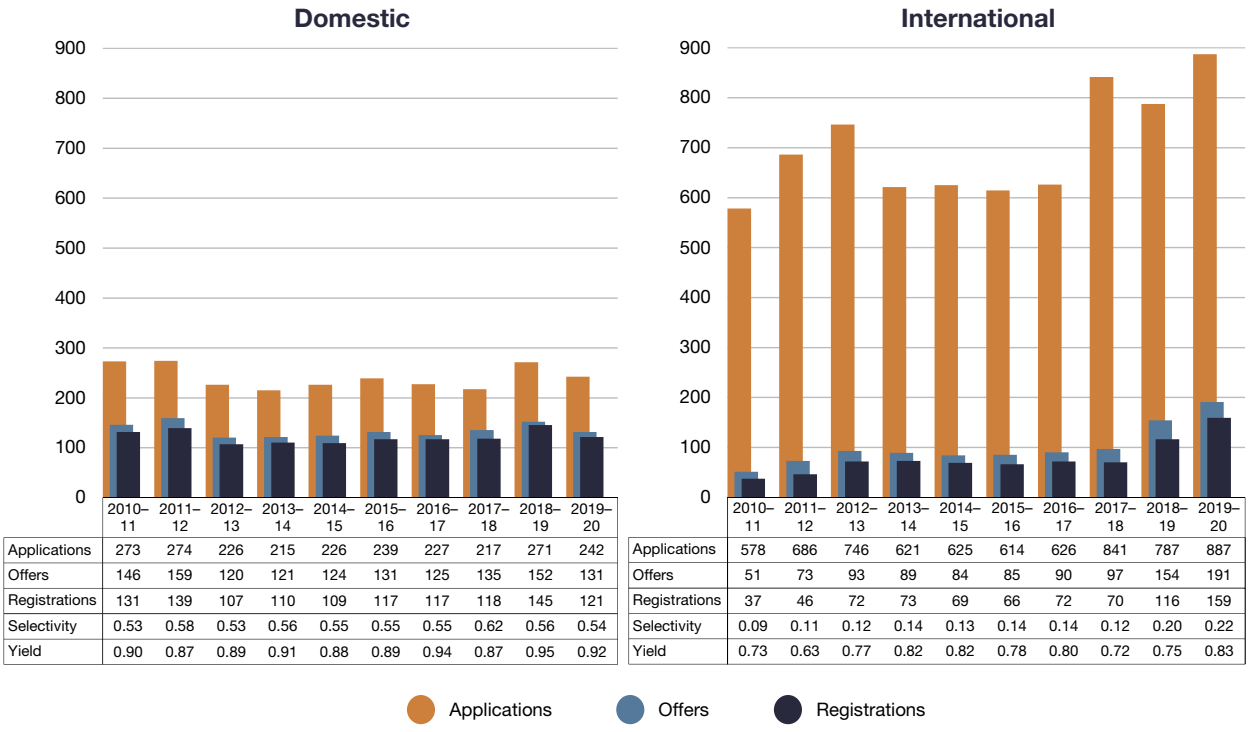
Figure 2.1a **Domestic and International MASc Students: Applications, Offers, Registrations, Selectivity and Yield, 2010–2011 to 2019–2020**



	2010–11	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20
Applications	614	539	563	540	536	598	633	642	556	547
Offers	244	226	253	274	206	265	275	289	238	232
Registrations	209	189	215	235	175	221	234	245	194	204
Selectivity	0.40	0.42	0.45	0.51	0.38	0.44	0.43	0.45	0.43	0.42
Yield	0.86	0.84	0.85	0.86	0.85	0.83	0.85	0.85	0.82	0.88

	2010–11	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20
Applications	766	926	1,088	1,086	1,050	1,015	1,022	1,276	1,263	1,368
Offers	61	75	78	77	66	65	76	84	98	94
Registrations	53	58	62	60	52	48	65	68	82	76
Selectivity	0.08	0.08	0.07	0.07	0.06	0.06	0.07	0.07	0.08	0.07
Yield	0.87	0.77	0.79	0.78	0.79	0.74	0.86	0.81	0.84	0.81

Figure 2.1b **Domestic and International PhD Students: Applications, Offers, Registrations, Selectivity and Yield, 2010–2011 to 2019–2020**

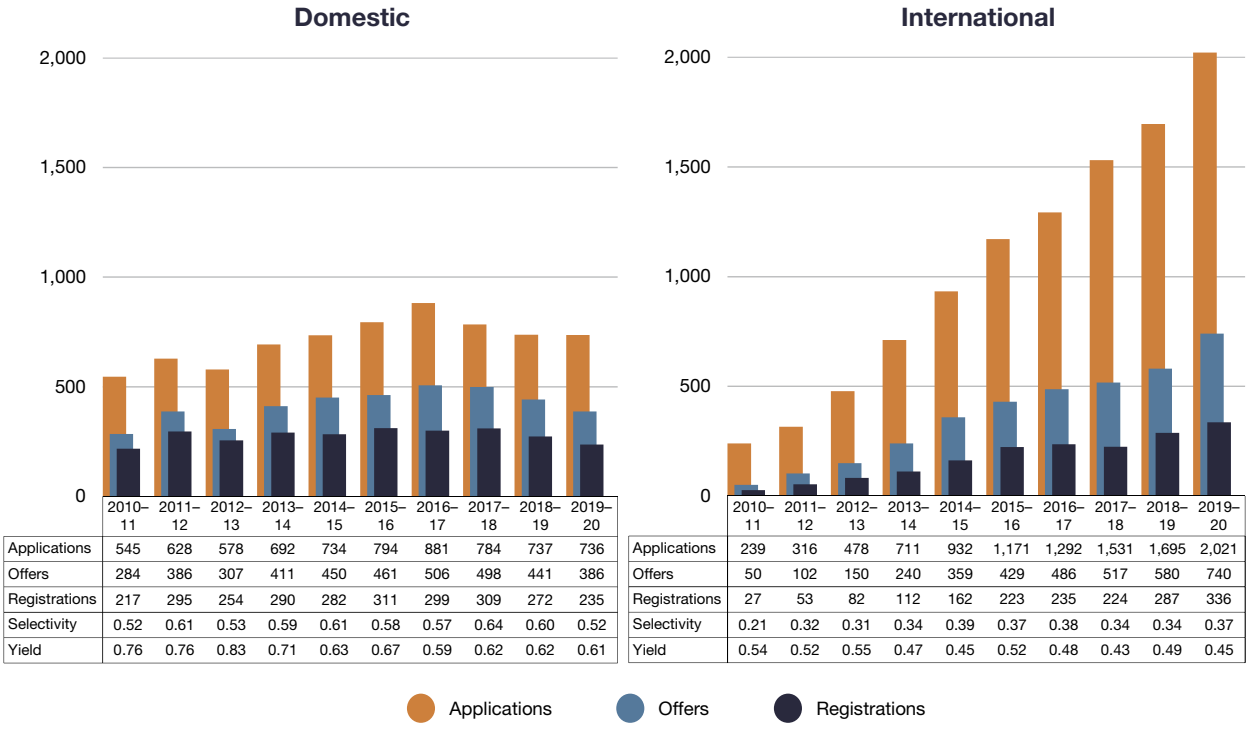


	2010–11	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20
Applications	273	274	226	215	226	239	227	217	271	242
Offers	146	159	120	121	124	131	125	135	152	131
Registrations	131	139	107	110	109	117	117	118	145	121
Selectivity	0.53	0.58	0.53	0.56	0.55	0.55	0.55	0.62	0.56	0.54
Yield	0.90	0.87	0.89	0.91	0.88	0.89	0.94	0.87	0.95	0.92

	2010–11	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20
Applications	578	686	746	621	625	614	626	841	787	887
Offers	51	73	93	89	84	85	90	97	154	191
Registrations	37	46	72	73	69	66	72	70	116	159
Selectivity	0.09	0.11	0.12	0.14	0.13	0.14	0.14	0.12	0.20	0.22
Yield	0.73	0.63	0.77	0.82	0.82	0.78	0.80	0.72	0.75	0.83

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

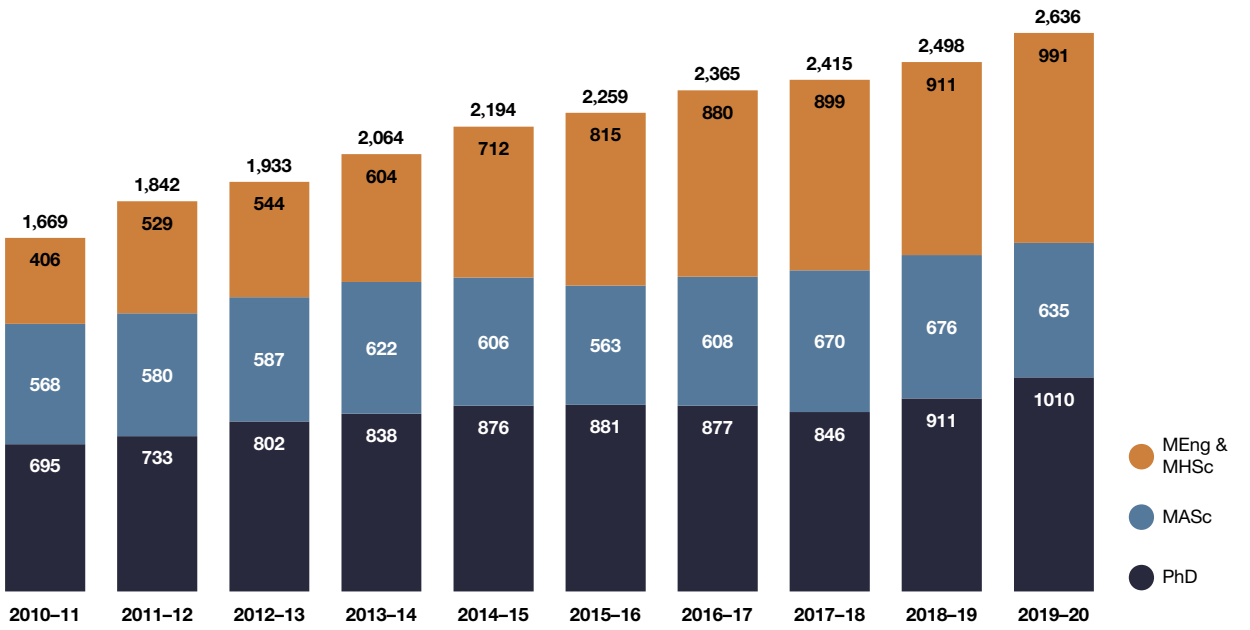
Figure 2.1c **Domestic and International MEng and MHSc Students: Applications, Offers, Registrations, Selectivity and Yield, 2010–2011 to 2019–2020**



Domestic	2010–11	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20
Applications	545	628	578	692	734	794	881	784	737	736
Offers	284	386	307	411	450	461	506	498	441	386
Registrations	217	295	254	290	282	311	299	309	272	235
Selectivity	0.52	0.61	0.53	0.59	0.61	0.58	0.57	0.64	0.60	0.52
Yield	0.76	0.76	0.83	0.71	0.63	0.67	0.59	0.62	0.62	0.61

International	2010–11	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20
Applications	239	316	478	711	932	1,171	1,292	1,531	1,695	2,021
Offers	50	102	150	240	359	429	486	517	580	740
Registrations	27	53	82	112	162	223	235	224	287	336
Selectivity	0.21	0.32	0.31	0.34	0.39	0.37	0.38	0.34	0.34	0.37
Yield	0.54	0.52	0.55	0.47	0.45	0.52	0.48	0.43	0.49	0.45

Figure 2.2a **Graduate Students by Degree Type, 2010–2011 to 2019–2020**

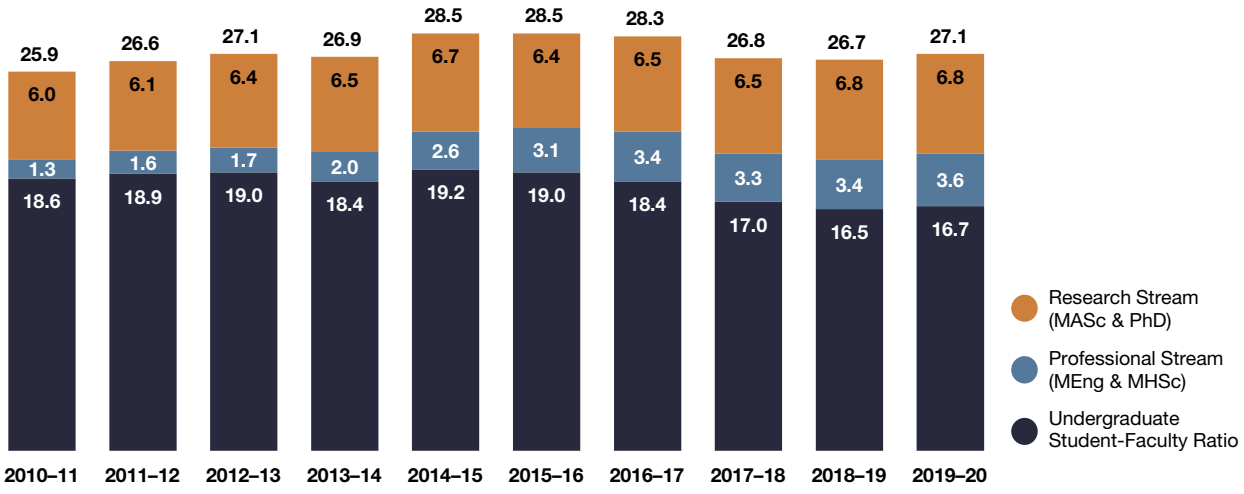


Note 2.1 a, b, c: Student counts are shown as of November 1. Selectivity = offers ÷ applications and represents the proportion of applicants who were offered admission. Yield = registration ÷ offers. Domestic students are defined as citizens (living in Canada or abroad) or permanent residents of Canada. 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, 2010–2011 to 2019–2020

		UTIAS	BME	ChemE	CivMin	ECE	MIE	MSE	Total
2010–2011	**FTE**	140.9	168.0	195.4	212.6	403.0	339.2	68.5	**1,527.6**
	HC	143	168	208	256	431	391	72	**1,669**
2011–2012	**FTE**	143.2	199.0	202.3	229.8	437.7	382.6	68.2	**1,662.8**
	HC	146	199	217	276	479	454	71	**1,842**
2012–2013	**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**
2013–2014	**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**
2014–2015	**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**
2015–2016	**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**
2016–2017	**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**
2017–2018	**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**
2018–2019	**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**
2019–2020	**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**

Figure 2.3a Undergraduate and Graduate Full-Time Equivalent Student-to-Faculty Ratios, 2010–2011 to 2019–2020



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

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, 2019–2020**

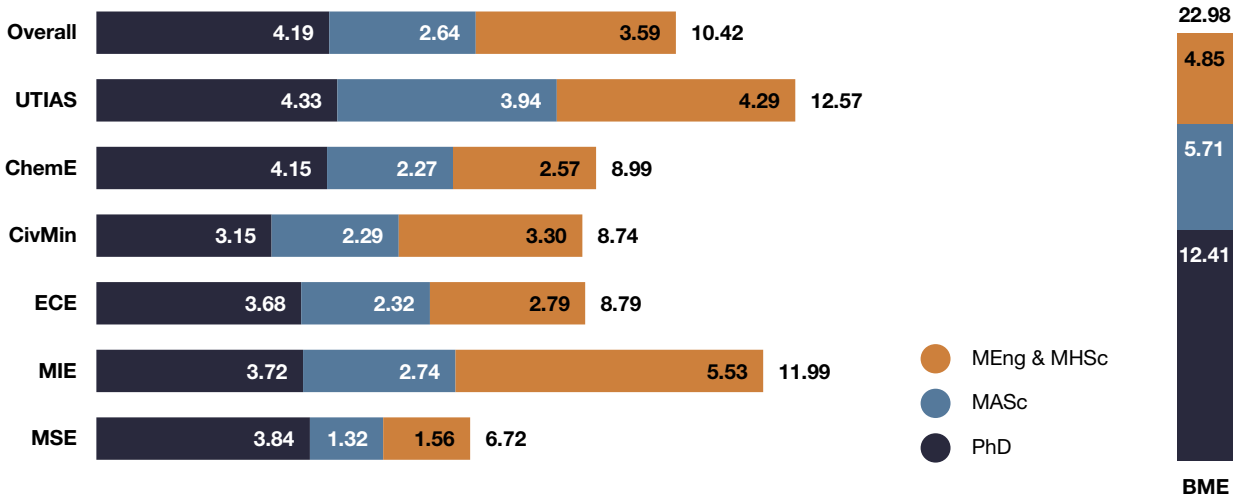
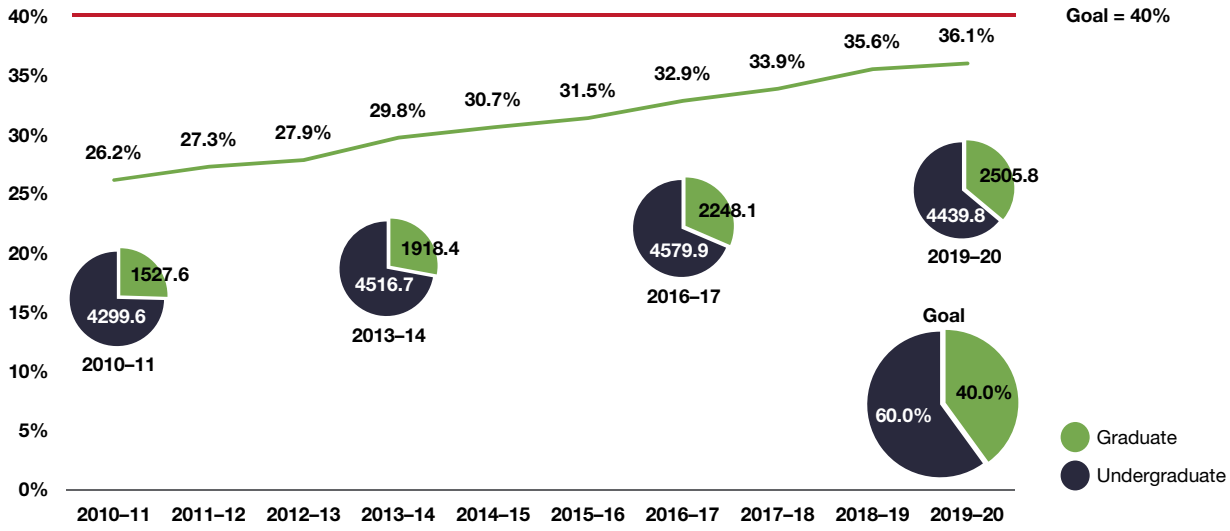


Figure 2.3c **Ratio of Undergraduate to Graduate Full-Time Equivalent Students, 2010–2011 to 2019–2020**



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, 2009–2010 to 2018–2019**

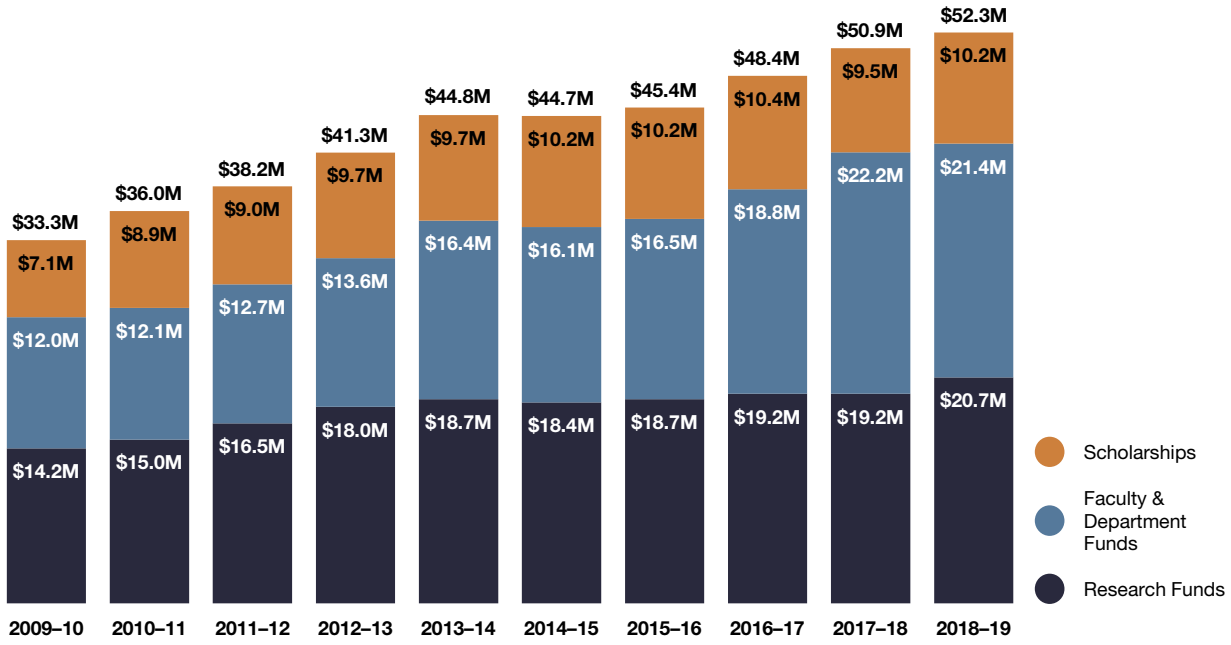
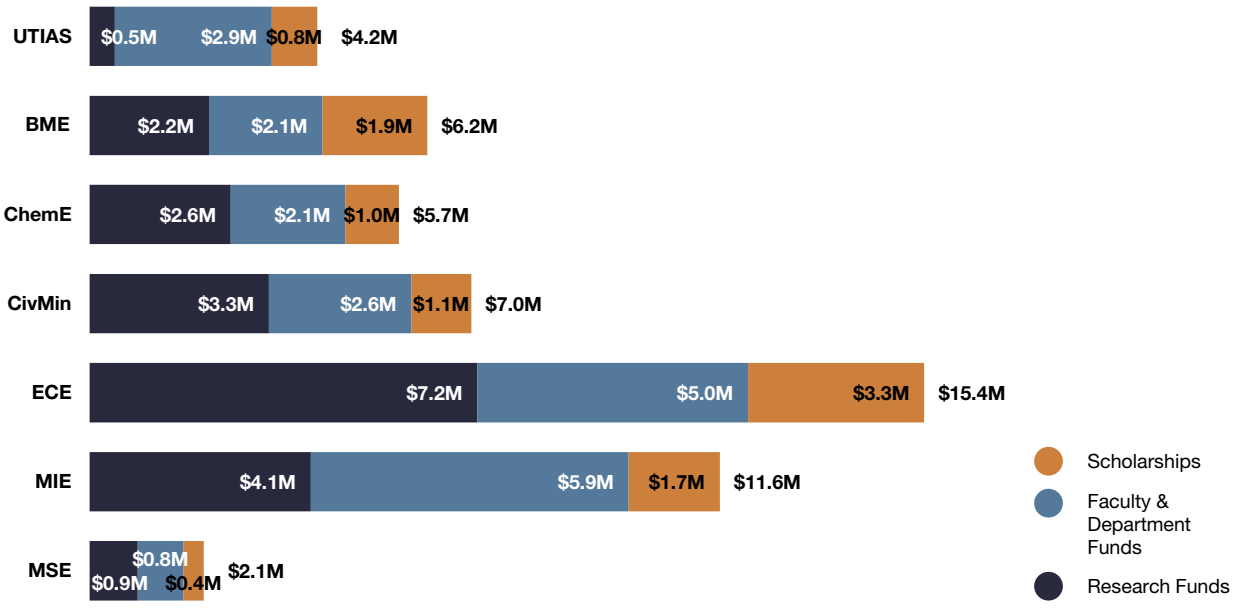


Figure 2.4b **Graduate Student Funding by Category and Academic Area, 2018–2019**

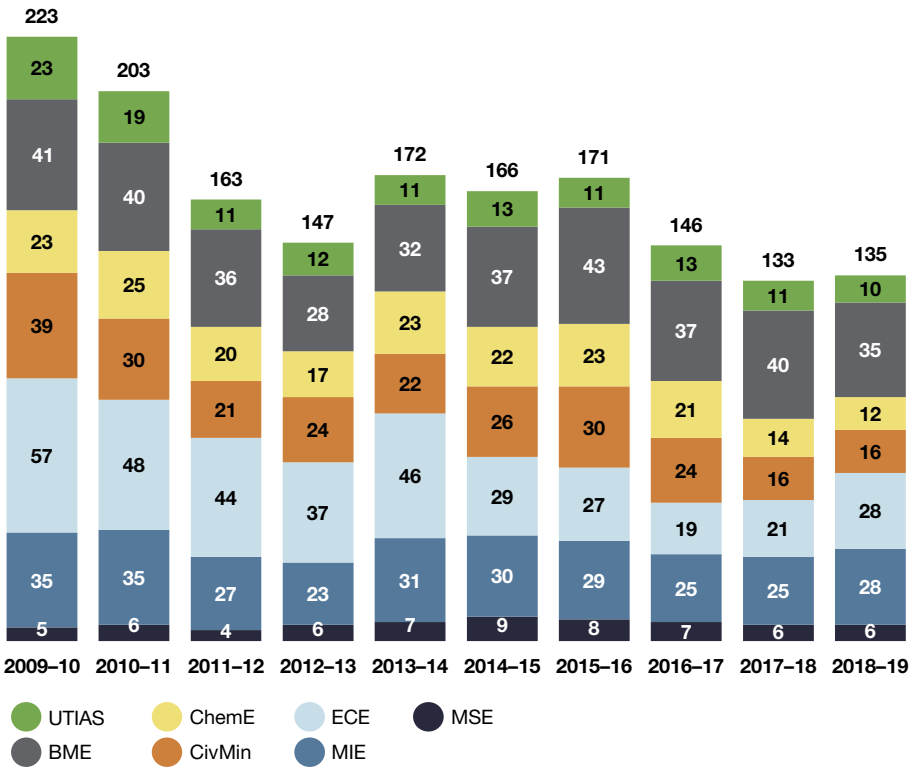


Note 2.4a, b: Data were obtained from the new Student Accounts Reporting Cube. Data for previous annual reports were obtained from the Graduate Student Income Reporting Cube. For more information, see Data Sources.

Figure 2.5a **Total External Graduate Student Scholarships by Source, 2009–2010 to 2018–2019**

	NSERC and CIHR	OGS	External – Other	Internal	Total
2009–10	$4,517,680	$853,334	$79,000	$1,613,187	$7,063,201
2010–11	$4,565,117	$1,036,675	$3,500	$3,287,981	$8,893,273
2011–12	$3,912,883	$1,593,328	$107,332	$3,383,614	$8,997,157
2012–13	$3,513,184	$1,583,333	$146,500	$4,445,431	$9,688,448
2013–14	$4,016,673	$1,236,666	$319,333	$4,094,144	$9,666,816
2014–15	$3,975,701	$1,336,670	$390,333	$4,487,866	$10,190,570
2015–16	$3,875,675	$1,223,331	$366,335	$4,748,300	$10,213,641
2016–17	$3,539,878	$1,360,004	$323,889	$5,157,619	$10,381,390
2017–18	$3,224,719	$1,525,000	$315,267	$4,481,057	$9,546,043
2018–19	$3,390,489	$1,443,333	$490,499	$4,850,987	$10,175,308

Figure 2.5b **Number of NSERC and CIHR Graduate Student Award Recipients by Academic Area, 2009–2010 to 2018–2019**



Note 2.5a, b: Data were obtained from the new Student Accounts Reporting Cube. Data for previous annual reports were obtained from the Graduate Student Income Reporting Cube. For more information, see Data Sources.

Figure 2.6a **Number of Students Fast-Tracked from MASc to PhD by Academic Area, 2010–2011 to 2019–2020**

	2010–11	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20
UTIAS	5	2	5	6	10	1	3	10	5	6
BME	8	5	8	8	12	14	8	10	14	4
ChemE	4	8	7	14	8	5	7	5	6	6
CivMin	2	5	2	3	1	5	5	7	3	2
ECE	6	4	2	4	5	4	3	6	14	11
MIE	6	6	6	5	2	8	13	6	3	3
MSE	3	7	1	3	4	2	2	0	0	2
Total	**34**	**37**	**31**	**43**	**42**	**39**	**41**	**44**	**45**	**34**

Figure 2.6b **Number of Direct-Entry PhD students by Academic Area, 2010–2011 to 2019–2020**

	2010–11	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20
UTIAS										2
BME	6	5	5	7	3	5	7	11	9	21
ChemE		1				5	1		12	7
CivMin							1		2	4
ECE					2	2	2	2	2	4
MIE		1	1				4		2	3
Total	6	7	6	7	5	12	15	13	27	41

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

Figure 2.7a Average Time to Completion for PhD, MASc, MEng and MHSc Students, 2010–2011 to 2019–2020

	2010–11	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20
PhD	5.3	5.0	5.3	5.2	5.3	5.3	5.3	5.0	5.3	5.0
MASc	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
MEng & MHSc (FT)	1.0	1.0	1.3	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
MEng (PT)	2.3	2.0	2.0	2.0	2.0	2.0	2.3	2.0	2.0	2.0

Figure 2.7b Time to Completion for Graduate Students – University of Toronto Institute for Aerospace Studies, 2010–2011 to 2019–2020

	2010–11	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20
PhD	7.0	4.7	5.3	5.3	5.7	6.3	5.3	5.0	5.8	6.0
MASc	2.0	2.0	2.0	2.2	2.0	2.0	2.0	2.0	2.0	2.0
MEng (FT)	1.3	1.3	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
MEng (PT)			1.7	1.3	2.0	2.3	3.0	3.0		2.3

Figure 2.7c Time to Completion for Graduate Students – Institute of Biomedical Engineering, 2010–2011 to 2019–2020

	2010–11	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20
PhD	6.0	5.7	5.0	5.0	6.0	5.7	5.2	5.3	5.5	6.0
MASc	2.0	2.0	2.0	2.0	2.3	2.0	2.0	2.3	2.0	2.0
MEng (FT)								1.0	1.0	1.0
MEng (PT)									1.3	1.7
MHSc (FT)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0

Figure 2.7d Time to Completion for Graduate Students – Department of Chemical Engineering & Applied Chemistry, 2010–2011 to 2019–2020

	2010–11	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20
PhD	6.0	5.3	5.2	5.5	5.7	5.7	5.5	5.8	5.5	6.3
MASc	2.0	2.0	2.0	2.0	2.0	2.3	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)					1.5	1.7	1.7	1.7	1.7	1.8
MEng (PT)	1.8	1.3	2.0	2.0	1.8	1.5	2.0	1.7	1.7	

Figure 2.7e Time to Completion for Graduate Students – Department of Civil & Mineral Engineering, 2010–2011 to 2019–2020

	2010–11	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20
PhD	5.3	5.3	5.3	5.0	5.3	5.3	5.7	5.0	5.2	4.3
MASc	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
MEng (FT)	1.3	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
MEng (PT)	2.3	1.8	2.0	2.0	1.7	2.0	2.2	2.0	1.7	2.3
MEngCEM (FT)					1.3	1.3	1.3	1.3	1.3	1.3
MEngCEM (Ext FT)								1.3	1.5	1.7

Figure 2.7f Time to Completion for Graduate Students – The Edward S. Rogers Sr. Department of Electrical & Computer Engineering, 2010–2011 to 2019–2020

	2010–11	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20
PhD	5.0	5.2	5.5	5.3	5.0	5.0	5.3	5.0	5.3	5.0
MASc	2.0	2.0	2.0	2.0	2.3	2.0	2.0	2.3	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
MEng (PT)	2.7	2.0	2.2	2.0	2.0	2.0	2.3	2.7	2.3	2.3

Figure 2.7g Time to Completion for Graduate Students – Department of Mechanical & Industrial Engineering, 2010–2011 to 2019–2020

	2010–11	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20
PhD	4.7	5.0	5.7	5.0	4.8	5.0	4.7	5.0	4.7	4.3
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	1.3	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
MEng (PT)	2.0	2.0	2.0	2.0	2.0	1.7	2.3	2.0	1.7	1.7
MEngDM (PT)	2.3	2.7	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, 2010–2011 to 2019–2020

	2010–11	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20
PhD	6.0	6.3	5.7	4.7	5.3	5.5	5.8	5.3	5.3	7.0
MASc	2.0	2.0	2.0	2.3	2.0	2.0	2.0	2.0	2.0	2.3
MEng (FT)		0.8	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
MEng (PT)	2.3	2.3	2.0	2.7	2.8				2.0	

Figure 2.8 **Graduate Degrees Awarded by Degree Type, 2010–2011 to 2019–2020**

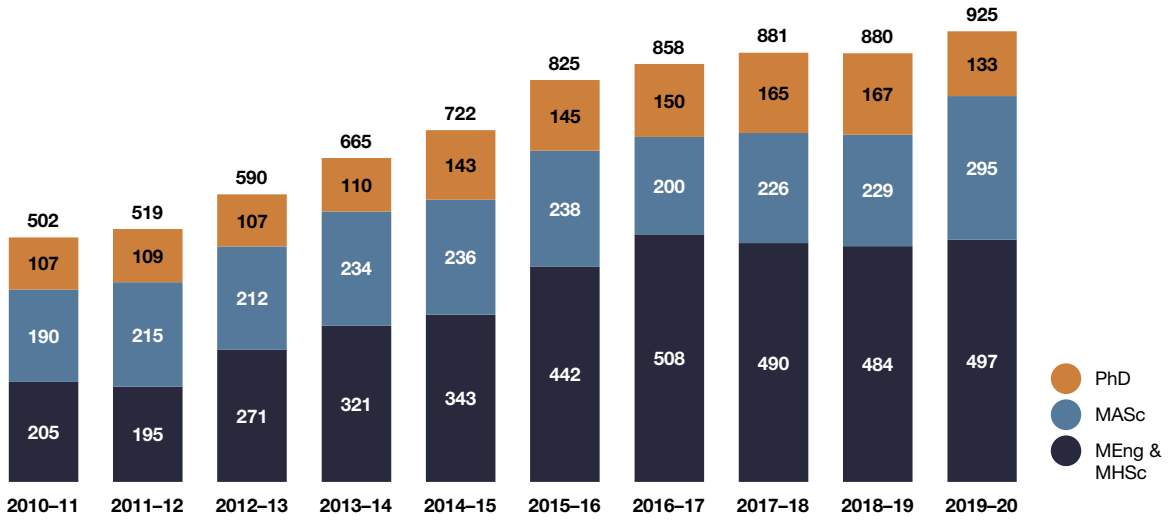


Figure 2.9 **ELITE Emphases Awarded, 2010–2011 to 2019–2020**

	2010–11	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20
UTIAS	2		7	2	4	11	1	17	3	5
BME										1
ChemE	12	11	17	8	20	20	18	13	15	6
CivMin	13	11	9	12	12	24	22	16	21	11
ECE	3	3	22	32	22	14	28	30	15	15
MIE	19	20	26	36	39	50	53	41	48	29
MSE	1	1	4	6	11	5	15	1	7	5
Total	**50**	**46**	**85**	**96**	**108**	**124**	**137**	**118**	**109**	**72**

Figure 2.10 **New MEng Emphases**

Title	Description
MEng Emphasis in Biomanufacturing	Through this emphasis, students in ChemE, MIE and MSE can specialize in topics such as biofuels and biochemical production, microbes for bioremediation, and applications in biomaterials, therapeutics, drug delivery and medicine.
MEng Emphasis in Advanced Soft Materials	This emphasis, open to students in ChemE, MIE and MSE, focuses on polymers, composites, colloids and suspensions. Students will study their underlying chemical and physical properties and learn design principles for the engineering of soft materials for practical applications.

Figure 2.11 **New Graduate Courses Launched, 2019–2020**

Course Code	Course Title
AER1515	Perception for Robotics
AER1516	Robot Motion Planning
AER1517	Control for Robotics
APS1053	Time Series Analytics for A.I. in Finance
APS1101	System Dynamic Risk Assessment
APS2000	Summer Engineering Practicum
APS5500	Research Methods and Project Execution for Graduate Student Success
BME1478	Coding for Biomedical Engineers
CHE1133	Bioprocess Engineering
CHE1135	Regulatory Affairs for Industrial Biotechnology and Biopharmaceutical Products
CHE1333	Biomaterials Engineering for Nanomedicine
CHE1334	Organ-on-a-Chip Engineering
CIV1240	Building Performance Assessment
MIE1075	AI Applications in Robotics
MIE1076	AI Applications in Robotics II
MIE1080	Introduction to Healthcare Robotics
MIE1453	Introduction to Sensors and Sensor Network
MIE1612	Stochastic Programming and Robust Optimization
MIE1724	Additive Manufacturing in Engineering Applications
MIE1766	Aluminum Die Casting 2 – Product Design and Optimization
MIE1767	Mechatronics in Automotive Applications 1
MIE1768	Mechatronics in Automotive Applications 2
MSE1063	Application of Artificial Intelligence in Process Metallurgy
MSE1064	Extraction, Production and Processing of Aluminum
MSE1065	Application of Artificial Intelligence in Materials Design
MSE1066	Practical Aspects of Electron Microscopy
MSE1067	Damage and Failure of Advanced Engineering Materials
MSE1068	Additive Manufacturing of Metals, Ceramics and Composites

CHAPTER 3
COMMUNITY

In February 2020, U of T Engineering hosted NSBEHacks 2020, the only student-run Black hackathon in the GTA. The winning team, Clarity, was recognized for its achievement in building a product to help people with autism learn to understand emotions through tone.
PHOTO: NSBE U OF T STUDENT CHAPTER

FACTS & FIGURES

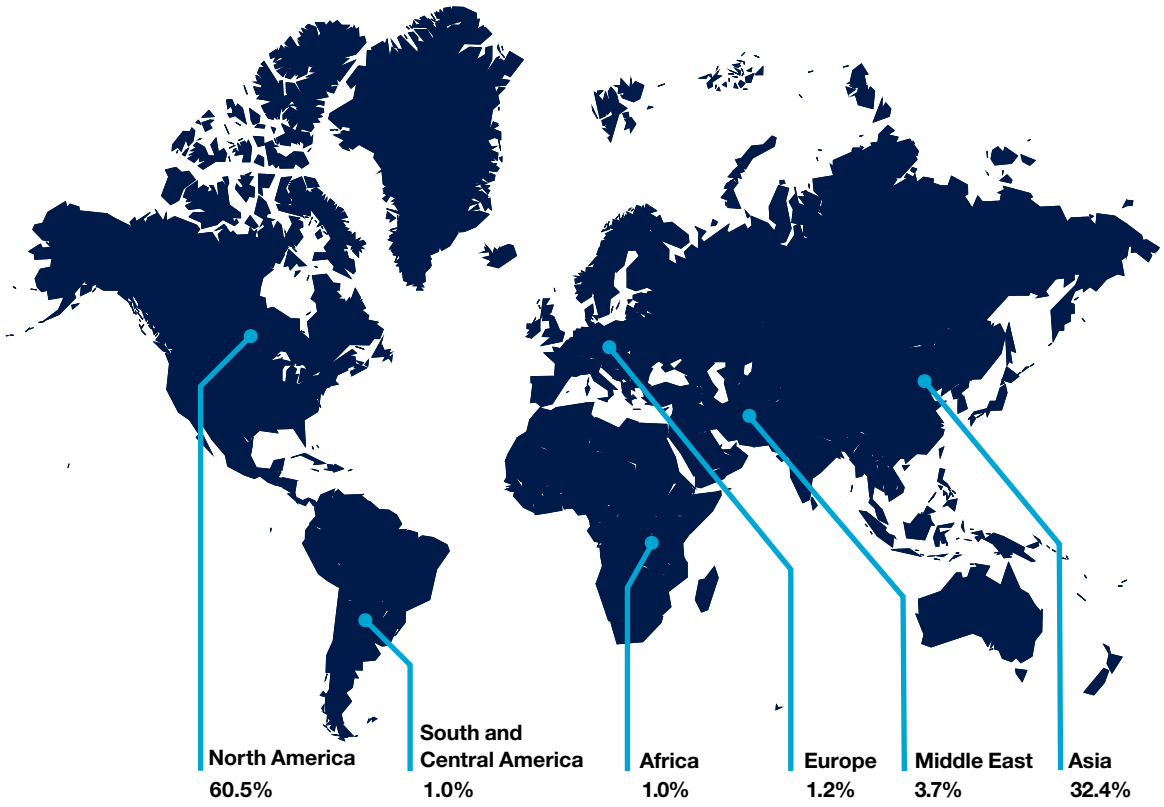
3,000+
Students reached through pre-university outreach programming in 2019–2020.

35.0%
Percentage of all students who are women, including 37.9% of undergraduate students and 29.1% of graduate students.

32.9%
Percentage of all students who come from outside of Canada, including 28.1% of undergraduate students and 42.4% of graduate students.

95+
Undergraduate and graduate student clubs and teams, from the Skule™ Orchestra to the Human Powered Vehicles Development Team.

Figure 3.1 **Continent of Origin: Undergraduate Students, Fall 2019**



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

Note 3.1: Not shown — 0.1% of undergraduate students from Oceania, which includes Australia, New Zealand and other countries in the Pacific Ocean. Country of origin is derived from a combination of citizenship, location of previous studies (e.g. elementary school, high school and university) and permanent address. This information does not indicate current Canadian immigration status, which is used to determine domestic/international student status for tuition and funding purposes.

Figure 3.2a **Incoming First-Year Undergraduates with Percentage of Women, 2010 to 2019**

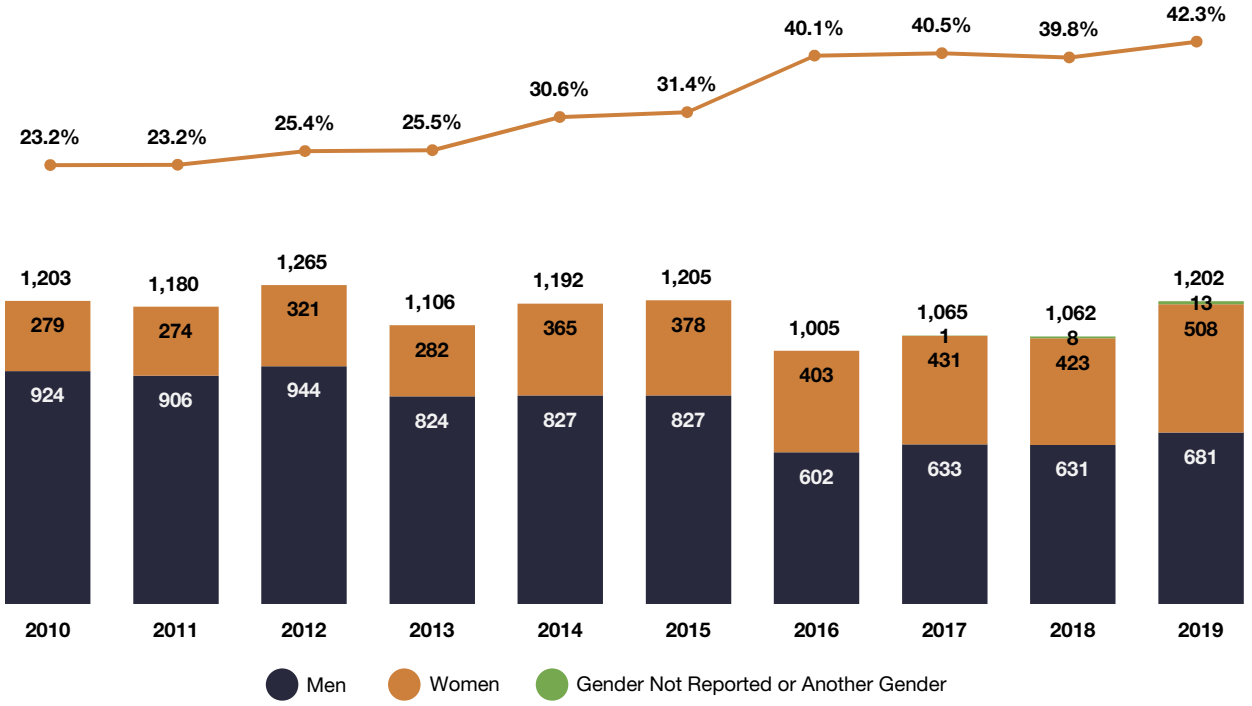
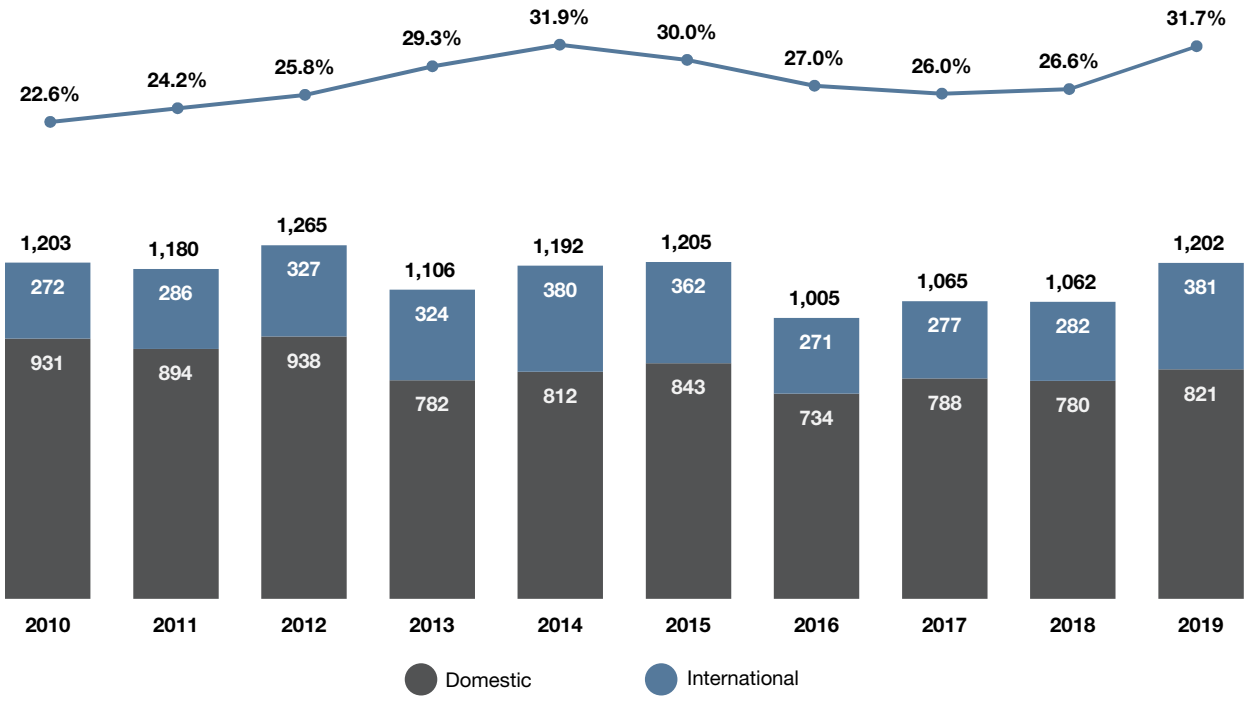


Figure 3.2b **Incoming First-Year Undergraduates with Percentage of International Students, 2010 to 2019**



Note 3.2a: Student counts are shown as of November 1. Data on student gender comes from the U of T Enrolment Reporting Cube; 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, 2010 to 2019**

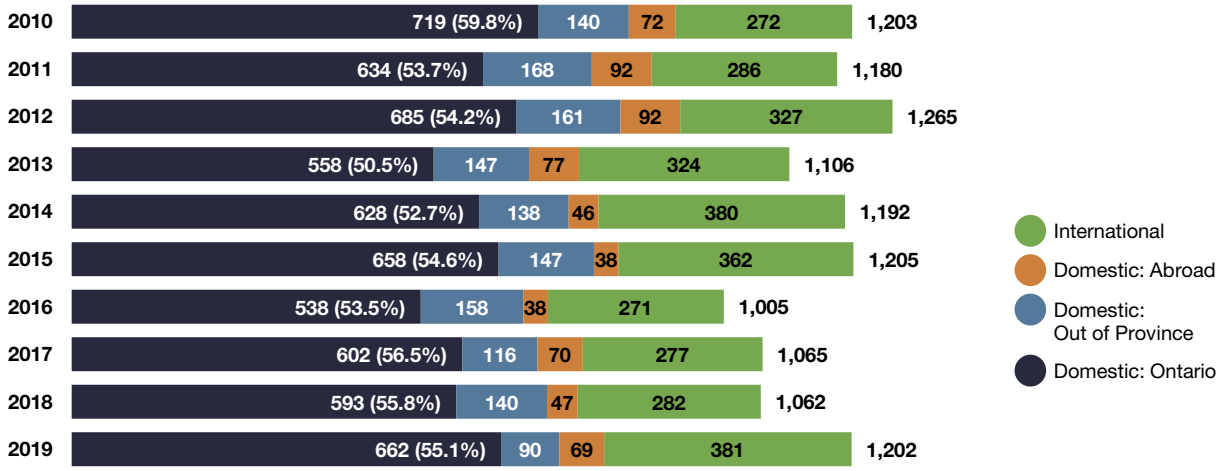
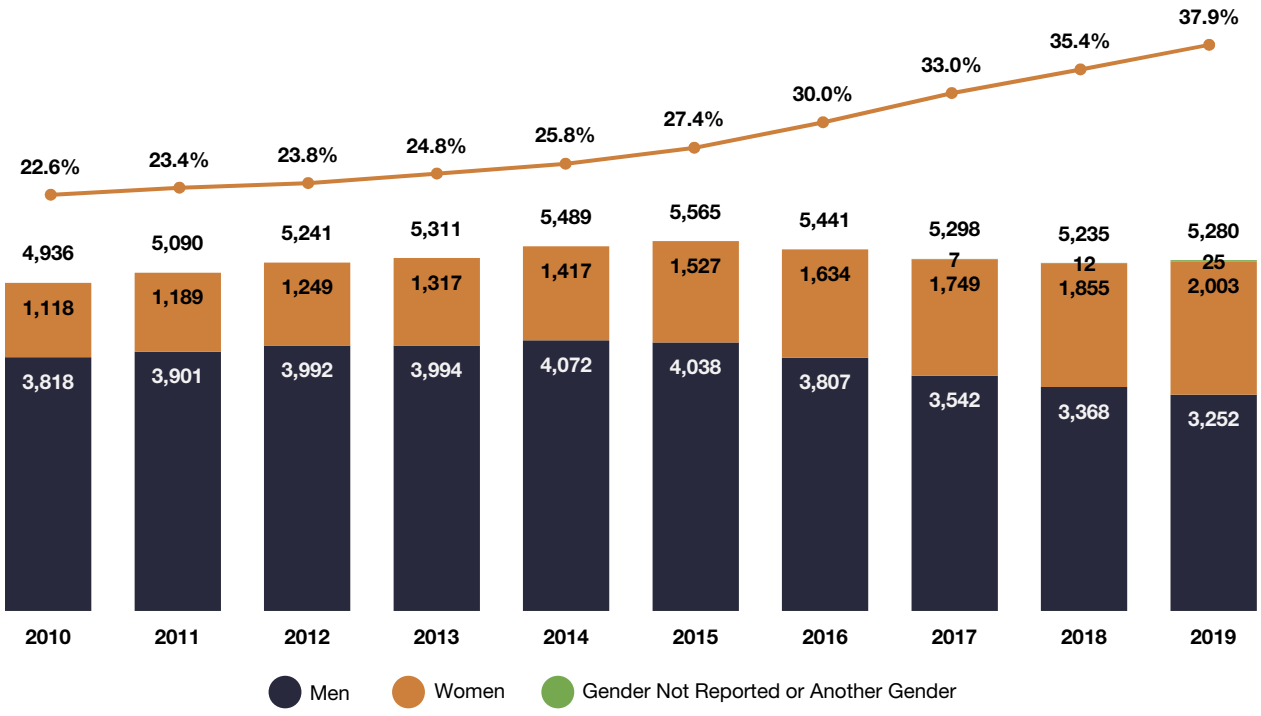


Figure 3.3a **Undergraduate Enrolment with Percentage of Women, 2010 to 2019**



Note 3.2c: 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.

Note 3.3a, b: 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 Enrolment Reporting Cube; the options to report "another gender" or to not report gender were added in 2017.

Figure 3.3b **Percentage of Women by Undergraduate Program, 2010–2011 to 2019–2020**

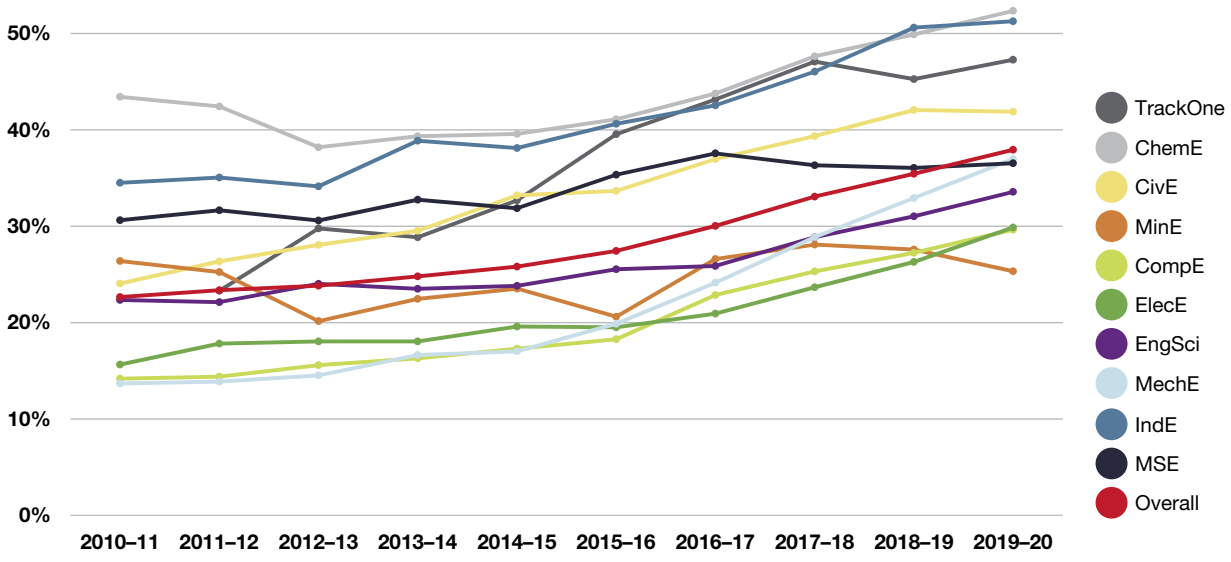
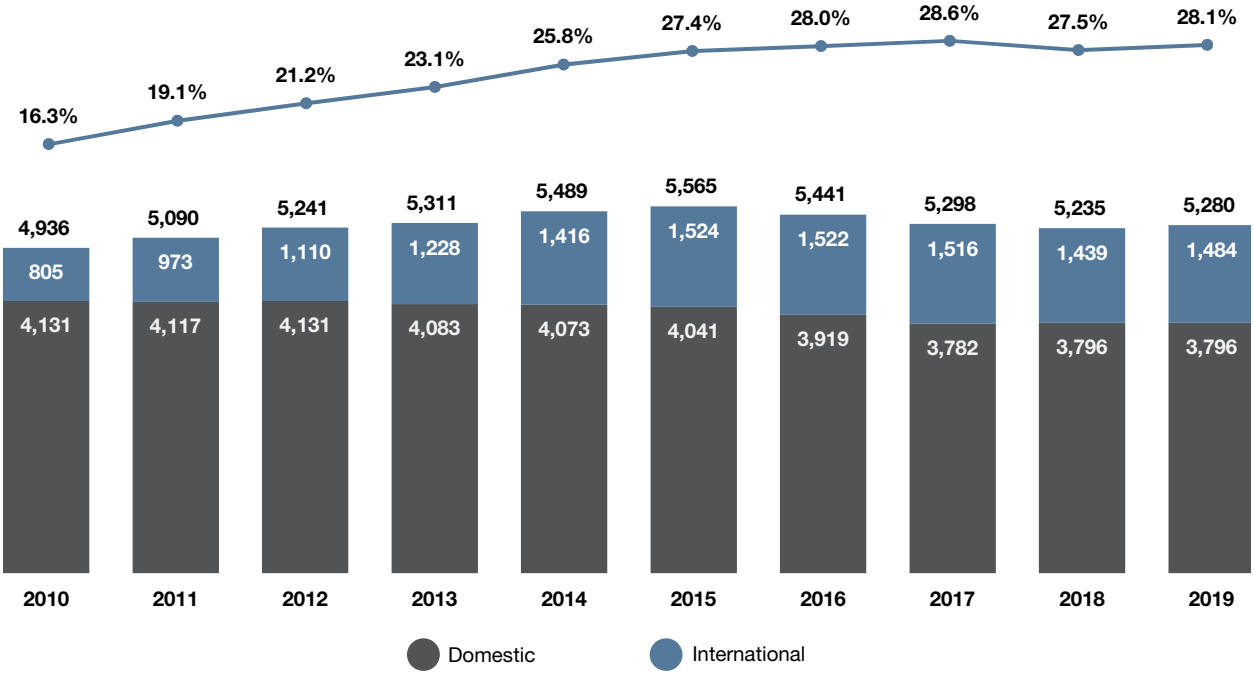


Figure 3.3c **Undergraduates with Percentage of International Students, 2010 to 2019**



Note 3.3c: 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.

Figure 3.4 **Undergraduate Degrees Awarded by Gender, 2010–2011 to 2019–2020**

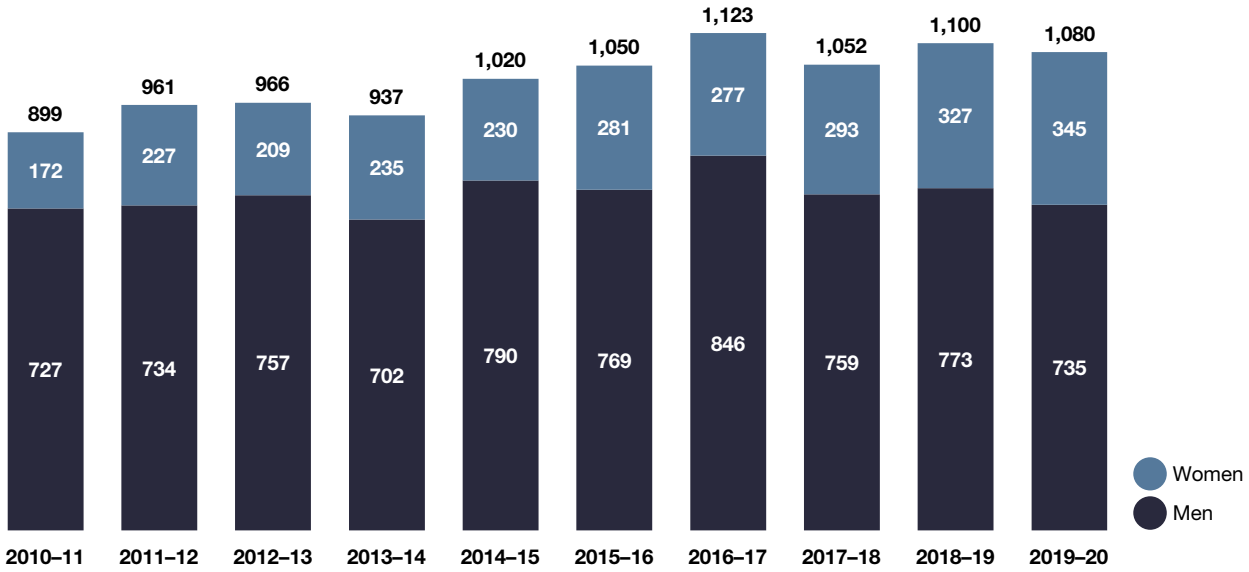


Figure 3.5 **Continent of Origin: Graduate Students, Fall 2019**

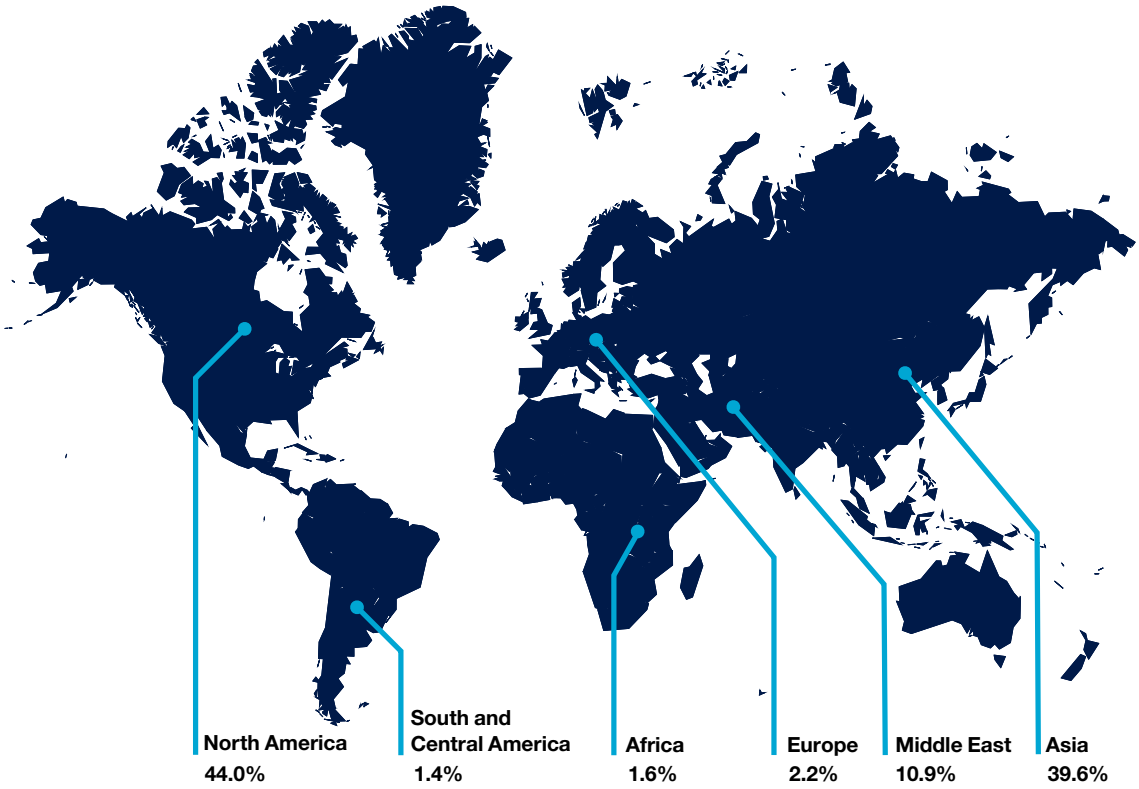
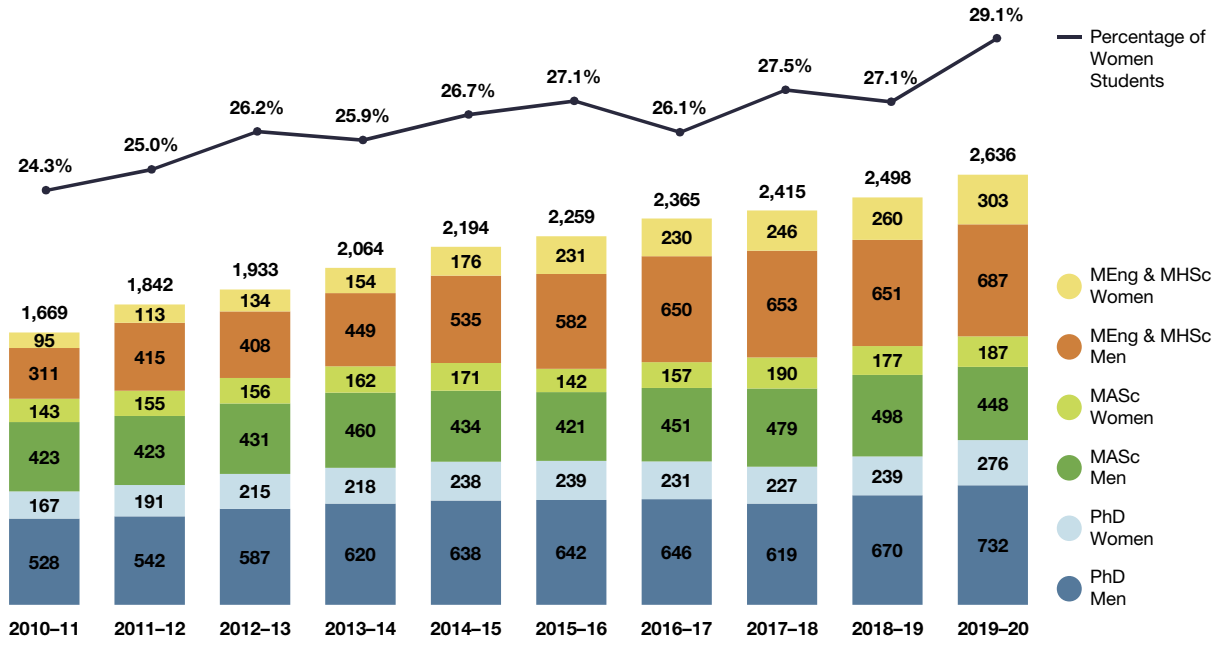


Figure 3.4: Data reported by academic year (September to August). Data on student gender comes from the U of T Enrolment Reporting Cube; the options to report "another gender" or to not report gender were added in 2017.

Note 3.5: Not shown — 0.1% of undergraduate students from Oceania, which includes Australia, New Zealand and other countries in the Pacific Ocean. Country of origin is derived from a combination of citizenship, location of previous studies (e.g. elementary school, high school and university) and permanent address. This information does not indicate current Canadian immigration status, which is used to determine domestic/international student status for tuition and funding purposes.

Figure 3.6a Graduate Students by Degree Type and Gender with Percentage of Women Students, 2010–2011 to 2019–2020



	2010–11	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20
MEng & MHSc Women	95	113	134	154	176	231	230	246	260	303
MEng & MHSc Men	311	415	408	449	535	582	650	653	651	687
MEng & MHSc Gender Not Reported			1	2	1	1	2			1
MASc Women	143	155	156	162	171	142	157	190	177	187
MASc Men	423	423	431	460	434	421	451	479	498	448
MASc Gender Not Reported	2	2			1			1	1	
PhD Women	167	191	215	218	238	239	231	227	239	276
PhD Men	528	542	587	620	638	642	646	619	670	732
PhD Gender Not Reported									2	2

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, 2010–2011 to 2019–2020**

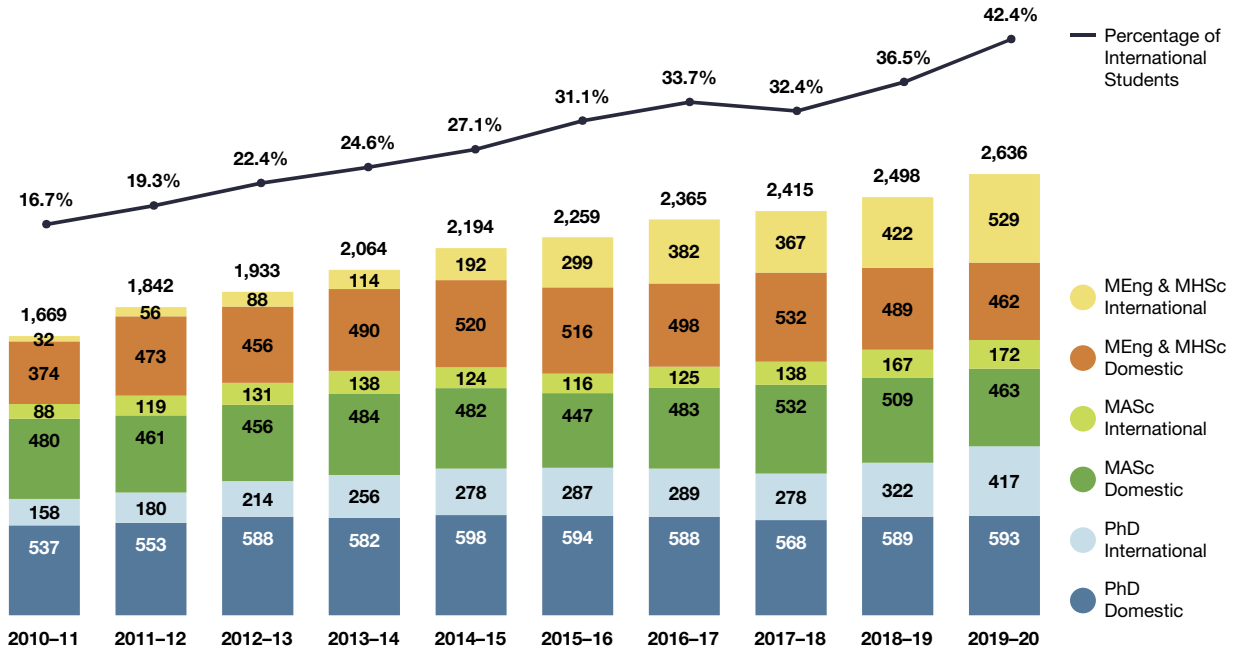
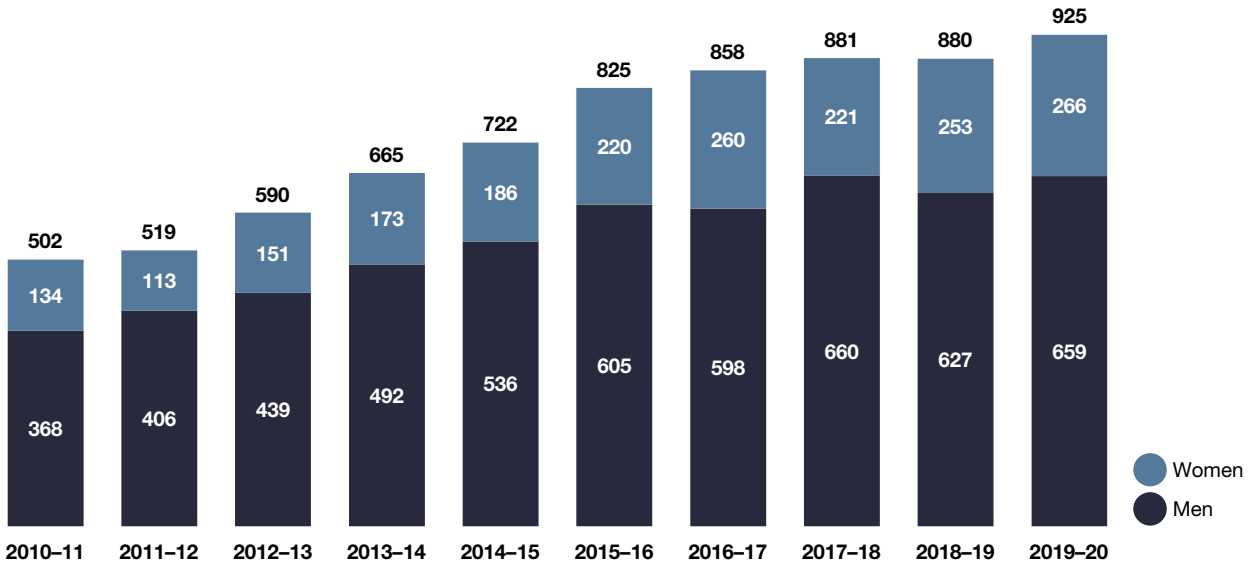


Figure 3.7 **Graduate Degrees Awarded by Gender, 2010–2011 to 2019–2020**



Note 3.8 (opposite page): This list includes 99 undergraduate and graduate student clubs and teams that shared $375,375 in funding through the Centralized Process for Student Initiative Funding (CPSIF). Beyond these, there are many other Engineering Society-affiliated groups — such as the Blue Sky Solar Team or aUToronto — which are not funded through CPSIF. Our students also participate in hundreds more clubs and teams across U of T.

Figure 3.8 **Engineering Undergraduate and Graduate Clubs and Teams**

Arts

- Fly with Origami, Learn to Dream
- Skule™ Arts Festival
- Skule™ Choir
- Skule™ Dance Club
- Skule™ Orchestra
- Skule™ Stage Band

Athletics

- Skule™ Badminton Club
- Skule™ Ski Club
- U of T Engineering Iron Dragons
- UTSG Cricket Club
- University of Toronto Table Tennis Club

Societal/Community/Charity

- Engineers in Action
- Engineers Without Borders
- Let's Talk Science
- Project Include
- Muslim Students' Association
- QueerSphere (U of T Engiqueers)
- Skule™ Alumni Outreach
- Toronto Science Policy Network

Cultural

- Association of Chinese Engineers
- Bangladeshi Students' Association
- Indian Students' Society
- Korean Engineering Students' Association

Design & Competition

- Design Team Association
- Future-Living Lab
- Human Powered Vehicle Design Team
- International Genetically Engineered Machines Toronto
- Interplanetary Space Exploration Team
- Operations Research Challenge
- Robotics for Space Exploration
- Spark Design Club
- Troitsky Bridge Building Club
- University of Toronto - Destination Imagination
- University of Toronto Aerospace Team
- University of Toronto Chemical Vehicles
- University of Toronto Concrete Canoe Team
- University of Toronto Concrete Toboggan Team
- University of Toronto Data Science Team
- University of Toronto Engineering Kompetitions
- University of Toronto Formula Electric
- University of Toronto Formula Racing Team
- University of Toronto Hyperloop Team
- University of Toronto Robotics Association
- University of Toronto Seismic Design Team
- University of Toronto Supermileage Team (formerly Carbon Cutting Racers)
- UT BIOME

Hobby & Special Interest

- SkuleCraft
- Skule™ Strategy Games Club
- Skule™ Smash Club
- University of Toronto Emergency First Responders
- University of Toronto Engineering Finance Association
- University of Toronto Sports Analytics Club
- University of Toronto Sky Association

Professional Development & Industry

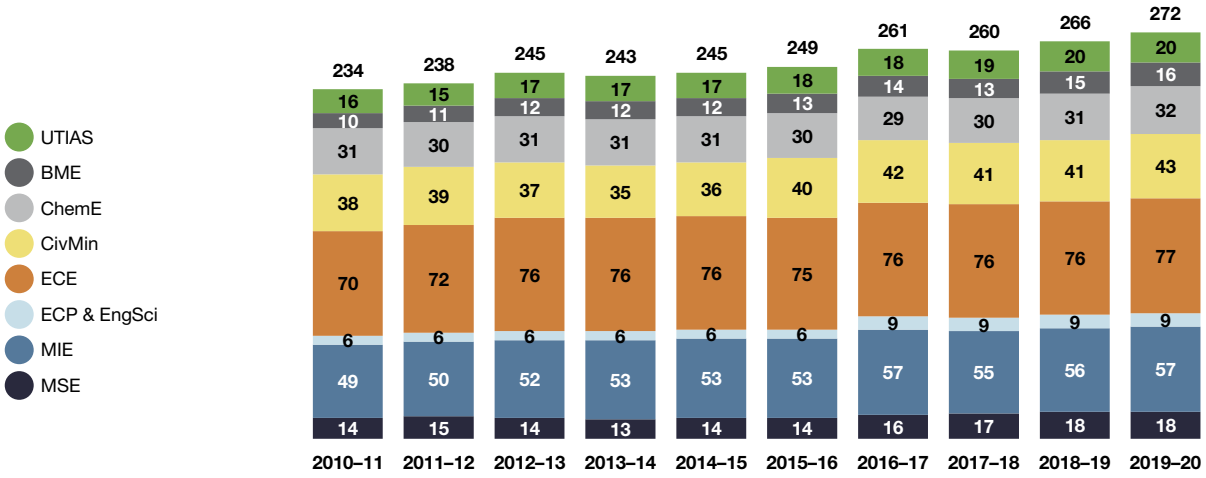
- Association of Leadership in Chemical Engineering
- Bioengineering Student Association
- Biomedical Engineering Student Association
- Canadian Association of Food Engineers
- Canadian International Erosion Control Association
- Canadian Society for Chemical Engineering
- Canadian Society for Civil Engineering
- Canadian Electrical Contractor's Association U of T Student Chapter
- Chemical Engineering Council
- Chemical Engineering Graduate Students' Association
- Civil Engineering Council
- Civil Engineering Graduate Student Association
- Club for Undergraduate Biomedical Engineering
- Developer Student Club
- Engineering Science Club
- Galbraith Society
- Global Engineering Club
- Human Factors Interest Group
- IEEE University of Toronto Student Branch
- Institute for Leadership Education in Engineering, Graduate
- Institute for Industrial and Systems Engineers
- Materials Industry Club
- Materials Science and Engineering Graduate Student Association
- Mechanical Engineering Club
- MechEngage
- Mineral Engineering Club World Mining Competition
- Materials Science and Engineering Student Discipline Club
- National Society of Black Engineers
- NSight Mentorship Program
- SettleIn
- Society of Petroleum Engineers U of T Chapter
- STEAM
- Suits U
- Sustainable Engineers Association
- TechXplore
- Toronto Students Advancing Aerospace
- University of Toronto Business Association
- University of Toronto Design League
- University of Toronto Earthquake Engineering Research Institute Student Chapter
- University of Toronto Engineering Toastmasters
- University of Toronto Institute of Transportation Engineers Student Chapter
- University of Toronto Machine Intelligence Student Team
- University of Toronto Ontario Water Works Association Student Chapter
- Water Environment Association of Ontario U of T Student Chapter
- Women in Science and Engineering

Figure 3.9 **Pre-University Outreach Programs, 2019–2020**

Program	Date	Audience	Female	Male	Another Gender or Gender Not Reported	Total # of Participants
SUMMER						
DEEP Spring Seminar Series	June 16 - June 29	Grades 9-12	16	11	101	128
ENGLife	July 2 - July 26	Grades 10-11	0	0	21	21
LAUNCH Science and Engineering Program	July 3 - July 27	Grades 2-8	42	24	361	427
DEEP Summer Academy	July 8 - August 2	Grades 9-12	63	111	801	975
Girls' Jr. DEEP	July 8 - July 12	Grades 3-8	55	0	0	55
ENGage	July 8 - July 12	Grades 3-8	25	27	0	52
Jr. DEEP	July 15 - August 16	Grades 3-8	223	450	0	673
Jr. DEEP Coding	July 15 - August 16	Grades 3-8	61	95	0	156
Jr. DEEP Makerspace	July 29 - August 16	Grades 5 & 6	16	32	0	48
University of Toronto Engineering Academy (UTEA)	August 5 - August 16	Grades 9-12	13	17	66	96
Destination STEM!	August 20 - August 23	Grades 5-8	19	40	0	59
FALL						
Go ENG Girl	October 26	Grades 7-10	46	0	0	46
Girls' Jr. DEEP Saturdays (Fall)	October 19 - November 9	Grades 3-8	43	0	0	43
Girls' Jr. DEEP Coding Saturday (Fall)	October 19 - November 9	Grades 5-8	20	0	0	20
Jr. DEEP Saturdays (Fall)	November 16 - November 30	Grades 3-8	25	47	0	72
Jr. DEEP Coding Saturday (Fall)	November 16 - November 30	Grades 5-8	10	30	0	40
Engineering High School Saturdays (Fall)	October 19 - November 30	Grades 9-12	19	21	89	129
WINTER						
Girls' Jr. DEEP Saturdays (Winter)	January 18 - February 8	Grades 3-8	47	0	0	47
Engineering High School Saturdays (Winter)	January 18 - March 7	Grades 9-12	10	8	67	85
ENGage High School Saturdays	January 18 - March 22	Grades 9-12	2	2	12	16
Jr. DEEP Saturdays (Winter)	February 22 - March 7	Grades 3-8	25	44	0	69
Total			**755**	**915**	**1,518**	**3,188**

Note 3.9: Data cover the period between June 2019 and early March 2020. The COVID-19 pandemic forced the cancellation of all spring programs (e.g. in-school workshops, March Break camps, etc.) and is the reason behind the lower numbers of students reached for 2019-2020 as compared with 2018–2019. Some summer programs such as Blueprint were continued online; they will be reported in the 2021 Annual Report.

Figure 3.10 **Total Number of Faculty by Academic Area, 2010–2011 to 2019–2020**



		2010–11	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20
UTIAS	Assistant Profs	4	5	6	5	5	4	3	2	3	3
	Associate Profs	3	3	4	4	4	6	6	8	6	6
	Professors	7	5	5	6	6	6	7	7	9	9
	Teaching-Stream Faculty	2	2	2	2	2	2	2	2	2	2
BME	Assistant Profs	3	5	6	5	4	4	4	2	3	3
	Associate Profs	3	3	2	2	3	4	4	6	7	6
	Professors	4	3	4	4	4	4	4	3	3	5
	Teaching-Stream Faculty	0	0	0	1	1	1	2	2	2	2
ChemE	Assistant Profs	7	5	6	4	5	4	4	3	3	1
	Associate Profs	2	3	3	5	5	5	2	4	4	5
	Professors	18	18	18	18	17	17	20	20	21	23
	Teaching-Stream Faculty	4	4	4	4	4	4	3	3	3	3
CivMin	Assistant Profs	9	9	8	7	8	5	8	6	7	8
	Associate Profs	11	10	11	11	9	14	12	12	9	11
	Professors	17	19	17	16	18	20	21	22	24	23
	Teaching-Stream Faculty	1	1	1	1	1	1	1	1	1	1
ECE	Assistant Profs	7	9	11	9	7	5	5	2	1	2
	Associate Profs	25	25	22	20	16	16	15	13	12	11
	Professors	34	34	39	43	49	50	51	56	58	60
	Teaching-Stream Faculty	4	4	4	4	4	4	5	5	5	4
ECP & EngSci	Teaching-Stream Faculty	6	6	6	6	6	6	9	9	9	9
MIE	Assistant Profs	8	7	7	6	6	6	9	7	7	9
	Associate Profs	15	16	14	16	15	12	11	12	10	8
	Professors	24	24	28	28	29	32	33	33	36	37
	Teaching-Stream Faculty	2	3	3	3	3	3	4	3	3	3
MSE	Assistant Profs	1	2	2	2	3	3	3	4	3	2
	Associate Profs	3	3	4	4	4	4	4	3	5	6
	Professors	10	10	8	7	7	7	8	9	9	9
	Teaching-Stream Faculty	0	0	0	0	0	0	1	1	1	1
Total		**234**	**238**	**245**	**243**	**245**	**249**	**261**	**260**	**266**	**272**

Figure 3.11 **Total Number of Faculty with Percentage of Women Overall and by Academic Rank, 2010–2011 to 2019–2020**

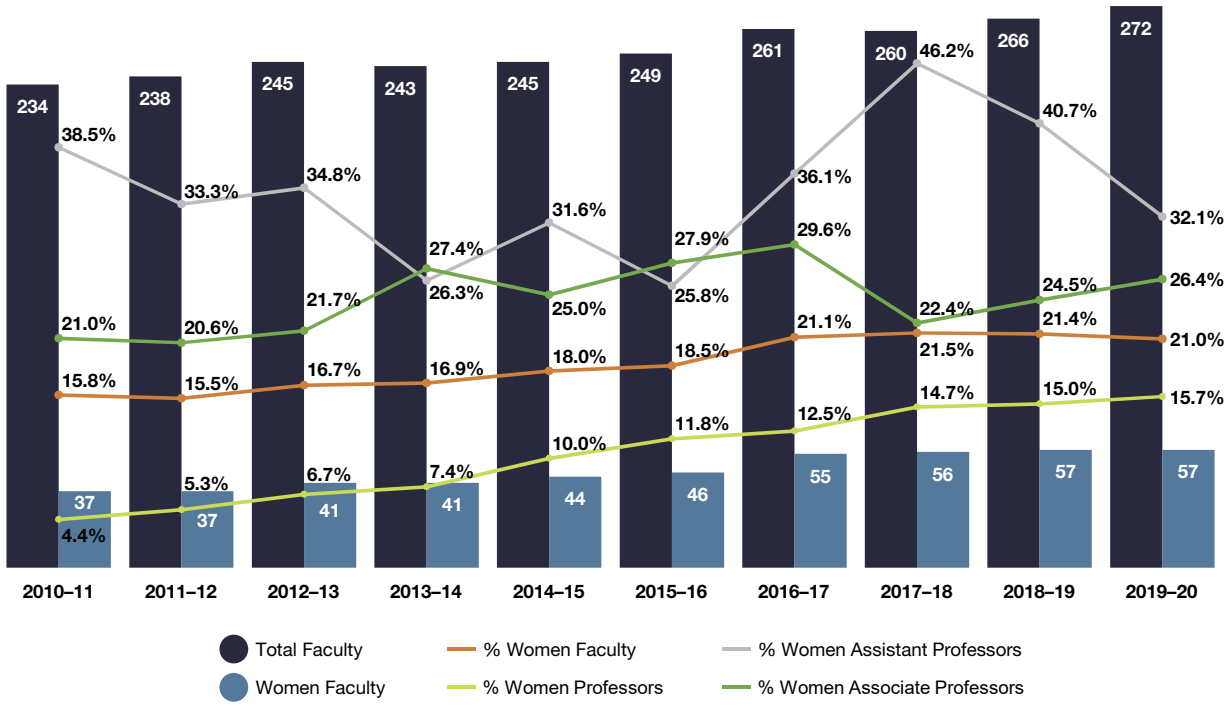


Figure 3.12 **Percentage of Women Faculty at U of T Engineering Compared with Women Faculty in Ontario and Canadian Engineering Faculties, 2018–2019**

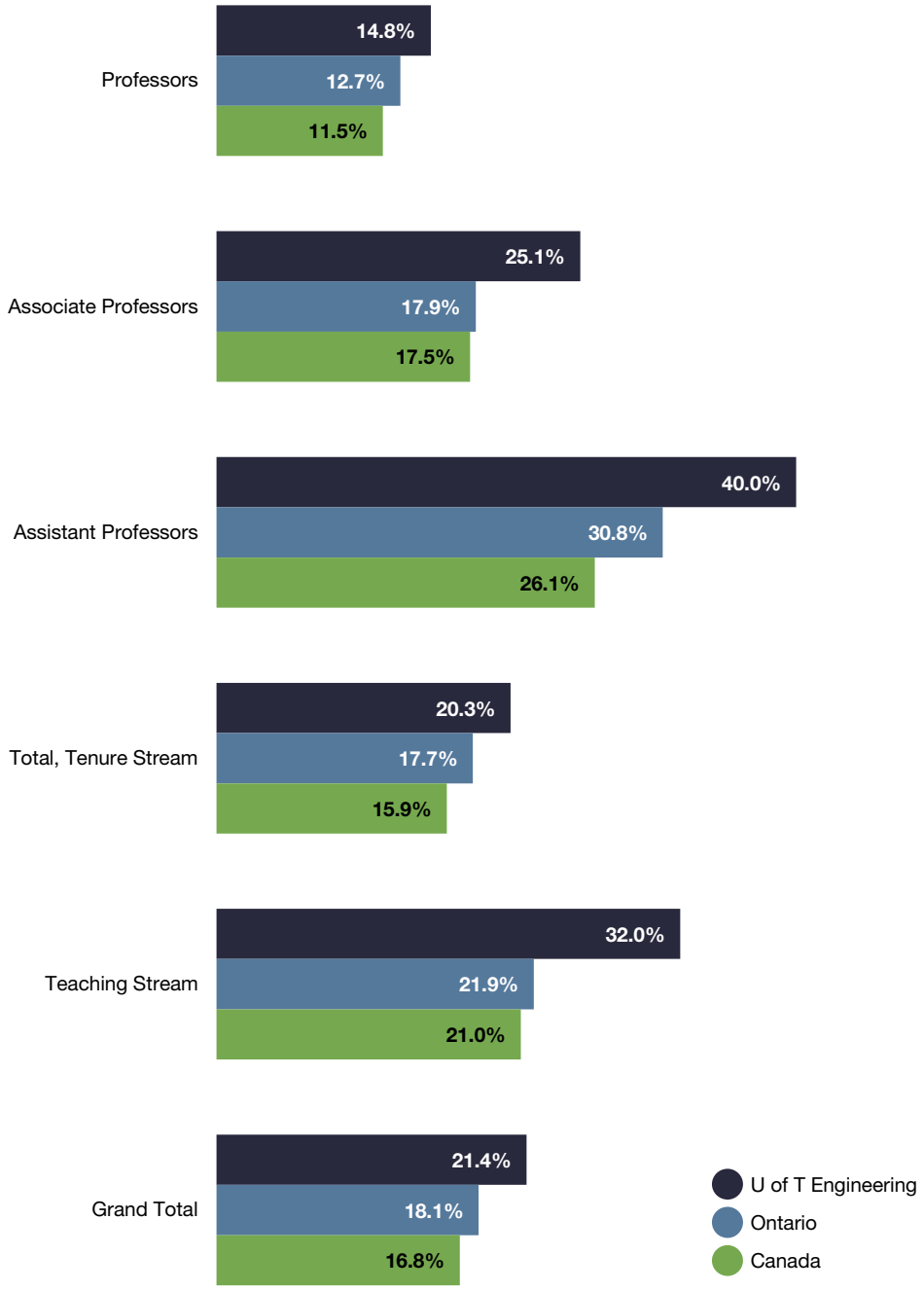


Figure 3.13 **Canada Research Chairs with Number and Percentage of Women Chairholders, 2011 to 2020**

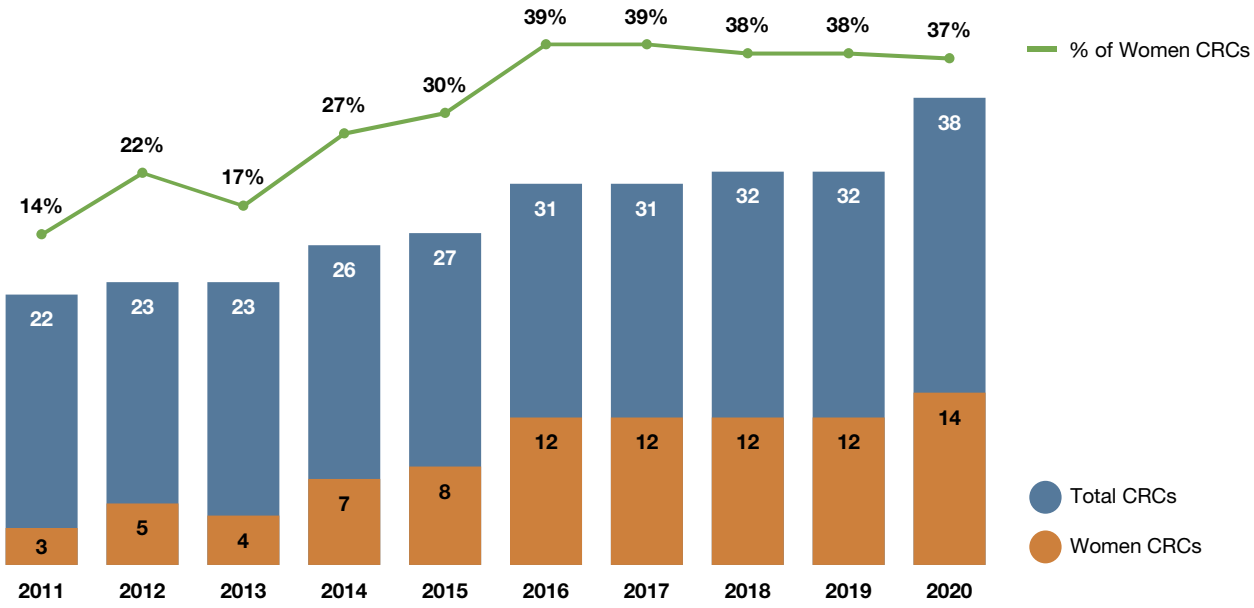


Figure 3.14 **Total Staff by Role and Gender, 2010–2011 to 2019–2020**

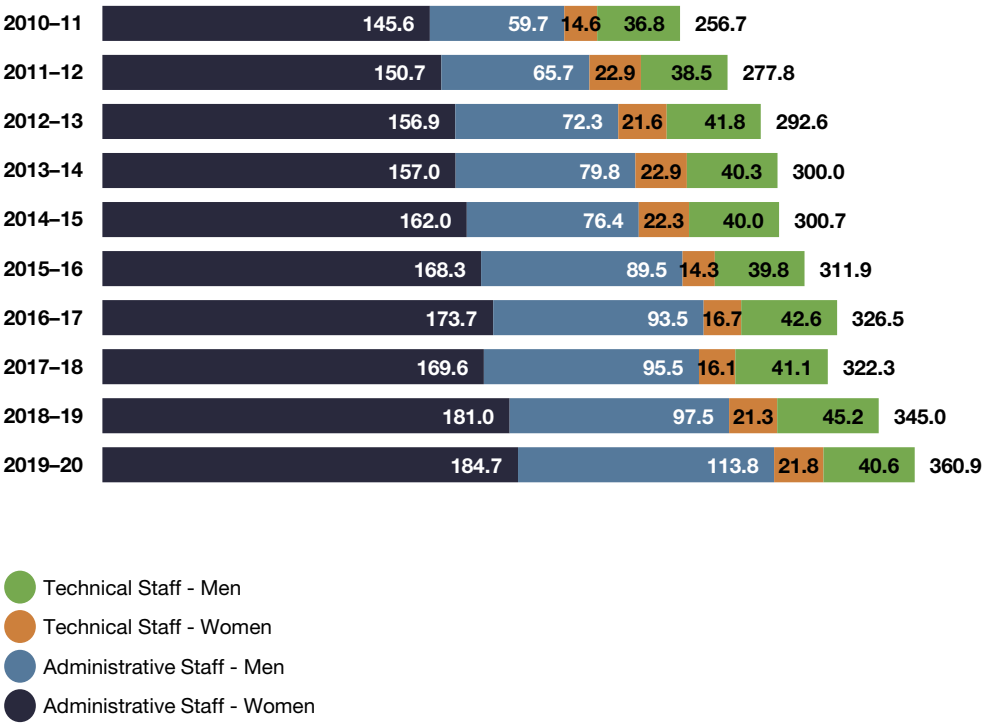


Figure 3.15 Summary of Progress Against the Recommendations of the *Blueprint for Action* (2018), as prepared by the Eagles' Longhouse (Engineering Indigenous Initiatives Steering Committee), 2020

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.
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.	Upcoming: A Blanket Exercise is a kinesthetic learning exercise designed to educate non-Indigenous people on the history of the Indigenous People of Canada including the ways education has been used as a weapon against Indigenous people. Arrangements for the two-day facilitated training session are underway to be held when in-person interaction resumes on campus. Future facilitators are being recruited.
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.
Indigenous Spaces — 3	Use a participatory design approach, with key members of Indigenous communities, to commission Indigenous artwork.	Anishnaabe 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 has also been commissioned to create a larger art piece (16' x 6') to be permanently displayed on Level 2's southern staircase in the Myhal Centre. Working with the U of T Art Museum, ten other Indigenous paintings were installed in various locations throughout the Myhal Centre in 2019.
Indigenous Spaces — 4	Use a participatory design approach, with key members of Indigenous communities, to establish educational installations in engineering spaces.	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.	Upcoming: A Blanket Exercise is a kinesthetic learning exercise designed to educate non-Indigenous people on the history of the Indigenous People of Canada including the ways education has been used as a weapon against Indigenous people. Arrangements for the two-day facilitated training session are underway to be held when in-person interaction resumes on campus. Future facilitators are being recruited.
Indigenous Student Access — 2	Begin targeted recruiting for Indigenous students.	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. All self-declared Indigenous applicants were contacted by Professor Jason Bazylak offering a personal connection and specific assistance with the application. The first annual Welcome to Engineering event specifically for Indigenous students was held online on May 30, 2020.
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.	No advancement.
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 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.	No advancement.
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.	No advancement.
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 within the Faculty.	No advancement.
Indigenous Spaces — 8	Create an Indigenous Office within U of T Engineering.	Negotiations about organizational structure and space have begun and continue.
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.	No advancement.
Indigenous Student Access — 9	Expand the Indigenous outreach program.	No advancement.
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 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 toward a transition program. While this program would not target northern or remote communities specifically, it could generate expertise within the Faculty to extend programming to these areas.
Indigenous Curriculum — 1	Take an integrated approach to bringing Indigenous content to the engineering curriculum, and NOT add additional courses.	Development of an Indigenous Technology elective has begun.
Indigenous Curriculum — 4	Better communicate the role of the engineer as a community builder.	Presentation to incoming Indigenous students on the importance of Indigenous engineers to build infrastructure for Indigenous communities.
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.	Significant preliminary work has gone into a proposed program for the Faculty to participate in the creation of an engineering program in remote Labrador. A report on this work has already been submitted prior to the release of this recommendation. The Eagles' Longhouse Steering Committee greatly supports this proposal as a strong step towards achieving this recommendation. 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.	No development.

Figure 3.16 Summary of Progress Against the Recommendations of *Striving Toward Black Inclusivity* (2019) as prepared by the Black Inclusion Steering Committee (BISC), 2020

Interim Recommendations (From November 2018)	
Description	**Progress**
Establish an Equity, Diversity & Inclusion (EDI) office	A new role of Assistant Dean and Director, Diversity, Inclusion and Professionalism (AD-DIP) was established to broadly address issues of diversity and inclusion within the Faculty. In May 2019, this role was filled by Marisa Sterling. BISC recommends the establishment of additional EDI-centric roles within the Faculty.
Collect race-based data	BISC provided guidance and suggestions for how this data collection could be integrated into the student application process, the faculty/staff admission/hiring process, or Faculty climate or experiential surveys. Building upon initiatives such as the first-year survey and the recent 'Voice of the Engineer' survey, efforts are underway to enable prospective students to voluntarily self-identify race and other demographic identifiers during the 2020-2021 application cycle.
Acknowledge and support Black History Month (BHM)	The Against Black Racism Campaign (ABRC) Committee organized a poster campaign which ran during BHM 2019. In collaboration with Engineering Strategic Communications, dedicated content was developed for Faculty websites and social media to display the variety of experience and perspective of the Black community within Engineering. This campaign ran in both 2019 and 2020.
Enhance and streamline communication to advertise and build inclusivity efforts	The Faculty has created an EDI webpage (engineering.utoronto.ca/about/equity-diversity-and-inclusion/) which includes a joint statement by the Dean and the Engineering Society President on "Our Shared Values of Diversity, Equity, and Inclusivity." The Office of the Vice Provost, Students has developed a webpage to highlight the institutional procedures and steps for students who wish to lodge complaints pertaining to potential prohibitory discrimination. This information must be integrated into the Faculty's EDI website. Work is underway to further define the workflow for disclosure of incidents pertaining to potential prohibitory discrimination at a Faculty level.
Have Black representation at departmental and Faculty seminar/lecture series	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. Departments/institutes such as ISTEP have brought in Black academics to speak on their research. However, no established changes to current processes to facilitate intentional diversification have yet been implemented.
Have targeted Black undergraduate student recruitment	Programs such as ENGage have a long history in the Faculty. In the summer of 2019, U of T Engineering Outreach ran a Summer Engineering Leadership Experience to provide Black Grade 11 students with the opportunity to engage in STEM education programming. A second iteration of the program, Blueprint, was launched in the summer of 2020. Blueprint is designed for highly motivated Black students in Grades 9, 10 and 11. Due to the COVID-19 pandemic, Blueprint began as an online-only program with student engagement via webinars and meetups with engineering students and practicing engineers. The program will transition to in-person meetings as circumstances allow.
Increase involvement at the NSBE National Convention	U of T Engineering has had strong representation at the NSBE Region 1 and national conferences in 2018 and 2019 and is committed to attending the 2020 national convention as well. U of T is the first Canadian university to be an academic sponsor for the NSBE convention.

Additional Recommendations (From September 2019)	
Prospective and Current Undergraduate Students	
Continual review of broad-based admission goals and procedures to further enhance the equitable and inclusive nature of general admissions	BISC highlighted key questions that the admissions committee should consider with regards to reviewing and updating admission procedures through an equitable lens. No changes to current processes have yet been implemented.
Develop alternative, gap-spanning admission and/or access pathways into U of T Engineering	BISC suggested the Faculty investigate and develop means for non-traditional students to have a viable pathway into post-secondary education in Engineering/STEM. No changes to current processes have yet been implemented.
Develop a centralized peer mentorship initiative	Within the Office of the Vice-Dean, Undergraduate, a new centralized peer mentorship program known as the Engineering Campus Experience Officer (Eng CEO) was established. The mentors represent a wide range of disciplines, years of study, racial and gender diversity.
Create infrastructure to increase faculty engagement in Outreach	BISC suggested a collaboration between the offices of the Vice-Dean, Research, Engineering Outreach and Vice-President, Research & Innovation to develop a framework and resource that all faculty members interested in or required to develop outreach programming can and should use. No changes to current processes have yet been implemented.
Increase access to financial aid and scholarships	While the Faculty has a variety of identity-based admission scholarships (e.g. Indigenous students, mature students, Polish students) there is opportunity for financial aid and scholarships that target other traditionally disenfranchised or underrepresented groups within STEM and post-secondary education (e.g. Black students, first-in-the-family to attend university, etc.) No changes to current processes have yet been implemented.
Prospective and Current Graduate Students	
Develop targeted workshop series to promote graduate school and support current graduate students	No changes to current processes have yet been implemented
Create targeted undergraduate research opportunities	No changes to current processes have yet been implemented
Continue to develop targeted recruitment strategies	The Office of the Vice-Dean, Graduate has placed more effort into targeted recruitment of Black and other underrepresented populations through their involvement in the NSBE Fall Region 1 conference. Applications for the Graduate Research Day 2020 recruitment event included optional self-declaration of racial/ethnic identity. The Faculty is leveraging the Provost's Postdoctoral Fellowship program to provide funding to increase opportunities for hiring postdoctoral fellows from underrepresented groups. One postdoctoral fellow in the Department of Civil & Mineral Engineering has been recruited through this program.

Additional Recommendations (From September 2019)	
Prospective and Current Faculty	
Intentional utilization of Provost Office diversity-driven initiatives	The Department of Chemical Engineering & Applied Chemistry has hired a new faculty member who self-identifies as Black to start in 2021, leveraging the Provost's new faculty funding program. This hire will be the only Black faculty member at U of T Engineering. BISC recommends that other departments and divisions follow this model.
Develop a framework to facilitate diverse candidate pool formulation and consideration	BISC recommends that departments/institutes follow the Office of the Vice-Provost, Faculty & Academic Life document 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: faculty.utoronto.ca/wp-content/uploads/2018/01/Recruiting-Excellent-Diverse-Faculty-Complement.pdf No mechanisms are in place to determine how the practices in this document are being implemented at a departmental level.
Define the means to value and incentivize EDI and mentoring work for faculty	No changes to current processes have been implemented.
Prospective and Current Staff	
Develop avenues for formal mentorship	No changes to current processes have been implemented.
Provide opportunities for affinity group community building	Engineering Positive Space exists as a de facto affinity group for the LGBTQ community within the Faculty at all levels (students, staff, faculty). No Faculty-centred affinity groups/gatherings for Black community members or other identities are in place.
Improve access to secondment and professional development opportunities	No changes to current processes have yet been implemented with regards to targeted communication to underrepresented staff highlighting opportunities and supports.
General	
Integrate broader EDI considerations into Alumni and Advancement Office operations	No changes to current processes have been implemented.
Develop more equitable and accessible modes of financial reimbursement and invoice generation	No changes to current processes have been implemented.
Offer and incentivize more equity and cultural competency training for staff/faculty	Since Fall 2018, the Engineering Equity, Diversity, and Inclusion Action Group (EEDIAG) has offered four "Open Discussions" on EDI issues as well as four Towards Inclusive Practice Series (TIPS) sessions per year. These cover a number of topics, including impostor syndrome and creating inclusive classrooms. These initiatives are expected to continue into the 2020-2021 academic year.
Establish hard targets for representation at all Faculty levels	No changes to current processes have yet been implemented.


2020

CHAPTER 4
RESEARCH

*Professor **Milica Radisic** (BME, ChemE) this year received a Killam Research Fellowship from the Canada Council for the Arts to continue developing lab-grown human tissues and organs. These innovations could accelerate drug discovery and regenerative medicine.*
PHOTO: JOHNNY GUATTO

FACTS & FIGURES

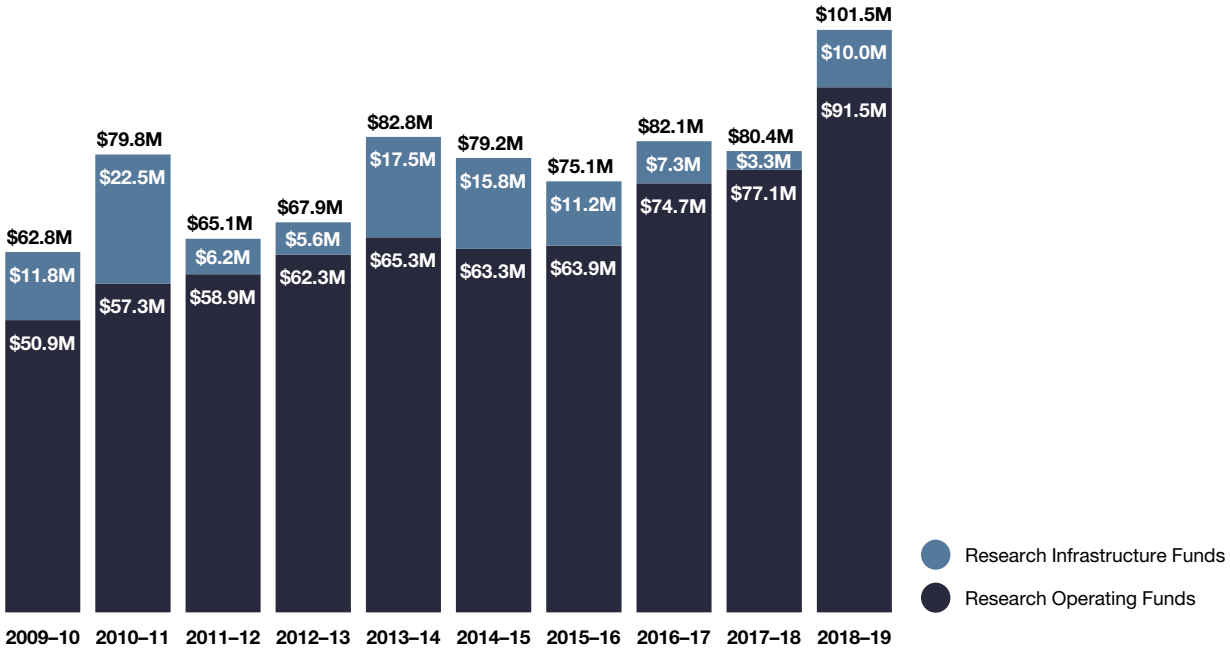
100+
U of T Engineering spinoff companies since 2000.

121
U of T Engineering research chairs and professorships, held by 110 individual chairholders.

51.8%
Proportion of NSERC funding that comes from Industrial Partnerships programs.

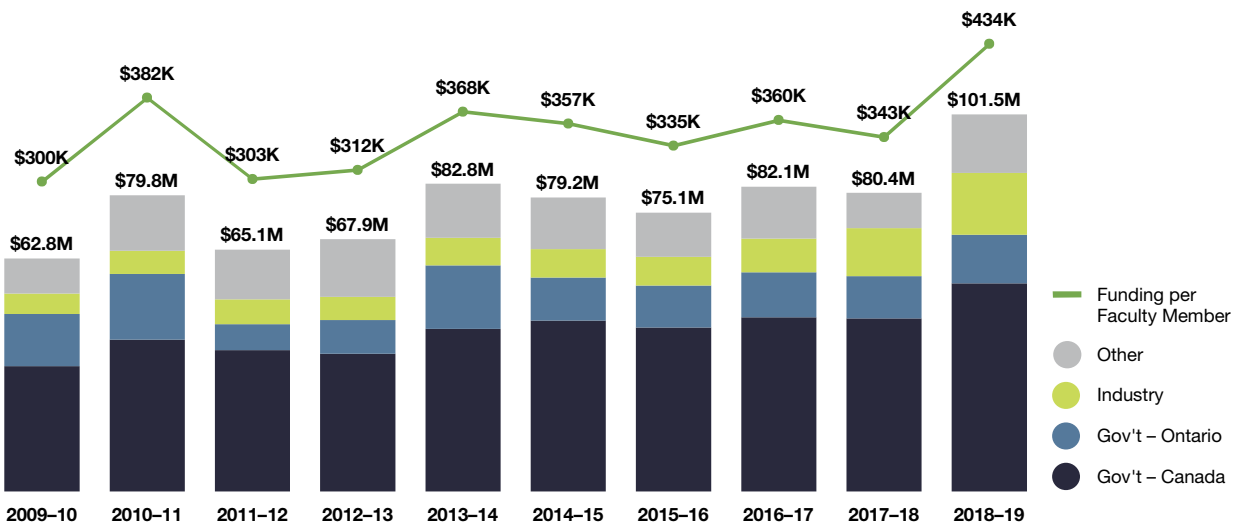
$101.5 M
Total research infrastructure and research operating funding for 2018–2019, an increase of 26.2% over the previous year.

Figure 4.1a **Research Infrastructure Funding and Research Operating Funding, 2009–2010 to 2018–2019**



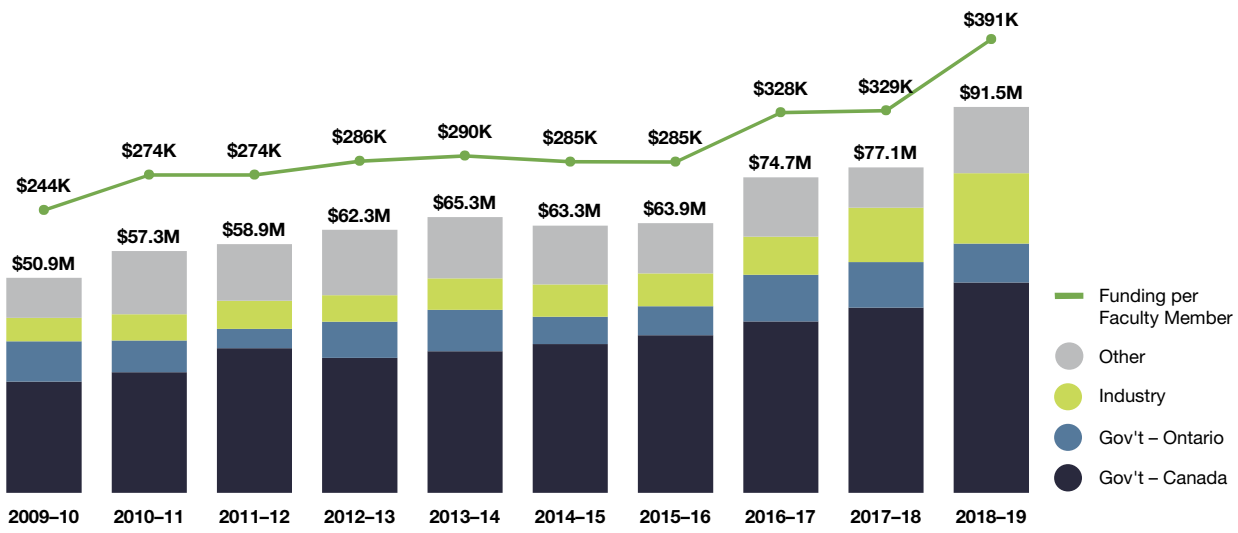
Data is based on grant years (April to March). The figures in this chapter report research funding the Faculty received in 2018–2019. Because it takes some time after the completion of a fiscal year for research funding data to become final, this is the most recent year for which data are available.

Figure 4.1b **Research Infrastructure Funding and Research Operating Funding by Year, Source and Funding per Faculty Member, 2009–2010 to 2018–2019**



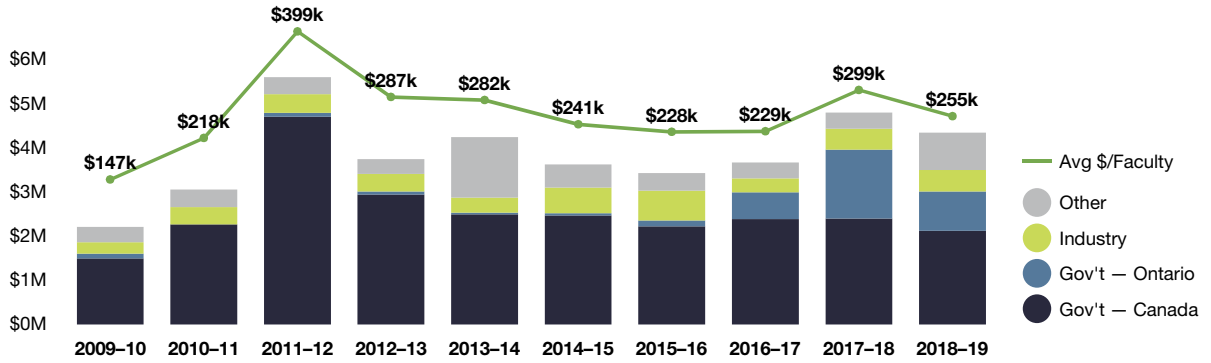
	Gov't – Canada	Gov't – Ontario	Industry	Other	Total	Funding per Faculty Member
2009–10	$33,703,786	$14,040,320	$5,540,382	$9,468,322	**$62,752,810**	**$300,253**
2010–11	$40,893,725	$17,675,370	$6,212,252	$14,972,890	**$79,754,237**	**$381,599**
2011–12	$38,025,055	$6,969,732	$6,702,708	$13,384,839	**$65,082,333**	**$302,709**
2012–13	$37,092,563	$9,035,997	$6,284,230	$15,528,448	**$67,941,239**	**$311,657**
2013–14	$43,780,988	$17,068,393	$7,452,220	$14,521,054	**$82,822,655**	**$368,101**
2014–15	$45,975,701	$11,583,586	$7,658,866	$13,933,434	**$79,151,587**	**$356,539**
2015–16	$44,114,260	$11,286,280	$7,770,092	$11,910,280	**$75,080,912**	**$335,183**
2016–17	$46,853,205	$12,163,804	$9,028,158	$14,014,384	**$82,059,551**	**$359,910**
2017–18	$46,603,584	$11,388,157	$12,873,442	$9,505,231	**$80,370,414**	**$343,463**
2018–19	$56,047,293	$13,025,608	$16,669,404	$15,748,571	**$101,490,875**	**$433,722**

Figure 4.1c **Research Operating Funding by Year, Source and Funding per Faculty Member, 2009–2010 to 2018–2019**



	Gov't – Canada	Gov't – Ontario	Industry	Other	Total	Funding per Faculty Member
2009–10	$26,342,234	$9,562,400	$5,540,382	$9,468,322	**$50,913,338**	**$243,604**
2010–11	$28,567,718	$7,520,797	$6,212,252	$14,972,890	**$57,273,658**	**$274,037**
2011–12	$34,287,390	$4,535,363	$6,702,708	$13,384,839	**$58,910,300**	**$274,001**
2012–13	$32,000,900	$8,511,021	$6,284,230	$15,528,448	**$62,324,600**	**$285,893**
2013–14	$33,545,785	$9,814,984	$7,452,220	$14,521,054	**$65,334,043**	**$290,374**
2014–15	$35,246,439	$6,486,482	$7,658,866	$13,933,434	**$63,325,221**	**$285,249**
2015–16	$37,318,481	$6,883,331	$7,770,092	$11,910,280	**$63,882,184**	**$285,188**
2016–17	$40,634,828	$11,035,186	$9,028,158	$14,014,384	**$74,712,557**	**$327,687**
2017–18	$43,893,948	$10,802,657	$12,873,442	$9,505,231	**$77,075,278**	**$329,382**
2018–19	$49,837,338	$9,196,478	$16,669,404	$15,748,571	**$91,451,791**	**$390,820**

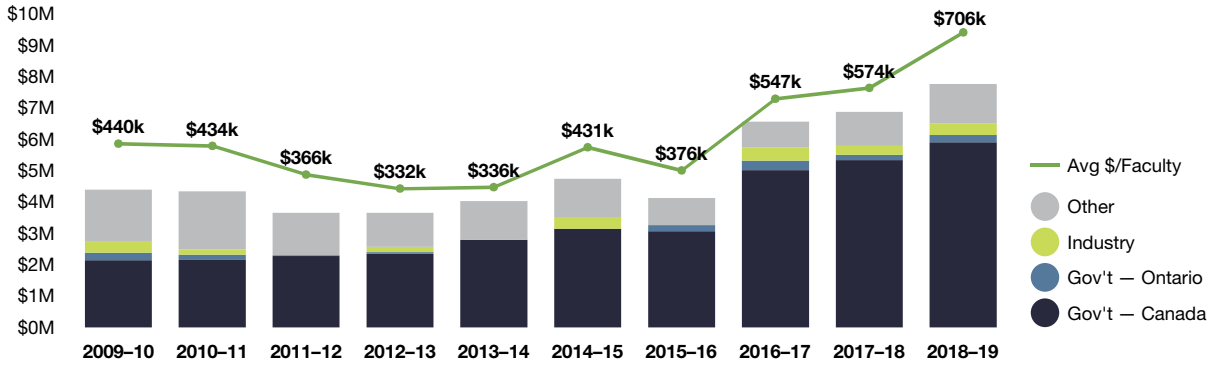
Figure 4.2a Research Operating Funding by Year, Source and Funding per Faculty Member – University of Toronto Institute for Aerospace Studies, 2009–2010 to 2018–2019



	Gov't – Canada	Gov't – Ontario	Industry	Other	Total	Avg $/Faculty
2009–10	$1,486,736	$107,333	$259,200	$349,356	**$2,202,626**	**$146,842**
2010–11	$2,261,742		$390,200	$396,929	**$3,048,871**	**$217,776**
2011–12	$4,692,107	$89,356	$420,400	$389,239	**$5,591,103**	**$399,364**
2012–13	$2,931,457	$70,157	$397,115	$337,561	**$3,736,290**	**$287,407**
2013–14	$2,485,293	$35,707	$342,396	$1,368,789	**$4,232,186**	**$282,146**
2014–15	$2,458,871	$50,000	$584,609	$518,655	**$3,612,134**	**$240,809**
2015–16	$2,216,737	$130,258	$674,557	$396,078	**$3,417,629**	**$227,842**
2016–17	$2,381,974	$603,265	$313,998	$362,281	**$3,661,518**	**$228,845**
2017–18	$2,390,069	$1,559,971	$474,246	$365,376	**$4,789,662**	**$299,354**
2018–19	$2,116,466	$889,637	$483,164	$843,587	**$4,332,854**	**$254,874**

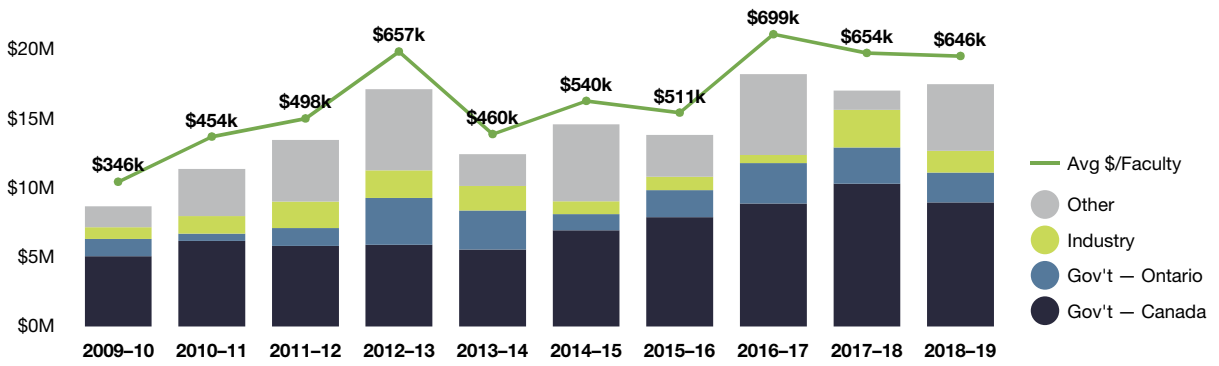
Note 4.2a-g: Data is based on grant years (April to March). Figures show research operating funding only — funding received under the following research infrastructure programs is excluded: Canada Foundation for Innovation (except the CFI Career Award); NSERC Research Tools & Instruments program for 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, 2009–2010 to 2018–2019**



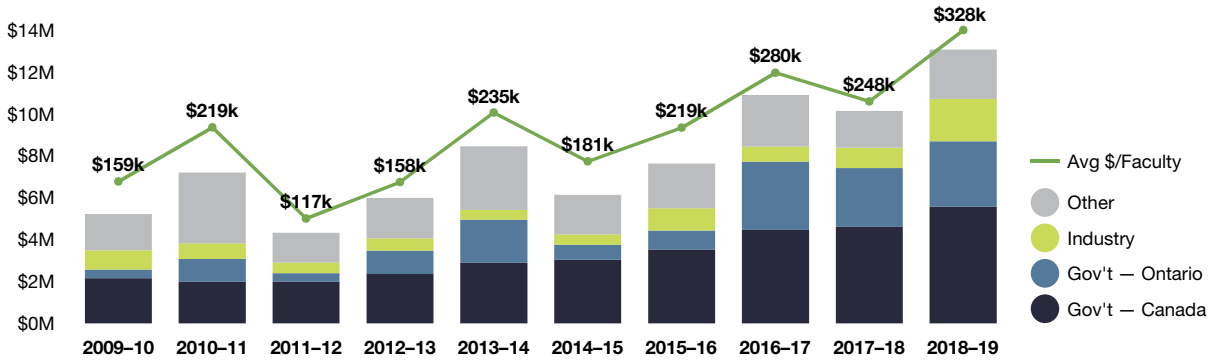
	Gov't – Canada	Gov't – Ontario	Industry	Other	Total	Avg $/Faculty
2009–10	$2,144,759	$239,594	$375,037	$1,637,566	**$4,396,956**	**$439,696**
2010–11	$2,151,571	$170,685	$165,534	$1,856,560	**$4,344,349**	**$434,435**
2011–12	$2,275,392	$32,004		$1,348,193	**$3,655,589**	**$365,559**
2012–13	$2,344,646	$61,148	$167,789	$1,080,669	**$3,654,252**	**$332,205**
2013–14	$2,790,844		$1,301	$1,237,634	**$4,029,779**	**$335,815**
2014–15	$3,153,427		$346,061	$1,245,302	**$4,744,790**	**$431,345**
2015–16	$3,069,858	$192,675	$4,802	$865,551	**$4,132,886**	**$375,717**
2016–17	$5,015,999	$306,359	$427,108	$818,499	**$6,567,965**	**$547,330**
2017–18	$5,338,091	$175,245	$285,487	$1,085,567	**$6,884,391**	**$573,699**
2018–19	$5,910,918	$230,719	$373,191	$1,254,443	**$7,769,271**	**$706,297**

Figure 4.2c **Research Operating Funding by Year, Source and Funding per Faculty Member – Department of Chemical Engineering & Applied Chemistry, 2009–2010 to 2018–2019**



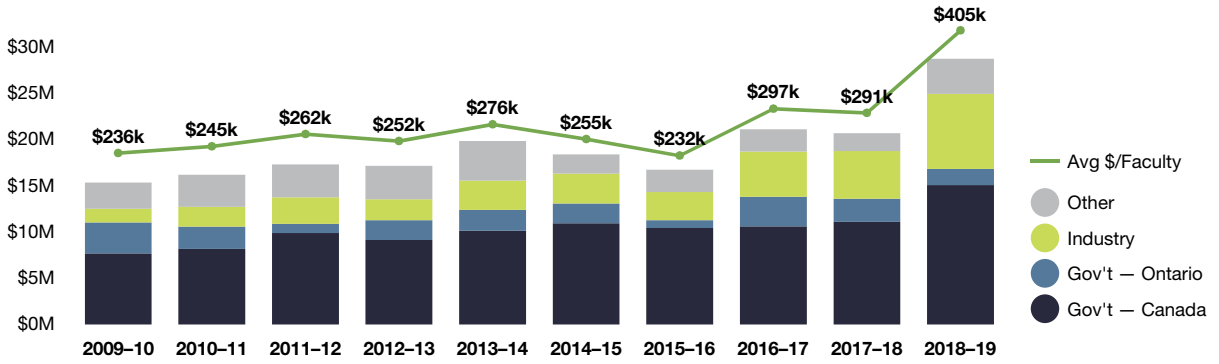
	Gov't – Canada	Gov't – Ontario	Industry	Other	Total	Avg $/Faculty
2009–10	$5,042,379	$1,264,697	$835,642	$1,502,522	**$8,645,240**	**$345,810**
2010–11	$6,164,266	$514,057	$1,261,227	$3,399,936	**$11,339,486**	**$453,579**
2011–12	$5,802,379	$1,283,132	$1,897,761	$4,450,227	**$13,433,500**	**$497,537**
2012–13	$5,872,641	$3,374,496	$1,990,738	$5,850,763	**$17,088,638**	**$657,255**
2013–14	$5,526,121	$2,817,237	$1,770,656	$2,296,491	**$12,410,505**	**$459,648**
2014–15	$6,919,763	$1,174,433	$920,026	$5,555,113	**$14,569,334**	**$539,605**
2015–16	$7,869,414	$1,950,027	$962,888	$3,012,675	**$13,795,004**	**$510,926**
2016–17	$8,861,036	$2,910,730	$570,070	$5,831,698	**$18,173,533**	**$698,982**
2017–18	$10,288,385	$2,600,541	$2,715,418	$1,394,275	**$16,998,620**	**$653,793**
2018–19	$8,923,513	$2,153,458	$1,574,303	$4,802,497	**$17,453,771**	**$646,436**

Figure 4.2d Research Operating Funding by Year, Source and Funding per Faculty Member – Department of Civil & Mineral Engineering, 2009–2010 to 2018–2019



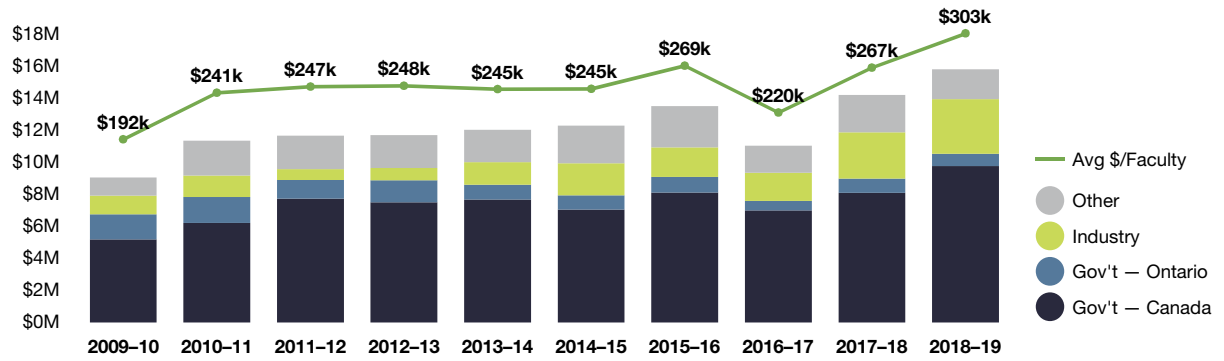
	Gov't – Canada	Gov't – Ontario	Industry	Other	Total	Avg $/Faculty
2009–10	$2,154,607	$412,542	$931,988	$1,732,687	**$5,231,825**	**$158,540**
2010–11	$1,981,370	$1,097,073	$747,127	$3,399,792	**$7,225,361**	**$218,950**
2011–12	$1,991,794	$402,645	$515,246	$1,428,083	**$4,337,768**	**$117,237**
2012–13	$2,358,881	$1,121,005	$585,360	$1,941,535	**$6,006,780**	**$158,073**
2013–14	$2,892,286	$2,069,442	$470,776	$3,041,897	**$8,474,400**	**$235,400**
2014–15	$3,037,368	$727,715	$491,188	$1,896,258	**$6,152,529**	**$180,957**
2015–16	$3,534,019	$906,960	$1,072,331	$2,137,592	**$7,650,902**	**$218,597**
2016–17	$4,477,039	$3,266,681	$715,923	$2,470,989	**$10,930,632**	**$280,273**
2017–18	$4,614,922	$2,816,542	$981,529	$1,756,620	**$10,169,614**	**$248,039**
2018–19	$5,583,105	$3,131,691	$2,038,270	$2,354,933	**$13,107,999**	**$327,700**

Figure 4.2e Research Operating Funding by Year, Source and Funding per Faculty Member – The Edward S. Rogers Sr. Department of Electrical & Computer Engineering, 2009–2010 to 2018–2019



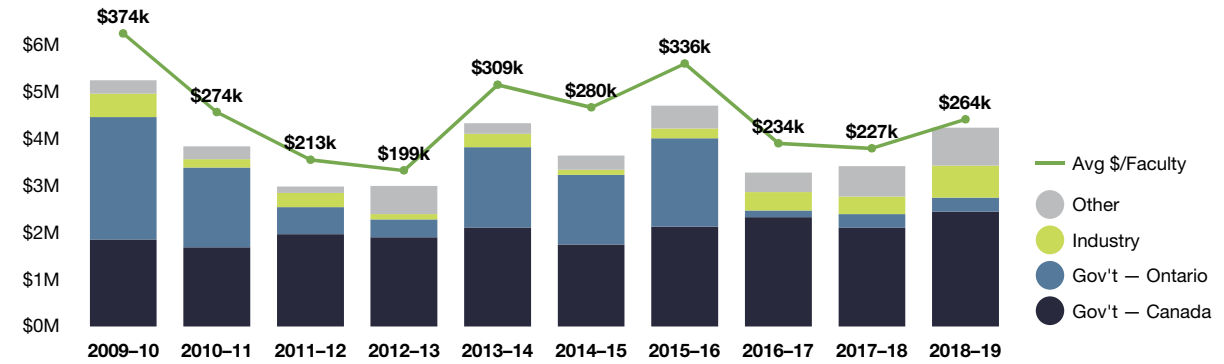
	Gov't – Canada	Gov't – Ontario	Industry	Other	Total	Avg $/Faculty
2009–10	$7,657,716	$3,371,903	$1,460,500	$2,836,755	**$15,326,874**	**$235,798**
2010–11	$8,146,160	$2,410,791	$2,134,524	$3,477,284	**$16,168,758**	**$244,981**
2011–12	$9,874,991	$977,439	$2,891,234	$3,546,234	**$17,289,899**	**$261,968**
2012–13	$9,122,947	$2,124,989	$2,275,037	$3,626,475	**$17,149,447**	**$252,198**
2013–14	$10,106,855	$2,250,783	$3,184,516	$4,295,002	**$19,837,156**	**$275,516**
2014–15	$10,919,509	$2,160,215	$3,203,168	$2,085,517	**$18,368,410**	**$255,117**
2015–16	$10,420,574	$843,513	$3,025,580	$2,430,366	**$16,720,033**	**$232,223**
2016–17	$10,605,077	$3,200,096	$4,870,089	$2,401,247	**$21,076,509**	**$296,852**
2017–18	$11,089,416	$2,487,824	$5,158,654	$1,923,360	**$20,659,254**	**$290,975**
2018–19	$15,070,577	$1,736,420	$8,110,598	$3,819,335	**$28,736,930**	**$404,745**

Figure 4.2f Research Operating Funding by Year, Source and Funding per Faculty Member – Department of Mechanical & Industrial Engineering, 2009–2010 to 2018–2019



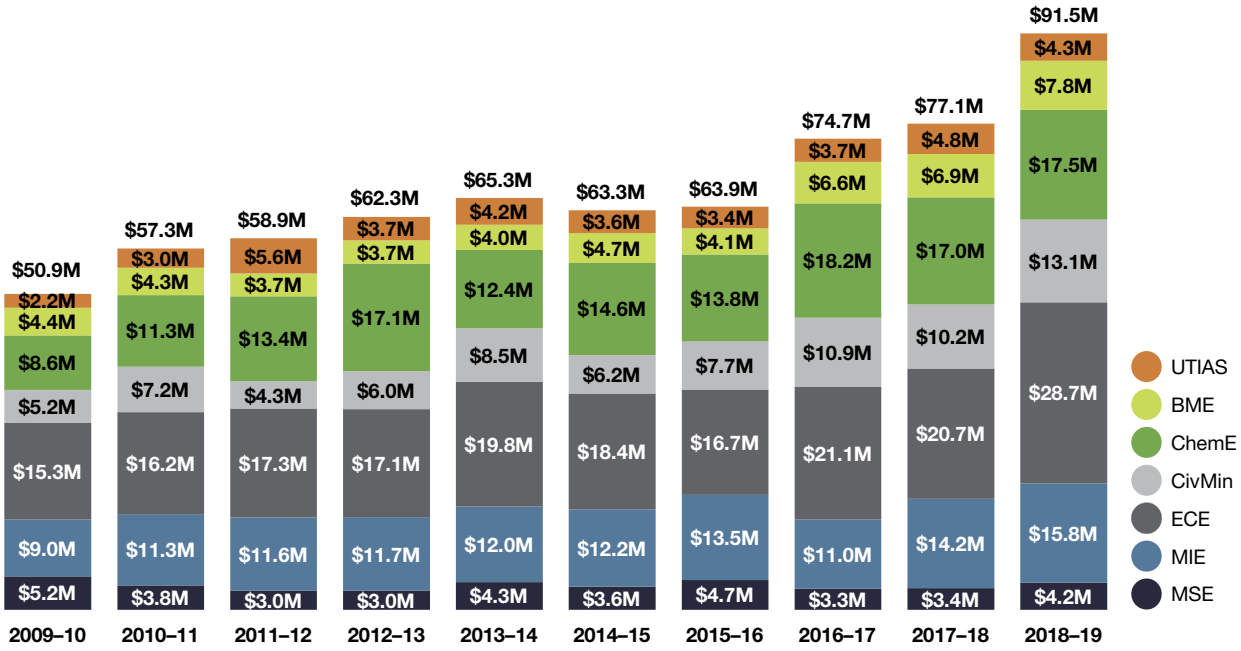
	Gov't – Canada	Gov't – Ontario	Industry	Other	Total	Avg $/Faculty
2009–10	$5,161,551	$1,554,477	$1,180,330	$1,125,847	**$9,022,204**	**$191,962**
2010–11	$6,181,418	$1,625,461	$1,337,641	$2,168,689	**$11,313,210**	**$240,707**
2011–12	$7,690,713	$1,170,375	$679,470	$2,082,577	**$11,623,134**	**$247,301**
2012–13	$7,473,427	$1,377,151	$757,191	$2,048,224	**$11,655,993**	**$248,000**
2013–14	$7,641,900	$929,834	$1,396,359	$2,019,869	**$11,987,962**	**$244,652**
2014–15	$7,016,883	$885,328	$2,007,844	$2,330,550	**$12,240,605**	**$244,812**
2015–16	$8,084,370	$975,760	$1,824,219	$2,580,489	**$13,464,838**	**$269,297**
2016–17	$6,967,616	$597,396	$1,740,732	$1,688,441	**$10,994,185**	**$219,884**
2017–18	$8,069,214	$877,882	$2,883,537	$2,323,223	**$14,153,856**	**$267,054**
2018–19	$9,729,115	$757,321	$3,405,477	$1,864,072	**$15,755,985**	**$303,000**

Figure 4.2g Research Operating Funding by Year, Source and Funding per Faculty Member – Department of Materials Science & Engineering, 2009–2010 to 2018–2019



	Gov't – Canada	Gov't – Ontario	Industry	Other	Total	Avg $/Faculty
2009–10	$1,847,850	$2,611,854	$497,685	$283,589	**$5,240,977**	**$374,356**
2010–11	$1,681,192	$1,702,731	$176,000	$273,700	**$3,833,624**	**$273,830**
2011–12	$1,960,014	$580,411	$298,597	$140,285	**$2,979,307**	**$212,808**
2012–13	$1,896,902	$382,077	$111,000	$598,253	**$2,988,232**	**$199,215**
2013–14	$2,102,486	$1,711,981	$286,216	$223,872	**$4,324,555**	**$308,897**
2014–15	$1,740,619	$1,488,791	$105,970	$302,039	**$3,637,419**	**$279,801**
2015–16	$2,123,510	$1,884,137	$205,715	$487,530	**$4,700,892**	**$335,778**
2016–17	$2,326,088	$143,197	$390,239	$415,974	**$3,275,497**	**$233,964**
2017–18	$2,103,851	$284,651	$374,571	$648,974	**$3,412,046**	**$227,470**
2018–19	$2,442,395	$297,232	$684,401	$806,763	**$4,230,791**	**$264,424**

Figure 4.3 **Distribution of Research Operating Funding by Academic Area, 2009–2010 to 2018–2019**



Note 4.3: Totals include a small amount of additional funding not shown in the breakdown by academic areas. The research funding attributed to BME for 2018–19 represents 82% of the total funding received by faculty members in the Institute. Because of BME's cross-disciplinary structure, some professors have their research funding processed through the Faculty of Medicine. The figure above shows only the funding that comes through U of T Engineering and is presented by grant year (April to March).

Figure 4.4a **Tri-Agency and NCE Support: CIHR, NSERC and NCE Funding, 2009–2010 to 2018–2019**

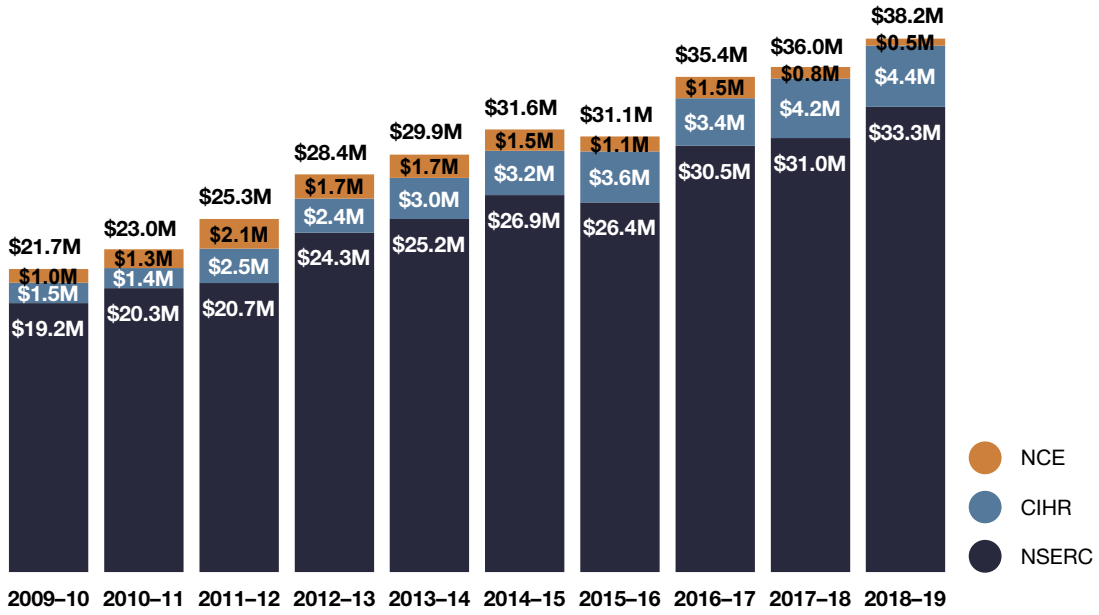
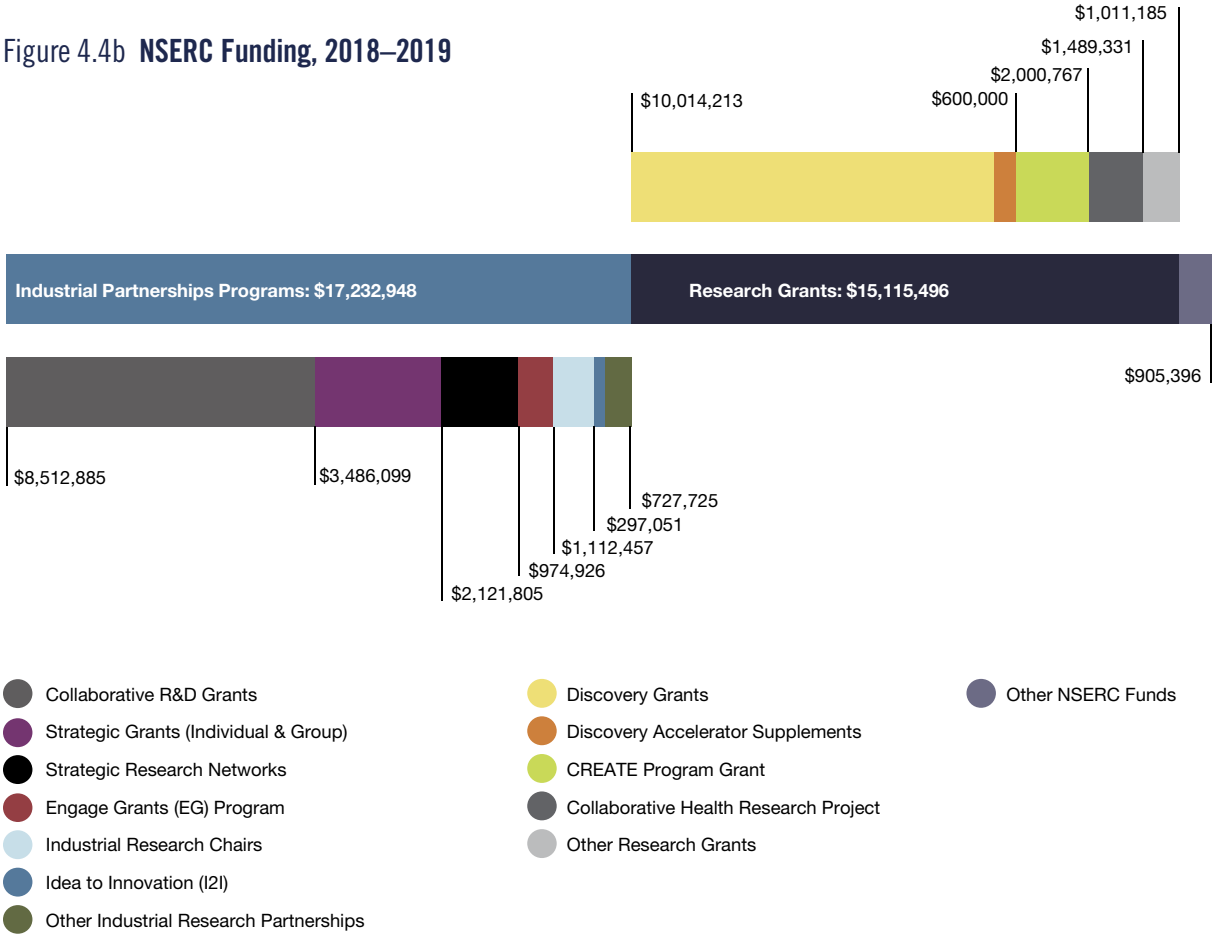
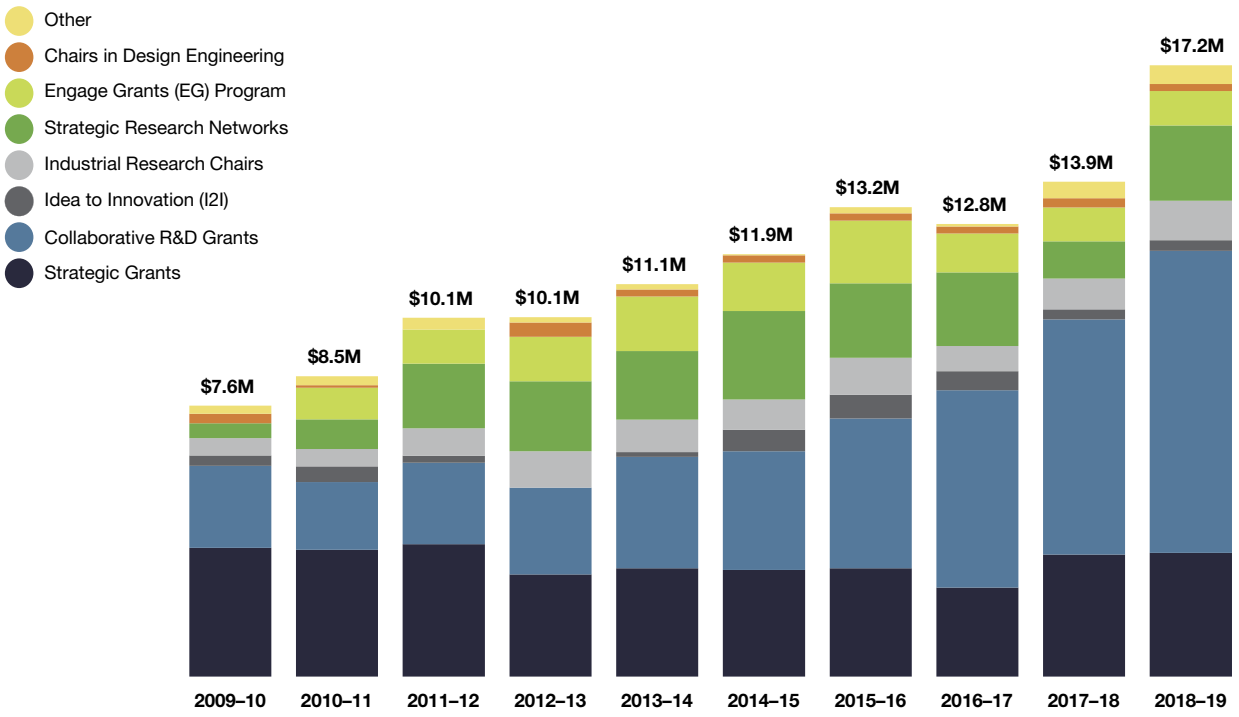


Figure 4.4b **NSERC Funding, 2018–2019**



Note 4.4b: Data as of May 2020 and based on grant year (April to March).

Figure 4.4c **NSERC Industrial Partnership Funding by Program, 2009–2010 to 2018–2019**



	2009–10	2010–11	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19
Other	$230,000	$251,770	$328,780	$146,905	$148,381	$32,031	$178,803	$72,536	$461,023	$527,725
Chairs in Design Engineering	$267,173	$69,076		$400,000	$200,000	$200,000	$200,000	$200,000	$260,000	$200,000
Engage Grants (EG) Program		$897,115	$960,531	$1,254,468	$1,533,923	$1,362,871	$1,767,890	$1,095,326	$958,418	$974,926
Strategic Research Networks	$417,293	$832,697	$1,826,000	$1,978,886	$1,935,440	$2,500,000	$2,100,000	$2,075,000	$1,050,000	$2,121,805
Industrial Research Chairs	$493,197	$485,711	$773,964	$1,025,031	$918,349	$847,278	$1,040,762	$713,023	$868,417	$1,112,457
Idea to Innovation (I2I)	$287,417	$448,612	$195,000		$133,750	$608,417	$669,364	$535,951	$279,835	$297,051
Collaborative R&D Grants	$2,313,127	$1,909,431	$2,301,643	$2,445,210	$3,137,628	$3,347,888	$4,226,332	$5,564,099	$6,633,399	$8,512,885
Strategic Grants	$3,625,316	$3,567,278	$3,725,048	$2,875,127	$3,050,468	$3,001,609	$3,047,358	$2,503,150	$3,432,564	$3,486,099
Total	**$7,633,523**	**$8,461,689**	**$10,110,965**	**$10,125,627**	**$11,057,939**	**$11,900,094**	**$13,230,509**	**$12,759,084**	**$13,943,657**	**$17,232,948**

Figure 4.4d **Industrial Partnerships as Percentage of Total NSERC Funding, 2009–2010 to 2018–2019**

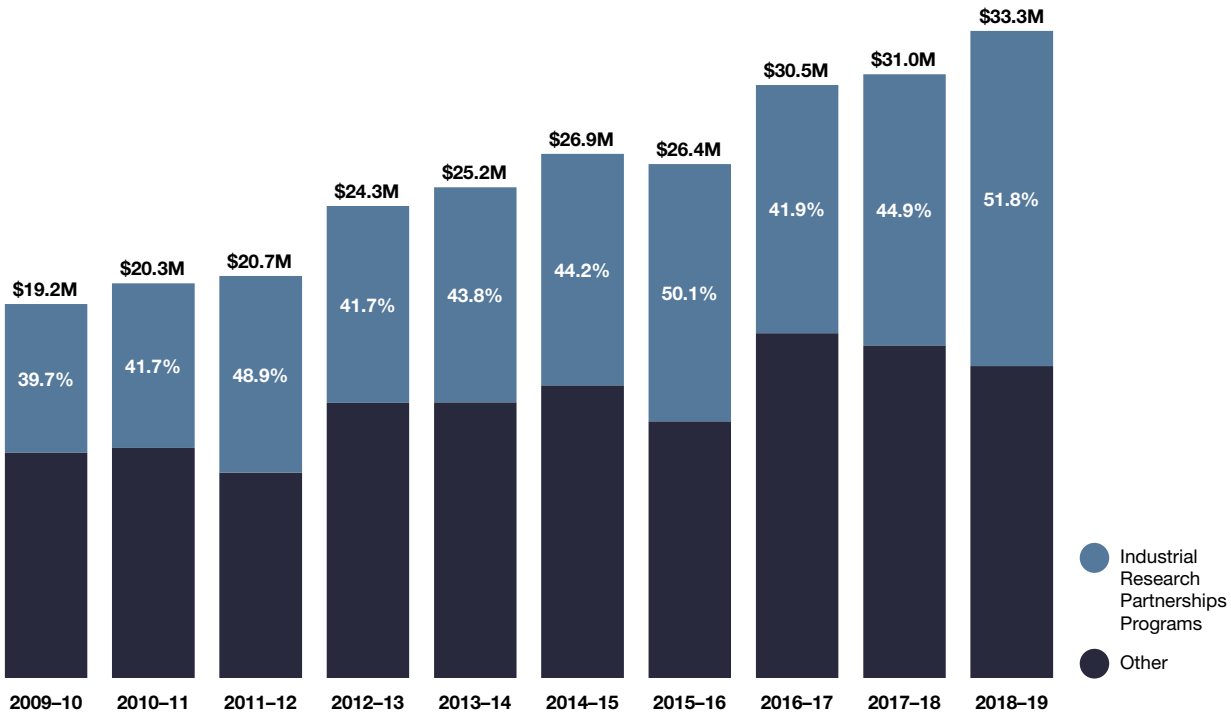
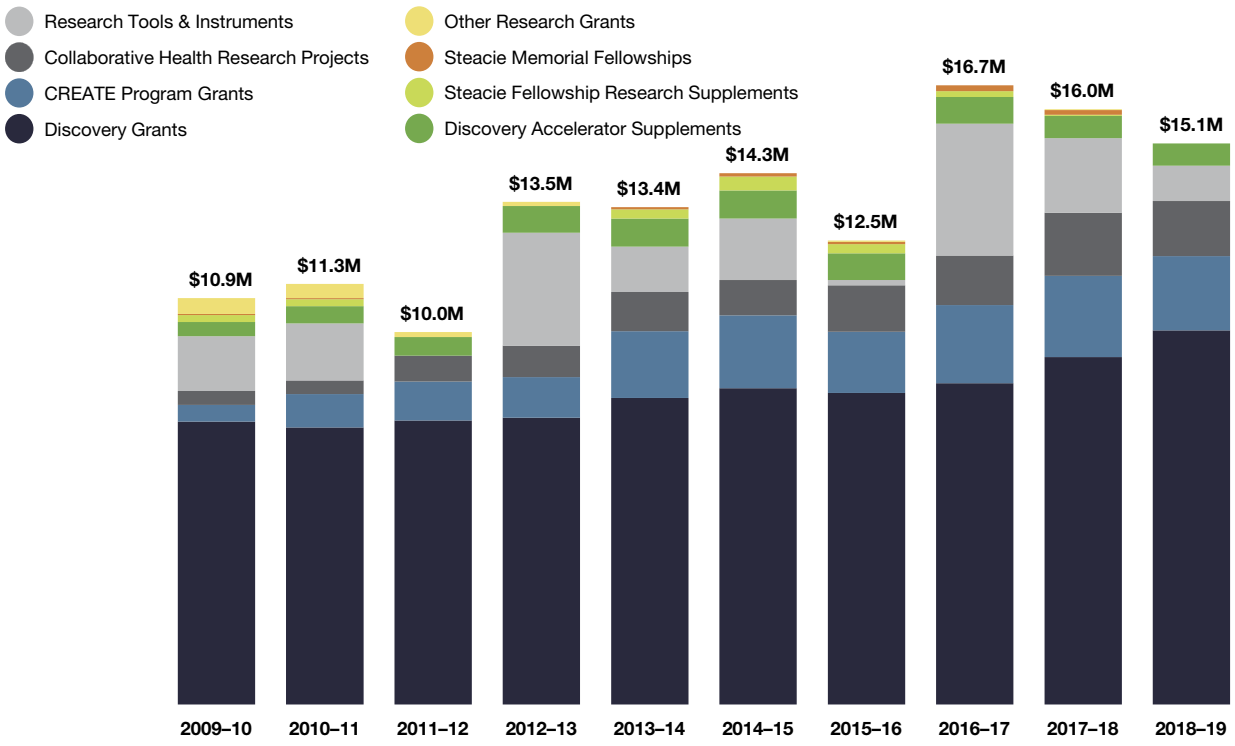


Figure 4.4e **NSERC Research Grant Funding by Program, 2009–2010 to 2018–2019**



	2009–10	2010–11	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19
Other Research Grants	$422,319	$382,583	$132,000	$111,000			$40,000		$25,000	
Steacie Memorial Fellowships	$30,000	$30,000			$60,000	$90,000	$60,000	$155,000	$125,000	
Steacie Fellowship Research Supplements	$187,500	$187,500			$250,000	$375,000	$250,000	$155,000	$30,000	
Discovery Accelerator Supplements	$383,999	$464,000	$504,000	$720,000	$760,000	$760,000	$716,285	$719,970	$600,000	$600,000
Research Tools & Instruments	$1,477,017	$1,533,781		$3,043,029	$1,218,076	$1,654,682	$146,872	$3,553,549	$2,011,907	$948,685
Collaborative Health Research Projects	$378,774	$366,899	$696,536	$846,731	$1,060,212	$950,376	$1,249,571	$1,338,873	$1,699,697	$1,489,331
CREATE Program Grants	$450,000	$900,000	$1,050,000	$1,096,000	$1,797,084	$1,969,779	$1,650,000	$2,100,000	$2,189,233	$2,000,767
Discovery Grants	$7,617,106	$7,464,405	$7,650,892	$7,726,942	$8,256,362	$8,516,417	$8,390,179	$8,657,937	$9,357,300	$10,076,713
Total	**$10,946,715**	**$11,329,168**	**$10,033,428**	**$13,543,702**	**$13,401,734**	**$14,316,254**	**$12,502,907**	**$16,680,328**	**$16,038,137**	**$15,115,496**

Figure 4.5a **Canadian Peer Universities vs. University of Toronto Share of NSERC Funding for Engineering Cumulative Five-Year Share, 2014–2015 to 2018–2019**

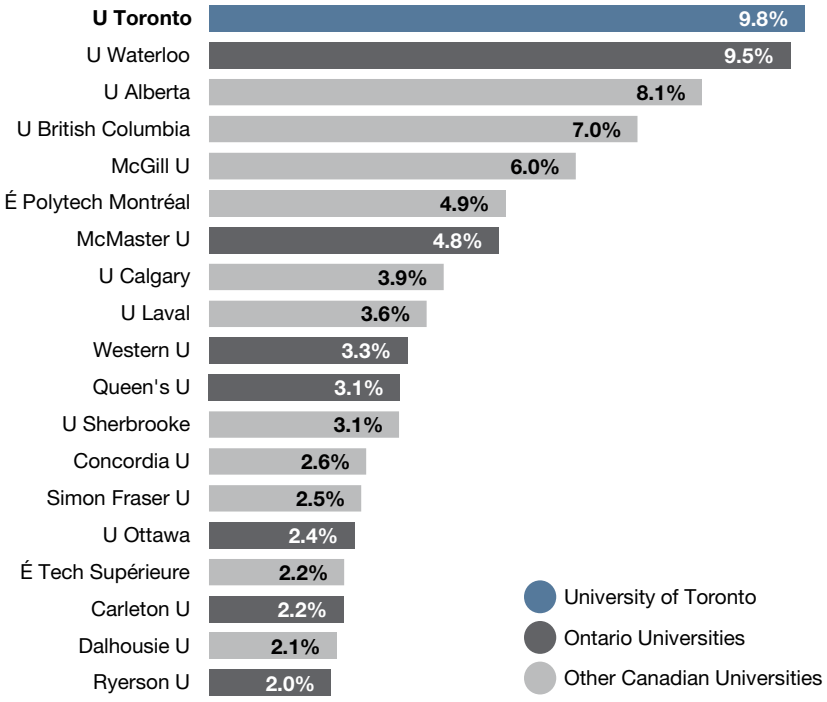
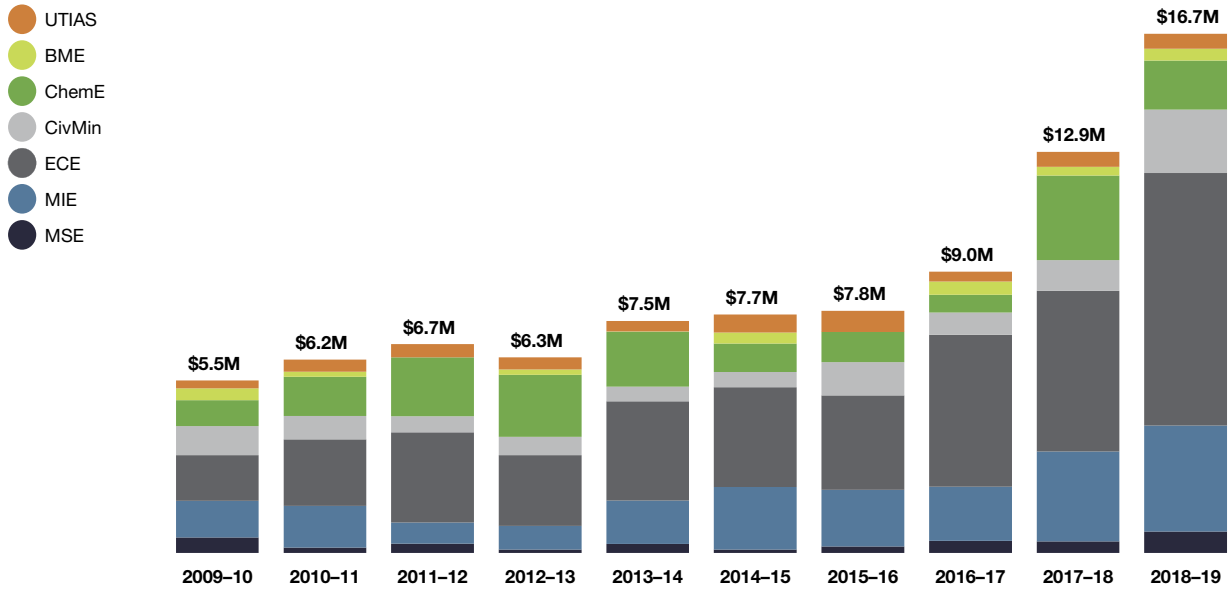


Figure 4.5b **U of T Annual Share of NSERC Funding in Engineering, 2009–2010 to 2018–2019**

2009–10	9.4%
2010–11	9.0%
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%

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, 2009–2010 to 2018–2019**



	2009–10	2010–11	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19
UTIAS	$259,200	$390,200	$420,400	$397,115	$342,396	$584,609	$674,557	$313,998	$474,246	$483,164
BME	$375,037	$165,534		$167,789	$1,301	$346,061	$4,802	$427,108	$285,487	$373,191
ChemE	$835,642	$1,261,227	$1,897,761	$1,990,738	$1,770,656	$920,026	$962,888	$570,070	$2,715,418	$1,574,303
CivMin	$931,988	$747,127	$515,246	$585,360	$470,776	$491,188	$1,072,331	$715,923	$981,529	$2,038,270
ECE	$1,460,500	$2,134,524	$2,891,234	$2,275,037	$3,184,516	$3,203,168	$3,025,580	$4,870,089	$5,158,654	$8,110,598
MIE	$1,180,330	$1,337,641	$679,470	$757,191	$1,396,359	$2,007,844	$1,824,219	$1,740,732	$2,883,537	$3,405,477
MSE	$497,685	$176,000	$298,597	$111,000	$286,216	$105,970	$205,715	$390,239	$374,571	$684,401
Total	**$5,540,382**	**$6,212,252**	**$6,702,708**	**$6,284,230**	**$7,452,220**	**$7,658,866**	**$7,770,092**	**$9,028,158**	**$12,873,442**	**$16,669,404**

Figure 4.6b **Industry Partnerships, 2019–2020**

- 3E Nano Inc.
- ABB Group
- Advanced Measurement and Analysis Group Inc.
- Advanced Micro Devices Inc.
- 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
- Anemoi Technologies Inc.
- Angstrom Engineering Inc.
- Antex Western
- Apotex Inc.
- Applanix
- Apple
- Aquafor Beech
- ArcelorMittal Dofasco
- 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.
- Bickell Foundation (J. P. Bickell)
- BiomeRenewables
- 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
- CAE
- Calera
- CalEnergy Generation
- Calgon Carbon Corp. Canadian Institute of Steel Construction
- Canadian Nuclear Safety Commission
- Canadian Precast/Prestressed Concrete Institute
- 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
- 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
- Colibri Technologies
- COM DEV International Ltd.
- Commissariat à l'energie 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 & Techology 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.
- 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.
- Flight Safety International
- Food BioTek Corp.
- Ford Motor Company (USA)
- Ford Motor Company of Canada
- 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
- Geosyntec Consultants
- Gerdau Long Steel North America
- GHGSat Inc.
- GlaxoSmithKline Inc.
- Glencore Canada Corp.
- Goodrich Landing Gear
- Grafoid Inc.
- Greencore Composites
- Groupe Mequaltech Inc.
- GTAA Toronto Pearson
- GVA Lighting
- Hanwha Solar Canada
- Hard Rock Innovations Inc.
- Hatch Ltd.
- Havelaar Canada
- Hawker Siddeley Canada
- HDR Corp.
- Hedgefog Research Inc.
- 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
- IMAX Corp.
- Imperial Oil Ltd.
- 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.
- JITRI Micro and Nano Automation
- JNE Chemicals
- 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.
- Klabin
- KQS Inc.
- Krauss Maffei Corp.
- Kumho Petrochemical R & D Center
- Laboratoire d'essai Mequaltech
- LaFarge Canada
- Lallemand Inc.
- Lattice Semiconductor Ltd.
- Leader's Circle
- LG Chem
- LightMachinery Inc.
- Lisgar Construction Company
- Litens Automotove Group
- Lubrizol
- Lumentra Inc.
- MacDonald, Dettwiler and Associates (MDA) Ltd.
- 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.
- MeadWestvaco (MWV) Corp.
- Mercedes-Benz Canada Inc.
- Messier-Bugatti-Dowty
- Messier-Dowty Inc.
- Metso Pulp, Paper and Power
- Microbonds Inc.
- Micropilot
- Millipore
- Mine Environment Neutral Drainage
- Mitsubishi Rayon Co. Ltd.
- Moldflow Corp.
- Monaghan Biosciences Ltd.
- Nanowave
- NanoXplore Inc.
- National Aeronautical Establishment (USA)
- NatureWorks LLC
- NCK Engineering
- Nestle Canada
- New World Laboratories
- Newterra
- Nike Inc.
- Northern Yashi Engineering Construction, Ltd.
- NUCAP Global
- Nuclear Waste Management Organization
- NXP Semiconductors Netherlands BV
- OCMR
- Olympus Canada
- Olympus NDT Canada
- Ontario Clean Water Agency
- Ontario Power Generation Inc.
- Ontario Renal Network
- Opal-RT Technologies Inc.
- ORNGE Medical Transport
- Ossur Canada Inc.
- OtoSim
- OZ Optics Ltd
- Pall Corp.
- Perkin Elmer Canada
- Petronas Canada
- Philips Electronics North America Corp.
- Plasco Energy Group
- Platinum Unlimited 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.
- Qualcomm Canada Inc.
- Qualcomm Technologies Inc.
- Quanser Inc.
- Quantum Dental Technologies (QDT) Inc.
- Questor Technologies Inc.
- Quorum Technologies Inc.
- RBC – Royal Bank of Canada
- Regeneron Pharmaceuticals
- RESCON
- Resertrac Inc.
- Resonance Ltd.
- Resource Systems Group Inc.
- Rio Tinto Alcan Inc.
- Robert Bosch Corp.
- Rockwell International
- Rocscience Inc.
- Rolls Royce Canada Ltd.
- Rubikloud Technologies Inc.

- RWDI
- Safety Power Inc.
- Safran Electronics Canada
- Samsung Advanced Institute of Technology
- Samsung Display
- Samsung Electronics
- Sanofi Pasteur
- Saudi Basic Industries Corp. (SABIC)
- Sceye Inc.
- Schlumberger Canada Ltd.
- Sealed Air Corp.
- Semiconductor Research Corp.
- Sensor Technology Ltd.
- S-FRAME Software Inc.
- ShawCor
- Shinil Chemical Industry Co. Ltd.
- Side Effects Software
- Sidewalk Toronto Employees Ltd.
- Siemens ADGT
- Sinclair Interplanetary
- Sinclair Technologies Inc.
- Solantro Semiconductor Corp.
- Solar Ship Inc.
- Solvay Specialty Polymers
- Sony Corp.
- SPP Canada Aircraft Inc.
- St Mary's Cement Group
- Stackpole International
- Stantec Inc.
- Steel Structures Education Foundation
- StemCell Tecnologies Inc.
- StoraEnso
- Sulzer Metco
- Suncor Energy Inc.
- Sunnybrook Health Sciences Centre
- Sunwell Technologies
- Suzano Papel e Celulose
- Synbra
- Syncrude Canada Ltd.
- 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
- Total American Services Inc.
- Tower Automotive
- Tower Solutions
- Toyota Collaborative Safety Research Center (CSRC)
- Toyota Technical Center USA Inc.
- TransCanada
- Trapeze Software ULC
- TSI
- Ultrasonix
- Uncharted Software Inc.
- Unisearch Associates
- 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
- Whitemud Resources
- WSP Canada Inc.
- Wugang Canada Resources Invest. Ltd.
- Wurth Elektronik eiSos GmbH & Co. KG
- Wuzhong Instrument Company
- Xilinx Inc.
- Xiphos Technologies Inc.
- XOR-Labs Toronto
- 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 4.7 **Engineering Invention Disclosures by Academic Area, 2015–2016 to 2019–2020**

	2015–16	2016–17	2017–18	2018–19	2019–20	5-Yr Total
UTIAS	1.0	1.0	2.0		1.0	**5.0**
BME	15.0	8.0	7.0	17.0	18.0	**65.0**
ChemE	10.0	18.0	7.0	16.0	20.0	**71.0**
CivE	6.0	2.0	4.0	3.0	7.0	**22.0**
ECE	28.0	36.0	49.0	43.0	53.0	**209.0**
EngSci	1.0	1.0	2.0	1.0	1.0	**6.0**
MIE	18.0	23.0	17.0	21.0	24.0	**103.0**
MSE	3.0	5.0	6.0	10.0	4.0	**28.0**
Annual Total	**82.0**	**94.0**	**94.0**	**111.0**	**128.0**	**509.0**
University Annual Total	**164.0**	**192.0**	**167.0**	**191.0**	**183.0**	**897.0**
Engineering Percentage	**50%**	**49%**	**56%**	**58%**	**70%**	**57%**

Figure 4.8 **Spinoff Companies, 2001 to 2020**

Est.	Company Name	Engineering Affiliation	Department
2020	Quantum Bridge Technologies Inc.	Hoi-Kwong Lo	ECE
2020	Amber Molecular Inc.	Tim Bender	ChemE
2020	Tartan AI Ltd.	Andreas Moshovos	ECE
2020	CERT Systems Inc.	Ted Sargent & David Sinton	ECE, MIE
2020	hedQTRS	Deepa Kundur	ECE
2020	Mazlite	Nasser Ashgriz	MIE
2020	Synakis	Molly Shoichet	ChemE
2019	Exactly Eyewear	Haonan “Alan” Li	ECE
2019	Micellae Delivery Systems Inc.	Mehdi Nouraei	ChemE
2019	YSCOPE	Ding Yuan	ECE
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	Vik Pandit	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 Soichet & 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 Ba-Tis	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, ChemE
2014	Arrowonics Inc.	Hugh Liu	UTIAS
2014	Enceladeus Imaging	Steve Mann	ECE
2014	IQBiomedical	David Sinton	MIE
2014	Pragmatek Transport Innovations, Inc.	Baher Abdulhai	CivMin
2014	QD Solar Inc.	Sjoerd Hoogland and 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	Cytodiagnostics	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
2003	ArchES Computing Systems Corp.	Paul Chow	ECE
2003	Norel Optronics Inc.	Zheng-Hong Lu	MSE
2003	Vocalage Inc.	Mark Chignell	MIE
2002	Information Intelligence Corporation (IIC)	Burhan Turksen	MIE
2002	MatRegen Corp.	Molly Shoichet	BME, ChemE
2002	OMDEC Inc.	Andrew K.S. Jardine	MIE
2002	SiREM	Elizabeth Edwards	ChemE
2001	Fox-Tek	Rod Tennyson	UTIAS
2001	Insception Biosciences	Peter Zandstra	BME
2001	Interface Biologics	Paul Santerre	BME

Figure 4.9 **Chairs and Professorships, 2019–2020**

Title	Chairholder	Sponsor	Tier	Dept.
Alumni Chair in Bioengineering	Cristina Amon	Endowed		MIE
Bahen/Tanenbaum Chair in Civil Engineering	Jeffrey Packer	Endowed		CivMin
Bahen/Tanenbaum Chair in Civil Engineering	Michael Collins	Endowed		CivMin
Bell Canada Chair in Multimedia	Kostas Plataniotis	Endowed		ECE
Bell Canada Chair in Software Engineering	Michael Stumm	Endowed		ECE
Bell University Labs Chair in Computer Engineering	Baochun Li	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 Computational Modelling and Design Optimization Under Uncertainty	Prasanth Nair	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 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 Functional Cardiovascular Tissue Engineering	Milica Radisic	NSERC	Tier 2	BME, ChemE
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 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 Nano- and Micro-Structured Electromagnetic Materials and Applications	George Eleftheriades	NSERC	Tier 1	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 Organic Optoelectronics	Zheng-Hong Lu	NSERC	Tier 1	MSE
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

Title	Chairholder	Sponsor	Tier	Dept.
Canada Research Chair in Seismic Resilience of Infrastructure	Constantin Christopoulos	NSERC	Tier 2	CivMin
Canada Research Chair in Thermofluidics for Clean Energy	Aimy Bazylak	NSERC	Tier 2	MIE
Canada Research Chair in Tissue Engineering	Molly Shoichet	NSERC	Tier 1	ChemE, BME
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
Chair in Information Engineering	Joseph Paradi	Endowed		MIE
Clarice Chalmers Chair of Engineering Design	Greg Jamieson	Endowed		MIE
Claudette MacKay-Lassonde Chair in Mineral Engineering	Lesley Warren	Endowed		CivMin
Dusan and Anne Miklas Chair in Engineering Design	Paul Chow	Endowed		ECE
Dean's Catalyst Professor	Amy Bilton			MIE
Dean's Catalyst Professor	Arthur Chan			ChemE
Dean's Catalyst Professor	Kinnor Chattopadhyay			MSE
Dean's Catalyst Professor	Eric Diller			MIE
Dean's Catalyst Professor	Jennifer Drake			CivMin
Dean's Catalyst Professor	Jonathan Kelly			UTIAS
Dean's Catalyst Professor	Edmond W.K. Young			MIE
Dean's Emerging Innovation in Teaching Professor	Chris Bouwmeester			BME
Dean's Emerging Innovation in Teaching Professor	Ariel Chan			ChemE
Dean's Emerging Innovation in Teaching Professor	Jennifer Farmer			ChemE
Dean's Emerging Innovation in Teaching Professor	Dawn Kilkenny			BME
Dean's Emerging Innovation in Teaching Professor	Elham Marzi			ISTEP
Dean's Emerging Innovation in Teaching Professor	Patricia Sheridan			ISTEP
Dean's Emerging Innovation in Teaching Professor	Hamid Timorabadi			ECE
Dean's Emerging Innovation in Teaching Professor	Chirag Variawa			ISTEP
Dean's Spark Professor	Fae Azhari			CivMin, MIE
Dean's Spark Professor	Giselle Azimi			ChemE
Dean's Spark Professor	Erin Bobicki			MSE, ChemE
Dean's Spark Professor	Merve Bodur			MIE
Dean's Spark Professor	Hai-Ling Margaret Cheng			BME, ECE
Dean's Spark Professor	Mason Ghafghazi			CivMin, MIE
Dean's Spark Professor	Alison Olechowski			MIE, ISTEP
Dean's Spark Professor	Daniel Posen			CivMin
Dean's Spark Professor	Scott Sanner			MIE
Dean's Spark Professor	Shoshanna Saxe			CivMin
Dean's Spark Professor	Marianne Touchie			CivMin, MIE
Dean's Spark Professor	Yu Zou			MSE
Decanal Chair in Innovation	Christopher Yip	Endowed		Dean's Office
Edward S. Rogers Sr. Chair in Engineering	Brendan Frey	Endowed		ECE
Erwin Edward Hart Professor in Chemical Engineering and Applied Chemistry	Alison McGuigan	Endowed		ChemE
Erwin Edward Hart Professor in Civil Engineering	Daman Panesar	Endowed		CivMin
Erwin Edward Hart Professor in Materials Science and Engineering	Chandra Veer Singh	Endowed		MSE
Erwin Edward Hart Professor in Mechanical and Industrial Engineering	Tobin Filleter	Endowed		MIE

Title	Chairholder	Sponsor	Tier	Dept.
Eugene V. Polistuk Chair in Electromagnetic Design	Costas Sarris	Endowed		ECE
Frank Dottori Chair in Pulp and Paper Engineering	Honghi Tran	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
L. Lau Chair in Electrical and Computer Engineering	Reza Iravani	Endowed		ECE
Michael E. Charles Chair in Chemical Engineering	Michael Sefton	Endowed		ChemE, BME
Nortel Institute Chair in Emerging Technology	J. Stewart Aitchison	Endowed		ECE
Nortel Institute Chair in Network Architecture and Services	Jörg Liebeherr	Endowed		ECE
NSERC Chair in Multidisciplinary Engineering Design	Kamran Behdinan	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 Grasselli	NSERC/Energi Simulation		CivMin
NSERC/NanoXplore Industrial Research Chair in Multifunctional Graphene-based Nanocomposites and Foams	Chul Park	NSERC/NanoXplore		MIE
NSERC/P&WC Industrial Research Chair in Aviation Gas Turbine Combustion/Emissions Research and Design System Optimization	Sam Sampath	NSERC/P&WC		UTIAS
NSERC/UNENE Industrial Research Chair in Corrosion Control and Materials Performance in Nuclear Power Systems	Roger Newman	NSERC/UNENE		ChemE
Percy Edward Hart Professor in Aerospace Engineering	Philippe Lavoie	Endowed		UTIAS
Percy Edward Hart Professor in Biomaterials and Biomedical Engineering	Jonathan Rocheleau	Endowed		BME
Percy Edward Hart Professor in Electrical and Computer Engineering	Natalie Enright Jerger	Endowed		ECE
Pierre Lassonde Chair in Mining Engineering	John Hadjigeorgiou	Endowed		CivMin
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
The Stanley L. Meek Chair in Advanced Nanotechnology	Harry Ruda	Endowed		MSE
U of T Distinguished Professor of Digital Communications	Frank Kschischang			ECE
U of T Distinguished Professor of Mechanobiology	Craig Simmons			MIE, BME

Title	Chairholder	Sponsor	Tier	Dept.
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	Michael Collins			CivMin
University Professor	Elizabeth Edwards			ChemE
University Professor	Edward Sargent			ECE
University Professor	Michael Sefton			ChemE
University Professor	Molly Shoichet			ChemE, BME
University Professor	Peter Zandstra			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


2020

CHAPTER 5

AWARDS & RANKINGS

U of T Engineering remains Canada's top engineering school and among the best in the world.
PHOTO: DARIA PEREVEZENTSEV

FACTS & FIGURES

TOP 10

U of T Engineering's ranking among North American public universities.

#1

U of T Engineering's rank within Canada across all four organizations that publish university rankings specific to engineering.

16.4%

U of T Engineering's share of major awards for which Canadian engineering professors are eligible (2019). Our faculty make up 5.6% of the Canadian total.

75

Major national and international awards earned by U of T Engineering faculty members over the past five years.

Figure 5.1 Summary of University of Toronto Engineering Performance in World Rankings, 2019–2020

Ranking Organization	Release Date	Canada	North American Public	World
QS World University Ranking for Engineering and Technology	**March 2020**	1	4	22
QS World University Ranking by Subject	March 2020			
– Chemical Engineering		1	7	27
– Civil & Structural Engineering		2	7	36
– Computer Sci. & Information Systems		1	2	10
– Electrical & Electronic Engineering		1	4	23
– Materials Science		1	9	48
– Mechanical, Aeronautical & Manuf. Eng.		1	6	32
– Mineral & Mining Engineering		5	8	22
Times Higher Education (THE) – Elsevier World University Ranking for Engineering & Technology	**October 2019**	1	7	27
Academic Ranking of World Universities (ARWU) for Engineering Subjects	**June 2019**			
– Aerospace Engineering		1	6	17
– Biomedical Engineering		1	4	21
– Chemical Engineering		4	25	142
– Civil Engineering		4	13	38
– Computer Science and Engineering		1	4	12
– Electrical & Electronic Engineering		1	16	41
– Materials Science & Engineering		1	16	66
– Mechanical Engineering		2	18	73
– Mining & Mineral Engineering		3	6	25
National Taiwan University (NTU) Performance Ranking of Scientific Papers for World Universities	**June 2019**	1	8	60
NTU Performance Ranking by Subject	June 2019			
– Chemical Engineering		3	17	128
– Civil Engineering		2	7	52
– Computer Science		3	10	59
– Electrical Engineering		2	6	39
– Materials Science		1	13	78
– Mechanical Engineering		1	11	76

Rankings data are current as of the date indicated in Figure 5.1. Awards data are presented for the 2019 calendar year (January to December). Selected faculty, alumni and staff awards were received between summer 2019 and summer 2020.

Figure 5.2a **QS Top 50 World Universities, 2020**

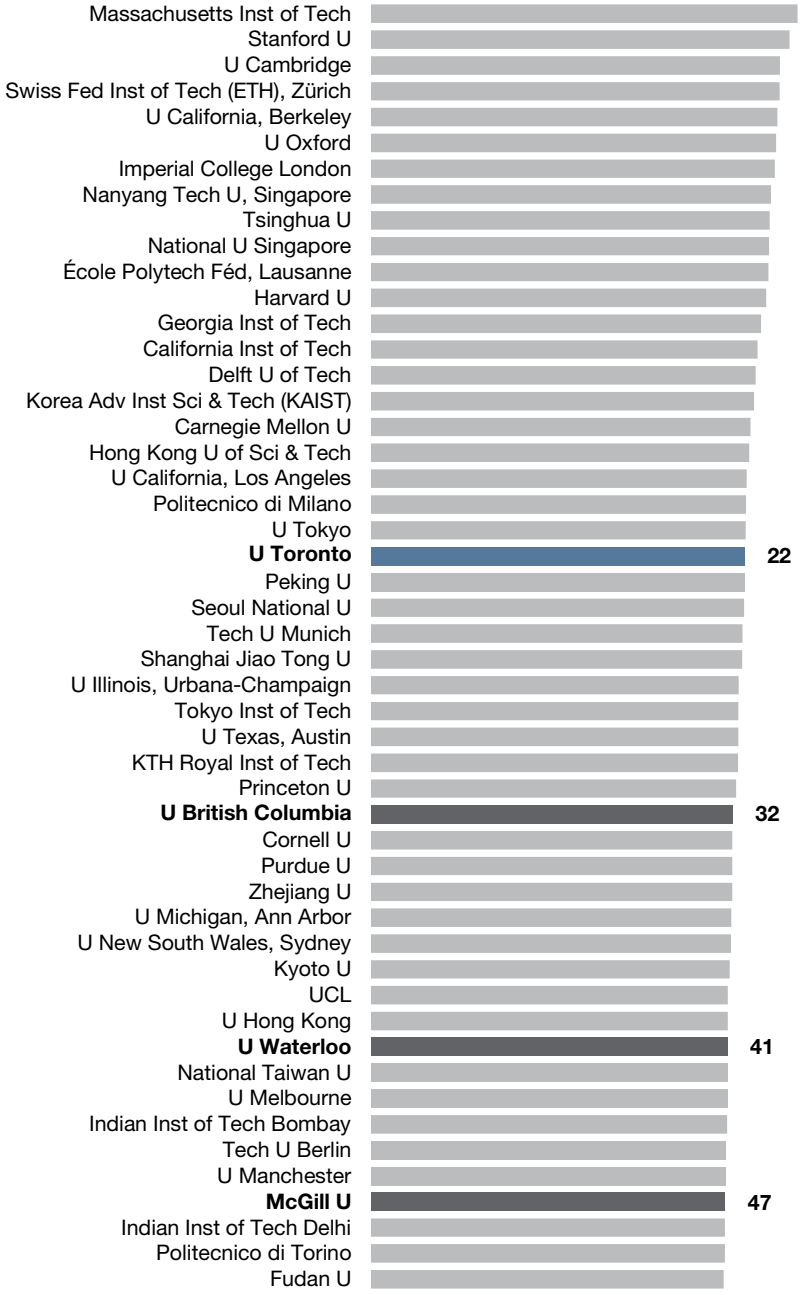


Figure 5.2b **QS Top North American Public Universities, 2020**

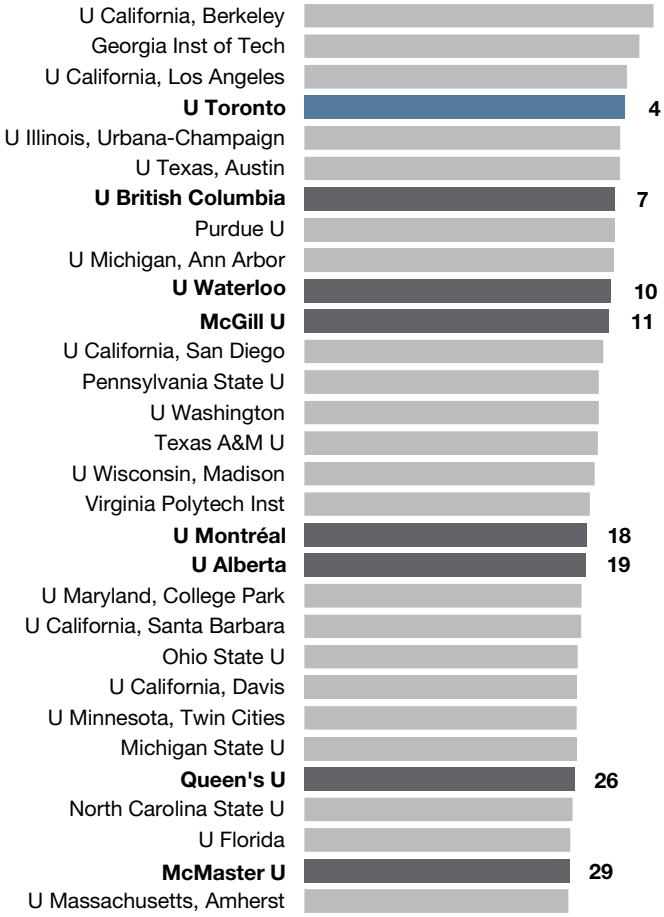


Figure 5.2c **Canadian U15 in QS Top 200, 2020**

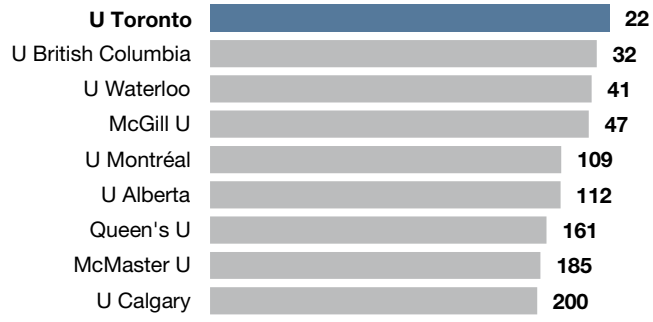
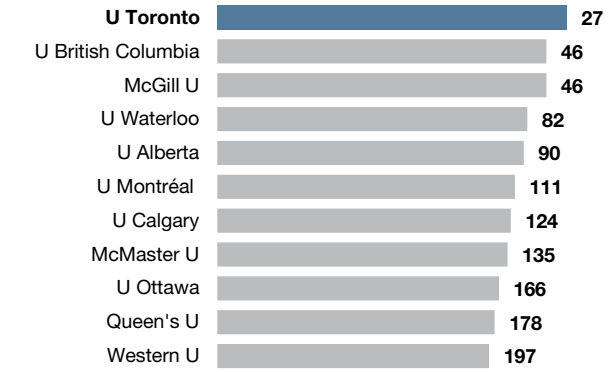
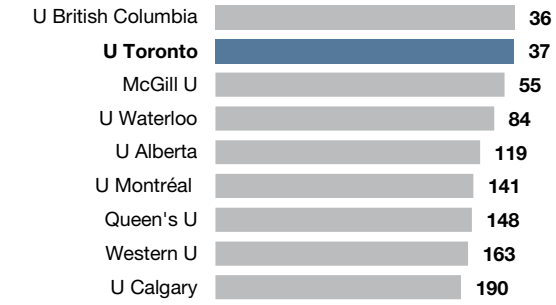


Figure 5.2d **Canadian Universities in QS by Subject, 2020**

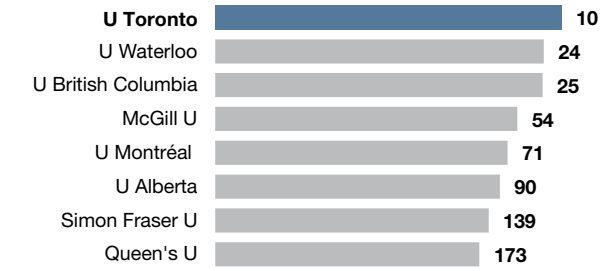
Chemical Engineering



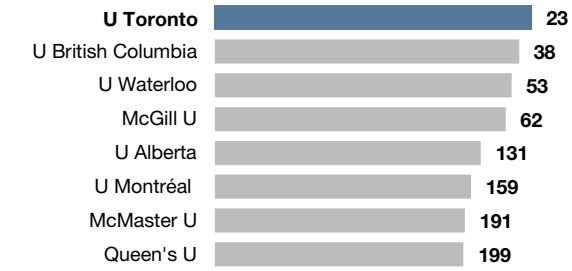
Civil & Structural Engineering



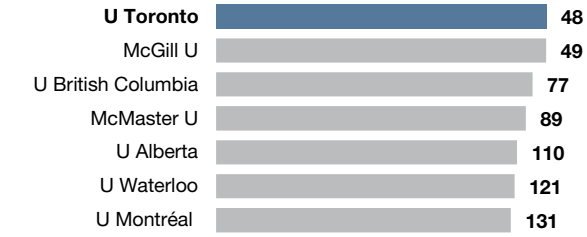
Computer Science & Information Systems



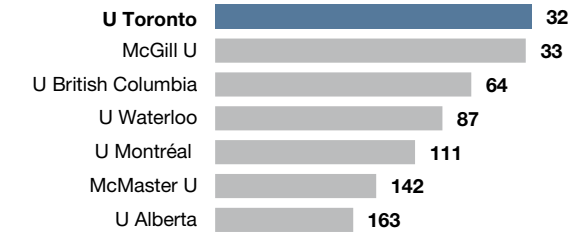
Electrical & Electronic Engineering



Materials Sciences



Mechanical, Aeronautical & Manufacturing Engineering



Mineral & Mining Engineering

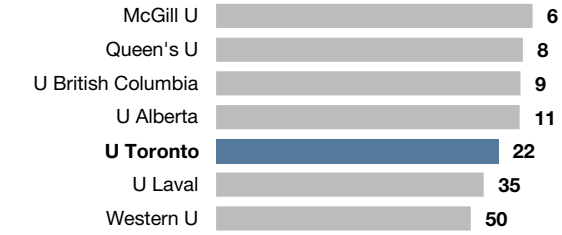


Figure 5.3a **THE Top 50 World Universities, 2020**

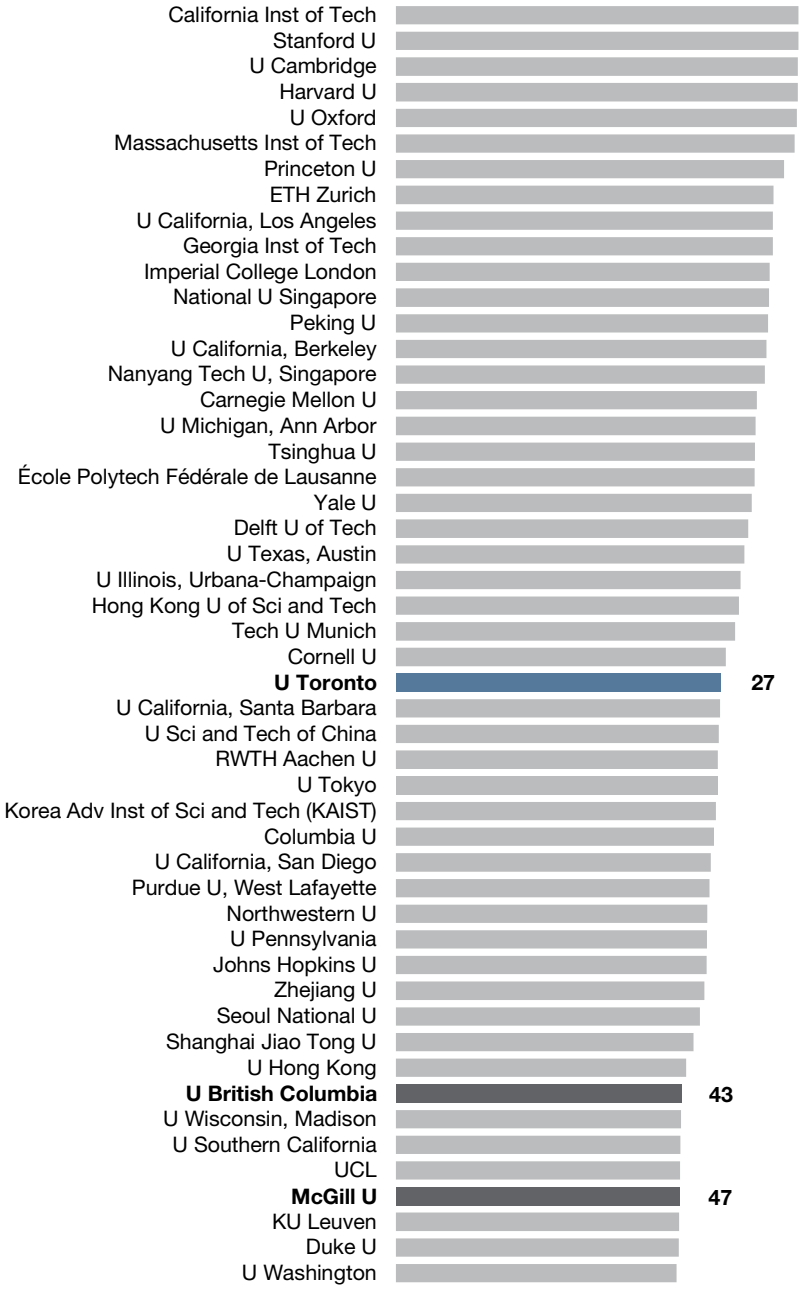


Figure 5.3b **THE Top North American Public Universities, 2020**

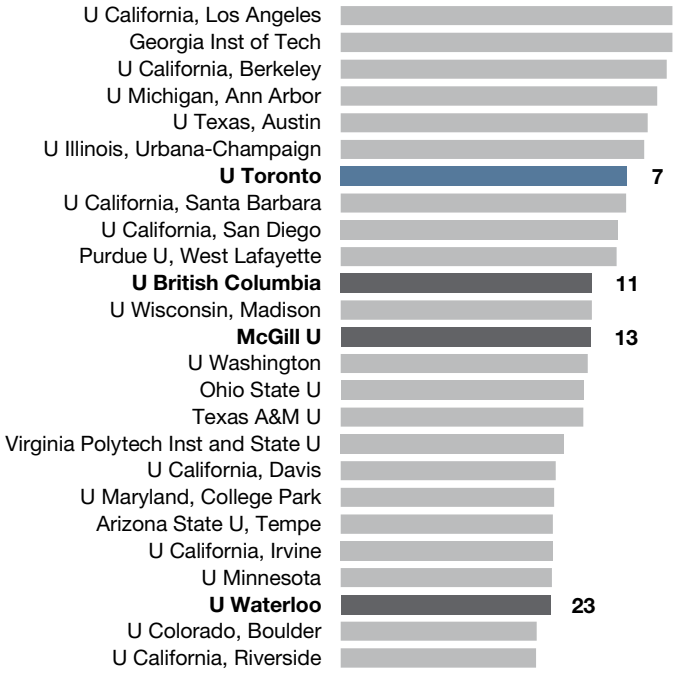


Figure 5.3c **Canadian U15 in THE Top 200, 2020**

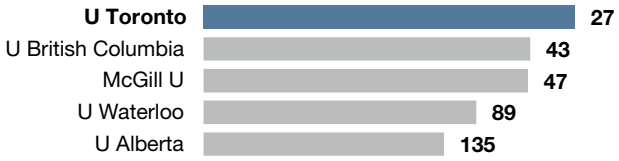
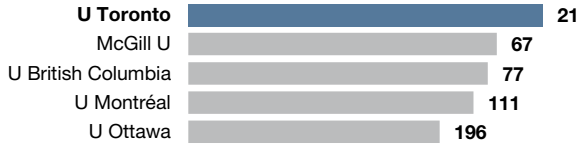


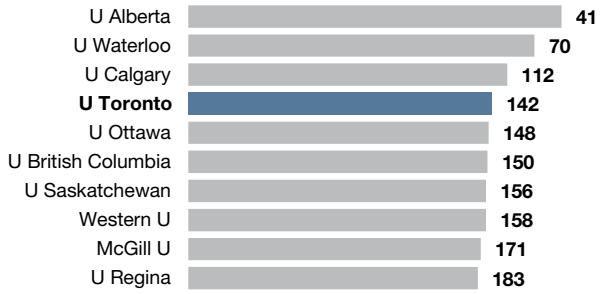
Figure 5.4 **Canadian Universities in the Top 200 of the ARWU by Subject, 2019**

Aerospace Engineering

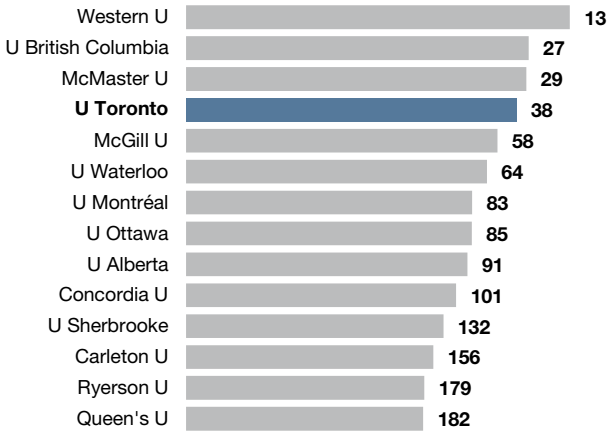
Biomedical Engineering



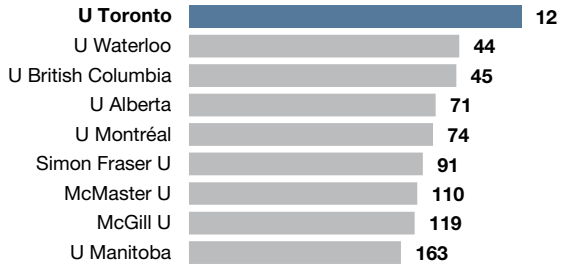
Chemical Engineering



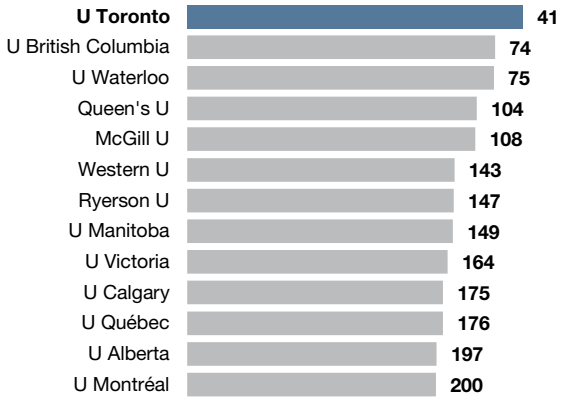
Civil & Structural Engineering



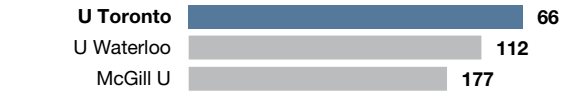
Computer Science & Engineering



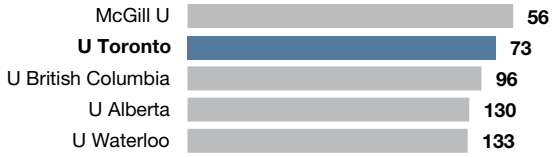
Electrical Engineering



Materials Science & Engineering



Mechanical Engineering



Mineral Engineering

Figure 5.5a **NTU Top 60 World Universities, 2019**

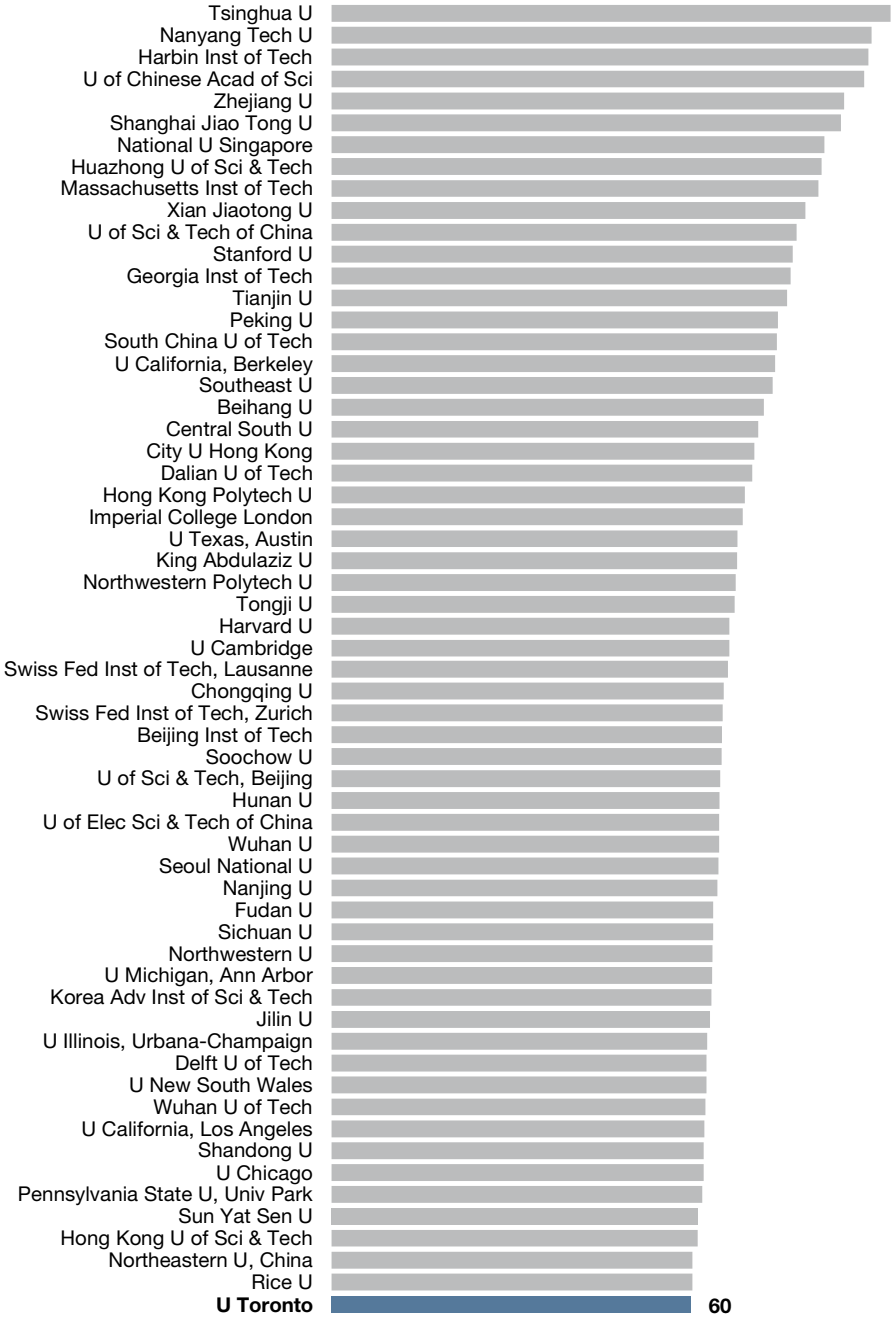


Figure 5.5b **NTU Top North American Public Universities, 2019**

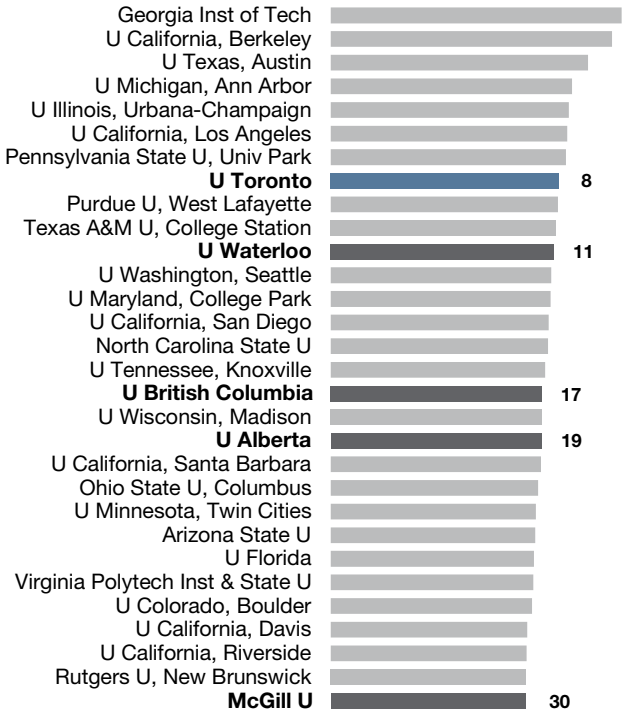


Figure 5.5c **Canadian U15 Universities in NTU Top 200, 2019**

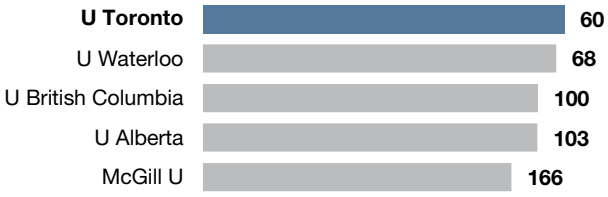


Figure 5.5d **Canadian Universities in NTU by Subject, 2019**

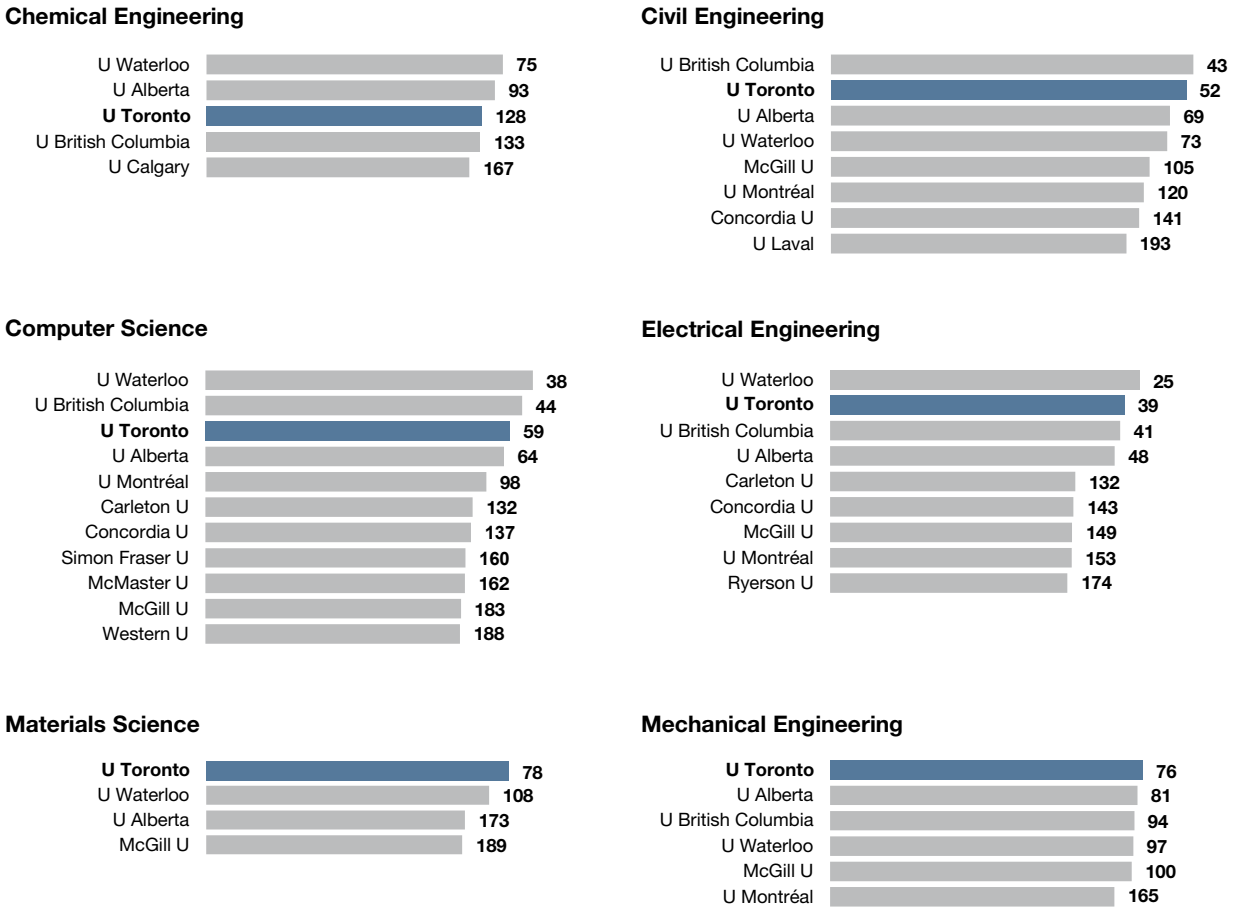


Figure 5.6a **Number of Engineering Publications Indexed by Thompson Reuters Association of American Universities (AAU) Public and Canadian Peer Institutions, 2014 to 2018**

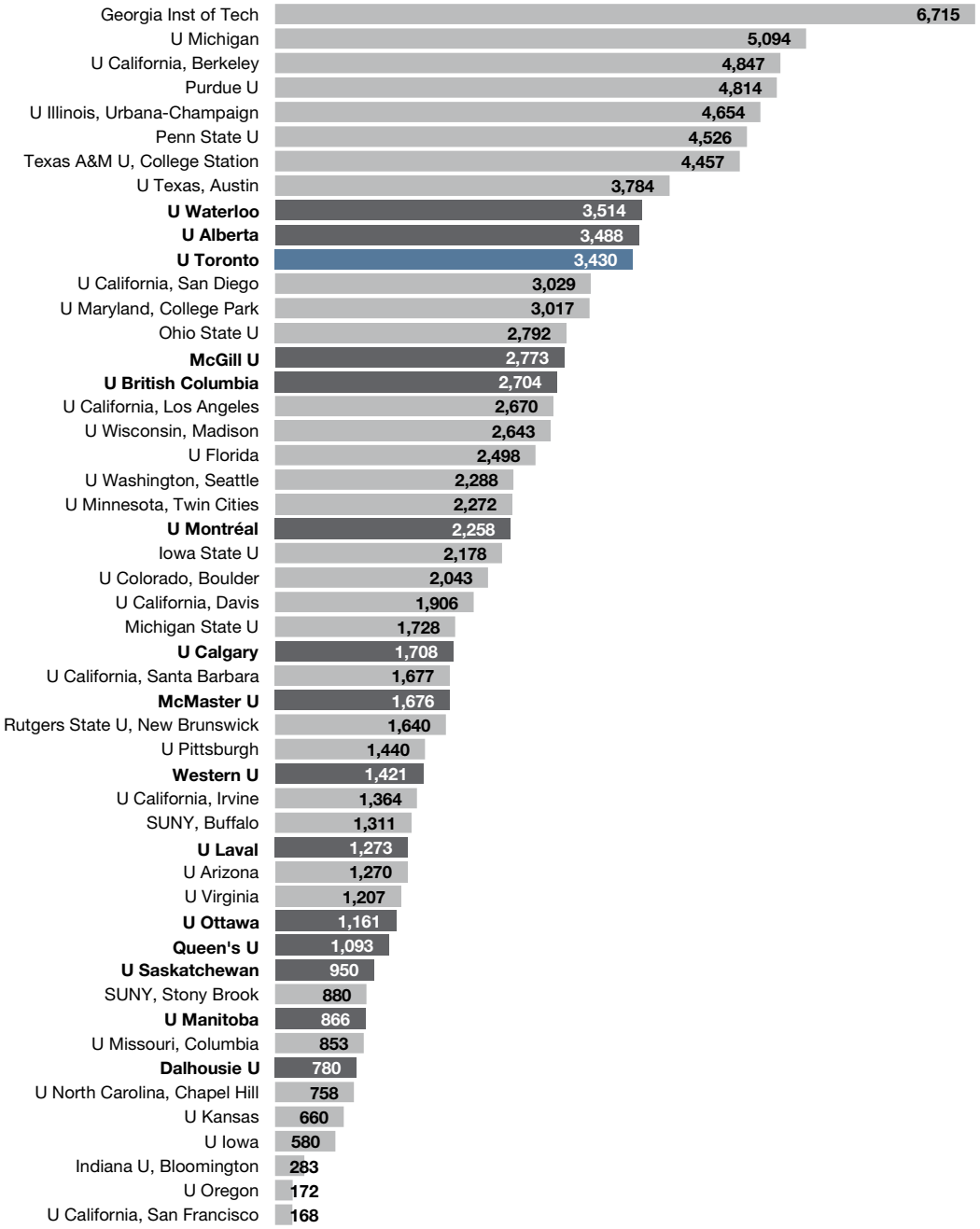


Figure 5.6b **Summary of U15 Bibliometrics for Publications**

	Publications	Faculty Count	Publications per Faculty	Rank on Pub per Faculty
U Waterloo	3,514	326	10.8	7
U Alberta	3,488	238	14.6	1
U Toronto	**3,430**	**262**	**13.1**	**3**
McGill U	2,773	221	12.6	5
U British Columbia	2,704	198	13.7	2
U Montréal	2,258	441	5.1	14
U Calgary	1,708	183	9.3	9
McMaster U	1,676	157	10.7	8
Western U	1,421	110	12.9	4
Laval U	1,273	162	7.9	12
U Ottawa	1,161	132	8.8	11
Queens U	1,093	236	4.6	15
U Saskatchewan	950	88	10.8	6
U Manitoba	866	93	9.3	10
Dalhousie U	780	111	7.0	13

Figure 5.6c **Number of Engineering Citations Indexed by Thompson Reuters Association of American Universities (AAU) Public and Canadian Peer Institutions, 2014 to 2018**

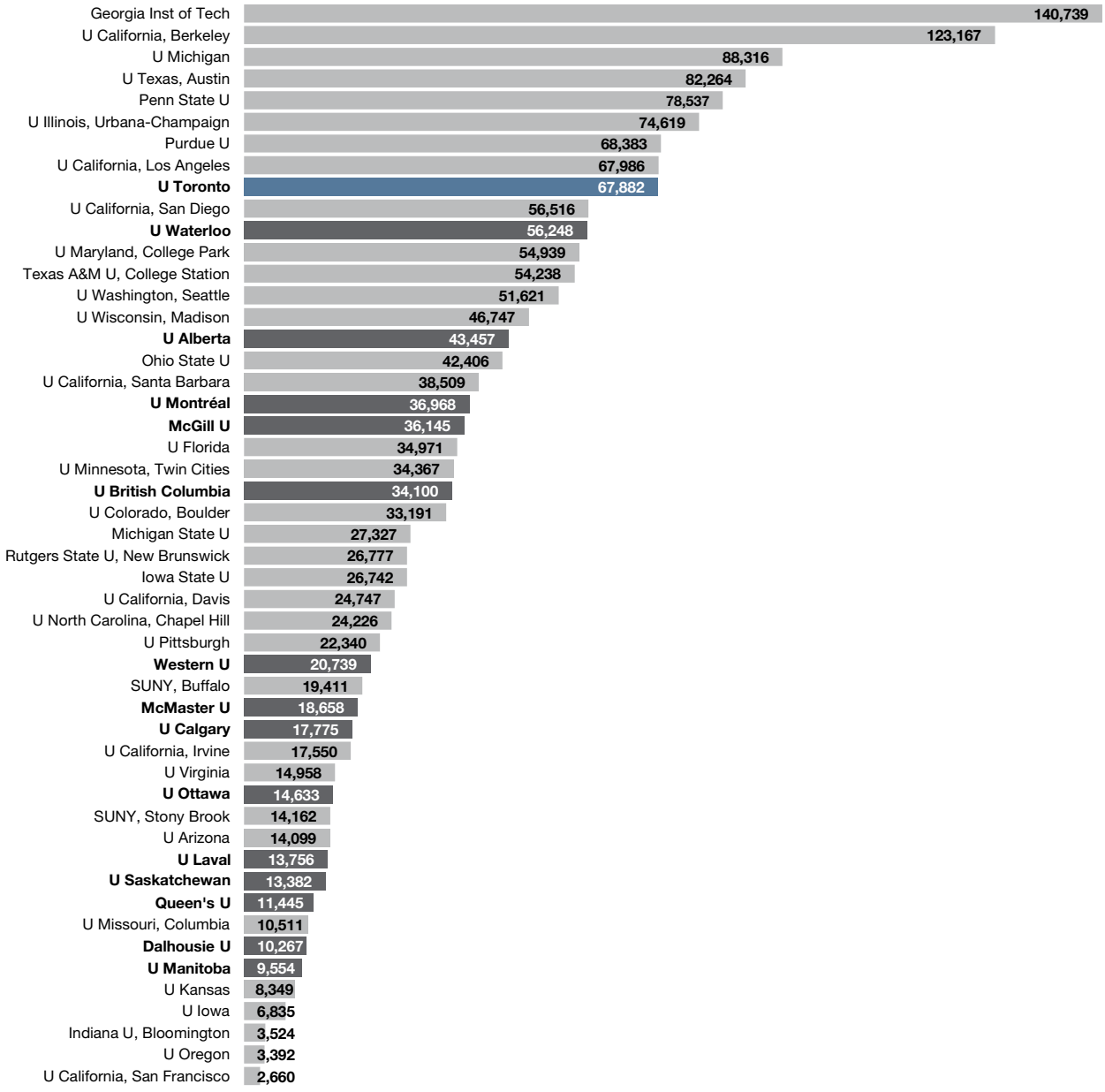


Figure 5.6d **Summary of U15 Bibliometrics for Citations**

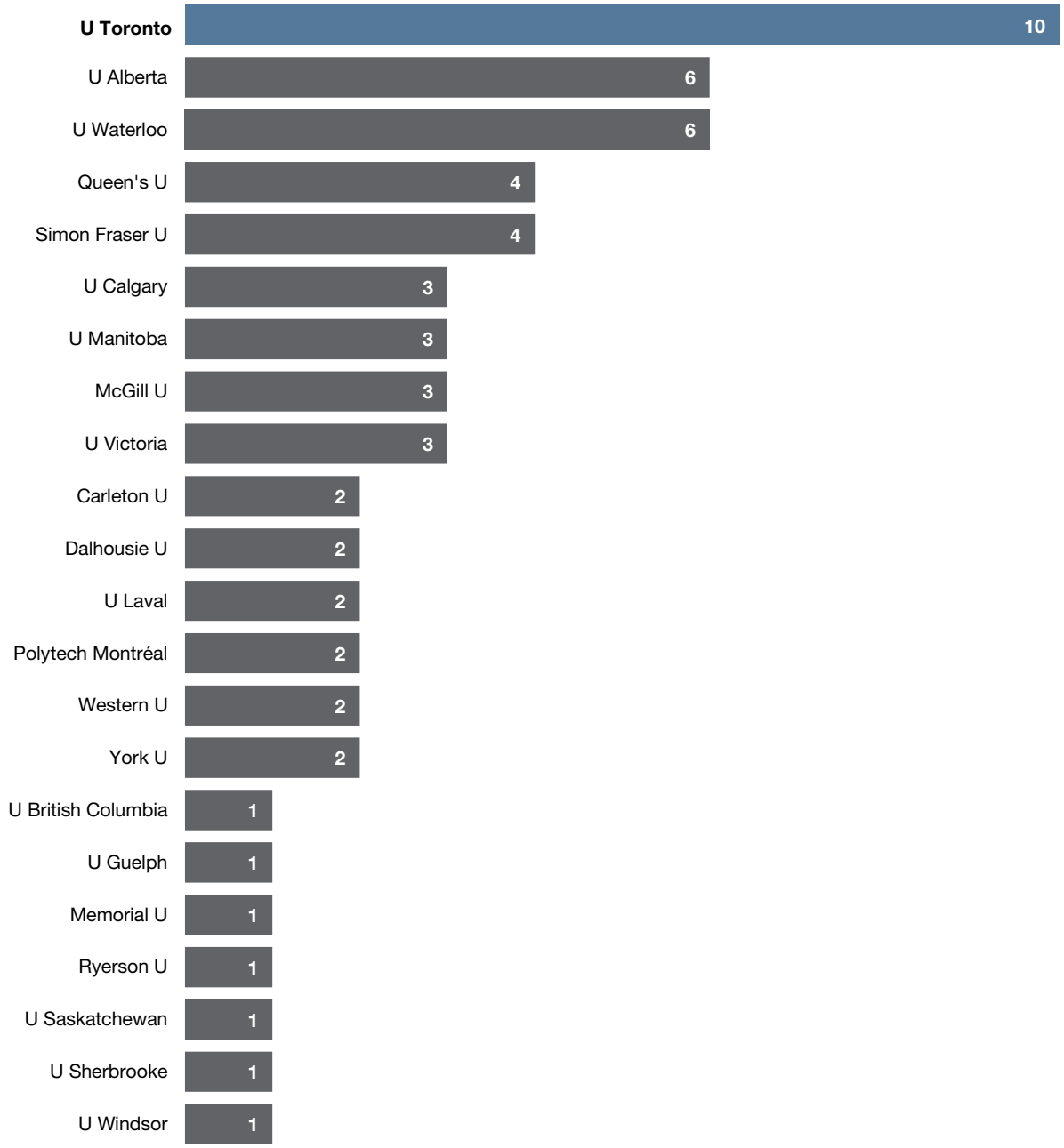
	Citations	Faculty Count	Citations per Faculty	Rank on Citations per Faculty	Citations per Publication	Rank on Citations per Publication
U Toronto	**67,882**	**261**	**259.3**	**1**	**19.8**	**1**
U Waterloo	56,248	296	172.8	4	16.0	3
U Alberta	43,457	227	182.3	3	12.5	10
U Montréal	36,968	254	83.8	14	16.4	2
McGill U	36,145	143	163.9	6	13.0	7
U British Columbia	34,100	195	172.7	5	12.6	8
Western U	20,739	108	188.5	2	14.6	4
McMaster U	18,658	156	119.1	8	11.1	11
U Calgary	17,775	159	97.1	11	10.4	15
U Ottawa	14,633	125	110.9	9	12.6	9
Laval U	13,756	162	84.9	13	10.8	13
U Saskatchewan	13,382	87	152.8	7	14.1	5
Queens U	11,445	127	48.4	15	10.5	14
Dalhousie U	10,267	104	92.5	12	13.2	6
U Manitoba	9,554	85	102.5	10	11.0	12

Figure 5.7 Summary of Major International, National and Provincial Awards and Honours, 2010 to 2019

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
International										
AAAS Fellowships (Engineering Section)	6	5	3			1	4	1		
MIT Top 35 Under 35			1					1		
National Academy of Inventors			1						1	
Royal Academy of Engineering			1						1	
Royal Society, U.K.										1
U.S. National Academies*	1	1			1		1			
National										
Brockhouse Prize							1			
Canadian Academy of Engineering Fellowship	8	1	7	6	3	5	5	5	3	2
Engineering Institute of Canada Fellowship	3	3	3	3	3	2	3	1	1	3
Engineering Institute of Canada Awards	1	2	1	2		1	1	2		1
Engineers Canada Awards	3		1	1	1	1		1	1	1
Governor General's Innovation Award								1	1	
Killam Research Fellowship*	2									
Killam Prize*					1		1	1		
Manning Innovation Award					1					
Order of Canada								2	1	
Royal Society of Canada Fellowship*	2	4	3		2	2	1	2		2
Royal Society of Canada College of New Scholars, Artists and Scientists					1	1	1	1	1	
Steacie Fellowship*			2	1	1	1	1			
Steacie Prize*			1					1		
Synergy Award for Innovation			1							
Provincial										
Ontario Professional Engineers Awards	4	5	3	2	2	1	2	3	1	3
OCUFA Teaching Award	1					1	1			
Order of Ontario	1	1							1	
Total	**32**	**22**	**26**	**15**	**16**	**16**	**22**	**22**	**12**	**13**

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 International Awards Received by U of T Engineering Compared to Other Canadian Engineering Faculties, 2019**

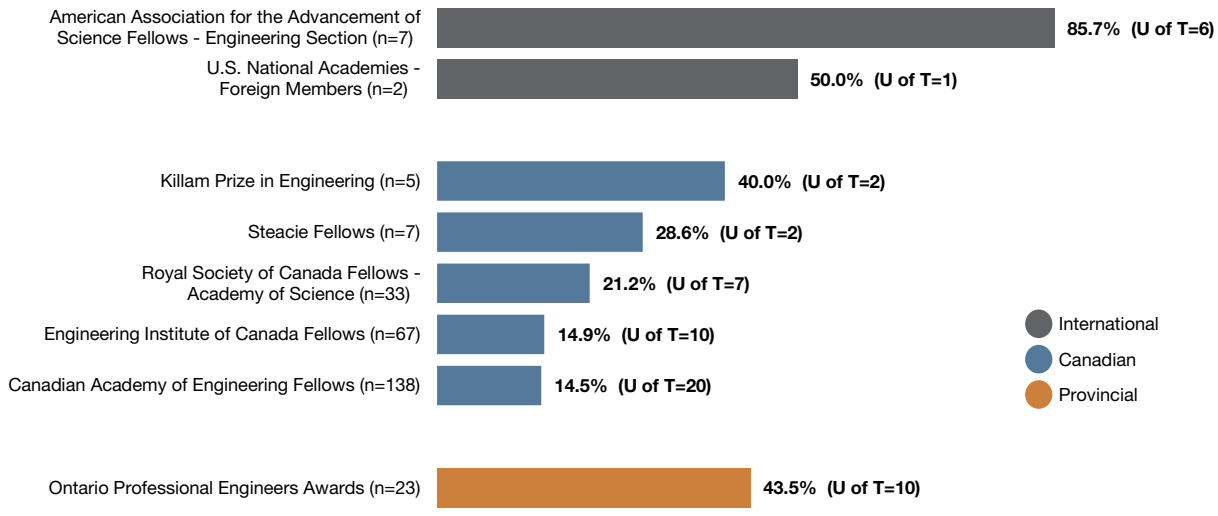


Note 5.8a, b: Data shown are by calendar year (January to December) and include faculty award recipients only. The following major awards are included: International — American Association for the Advancement of Science Fellowship (Engineering Section), MIT Top 35 under 35, the National Academy of Inventors,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

Figure 5.8b Percentage of Engineering Faculty and Total Major Awards Received in Canadian Engineering Faculties, 2019

	Percentage of Total Full Time Equivalent Engineering Faculty in Canada	Percentage of Total Major Awards Received by Engineering Faculties
U Toronto	**5.6%**	**16.4%**
U Alberta	5.1%	9.8%
U Waterloo	6.9%	9.8%
Queen's U	5.0%	6.6%
Simon Fraser U	0.7%	6.6%
U Calgary	3.9%	4.9%
U Manitoba	2.0%	4.9%
McGill U	4.7%	4.9%
U Victoria	1.6%	4.9%
Carleton U	3.5%	3.3%
Dalhousie U	2.4%	3.3%
U Laval	3.4%	3.3%
Polytech Montréal	9.4%	3.3%
Western U	2.3%	3.3%
York U	1.5%	3.3%
U British Columbia	4.2%	1.6%
U Guelph	1.3%	1.6%
Memorial U	2.0%	1.6%
Ryerson U	2.7%	1.6%
U Saskatchewan	1.9%	1.6%
U Sherbrooke	3.0%	1.6%
U Windsor	1.9%	1.6%

Figure 5.9 Number of Awards Received by U of T Engineering Faculty Compared to Other Canadian Engineering Faculties 2015 to 2019



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, 2019–2020**

Level	Organization	Award	Recipient
International	American Institute of Medical and Biomedical Engineering	Fellow	Yu Sun (MIE)
International	American Society of Mechanical Engineers	Fellow	Nasser Ashgriz (MIE)
International	American Society of Mechanical Engineers	Fellow	Aimy Bazylak (MIE)
International	Institute of Electrical and Electronics Engineers	Fellow	Vaughn Betz (ECE)
International	Institute of Electrical and Electronics Engineers	Fellow	Shahrokh Valaee (ECE)
International	Institute of Electrical and Electronics Engineers Antennas and Propagation Society	Distinguished Achievement Award	George Eleftheriades (ECE)
International	Institute of Electrical and Electronics Engineers Professional Communications Society	Ronald S. Blicq Award for Distinction in Technical Communication Education	Robert Irish (ISTEP)
International	Institute of Electrical and Electronics Engineers Robotics and Automation Society	Early Academic Career Award in Robotics and Automation	Eric Diller (MIE)
International	International Federation of Automatic Control	Giorgio Quazza Medal	Murray Wonham (ECE)
International	National Academy of Engineering (U.S.)	International Member	Michael Sefton (ChemE, BME)
National	Canadian Academy of Engineering	Fellow	Milos Popovic (BME)
National	Canadian Academy of Engineering	Fellow	David Sinton (MIE)
National	Canada Council for the Arts	Killam Prize in Engineering	Ted Sargent (ECE)
National	Canada Council for the Arts	Killam Research Fellowship	Milica Radisic (BME, ChemE)
National	Canadian Society for Chemical Engineering	R.S. Jane Memorial Award	Levente Diosady (ChemE)
National	Canadian Society for Civil Engineering	A.B. Sanderson Award	Jeffrey Packer (CivMin)
National	Canadian Society for Civil Engineering	Fellow	Paul Gauvreau (CivMin)
National	Canadian Society for Civil Engineering	Sandford Fleming Award	Amer Shalaby (CivMin)
National	Canadian Society for Mechanical Engineering	Fellow	Xinyu Liu (MIE)
National	Engineers Canada	Gold Medal Award	Cristina Amon (MIE)
National	Engineering Institute of Canada	Fellow	Michael Carter (MIE)
National	Engineering Institute of Canada	Fellow	Nazir Kherani (ECE, MSE)
National	Engineering Institute of Canada	Fellow	Douglas Reeve (ChemE)
National	Engineering Institute of Canada	Fellow	Craig Simmons (MIE, BME)
National	Royal Society of Canada	Fellow	Zheng-Hong Lu (MSE)
National	Royal Society of Canada	Fellow	Yu Sun (MIE)
National	Women's Executive Network	Canada's Most Powerful Women — Top 100	Cristina Amon (MIE)
Regional	Ontario Professional Engineers Awards	Engineering Excellence Medal	Goldie Nejat (MIE)
U of T	U of T	Joan E. Foley Quality of Student Experience Award	Jason Bazylak (MIE)
U of T	U of T	McLean Award	Natalie Enright Jerger (ECE)
U of T	U of T	President's Impact Award	Tom Chau (BME)
U of T	U of T	President's Teaching Award	Micah Stickel (ECE)
U of T	U of T	Vivek Goel Faculty Citizenship Award	Cristina Amon (MIE)

Figure 5.11a **U of T Engineering Staff and Faculty Awards, 2019–2020**

Type	Award	Recipient
Administrative Staff Awards	Harpreet Dhariwal Emerging Leader Award	Nini Chen (ECE)
Administrative Staff Awards	Barbara McCann Quality of Student Experience Award for Frontline Staff	Shayni Curtis-Clarke (CivMin)
Administrative Staff Awards	Quality of Student Experience Award for Behind the Scenes Staff	David Duong (Office of the Dean)
Administrative Staff Awards	Agnes Kaneko Citizenship Award	Karen Irving (ECE)
Administrative Staff Awards	Innovation Award	Afshin Poraria (ECE)
Administrative Staff Awards	Catherine Gagne Sustained Excellence in Leadership Award	Jaro Pristupa (ECE)
Research Awards	McCharles Prize for Early Career Research Distinction	Gisele Azimi (ChemE, MSE)
Research Awards	McCharles Prize for Early Career Research Distinction	Eric Diller (MIE)
Research Awards	Safwat Zaky Research Leader Award	Eric Miller (CivMin)
Research Awards	Safwat Zaky Research Leader Award	Farid Najm (ECE)
Teaching Awards	Early Career Teaching Award	Amy Bilton (MIE)
Teaching Awards	Early Career Teaching Award	Elodie Passeport (CivMin, ChemE)
Teaching Awards	Faculty Teaching Award	Timothy Chan (MIE)
Teaching Awards	Sustained Excellence in Teaching Award	Mark Kortschot (ChemE)

Figure 5.11b **Engineering Alumni Network Awards, 2019**

Award	Recipient
Engineering Alumni Medal	Levente Diosady (ChemE 6T6, MASc 6T8, PhD 7T2)
Engineering Alumni Hall of Distinction Award	Deborah Goodings (CivE 7T5)
Engineering Alumni Hall of Distinction Award	John A. MacDonald (ElecE 7T9)
Engineering Alumni Hall of Distinction Award	Shawn Qu (MSE PhD 9T5)
Engineering Alumni Hall of Distinction Award	Bob Simmonds (EngSci 7T5)
Engineering Alumni Hall of Distinction Award	Jeanette Southwood (ChemE 8T6, MASc 8T8)
2T5 Mid-Career Achievement Award	Maryam Shanechi (EngSci 0T4)
7T6 Early Career Award	Holly Johnson (MechE 1T0)
Malcolm F. McGrath Alumni Achievement Award	James Courtney (EngSci 6T6, Physics MSc. 1967, Physics PhD 1971, MBA 1985)
Honourary Member of the EAN	Laura C. Fujino
L.E. (Ted) Jones Award of Distinction	Robert Bazzocchi (EngSci 1T9)
L.E. (Ted) Jones Award of Distinction	Emma Sexton (IndE 1T9)

CHAPTER 6
ADVANCEMENT & COMMUNICATIONS

This rendering shows the vision for the Sustainability Lab, a new facility to be constructed on the roof of the Wallberg building.

IMAGE COURTESY BAIRD SAMPSON NEUERT ARCHITECTS

FACTS & FIGURES

$17.6 M

Total philanthropic support generated in 2019–2020.

98.6 M

Total impressions generated by media stories mentioning U of T Engineering in 2019–2020.

200,673

Unique visitors to the U of T Engineering News website in 2019–2020.

31,189

Total followers across @uoftengineering Facebook, Instagram, Twitter and LinkedIn accounts.

Figure 6.1a **Philanthropic Support, 2019–2020**

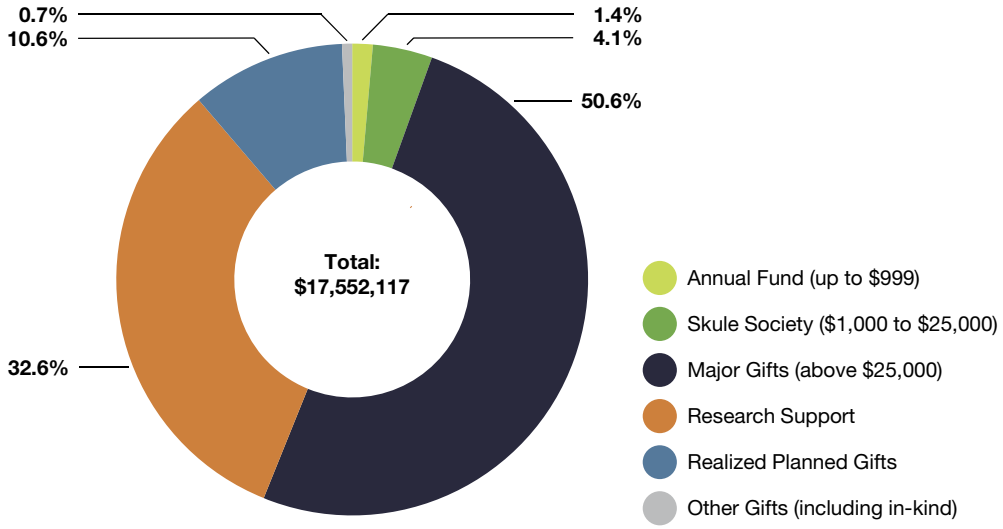
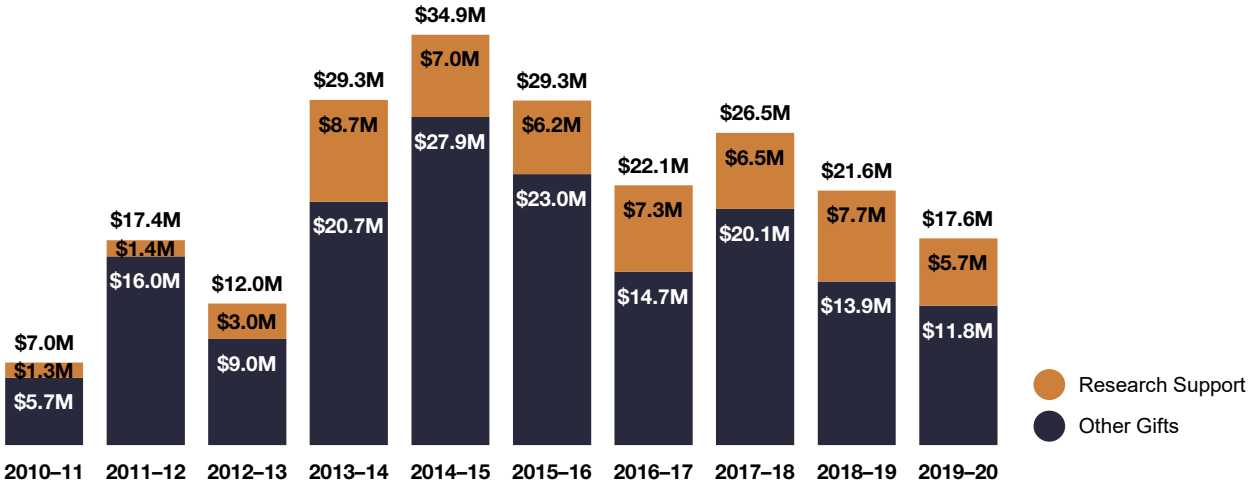


Figure 6.1b **Philanthropic Support, 2010–2011 to 2019–2020**



Data in this chapter are presented by fiscal year, May 1, 2019 to April 30, 2020.

Figure 6.1c **Gift Designations, 2019–2020**

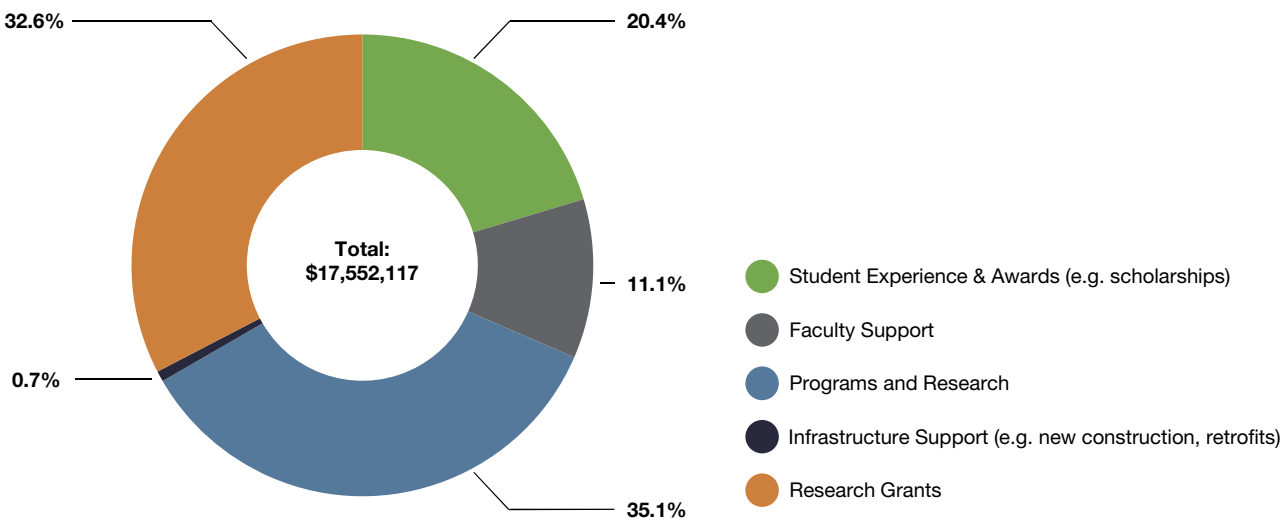


Figure 6.1d **Engagement on U of T Engineering CONNECT, 2019–2020**

Category	Members	Proportion of Alumni
Alumni members	7,348	100%
Alumni members aged 35 and younger	5,143	70.0%
Alumni in senior leadership positions	1,694	23.0%
Alumni who have indicated they are willing to help mentor current students	5,634	76.7%

Note 6.1d: Data are as of April 30, 2020. The total CONNECT membership of 9,948 includes 2,600 students, staff and faculty.

Figure 6.2a **U of T Engineering Media Stories and Impressions, May 2019 to April 2020**

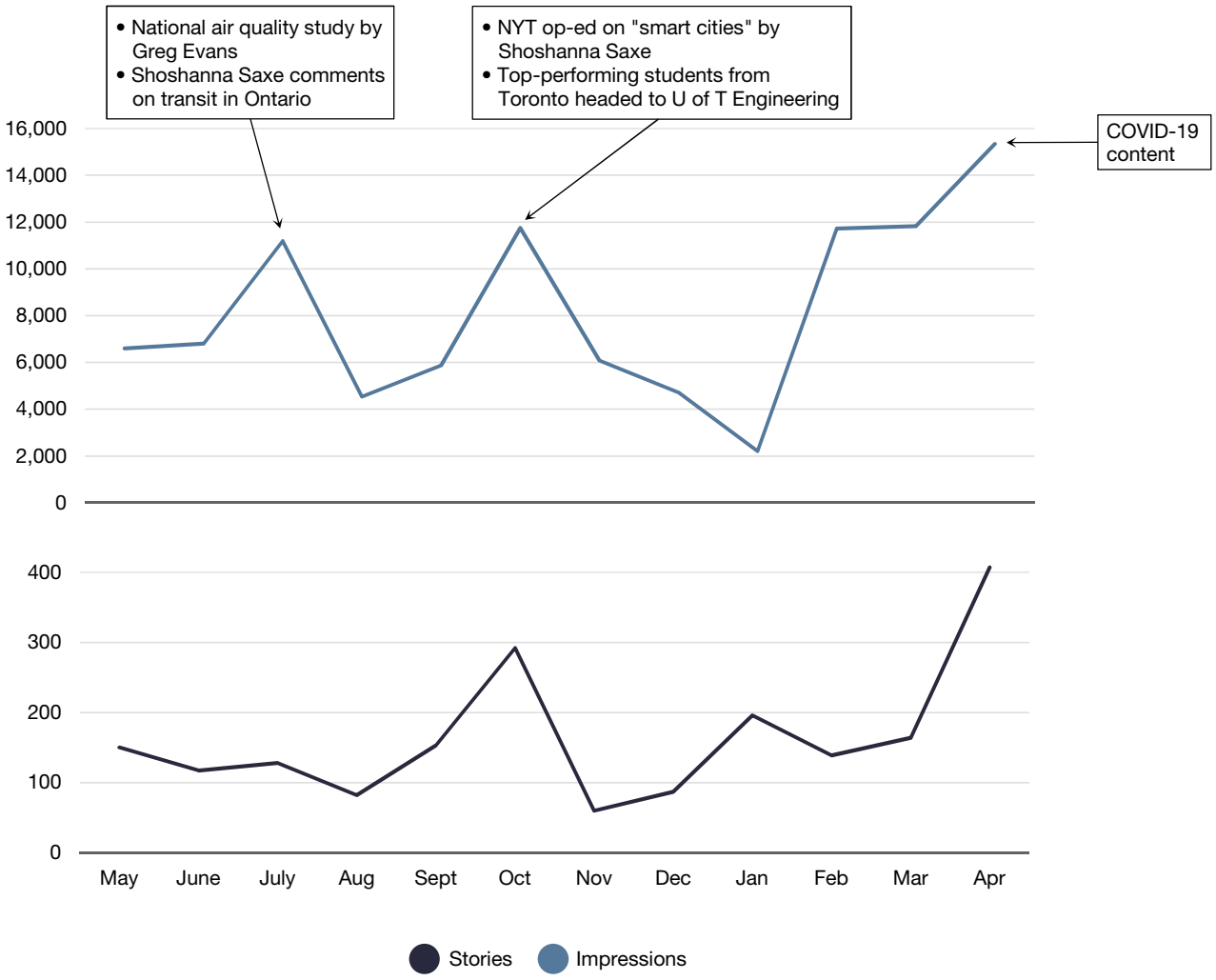


Figure 6.2b **Proportion of U of T Engineering Impressions by Academic Area, 2019–2020**

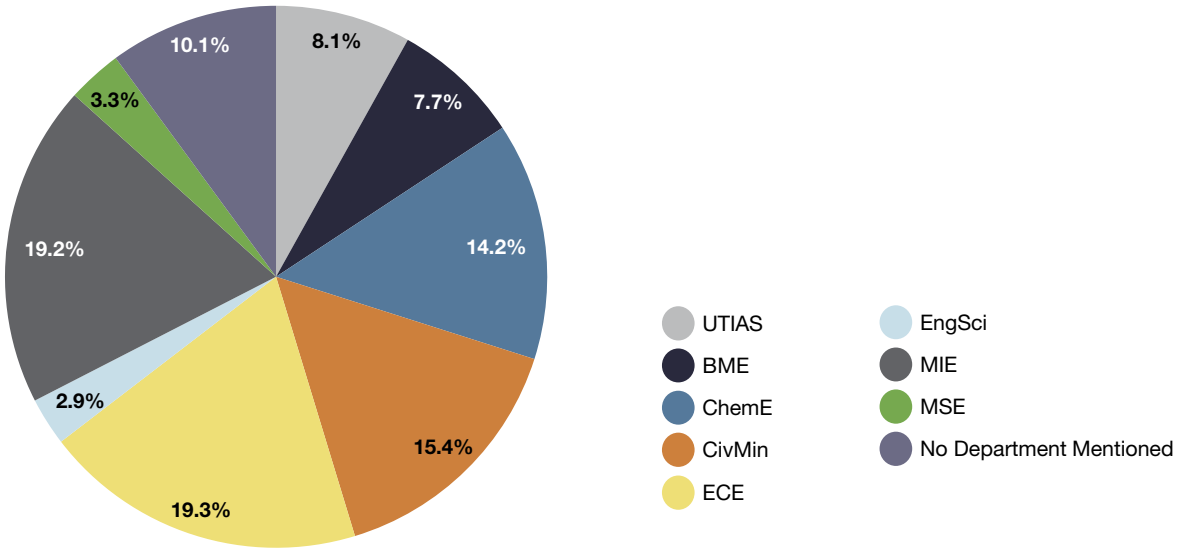
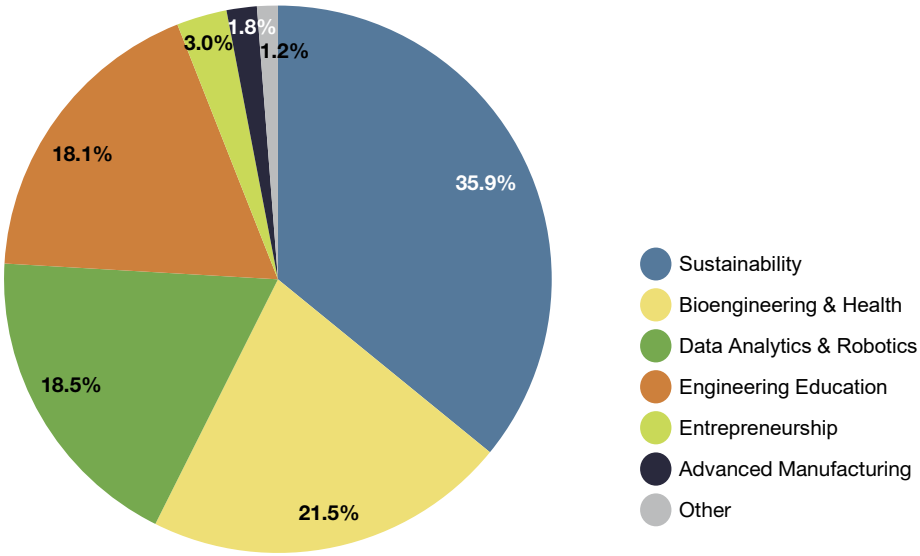


Figure 6.2c **Proportion of U of T Engineering Impressions by Strategic Priority Area, 2019–2020**



Note 6.2b: Media impressions are a measure of impact reflecting the number of people who may have read, viewed or consumed a piece of content based on audience data for the outlet. 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 Stories by Outlet Location, 2019–2020**

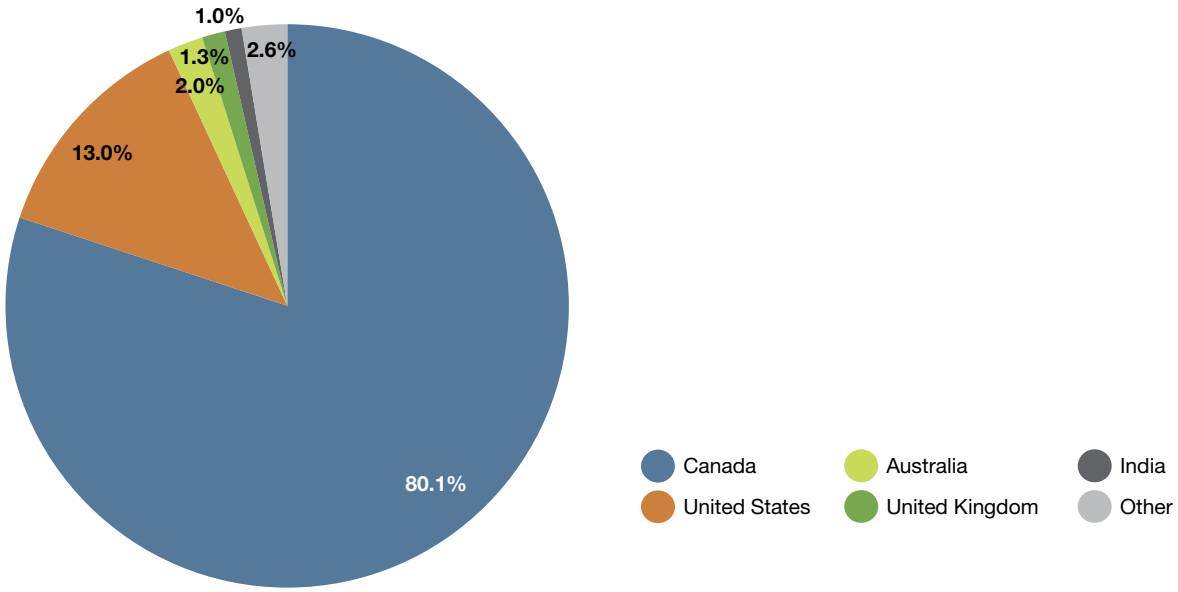
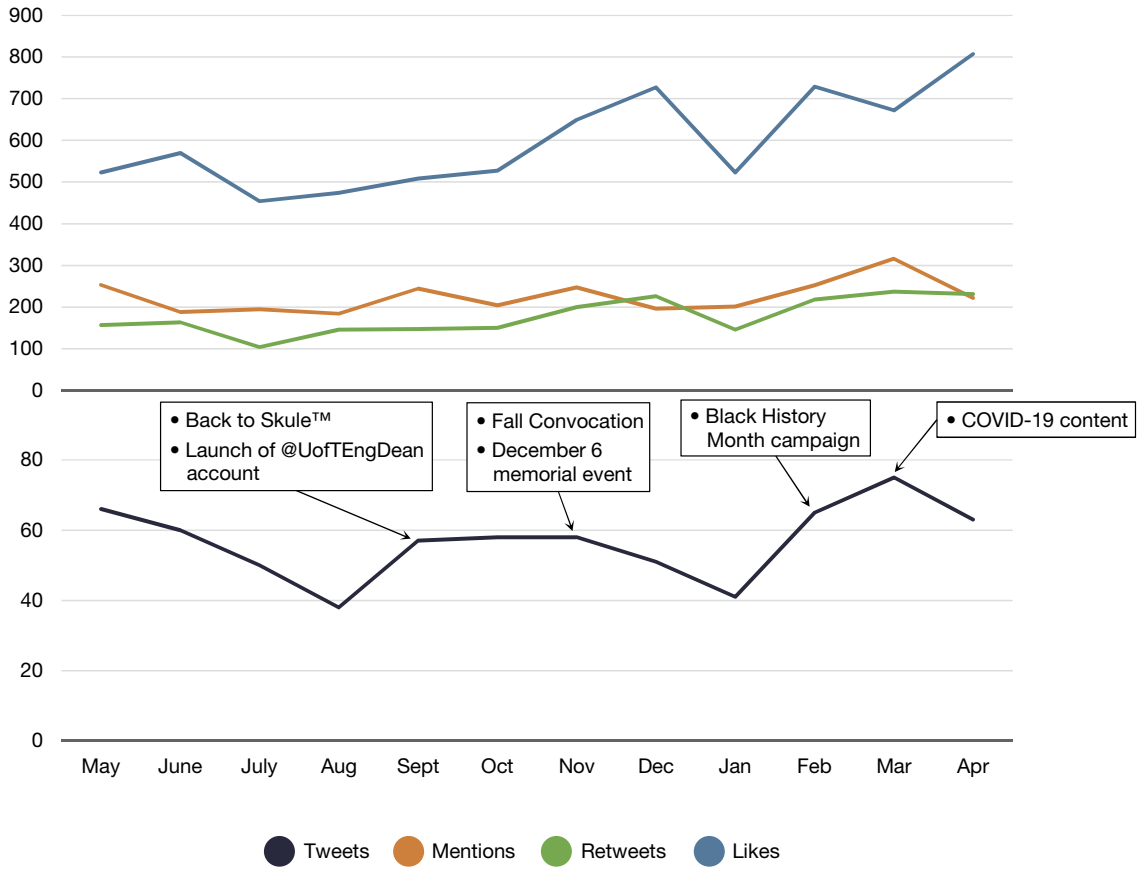


Figure 6.3a **Twitter Statistics: Tweets, Mentions, Retweets, Likes, May 2019 to April 2020**



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: Posts, Comments, Shares, Reactions, May 2019 to April 2020**

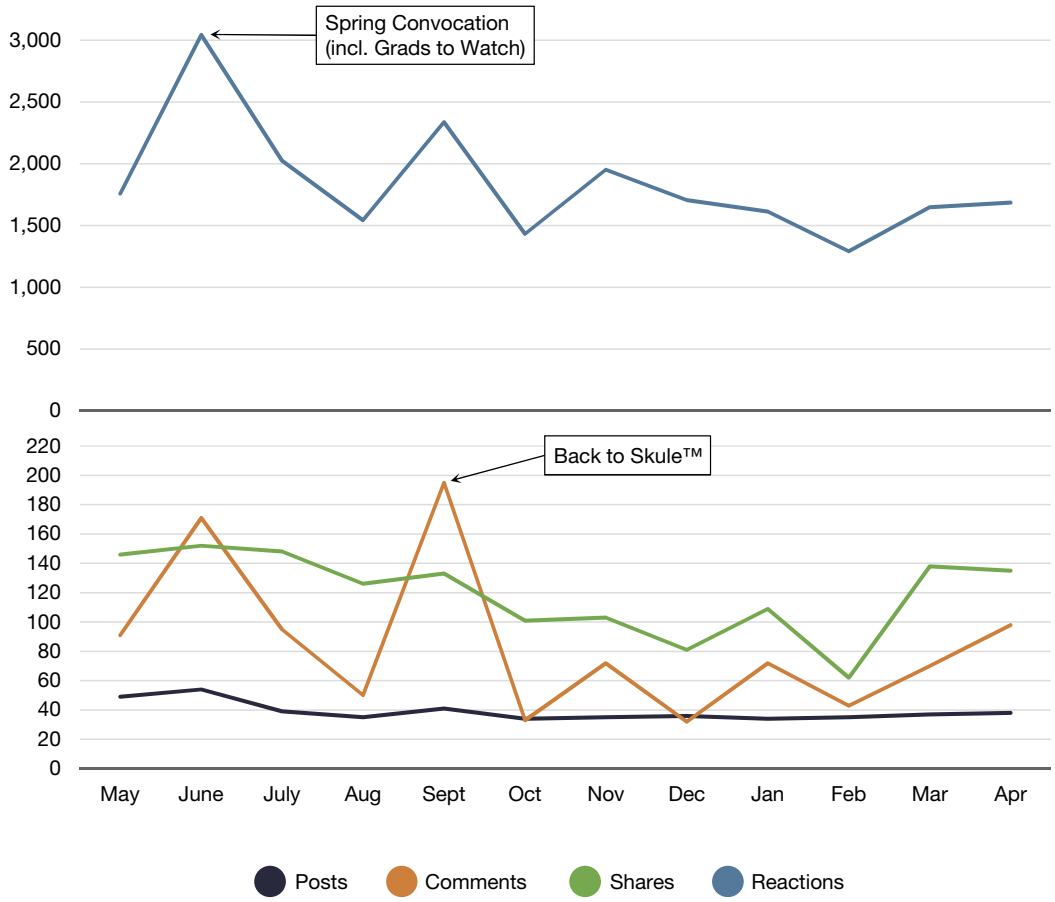


Figure 6.3c **Instagram Statistics: Posts, Comments, Likes, May 2019 to April 2020**

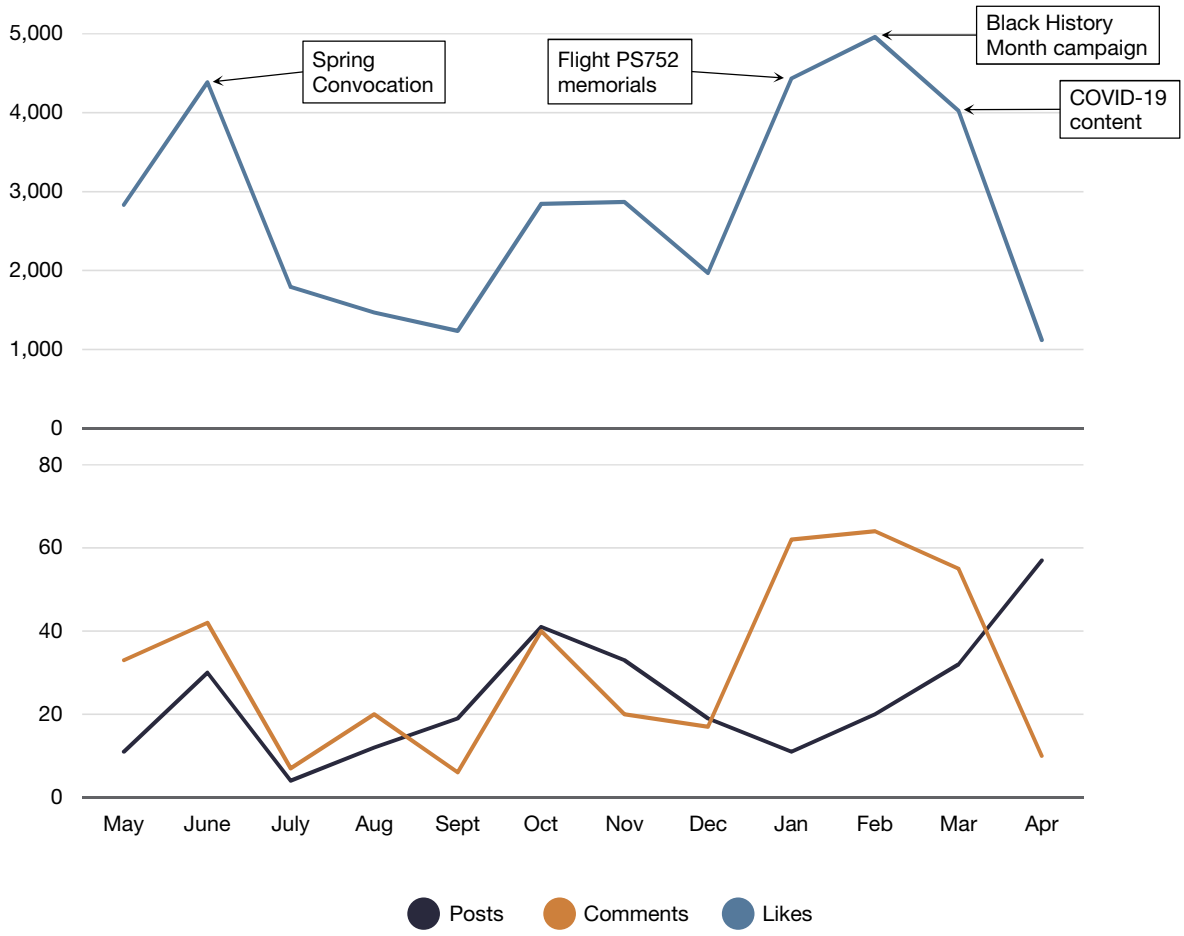


Figure 6.4 **Summary of Analytics for U of T Engineering Faculty Site and U of T Engineering News Site, 2019–2020**

	Faculty site (engineering.utoronto.ca)	U of T Engineering News site (news.engineering.utoronto.ca)
Pageviews	390,196	309,113
Unique visitors	168,976	200,673
Average number of pageviews per session	1.46	1.25
Average amount of time spent on site	1:33 min	0:37 min
Cities of origin	5,578	10,109
Countries of origin	201	209

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, 2019–2020

Social Media Platform	Unique Users	Sessions
Facebook	22,395	28,258
Twitter	4,543	6,514
LinkedIn	3,440	3,970
Instagram	728	783

Figure 6.6 Summary of Analytics for Discover Engineering, You Belong Here and Graduate Studies Sites, 2019–2020

	Discover Engineering (discover.engineering.utoronto.ca)	You Belong Here (news.engineering.utoronto.ca)	Graduate Studies (gradstudies.engineering.utoronto.ca)
Pageviews	1,047,798	29,569	240,726
Unique visitors	308,507	5,927	67,952
Average number of pageviews per session	2.24	2.70	2.13
Average amount of time spent on site	2:09 min	2:31 min	2:15 min
Cities of origin	7,453	695	3,035
Countries of origin	216	92	178

Note 6.5: U of T Engineering's LinkedIn account launched in January 2020.

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 Stories on the Engineering News and U of T News Websites, 2019–2020**

Page Title	Date Posted	Pageviews (U of T Engineering News)	Pageviews (U of T News)	Total
FLATTEN: Engineering students create free online map to help track the spread of COVID-19	March 25, 2020	23,845	37,704	**61,549**
Out of thin air: New electrochemical process shortens the path to capturing and recycling CO2	May 29, 2019	56,133	752	**56,885**
Air filtration and COVID-19: Indoor air quality expert explains how to keep you and your building safe	March 20, 2020	14,405	--	**14,405**
Remembering Mojtaba Abbasnezhad	January 10, 2020	2,669	7,637	**10,306**
How does COVID-19 invade our bodies so easily? U of T Engineering team uses 'organ-on-a-chip' model to find out	April 8, 2020	3,477	3,761	**7,238**
This ultra-thin hot water bottle could help ease menstrual pain	August 1, 2019	1,761	4,217	**5,978**
Grads to Watch 2019	June 5, 2019	3,207	2,234	**5,441**
Can ultraviolet light help hospitals disinfect their supply of masks and gowns? U of T Engineering UV expert explains	April 6, 2020	300	5,061	**5,361**
As COVID-19 protective supplies dwindle, U of T Engineering grad students are stitching face masks for Toronto	April 3, 2020	3,018	2,074	**5,092**
Black History Month: Reflections from U of T Engineering	January 31, 2020	1,809	2,804	**4,613**
Handheld 3D skin printer demonstrates accelerated healing of large, severe burns	February 4, 2020	2,514	1,345	**3,859**
COVID-19 and the 'what if machine': How simulations and models help predict pandemic spread	March 19, 2020	2,857	593	**3,450**
Won't crack under pressure: stress test reveals graphene can withstand more than one billion cycles before breaking	January 28, 2020	112	3,009	**3,121**
Engineering Holiday Gift Guide	December 11, 2019	1,455	1,527	**2,982**
Can self-driving cars handle a Canadian winter? We're about to find out	February 3, 2020	1,465	1,505	**2,970**
From Malaysia to Toronto: Meet your incoming class of 2T3	August 29, 2020	1,288	1,413	**2,701**
Oil-adsorbing sponge could prevent environmental contamination	December 16, 2019	463	2,166	**2,629**
We Remember: U of T Engineering community reflects on the legacy of December 6	December 4, 2020	1,457	1,026	**2,483**
Four startups to watch from Hatchery Demo Day 2019	September 6, 2019	1,226	1,163	**2,389**
U of T Engineering team programs single-board computers to remotely monitor COVID-19 patients and protect health care workers	April 16, 2020	1,018	1,208	**2,226**
Fourteen engineering professors and staff members honoured for excellence by the Faculty	April 22, 2020	2,132	--	**2,132**
National air pollution report calls out rush-hour traffic, diesel truck emissions as major areas of concern	October 30, 2019	984	1,003	**1,987**
Meet Marisa Sterling, U of T Engineering's first Assistant Dean and Director of Diversity, Inclusion and Professionalism	July 10, 2020	1,877	--	**1,877**
U of T Engineering and Caltech collaborate on pathway to carbon-neutral plastics	November 20, 2019	1,257	319	**1,576**
Researchers develop method to improve transplantation of artificial insulin-producing cells	January 17, 2020	220	1,231	**1,451**

CHAPTER 7

FINANCIAL & PHYSICAL RESOURCES

*From left, Dean Emerita **Cristina Amon,** Professor Emeritus **Ron Venter** and Dean **Chris Yip** open the revitalized entrance of the Galbraith Building in October 2019. The transformed space serves as a welcoming public area with improved accessibility.*
PHOTO: ROBERTA BAKER

FACTS & FIGURES

$234.1 M

Total revenue, 2019–2020.

18

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

$112.3 M

Net revenue, 2019–2020.

89

Laboratory facilities across U of T Engineering upgraded through the Lab Innovation for Toronto (LIFT) project.

Figure 7.1 **Total Revenue, 2010–2011 to 2019–2020**

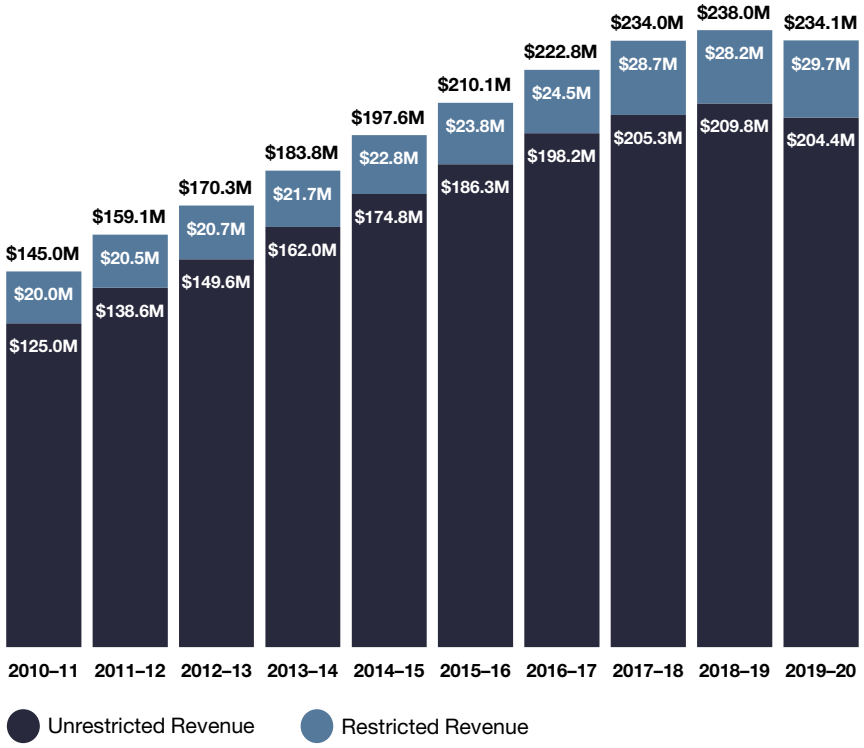
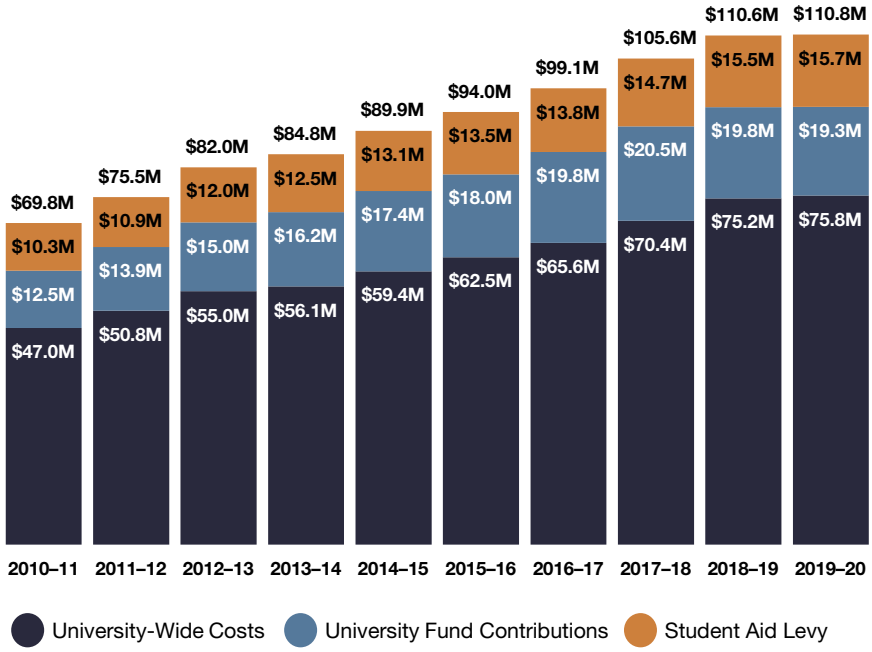


Figure 7.2 **Total Central Costs, 2010–2011 to 2019–2020**



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

Figure 7.3 **Budget Data, 2010–2011 to 2019–2020**

	2010–11	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20
Unrestricted Revenue	$124,966,518	$138,597,605	$149,615,656	$162,048,175	$174,819,446	$186,298,686	$198,246,669	$205,332,615	$209,797,947	$204,361,688
Restricted Revenue	$20,009,763	$20,483,566	$20,726,973	$21,737,177	$22,751,425	$23,766,755	$24,525,299	$28,686,839	$28,225,383	$29,712,446
Total Revenue	**$144,976,282**	**$159,081,170**	**$170,342,629**	**$183,785,352**	**$197,570,871**	**$210,065,441**	**$222,771,967**	**$234,019,454**	**$238,023,330**	**$234,074,134**
Divisional Recovery for Interdivisional Teaching						**$6,042,335**	**$5,084,764**	**$5,028,443**	**$11,067,206**	**$10,910,265**
University-Wide Costs	$47,027,056	$50,817,454	$55,028,273	$56,089,556	$59,390,462	$62,461,112	$65,553,462	$70,384,637	$75,233,388	$75,822,728
University Fund Contributions	$12,496,652	$13,859,760	$14,961,566	$16,167,220	$17,443,377	$17,985,353	$19,787,234	$20,496,107	$19,836,969	$19,309,067
Student Aid Levy	$10,313,864	$10,859,371	$11,995,084	$12,539,417	$13,093,888	$13,541,938	$13,793,571	$14,716,594	$15,542,692	$15,703,617
Total Central Costs	**$69,837,572**	**$75,536,585**	**$81,984,923**	**$84,796,193**	**$89,927,727**	**$93,988,403**	**$99,134,267**	**$105,597,337**	**$110,613,049**	**$110,835,412**
Net Revenue	**$75,138,710**	**$83,544,584**	**$88,357,706**	**$98,989,159**	**$107,643,144**	**$110,034,703**	**$118,552,936**	**$123,393,674**	**$116,343,075**	**$112,328,457**

Figure 7.4 **Revenue Sources, 2019–2020**

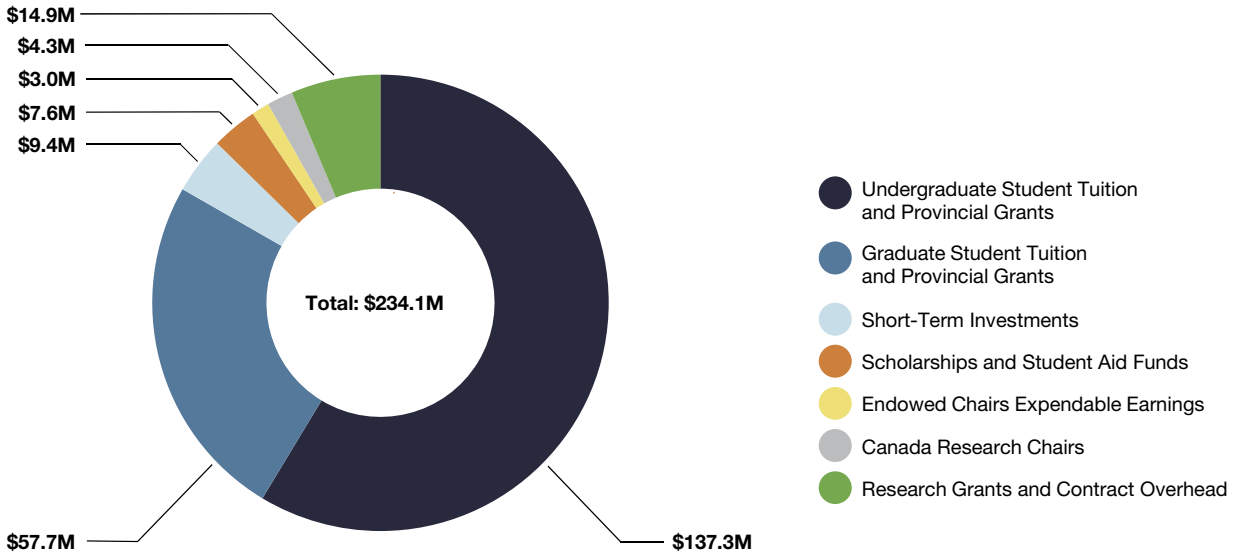


Figure 7.5 **Revenue Distribution, 2019–2020**

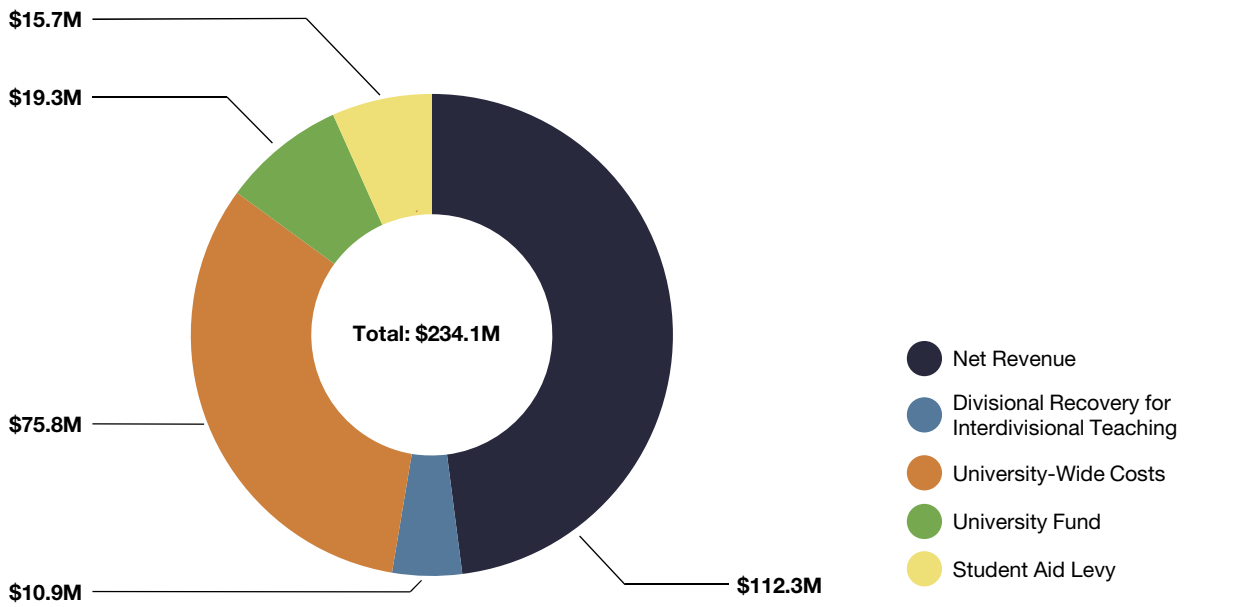


Figure 7.6 **Total Operating Budget: Breakdown by Expenses (Net of Central University Costs), 2019–2020**

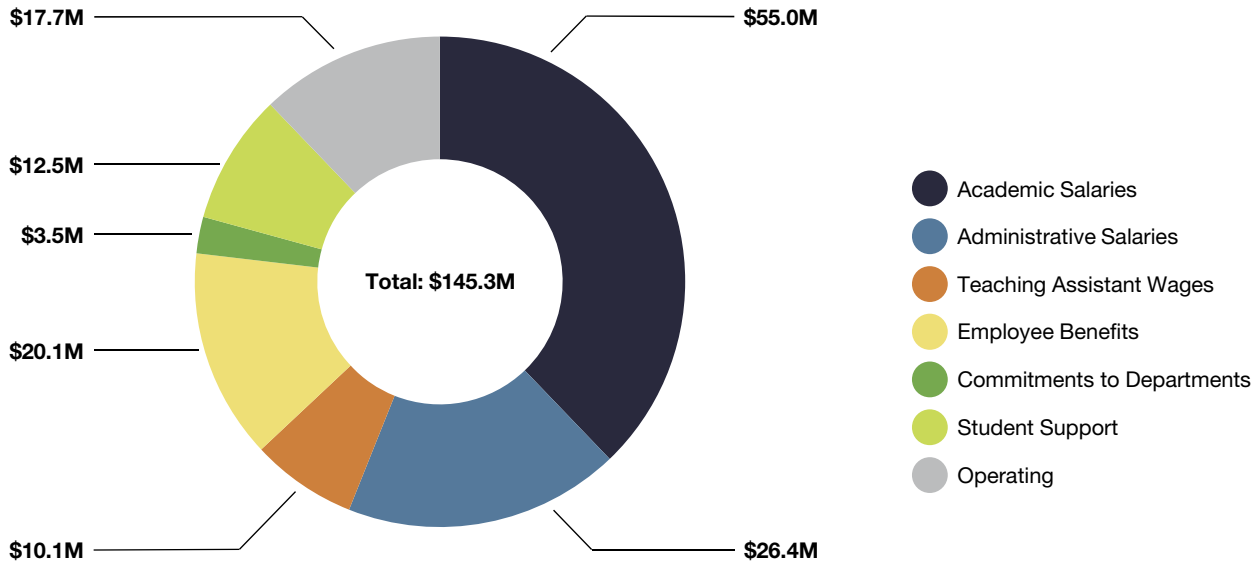


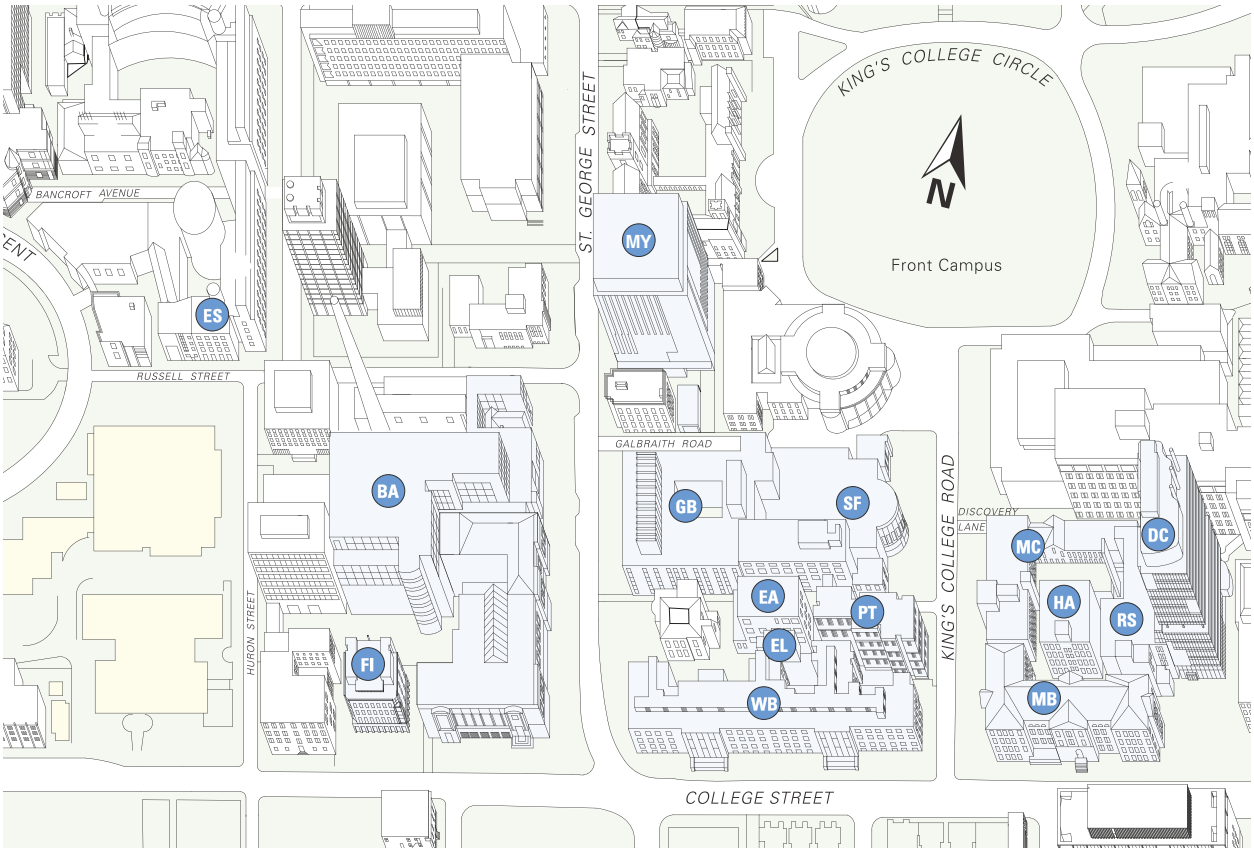
Figure 7.7 Summary of Buildings Occupied by Engineering, 2019–2020

Code	Building	Office of the Dean	EngSci	UTIAS	ChemE	CivE & MinE	ECE	BME	MIE	MSE	Total NASMs
AS	**Aerospace (Downsview)**			5,293							5,293
BA	**Bahen Centre**	1,619	561		67		5,780		1,417		9,445
DC	**Donnelly CCBR**				667			889			1,556
ES	**Earth Sciences**				164						164
EA	**Engineering Annex**	221					936			91	1,248
EL	**Electrometal**									149	149
FI	**Fields Institute**	332									332
GB	**Galbraith**	1,560				5,312	4,318				11,190
HA	**Haultain**				198	110			646	721	1,675
	MaRS West Tower						136	791	183		1,110
MB	**Lassonde Mining**					1,138		1,362	1,890	832	5,222
MC	**Mechanical Engineering**	63							5,380		5,442
MY	**Myhal Centre**	4,860									4,860
PT	**D.L. Pratt**						1,327			1,488	2,815
RS	**Rosebrugh**							799	2,096		2,895
SF	**Sandford Fleming**	766		692		1,559	3,546				6,563
WB	**Wallberg**	375			8,264		130			1,381	10,151
RM	**256 McCaul**	528									528
	Total Area	**10,324**	**561**	**5,985**	**9,361**	**8,118**	**16,174**	**3,841**	**11,613**	**4,662**	**70,638**
		70,638 NASMs (Net Assignable Square Metre)									

Figure 7.8 Selected Infrastructure Investments, 2019–2020

Projects	Description	Progress
Sustainability Research Laboratory (S-Lab)	Located on the roof of the Wallberg building, S-Lab features a 550 square metre rooftop solar array and advanced environmental sensors.	Design development is nearing completion
Gull Lake Survey Camp Bunkhouse	This new facility will house up to 96 people and includes a washroom & shower facility, common room, and new septic system.	Construction has started and will be ready for use in the summer of 2021.
Experiential Learning Hub @203 College Street	This joint collaborative career centre includes new offices for the Engineering Career Centre's Professional Experience Year (PEY) Co-op Program.	The project is expected to be complete and available for student career services in early 2022.
Canadian Centre for Research and Applications in Fluidic Technologies (C-CRAFT)	C-CRAFT is a collaborative project between U of T Engineering, the Faculty of Arts & Science, the Faculty of Medicine, the Leslie Dan Faculty of Pharmacy, and the National Research Council. It includes facilities for photolithography, scale-up fabrication and polymer processing.	Construction is underway on alterations to existing Toronto Nanofabrication Centre facilities (Bahen Centre & Pratt Building) including facilities for photolithography, scale-up fabrication and polymer processing. Design is nearing completion on a new Containment Level (CL) 2 bio-safety facility to be located in the Mechanical Engineering Building.

Figure 7.9 **The Engineering Neighbourhood**



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

APPENDIX

DATA SOURCES

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

	Faculty Leadership, 2019–2020	Information provided by the Chief Administrative Officer, Faculty of Applied Science & Engineering. A current organizational chart is also available online at www.engineering.utoronto.ca/about/office-of-the-dean/#academiclead
	Comparison of U of T Engineering with Ontario and Canada, 2018–2019	Enrolment, degrees granted and faculty data are based on the 2018 calendar year and come from the National Council of Deans of Engineering and Applied Science (NCDEAS) 2018 Resources Report, prepared by Engineers Canada and circulated to Canadian engineering deans in July 2019. An updated version of this report was not yet available at the time this Report went to print. 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 take into account 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: Selection Committees = Discovery Grants + Research Partnerships (excl CRCs & NCEs); Research Subjects = all engineering-related categories; Universities only; Fiscal Year = 2018–2019 (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 2019 calendar year (April to March).
	Comparison of U of T Engineering with St. George Campus and University of Toronto, 2019–2020	All student enrolment statistics are based on headcount for Fall 2019 from the U of T Enrolment Reporting Cube (St. George and U of T statistics do not include Toronto School of Theology). All degrees awarded statistics come from ROSI and reflect September 2019 to June 2020 dates (St. George 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 Cube, based on the 2018–2019 grant year, and exclude partner hospitals; includes all program types; data is current as of May 2020. Engineering academic staff statistics provided by the Chief Administrative Officer, Faculty of Applied Science & Engineering (based on HRIS and published lists of faculty members). Engineering administrative and technical staff statistics provided by the Manager, Finance and Budget, Faculty of Applied Science & Engineering. U of T academic and administrative staff statistics come from U of T Facts and Figures 2019, 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 2019–20 (Feb 2019), Appendix B, Schedule 4: Revenue and Expense Allocations by Division 2019–20, prepared by the Office of the Vice-Provost, Planning & Budget and available online at: www.planningandbudget.utoronto.ca/budget/reports.htm. Engineering space statistics from U of T Office of Space Management data, March 2020. U of T and St. George space statistics from U of T Facts and Figures 2019.

Chapter 1: **Undergraduate Studies**

1.1a	**Applications, Offers, Registrations, Selectivity and Yield of First-Year Undergraduates, 2010 to 2019**	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. Excludes students with special status. Registrations only are from the U of T Enrolment Reporting Cube. Cube Parameters: Faculty = Faculty of Applied Science & Engineering, All Fall Terms for 2010–2019, Degree Type = Undergraduate; Stage of Study (SESLEV) = Year 1, New Intake (NEWINTK) = Yes, Measure = Headcount.

1.1b	**Applications, Offers, Registrations, Selectivity and Yield of Domestic First-Year Undergraduates, 2010 to 2019**	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. Excludes students with special status. Registrations only are from the U of T Enrolment Reporting Cube. Cube Parameters: Faculty = Faculty of Applied Science & Engineering, All Fall Terms for 2010–2019, Degree Type = Undergraduate; Stage of Study (SESLEV) = Year 1, New Intake (NEWINTK) = Yes, Domestic / International (DOM_INTL) = Domestic; Measure = Headcount.
1.1c	**Applications, Offers, Registrations, Selectivity and Yield of International First-Year Undergraduates, 2010 to 2019**	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. Excludes students with special status. Registrations only are from the U of T Enrolment Reporting Cube. Cube Parameters: Faculty = Faculty of Applied Science & Engineering, All Fall Terms for 2010–2019, Degree Type = Undergraduate; Stage of Study (SESLEV) = Year 1, New Intake (NEWINTK) = Yes, Domestic / International (DOM_INTL) = International; Measure = Headcount.
1.2a	**Ontario Secondary School Averages of Incoming First-Year Undergraduates, 2010 to 2019**	Averages of incoming first-year students from Admissions Committee Report to Engineering Faculty Council (November).
1.2b	**Two-Year Retention Rate, 2010 to 2017**	Averages of incoming first-year students from Admissions Committee Report to Engineering Faculty Council (November). Retention rate is the proportion of students who successfully move on to second year in the fall semester following their first year.
1.3	**Incoming First-Year Undergraduates by Program, 2010–2011 to 2019–2020**	Headcount from the U of T Enrolment Reporting Cube. Excludes students with special status. Cube Parameters: Faculty = Applied Science & Engineering; All Fall Terms for 2010–2019; Degree Type = Undergraduate; New Intake (NEWINTK) = Yes; Measure = Headcount; Programs of study based on [Program] field.
1.4a	**All Undergraduates by Program, 2010–2011 to 2019–2020**	Headcount from the U of T Enrolment Reporting Cube. Includes full-time students, part-time students and students on PEY Co-op. Excludes students with special status. Cube Parameters: Faculty = Applied Science & Engineering; All Fall Terms for 2010–2019; Degree Type = Undergraduate; Stage of Study (SESLEV) = Years 1–4; Measure = Headcount; Programs of study based on [Program] field.
1.4b	**All Undergraduates by Program, Year of Study and Professional Experience Year Co-op, 2019–2020**	Headcount from the U of T Enrolment Reporting Cube. Includes full-time students, part-time students and students on PEY Co-op. Excludes students with special status. Cube Parameters: Faculty = Applied Science & Engineering; Degree Type = Undergraduate; Stage of Study (SESLEV) = Years 1–4; Fall 2019; Programs of study based on [Program] field.
1.5a	**Undergraduate Student-to-Faculty Ratios by Academic Area, 2019–2020**	Number of undergraduates from the U of T Enrolment Reporting Cube. Excludes students on PEY Co-op and students with special status. Cube Parameters: Faculty = Applied Science & Engineering; Fall 2019, Degree Type = Undergraduate; Associated Org = blank (to exclude PEY Co-op); Measure = Headcount. 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 Chief Administrative Officer, Faculty of Applied Science & Engineering and used on a slip-year basis: totals from July 2019 are used to compare with 2019–2020 student counts. Calculation includes tenured, tenure-stream and teaching-stream faculty.

1.5b	**Undergraduate Full-Time Equivalent Student-to-Faculty Ratios, 2010–2011 to 2019–2020**	Number of undergraduates from the U of T Enrolment Reporting Cube. Excludes students on PEY Co-op and students with special status. Cube Parameters: Faculty = Applied Science & Engineering; Fall 2019, Degree Type = Undergraduate; Associated Org = blank (to exclude PEY Co-op); Measure = Headcount. Does not include teaching done for Engineering by extra-divisional units (especially Arts & Science departments). Faculty counts are provided by the Chief Administrative Officer, Faculty of Applied Science & Engineering and used on a slip-year basis: totals from July 2019 are used to compare with 2019–2020 student counts. Calculation includes tenured, tenure-stream and teaching-stream faculty.
1.6a	**Undergraduate Participation in Summer Research Opportunities, 2011 to 2020**	Information regarding Canadian placements provided by the Registrar's Office, Faculty of Applied Science & Engineering. International placement statistics provided by the U of T Centre for International Experience.
1.6b	**Undergraduate Participation in Summer Research Opportunities by Academic Area, 2020**	Information regarding Canadian placements provided by the Registrar's Office, Faculty of Applied Science & Engineering. 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, 2010–2011 to 2019–2020**	Statistics provided by the Engineering Career Centre, Faculty of Applied Science & Engineering.
1.7b	**Number of Canadian and International PEY Co-op Positions, 2010–2011 to 2019–2020**	Statistics provided by the Engineering Career Centre, Faculty of Applied Science & Engineering.
1.7c	**Number of PEY Co-op Employers, 2010–2011 to 2019–2020**	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, 2010–2011 to 2019–2020**	Award data from the U of T Student Accounts Cube. Parameters: Faculty = Applied Science & Engineering; Transaction Type = Income / Awards – Undergraduate; Needs-based Awards; Level of Instruction = Undergraduate; Enrolment Status = All (e.g. FINCA, CANC, etc.); Stage of Study (SESLEV) = 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, 2010–2011 to 2019–2020**	Award data from the U of T Student Accounts Cube. Parameters: Faculty = Applied Science & Engineering; Transaction Type = Income / Awards – Undergraduate; Needs-based Awards; Level of Instruction = Undergraduate; Enrolment Status = All (e.g. incl. FINCA, CANC, etc.); Stage of Study (SESLEV) = 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, 2010–2011 to 2019–2020**	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, 2018**	U of T and Canadian statistics are based on the 2018 calendar year and come from Engineers Canada Report of Enrolment & Degrees Granted *(Canadian Engineers for Tomorrow, Trends in Engineering Enrolment and Degrees Awarded 2014-2018),* released November 2019, and available online at: engineerscanada.ca/reports/enrolment-and-degrees-awarded-report. American statistics used to calculate North American percentages are based on the 2018–2019 academic year and come from the 2019 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, 2011 to 2020**	Data provided by the Office of the Faculty Registrar, Faculty of Applied Science & Engineering. Based 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 2015 to Winter 2020**	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 2020 Winter term results.
1.12a	**Number of Completed Minors and Percentage of Graduating Students Completing an Engineering Minor, 2010–2011 to 2019–2020**	Information provided by the Cross-Disciplinary Programs Office, Faculty of Applied Science & Engineering.
1.12b	**Students Graduating with an Engineering Business Minor or Certificate, 2011–2012 to 2019–2020**	Information provided by the Cross-Disciplinary Programs Office, Faculty of Applied Science & Engineering.

Chapter 2: **Graduate Studies**

2.1a	**Domestic and International MASc Students: Applications, Offers, Registrations, Selectivity and Yield, 2010–2011 to 2019–2020**	All data from ROSI download: 4BEG (Admissions Statistics).
2.1b	**Domestic and International PhD Students: Applications, Offers, Registrations, Selectivity and Yield, 2010–2011 to 2019–2020**	All data from ROSI download: 4BEG (Admissions Statistics). Students who have fast-tracked from MASc programs into PhD programs are calculated separately (see Fig. 2.6a) but have been included in this figure as applications, offers and admissions in order to more accurately reflect total PhD student intake.
2.1c	**Domestic and International MEng and MHSc Students: Applications, Offers, Registrations, Selectivity and Yield, 2010–2011 to 2019–2020**	All data from ROSI download: 4BEG (Admissions Statistics).

2.2a	**Graduate Students by Degree Type, 2010–2011 to 2019–2020**	Enrolment counts are from the U of T Enrolment Reporting Cube and exclude special status students. Cube Parameters: Faculty = Applied Science & Engineering; All Fall Terms for 2010–2019; Measure = Headcount.
2.2b	**Graduate Enrolment by Full-Time Equivalent (FTE) and Headcount (HC) by Academic Area, 2010–2011 to 2019–2020**	Enrolment counts are from the U of T Enrolment Reporting Cube and exclude special status students. Cube Parameters: Faculty = Applied Science & Engineering; Measure = Headcount or Total FTE (UAR). Headcounts are reported for all fall terms from 2010–2019. FTEs are counted by academic year as reported in the cube (May to April).
2.3a	**Undergraduate and Graduate Full-Time Equivalent Student-to-Faculty Ratios, 2010–2011 to 2019–2020**	Number of FTE undergraduates is from the U of T Enrolment Reporting Cube, excluding students on PEY Co-op and students with special status. Cube Parameters: Faculty = Applied Science & Engineering; Fall terms 2010–2019; Associated Org = blank (to exclude PEY Co-op); Degree Type = Undergraduate; Measure = Headcount. To calculate Undergraduate FTEs, part-time students are counted as 0.3 FTE. Number of FTE graduate students is from the U of T Enrolment Reporting Cube. Cube Parameters: Faculty = Applied Science & Engineering; Fall terms 2010–2019; Measure = Total FTE (UAR); excludes students with special status. Number of faculty included in the calculation is provided by the Chief Administrative Officer, Faculty of Applied Science & Engineering and used on a slip-year basis: totals from July 2019 are used to compare with 2019–2020 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, 2019–2020**	Number of FTE graduate students is from the U of T Enrolment Reporting Cube. Cube Parameters: Faculty = Applied Science & Engineering; Fall 2019; Measure = Total FTE (UAR). Includes all degree types but excludes students with special status. 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 Chief Administrative Officer, Faculty of Applied Science & Engineering, and are used on a slip-year basis: totals from July 2019 are used to compare with 2019–2020 student counts. Includes tenured and tenure-stream faculty only.
2.3c	**Ratio of Undergraduate to Graduate Full-Time Equivalent Students, 2010–2011 to 2019–2020**	Number of FTE undergraduates is from the U of T Enrolment Reporting Cube, excluding students on PEY Co-op and students with special status. Cube Parameters: Faculty = Applied Science & Engineering; Fall terms 2010–2019; Associated Org = blank (to exclude PEY Co-op); Degree Type = Undergraduate; Measure = Headcount. To calculate Undergraduate FTEs, part-time students are counted as 0.3 FTE. Number of FTE graduate students is from the U of T Enrolment Reporting Cube. Cube Parameters: Faculty = Applied Science & Engineering; Fall terms 2010–2019; Measure = Total FTE (UAR); Includes all degree types but excludes students with special status.
2.4a	**Graduate Student Funding by Category, 2009–2010 to 2018–2019**	Data from the U of T Student Accounts Reporting Cube. Parameters: Faculty = Applied Science & Engineering; Transaction Type = Awards – Grad, 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, 2018–2019**	Data obtained from the U of T Student Accounts Reporting Cube. Parameters: Faculty = Applied Science & Engineering; Transaction Type = Awards – Grad, Stipend, UT Employment; excludes Awards – Undergraduate, Waiver. Student funding reported by academic year (September to August).
2.5a	**Total External Graduate Student Scholarships by Source, 2009–2010 to 2018–2019**	Data from the U of T Student Accounts Reporting Cube. Parameters: Faculty = Applied Science & Engineering; Transaction Type = Income / 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, 2009–2010 to 2018–2019**	Data from the U of T Student Accounts Reporting Cube. Parameters: Faculty = Applied Science & Engineering; Transaction Type = Income / 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 MASc to PhD by Academic Area, 2010–2011 to 2019–2020**	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 Masters 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, 2010–2011 to 2019–2020**	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	**Average Time to Completion for PhD, MASc, MEng and MHSc Students, 2010–2011 to 2019–2020**	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, 2010–2011 to 2019–2020**	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, 2010–2011 to 2019–2020**	All data from ROSI download: 5EA (Graduated Students); Faculty = APSC (Applied Science & Engineering).
2.9	**ELITE Emphases Awarded, 2010–2011 to 2019–2020**	ELITE eligibility based on year of graduation and successful completion of a minimum of 4 ELITE-designated courses. Data provided by the Vice-Dean Graduate Studies, Faculty of Applied Science & Engineering.

Chapter 3: **Community**

3.1	**Continent of Origin: Undergraduate Students, Fall 2019**	Student counts from the U of T Enrolment Reporting Cube, excluding students with special status. Cube Parameters: Faculty = Applied Science & Engineering; Year = Fall 2019; Degree Type = Undergraduate; Measure = Headcount; Calculations based on Continent/Country of Citizenship [CUNCIT] parameter.
3.2a	**Incoming First-Year Undergraduates with Percentage of Women, 2010 to 2019**	Headcount from the U of T Enrolment Reporting Cube. Excludes students with special status. Cube Parameters: Faculty = Applied Science & Engineering; All Fall Terms for 2010–2019; Degree Type = Undergraduate; New Intake (NEWINTK) = Yes; Measure = Headcount; [Gender] parameter used to calculate percentage of women students. See footnote to Fig. 3.2a for more information about changes in the reporting of gender beginning in 2017.
3.2b	**Incoming First-Year Undergraduates with Percentage of International Students, 2010 to 2019**	Headcount from the U of T Enrolment Reporting Cube. Excludes students with special status. Cube Parameters: Faculty = Applied Science & Engineering; All Fall Terms for 2010–2019; Degree Type = Undergraduate; New Intake (NEWINTK) = Yes; Measure = Headcount; [DOM_INTL] parameter used to calculate percentage of international students.

3.2c	**Incoming First-Year Domestic and International Undergraduates, 2010 to 2019**	Headcount from the U of T Enrolment Master Files, source of the Enrolment Reporting Cube. Includes new and returning students. Excludes students with special status. Cube Parameters: Faculty = Applied Science & Engineering; All Fall Terms for 2010–2019; Degree Type = Undergraduate; Stage of Study (SESLEV) = Year 1; New Intake (NEWINTK) = Yes; Measure = Headcount
3.3a	**Undergraduate Enrolment with Percentage of Women, 2010 to 2019**	Headcount from the U of T Enrolment Reporting Cube. Excludes students with special status. Cube Parameters: Faculty = Applied Science & Engineering; All Fall Terms for 2010–2019; Degree Type = Undergraduate; Measure = Headcount; [Gender] parameter used to calculate percentages of women. See footnote to Fig. 3.3a for more information about changes in the reporting of gender beginning in 2017.
3.3b	**Percentage of Women by Undergraduate Program, 2010–2011 to 2019–2020**	Headcount from the U of T Enrolment Reporting Cube. Excludes students with special status. Cube Parameters: Faculty = Applied Science & Engineering; Fall Terms for 2010–2019; Degree Type = Undergraduate; Gender = Female; Programs of study based on [Program] field. See footnote to Fig. 3.3a for more information about changes in the reporting of gender beginning in 2017.
3.3c	**Undergraduates with Percentage of International Students, 2010 to 2019**	Headcount from the U of T Enrolment Reporting Cube. Excludes students with special status. Cube Parameters: Faculty = Applied Science & Engineering; All Fall Terms for 2010–2019; Degree Type = Undergraduate; Measure = Headcount; [DOM_INTL] parameter used to calculate percentages international students.
3.4	**Undergraduate Degrees Awarded by Gender, 2010–2011 to 2019–2020**	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 2019**	Student counts from the U of T Enrolment Reporting Cube, excluding students with special status. Cube Parameters: Faculty = Applied Science & Engineering; Year = Fall 2019; Measure = Headcount; Calculations based on Continent/Country of Citizenship [CUNCIT] parameter.
3.6a	**Graduate Students by Degree Type and Gender with Percentage of Women Students, 2010–2011 to 2019–2020**	Enrolment counts are from the U of T Enrolment Reporting Cube and exclude special status students. Cube Parameters: Faculty = Applied Science & Engineering; All Fall Terms for 2010–2019; Measure = Headcount. [Gender] parameter used to calculate percentage of women. See footnote to Fig. 3.6b for more information about the reporting of gender.
3.6b	**Graduate Students by Degree Type and Domestic/ International Status, with Percentage of International Students, 2010–2011 to 2019–2020**	Enrolment counts are from the U of T Enrolment Reporting Cube and exclude special status students. Cube Parameters: Faculty = Applied Science & Engineering; All Fall Terms for 2010–2019, Measure = Headcount. [DOM_INTL] parameter used to calculate percentage of international students.
3.7	**Graduate Degrees Awarded by Gender, 2010–2011 to 2019–2020**	All data from ROSI download: 5EA (Graduated Students); Faculty = APSC (Applied Science & Engineering).
3.8	**Engineering Undergraduate Clubs and Teams**	Information from the Engineering Society: www.skule.ca
3.9	**Pre-University Outreach Programs**	Information provided by the Engineering Student Outreach Office, Faculty of Applied Science & Engineering.

3.10a to 3.10h	**Academic Staff by Academic Area**	Information provided by the Chief Administrative Officer, 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, 2010–2011 to 2019–2020**	Information provided by the Chief Administrative Officer, 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, 2018–2019**	Information from the 2018 Resources Survey prepared by Engineers Canada for the National Council of Deans of Engineering and Applied Science (NCDEAS) and circulated to Canadian engineering deans in July 2019. Data represents faculty counts as of November 15, 2018. An updated version of this report was not yet available at the time this Report went to print.
3.13	**Canada Research Chairs with Number and Percentage of Women Chairholders, 2011 to 2020**	Information provided by the Divisional Reporting and Information 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 Academic Area, 2010–2011 to 2019–2020**	Information provided by the Manager, Finance and Budget, Faculty of Applied Science & Engineering.
3.15	**Summary of Progress Against the Recommendations of the Blueprint for Action, 2020**	Information provided by the Eagle's Longhouse, in consultation with the Engineering Outreach Office, Office of the Vice-Dean, Graduate Studies, Office of the Vice-Dean, Undergraduate Studies, and departmental offices.
3.16	**Summary of Progress Against the Recommendations of Striving Toward Black Inclusivity, 2020**	Information provided by the Dean's Advisor on Black Inclusivity Initiatives and Student Inclusion & Transition Advisor, in consultation with the Office of the Vice-Dean, Graduate Studies, Office of the Vice-Dean, Undergraduate Studies, and departmental offices.

Chapter 4: **Research**

4.1a	**Research Infrastructure Funding and Research Operating Funding, 2009–2010 to 2018–2019**	Data from the U of T Research Information System (RIS) is current as of May 2020 and organized by grant year (e.g., 2018–2019 = April 2018 to March 2019 = Grant Year 2019). 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	**Research Infrastructure Funding and Research Operating Funding by Year, Source and Funding per Faculty Member, 2009–2010 to 2018–2019**	Data from the U of T Research Information System (RIS) is current as of May 2020 and adjusted to reflect each PI's department of budgetary appointment. Organized by grant year (e.g., 2018–2019 = April 2018 to March 2019 = Grant Year 2019). Faculty data is provided by the Chief Administrative Officer, 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 2018 (for academic year 2017-18) are linked to Grant Year 2019 (Apr 2018 - Mar 2019).

4.1c	**Research Operating Funding by Year, Source and Funding per Faculty Member, 2009–2010 to 2018–2019**	Data from the U of T Research Information System (RIS) is current as of May 2020 and organized by grant year (e.g., 2018–2019 = April 2018 to March 2019 = Grant Year 2019). 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 Chief Administrative Officer, 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 2018 (for academic year 2017–2018) are linked to Grant Year 2019 (Apr 2018 to Mar 2019).
4.2a to 4.2g	**Research Operating Funding by Academic Area and Average Funding per Faculty Member, 2009–2010 to 2018–2019**	Data from the U of T Research Information System (RIS) is current as of May 2020 and adjusted to reflect each PI's department of budgetary appointment. Organized by grant year (e.g., 2018–2019 = April 2018 to March 2019 = Grant Year 2019). 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 Chief Administrative Officer, 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 2018 (for academic year 2017-18) are linked to Grant Year 2019 (Apr 2018 - Mar 2019).
4.3	**Distribution of Research Operating Funding by Academic Area, 2009–2010 to 2018–2019**	Data from the U of T Research Information System (RIS) is current as of May 2020 and adjusted to reflect each PI's department of budgetary appointment. Organized by grant year (e.g., 2018–2019 = April 2018 to March 2019 = Grant Year 2019). 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, 2009–2010 to 2018–2019**	Data from the U of T Research Information System (RIS) is current as of May 2020 and organized by grant year (e.g., 2018–2019 = April 2018 to March 2019 = Grant Year 2019).
4.4b	**NSERC Funding, 2018–2019**	Data from the U of T Research Information System (RIS) is current as of May 2020 and organized by grant year (e.g., 2018–2019 = April 2018 to March 2019 = Grant Year 2019). Sponsor = Natural Sciences & Engineering. Grant Year = 2019.
4.4c	**NSERC Industrial Partnership Funding by Program, 2009–2010 to 2018–2019**	Data from the U of T Research Information System (RIS) is current as of May 2020 and organized by grant year (e.g., 2018–2019 = April 2018 to March 2019 = Grant Year 2019). Sponsor = Natural Sciences & Engineering / Research Partnerships Programs
4.4d	**Industrial Partnerships as Percentage of Total NSERC Funding, 2009–2010 to 2018–2019**	Data from the U of T Research Information System (RIS) is current as of May 2020 and organized by grant year (e.g., 2018–2019 = April 2018 to March 2019 = Grant Year 2019). Sponsor = Natural Sciences & Engineering.
4.4e	**NSERC Research Grant Funding by Program, 2009–2010 to 2018–2019**	Data from the U of T Research Information System (RIS) is current as of May 2020 and organized by grant year (e.g., 2018–2019 = April 2018 to March 2019 = Grant Year 2019). Sponsor = Natural Sciences & Engineering.

4.5a	**Canadian Peer Universities vs. University of Toronto Share of NSERC Funding for Engineering Cumulative Five-Year Share, 2014–2015 to 2018–2019**	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., 2018–2019 = April 2018 to March 2019 = Grant Year 2019).
4.5b	**U of T Annual Share of NSERC Funding in Engineering, 2009–2010 to 2018–2019**	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., 2018–2019 = April 2018 to March 2019 = Grant Year 2019).
4.6a	**Industry Research Funding by Academic Area, 2009–2010 to 2018–2019**	Data from the U of T Research Information System (RIS) is current as of May 2020 and organized by grant year (e.g., 2018–2019 = April 2018 to March 2019 = Grant Year 2019). Industry = Corporate.
4.6b	**Industrial Partnerships, 2019–2020**	Data from the U of T Research Information System (RIS) is current as of May 2020. 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.
4.7	**Engineering Invention Disclosures by Academic Area, 2015–2016 to 2019–2020**	Data from the Report of U of T Commercialization Indicators, Annual Supplement for FY2020, provided by the Office of the Vice President, Research. Data current as of May 1, 2020.
4.8	**Spinoff Companies, 2001 to 2020**	Information provided by the Office of the Vice President, Research & Innovation (OVPRI).
4.9	**Chairs and Professorships, 2019–2020**	Chairholders are reported as of the HR turnover date at the end of the reporting cycle, in this case, July 1, 2020, except in cases where new allocations (e.g. CRCs) have not yet been made public. List compiled from the following sources: – 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 – Office of Advancement, Faculty of Applied Science & Engineering – Office of the Vice-Dean, Research, Faculty of Applied Science & Engineering – Chief Administrative Officer, 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/ www.provost.utoronto.ca/awards-funding/university-professors/

Chapter 5: **Awards & Rankings**

5.1	**Summary of University of Toronto Engineering Performance in World Rankings**	Compiled from other figures in this chapter.

QS World University Rankings for Engineering and Technology

5.2a	**QS Top 50 World Universities, 2020**	Data from QS World University Ranking website: www.topuniversities.com/university-rankings/university-subject-rankings/2020/engineering-technology
5.2b	**QS Top North American Public Universities, 2020**	Data from QS World University Ranking website: www.topuniversities.com/university-rankings/university-subject-rankings/2020/engineering-technology
5.2c	**Canadian U15 Universities in QS Top 200, 2020**	Data from QS World University Ranking website: www.topuniversities.com/university-rankings/university-subject-rankings/2020/engineering-technology
5.2d	**Canadian Universities in QS by Subject, 2020**	Data from QS World University Ranking website: www.topuniversities.com/university-rankings/university-subject-rankings/2020/engineering-technology

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

5.3a	**THE Top 50 World Universities, 2020**	Data from THE World University Ranking website: www.timeshighereducation.com/world-university-rankings/2020/subject-ranking/engineering-and-IT
5.3b	**THE Top North American Public Universities, 2020**	Data from THE World University Ranking website: www.timeshighereducation.com/world-university-rankings/2020/subject-ranking/engineering-and-IT
5.3c	**Canadian U15 Universities in THE Top 200, 2020**	Data from THE World University Ranking website: www.timeshighereducation.com/world-university-rankings/2020/subject-ranking/engineering-and-IT

Academic Ranking of World Universities (ARWU) for Engineering Subjects

5.4	**Canadian Universities in the Top 200 of the ARWU by Subject, 2019**	Data from ARWU website: www.shanghairanking.com/Shanghairanking-Subject-Rankings/index.html

National Taiwan University (NTU) Performance Ranking of Engineering Papers

5.5a	**NTU Top 60 World Universities, 2019**	Data from National Taiwan University Performance Ranking of Scientific Papers for World Universities website: nturanking.lis.ntu.edu.tw/ranking/ByField/ENG. Data compiled from Thomson Reuters' science citation indexes.
5.5b	**NTU Top North American Public Universities, 2019**	Data from National Taiwan University Performance Ranking of Scientific Papers for World Universities website: nturanking.lis.ntu.edu.tw/ranking/ByField/ENG. Data compiled from Thomson Reuters' science citation indexes.
5.5c	**Canadian U15 Universities in NTU Top 200, 2019**	Data from National Taiwan University Performance Ranking of Scientific Papers for World Universities website: nturanking.lis.ntu.edu.tw/ranking/ByField/ENG. Data compiled from Thomson Reuters' science citation indexes.

5.5d	**Canadian Universities in NTU by Subject, 2019**	Data from National Taiwan University Performance Ranking of Scientific Papers for World Universities website: nturanking.lis.ntu.edu.tw/ranking/ByField/ENG. 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, 2014 to 2018**	Data from Thomson Reuters InCites™ covering 2014 to 2018. 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, 2014 to 2018**	Data from National Taiwan University Performance Ranking of Scientific Papers for World Universities website: nturanking.lis.ntu.edu.tw/ranking/ByField/ENG. Data compiled from Thomson Reuters' science citation indexes.
5.6c	**Number of Engineering Citations Indexed by Thomson Reuters for Association of American Universities (AAU) Public and Canadian Peer Institutions, 2014 to 2018**	Data from Thomson Reuters InCites™ covering 2014 to 2018. 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, 2014 to 2018**	Data from Thomson Reuters InCites™ covering 2014 to 2018. 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 2018 Resources Report.
5.7	**Summary of Major International, National and Provincial Awards and Honours, 2010 to 2019**	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, 2019**	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, 2019**	Information provided by the Director, Awards and Honours, Faculty of Applied Science & Engineering. Faculty FTEs are based on the National Council of Deans of Engineering and Applied Science (NCDEAS) 2018 Resources Report prepared by Engineers Canada and circulated to Canadian engineering deans in July 2019.
5.9	**Number of Awards Received by U of T Engineering Faculty Compared to Other Canadian Engineering Faculties, 2015 to 2019**	Information provided by the Director, Awards and Honours, Faculty of Applied Science & Engineering.

5.10	**Selected Awards Received by Faculty and Staff, 2019–2020**	Information provided by the Director, Awards and Honours, Faculty of Applied Science & Engineering.
5.11	**U of T Engineering Staff and Faculty Awards, 2019–2020**	Information provided by the Director, Awards and Honours, Faculty of Applied Science & Engineering.
5.12	**Engineering Alumni Network Awards, 2019**	Information provided by the Office of Advancement and Alumni Relations, Faculty of Applied Science & Engineering.

Chapter 6: **Advancement & Communications**

6.1a	**Philanthropic Support, 2019–2020**	Statistics provided by the Office of Advancement and Alumni Relations, Faculty of Applied Science & Engineering.
6.1b	**Philanthropic Support, 2010–2011 to 2019–2020**	Statistics provided by the Office of Advancement and Alumni Relations, Faculty of Applied Science & Engineering.
6.1c	**Gift Designation, 2019–2020**	Statistics provided by the Office of Advancement and Alumni Relations, Faculty of Applied Science & Engineering.
6.1d	**Engagement on U of T Engineering CONNECT, 2019–2020**	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 2019 to April 2020**	Information collected via Metrix Research Inc. (May 1, 2019 to April 30, 2020).
6.2b	**Proportion of U of T Engineering Impressions by Academic Area, 2019–2020**	Information collected via Metrix Research Inc. (May 1, 2019 to April 30, 2020).
6.2c	**Proportion of U of T Engineering Impressions by Strategic Priority Area, 2019–2020**	Information collected via Metrix Research Inc. (May 1, 2019 to April 30, 2020).
6.2d	**Proportion of U of T Engineering Media Stories by Outlet Location, 2019–2020**	Information collected via Metrix Research Inc. (May 1, 2019 to April 30, 2020).
6.3a	**Twitter Statistics: Tweets, Mentions, Retweets, Likes, May 2019 to April 2020**	Data collected via Sprout Social (May 1, 2019 to April 30, 2020).
6.3b	**Facebook Statistics: Posts, Comments, Shares, Reactions, May 2019 to April 2020**	Data collected via Sprout Social (May 1, 2019 to April 30, 2020).
6.3c	**Instagram Statistics: Posts, Comments, Likes, May 2019 to April 2020**	Data collected via Sprout Social (May 1, 2019 to April 30, 2020).

6.4	**Summary of Analytics for U of T Engineering Faculty Site and U of T Engineering News Site, 2019–2020**	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, 2019 to April 30, 2020).
6.5	**Social Media Referrals for U of T Engineering News, 2019–2020**	Information provided by Engineering Strategic Communications, Faculty of Applied Science & Engineering. Website statistics sourced from Google Analytics (May 1, 2019 to April 30, 2020).
6.6	**Summary of Analytics for Discover Engineering, You Belong Here and Engineering Graduate Studies Sites, 2019–2020**	Websites: discover.engineering.utoronto.ca, www.admit.engineering.utoronto.ca and gradstudies.engineering.utoronto.ca. Website statistics sourced from Google Analytics (May 1, 2019 to April 30, 2020).
6.7	**Top Stories on the Engineering News and U of T News Websites, 2019–2020**	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, 2019 to April 30, 2020).

Chapter 7: **Financial & Physical Resources**

7.1	**Total Revenue, 2010–2011 to 2019–2020**	Information provided by the Chief Financial Officer, Faculty of Applied Science & Engineering.
7.2	**Total Central Costs, 2010–2011 to 2019–2020**	Information provided by the Chief Financial Officer, Faculty of Applied Science & Engineering.
7.3	**Budget Data, 2010–2011 to 2019–2020**	Information provided by the Chief Financial Officer, Faculty of Applied Science & Engineering.
7.4	**Revenue Sources, 2019–2020**	Information provided by the Chief Financial Officer, Faculty of Applied Science & Engineering.
7.5	**Revenue Distribution, 2019–2020**	Information provided by the Chief Financial Officer, Faculty of Applied Science & Engineering.
7.6	**Total Operating Budget: Breakdown by Expense, 2019–2020 (Net of Central University Costs)**	Information provided by the Chief Financial Officer, Faculty of Applied Science & Engineering.
7.7	**Summary of Buildings Occupied by Engineering, 2019–2020**	Data provided by the Director, Facilities & Infrastructure Planning, Faculty of Applied Science & Engineering.
7.8	**Selected Infrastructure Investments, 2019–2020**	Information provided by Director, Facilities & Infrastructure Planning.
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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