UNIVERSITY OF ALBERTA
FACULTY OF GRADUATE
STUDIES & RESEARCH

Graduate Student Enrolment Report

2016-17

Revised Version
May 2017

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Message from the Interim Vice-Provost and Dean, Faculty of Graduate Studies and Research (FGSR)

It is a pleasure to present the second annual report on graduate enrolment at the University of Alberta. Our 7,300 graduate students work in over 300 research areas with 250 official specializations. Recruitment, admission and enrolment are highly decentralized, and the graduate student body is rich in diversity. One third of our graduate students are international, compared to 14% of our undergraduate population. Half self-identify as members of a visible minority group (Black, East Asian, South Asian, Southeast Asian, West Asian, Latin American or Mixed Origin), according to the 2016 Canadian Graduate and Professional Student Survey, and an additional 3.7% self-identify as Aboriginal.[1] Just over half of our graduate students are married (41.4% of respondents) or living with a domestic partner (11.2%). One quarter of University of Alberta graduate students (25.8%) have at least one child. The age distribution is also worth noting:

21-25	19.3%
26-30	35.5%
31-35	21.6%
36-40	9.0%
41-45	6.1%
45 +	8.5%

There is clearly no such thing as a "typical graduate student."

Generalizing across such a demographically and academically differentiated landscape is risky – and yet the data here reaffirm the quality of our students (who consistently show high admission GPAs) and the strength of our supervision (time to completion is stable, and the attrition rate is low by comparison with our peers, and improving).

We are seeing three distinct enrolment trends at play. After reaching a historic high of over 3,000 in 2012, doctoral enrolments are decreasing. We still have more PhD students than we had in 2007, before the numbers began to climb, but we are approaching that level again. Thesis-based Master's enrolments are more or less stable, with last year's low appearing anomalous. The real story here is course-based Master's, which continue to surge. The University of Alberta now has nearly 50% more course-based Master's students than we had a decade ago. Of particular note, these programs are favoured by international students (who continue to complete their degrees more quickly than domestic students) and by women, who now outmatch men by a factor of nearly 2:1 in course-based streams. Women are also edging closer to 50% of doctoral enrolments, and maintaining parity with men in thesis-based Master's programs.

There are some significant changes to this year's report. First, 2016 is a year of restatement. In last year's graduate enrolment report we relied on both FGSR statistics and those from the Office of Strategic Analysis data warehouse. In order to ensure that this report is sustainable in the future, we have made the decision to rely solely on data from the Office of Strategic Analysis. In some cases, these figures differ from those that were held in the FGSR Statistics database we used for more historical comparisons last year. This decision has resulted in some differences between the 2015-16 and 2016-17 reports, particularly in reporting time to

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[1] The Canadian Graduate and Professional Student Survey is a triennial, nation-wide survey. The 2016 response rate for the University of Alberta was 25.0%. Of respondents, 59.2% were female and 40.8% were male; 61.1% were Canadian, 8.5% Permanent Residents, and 30.4% indicated international status.

completion and rate of completion. We are confident that restating these figures now will ensure accurate long-term comparisons in years to come.

The second change in this report is the inclusion of new data. In response to requests from readers of last year's report, we have provided undergraduate to graduate student ratios and graduate student to professor ratios broken down by Faculty. Most importantly, we have included some U15 comparator data. As readers may be aware these data come from a data sharing agreement and, while there is significant effort made by consortium members to ensure that the information provided is complete and comparable, we do not control the sources of this information. Finding up to date, inclusive and reliable comparator data in the graduate area remains a challenge. Readers may be interested to know that the Council of Graduate Schools, the US-based organization, will be launching a Canadian enrolment data reporting project in January 2017.

By way of a minor note, in addition to students in doctoral and master's students, we do have a small number of students in other categories. These include qualifying, visiting and probationary students as well as people registered in post baccalaureate certificates or postgraduate diplomas. The total number of such students is small and thus we have only specifically reported on them in the categories where it makes sense to do so. Similarly, a small number of students (73 total for the past 10 years, 23 in the period from 2012 to 2016) have the Faculty of Graduate Studies and Research listed as their home department. These individuals are included in total numbers of graduate students, but are not reported in Faculty-by-Faculty analyses.

FGSR welcomes the opportunity to be a key partner in strategic enrolment management and presents this report with great pride in our students, our supervisors and our programs. I appreciate the contributions of Cristiana Caramihai, Amy Dambrowitz, Gurpinder Gandhara, Denise Giles and Deborah Williams. I accept responsibility for any shortcomings.

Heather Zwicker, PhD
Interim Vice-Provost and Dean, Faculty of Graduate Studies and Research
6 January 2017

1. Enrolment

In this section, all numbers are the standard December 1st headcounts, as reported to Statistics Canada and the Government of Alberta. It is worth noting that this enrolment figure is a point-in-time snapshot, and does not show the total number of graduate students who have been on campus at various points during the year. December 1st headcounts are a snapshot of the Fall Term registrations only.

Variation in graduate enrolment from one academic year to the next is due to three independent factors. The number increases by the total number of **new registrations**, and it decreases by the number of those leaving, through **convocation** or through **attrition** (see section 3). As an aggregate measure, enrolment variations have to be understood with reference to the changes in these three factors.

1.1.   Graduate Enrolment by Degree Type

This graph demonstrates the overall trends in graduate enrolment over the last decade. Course-based Master's programs show a consistent rise in enrolment levels, while we are beginning to see a decrease in thesis-based programs.
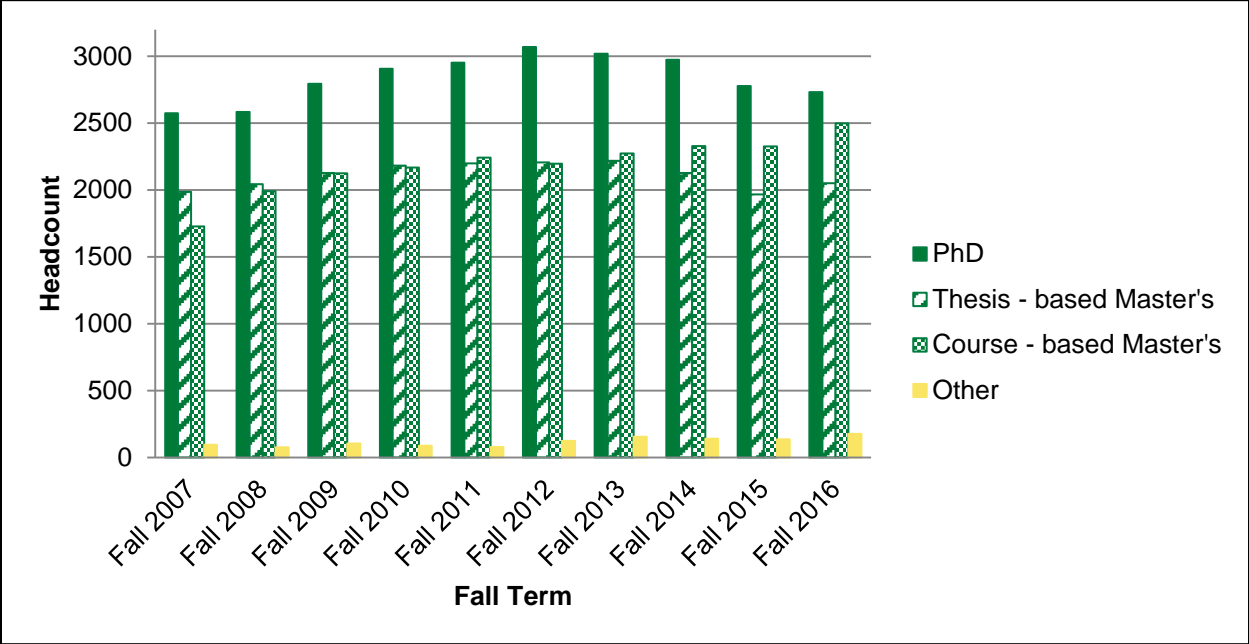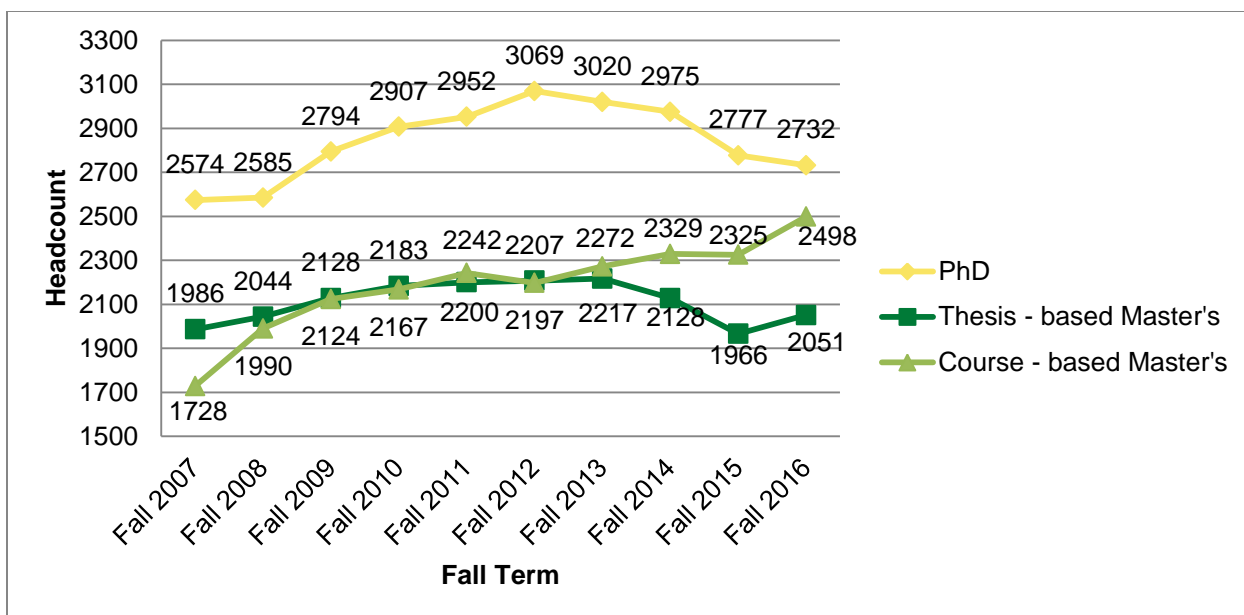
3300
3100
2900
2700
2500
2300
2100
1900
1700
1500

Headcount

2574 2585 2794 2907 2952 3069 3020 2975 2777 2732
1986 2044 2128 2183 2242 2207 2272 2329 2325 2498
1728 1990 2124 2167 2200 2197 2217 2128 1966 2051

Fall 2007 Fall 2008 Fall 2009 Fall 2010 Fall 2011 Fall 2012 Fall 2013 Fall 2014 Fall 2015 Fall 2016

Fall Term

— PhD
— Thesis - based Master's
— Course - based Master's

Source: Strategic Analysis and Data Warehousing – accessed December 3, 2016
Notes: (1) Figures represent the Fall term enrolment headcount; (2) Students who have FGSR listed as their department are included.

1.2. Graduate Enrolment – Fall Headcount for Doctoral Degree by Faculty

Faculty	Fall 2012	Fall 2013	Fall 2014	Fall 2015	Fall 2016
ALES	246	235	237	230	221
Arts	472	478	452	413	412
Business	60	61	51	45	46
Education	296	291	295	257	246
Engineering	717	702	711	678	679
Extension	-	-	-	-	-
Faculté Saint-Jean	-	-	-	-	-
Faculty of Native Studies	-	-	-	-	-
Law	8	8	7	7	8
Medicine and Dentistry	319	316	340	342	329
Nursing	71	65	68	64	68
Pharmacy	34	33	32	32	28
Physical Educ. & Recreation	60	65	55	56	49
Public Health	41	42	45	50	47
Rehabilitation Medicine	36	38	36	37	35
Science	709	686	646	566	564
Total	**3,069**	**3,020**	**2,975**	**2,777**	**2,732**

Source: Strategic Analysis and Data Warehousing – accessed December 3, 2016

1.3. Graduate Enrolment – Fall Headcount for Master's Degree by Faculty

This table shows a consistent growth in course-based Master's programs, probably as a result of interest in professional Master's degrees.

Faculty	Fall 2012			Fall 2013			Fall 2014			Fall 2015			Fall 2016		
	M-C	M-T	Total	M-C	M-T	Total	M-C	M-T	Total	M-C	M-T	Total	M-C	M-T	Total
ALES	13	249	262	26	258	284	21	261	282	22	244	266	35	255	290
Arts	104	313	417	97	311	408	90	269	359	81	240	321	87	255	342
Business	448	-	448	499	-	499	543	1	544	558	-	558	556	-	556
Education	497	97	594	496	85	581	546	80	626	567	70	637	576	70	646
Engineering	188	496	684	148	566	714	93	545	638	36	527	563	111	544	655
Extension	57	2	59	49	2	51	54	1	55	54	-	54	52	8	60
Faculté Saint-Jean	30	20	50	24	16	40	16	13	29	20	8	28	13	5	18
Faculty of Native Studies	-	7	7	-	10	10	-	7	7	-	12	12	-	20	20
Law	1	8	9	2	6	8	-	4	4	-	5	5	1	5	6
Medicine and Dentistry	2	277	279	2	265	267	-	281	281	2	260	262	4	277	281
Nursing	32	43	75	43	33	76	47	29	76	45	20	65	36	18	54
Pharmacy	-	21	21	-	13	13	-	17	17	-	18	18	-	22	22
Physical Educ. & Recreation	15	64	79	16	57	73	18	49	67	18	44	62	15	41	56
Public Health	134	95	229	146	99	245	144	100	244	131	80	211	120	71	191
Rehabilitation Medicine	589	37	626	633	41	674	667	39	706	680	48	728	779	49	828
Science	87	478	565	91	455	546	90	432	522	111	390	501	113	411	524
Total	2197	2207	4404	2272	2217	4489	2329	2128	4457	2325	1966	4291	2498	2051	4549

M-T = Thesis-Based Master's, M-C = Course-Based Master's

Source: Strategic Analysis and Data Warehousing – accessed December 3, 2016
Notes: (1) Figures represent the Fall term enrolment headcount of Master`s students by Faculty; (2) Students who have FGSR as their department are excluded.

1.4. Graduate Enrolment – Fall Headcount for Other Programs

Faculty	Fall 2012	Fall 2013	Fall 2014	Fall 2015	Fall 2016
ALES	8	5	8	4	4
Arts	13	14	23	17	16
Business	8	21	19	10	16
Education	6	1	4	7	4
Engineering	7	12	9	9	9
Extension	3	1	-	1	-
Faculté Saint-Jean	1	6	1	3	9
Faculty of Native Studies	1	-	1	-	-
Law	-	-	-	-	-
Medicine and Dentistry	4	3	7	7	8
Nursing	7	5	4	2	2
Pharmacy	-	2	-	-	1
Physical Educ. & Recreation	-	1	3	3	1
Public Health	2	4	4	1	3
Rehabilitation Medicine	32	75	45	68	100
Science	10	5	12	4	4
Total	102	155	140	136	177

Source: Strategic Analysis and Data Warehousing – accessed December 3, 2016
Notes: (1) Figures represent the Fall term enrolment headcount in other programs by Faculty; (2) Other programs include: post-Baccalaureate and post Master's Certificates, postgraduate diplomas, qualifying, special, visiting and probationary students (by Faculty).

1.3.1. Ratio of Faculty to Graduate Students, by Faculty

This table gives an overview of the ratio of graduate students to professors in each Faculty. The goal is to express a supervisory ratio: thus all assistant, associate and full-time professors (those in academic category A.1.1) are included in the faculty number, and students include all types of programs (PhD, Master's and Other).

We have reported on every faculty in this dataset, although there are important nuances that come to light in the following tables: Faculties with large course-based Master's programs (Business's MBA, most graduate programs in the Faculty of Rehabilitation Medicine, a substantial proportion of Engineering's graduate offerings, e.g.) will appear to be carrying a disproportionately heavy supervisory responsibility. The value of this table is principally in tracking whether student numbers and faculty complement are moving in tandem. Tables 1.3.2, 1.3.3 and 1.3.4 offer breakdowns by degree.

On balance the graduate student to faculty ratio has stayed constant over the last five years, with the exception of Fall 2014, when the professoriate shrunk (probably a function of budget cuts in previous years).

Faculty	Fall 2012			Fall 2013			Fall 2014			Fall 2015			Fall 2016		
	Prof	Grad	Ratio	Prof	Grad	Ratio	Prof	Grad	Ratio	Prof	Grad	Ratio	Prof	Grad	Ratio
ALES	101	516	1:5.1	104	524	1:5.0	108	527	1:4.9	111	500	1:4.5	113	515	1:4.6
Arts	353	902	1:2.6	347	900	1:2.6	319	834	1:2.6	322	751	1:2.3	323	770	1:2.4
Business	77	516	1:6.7	73	581	1:8.0	74	614	1:8.3	72	613	1:8.5	71	618	1:8.7
Education	115	896	1:7.8	109	873	1:8.0	100	925	1:9.3	104	901	1:8.7	107	896	1:8.4
Engineering	184	1408	1:7.7	200	1428	1:7.1	194	1358	1:7.0	201	1250	1:6.2	204	1343	1:6.6
Extension	17	62	1:3.6	17	52	1:3.1	16	55	1:3.4	17	55	1:3.2	15	60	1:4.0
Faculté Saint-Jean	33	51	1:1.5	30	46	1:1.5	25	30	1:1.2	29	31	1:1.1	30	27	1.1:1
Faculty of Native Studies	9	8	1.1:1	8	10	1:1.3	8	8	1:1.0	10	12	1:1.2	11	20	1:1.8
Law	32	17	1.9:1	32	16	2:1.0	29	11	2.6:1	27	12	2.3:1	28	14	2:1.0
Medicine and Dentistry	638	602	1.1:1	635	586	1.1:1	627	628	1:1.0	643	611	1.1:1	644	618	1:1.0
Nursing	52	153	1:2.9	51	146	1:2.9	49	148	1:3.0	47	131	1:2.8	47	124	1:2.6
Pharmacy	23	55	1:2.4	20	48	1:2.4	20	49	1:2.5	22	50	1:2.3	24	51	1:2.1
Physical Educ. & Recreation	40	139	1:3.5	43	139	1:3.2	39	125	1:3.2	38	121	1:3.2	41	106	1:2.6
Public Health	27	272	1:10.1	28	291	1:10.4	25	293	1:11.7	26	262	1:10.1	27	241	1:8.9
Rehabilitation Medicine	42	694	1:16.5	48	787	1:16.4	42	787	1:18.7	44	833	1:18.9	44	963	1:21.9
Science	290	1284	1:4.4	300	1237	1:4.1	288	1180	1:4.1	286	1071	1:3.7	288	1092	1:3.8
Total	2033	7575	1:3.7	2045	7664	1:3.7	1963	7572	1:3.9	1999	7204	1:3.6	2017	7458	1:3.7

Source: Strategic Analysis and Data Warehousing – accessed December 3, 2016.
Notes: (1) Figures represent the professor headcount by faculty (Prof) compared with Fall term enrolment headcount of graduate students by faculty (Grad); (2) Contingent faculty, administrative faculty, and faculty on long-term disability (LTD) are not captured; (3) Student numbers include all types of programs (PhD, Master's and Other); (4) Students who have FGSR as their department are excluded; (5) Medicine and Dentistry figures include contingent faculty members, who represent (on average for the past 5 years) 66.5% of the total profesoriate figures.

1.3.2. Ratio of Faculty to Doctoral Students, by Faculty

The ratio of doctoral students to faculty over this time period is relatively stable, indicating that the decrease in the number of doctoral candidates has moved in parallel with the number of faculty members. A similar trend is observed for thesis-based Master's students (table 1.3.3). The individual figures are worth examining closely, as there is significant variation between Faculties.

Faculty	Fall 2012			Fall 2013			Fall 2014			Fall 2015			Fall 2016		
	Prof	Grad	Ratio	Prof	Grad	Ratio	Prof	Grad	Ratio	Prof	Grad	Ratio	Prof	Grad	Ratio
ALES	101	246	1:2.4	104	235	1:2.3	108	237	1:2.2	111	230	1:2.1	113	221	1:2.0
Arts	353	472	1:1.3	347	478	1:1.4	319	452	1:1.4	322	413	1:1.3	323	412	1:1.3
Business	77	60	1.3:1	73	61	1.2:1	74	51	1.5:1	72	45	1.6:1	71	46	1.5:1
Education	115	296	1:2.6	109	291	1:2.7	100	295	1:3.0	104	257	1:2.5	107	246	1:2.3
Engineering	184	717	1:3.9	200	702	1:3.5	194	711	1:3.7	201	678	1:3.4	204	679	1:3.3
Extension	17	-	-	17	-	-	16	-	-	17	-	-	15	-	-
Faculté Saint-Jean	33	-	-	30	-	-	25	-	-	29	-	-	30	-	-
Faculty of Native Studies	9	-	-	8	-	-	8	-	-	10	-	-	11	-	-
Law	32	8	4:1.0	32	8	4:1.0	29	7	4.1:1	27	7	3.9:1	28	8	3.5:1
Medicine and Dentistry	638	319	2:1.0	635	316	2:1.0	627	340	1.8:1	643	342	1.9:1	644	329	2:1.0
Nursing	52	71	1:1.4	51	65	1:1.3	49	68	1:1.4	47	64	1:1.4	47	68	1:1.4
Pharmacy	23	34	1:1.5	20	33	1:1.7	20	32	1:1.6	22	32	1:1.5	24	28	1:1.2
Physical Educ. & Recreation	40	60	1:1.5	43	65	1:1.5	39	55	1:1.4	38	56	1:1.5	41	49	1:1.2
Public Health	27	41	1:1.5	28	42	1:1.5	25	45	1:1.8	26	50	1:1.9	27	47	1:1.7
Rehabilitation Medicine	42	36	1.2:1	48	38	1.3:1	42	36	1.2:1	44	37	1.2:1	44	35	1.3:1
Science	290	709	1:2.4	300	686	1:2.3	288	646	1:2.2	286	566	1:2.0	288	564	1:2.0
Total	2033	3069	1:1.5	2045	3020	1:1.5	1963	2975	1:1.5	1999	2777	1:1.4	2017	2732	1:1.4

Source: Strategic Analysis and Data Warehousing – accessed December 3, 2016.
Notes: (1) Figures represent the professor headcount by faculty (Prof) compared with Fall term enrolment headcount of graduate students by faculty (Grad); (2) Contingent faculty, administrative faculty, and faculty on long-term disability (LTD) are not captured; (3) Student numbers include students in Doctoral programs; (4) Students who have FGSR as their department are excluded; (4) Medicine and Dentistry figures include contingent faculty members, who represent (on average for the past 5 years) 66.5% of the total profesoriate figures.

1.3.3. Ratio of Faculty to Thesis-Based Master's Students, by Faculty

Faculty	Fall 2012			Fall 2013			Fall 2014			Fall 2015			Fall 2016		
	Prof	Grad	Ratio	Prof	Grad	Ratio	Prof	Grad	Ratio	Prof	Grad	Ratio	Prof	Grad	Ratio
ALES	101	249	1:2.5	104	258	1:2.5	108	261	1:2.4	111	244	1:2.2	113	255	1:2.3
Arts	353	313	1.1:1	347	311	1:1.0	319	269	1.2:1	322	240	1.3:1	323	255	1.3:1
Business	77	-	-	73	-	-	74	1	74:1	72	-	-	71	-	-
Education	115	97	1.2:1	109	85	1.3:1	100	80	1.3:1	104	70	1.5:1	107	70	1.5:1
Engineering	184	496	1:2.7	200	566	1:2.8	194	545	1:2.8	201	527	1:2.6	204	544	1:2.7
Extension	17	2	8.5:1	17	2	8.5:1	16	1	16:1.0	17	-	-	15	8	1.9:1
Faculté Saint-Jean	33	20	1.7:1	30	16	1.9:1	25	13	1.9:1	29	8	3.6:1	30	5	6:1.0
Faculty of Native Studies	9	7	1.3:1	8	10	1:1.3	8	7	1.1:1	10	12	1:1.2	11	20	1:1.8
Law	32	8	4:1.0	32	6	5.3:1	29	4	7.3:1	27	5	5.4:1	28	5	5.6:1
Medicine and Dentistry	638	277	2.3:1	635	265	2.4:1	627	281	2.2:1	643	260	2.5:1	644	277	2.3:1
Nursing	52	43	1.2:1	51	33	1.5:1	49	29	1.7:1	47	20	2.4:1	47	18	2.6:1
Pharmacy	23	21	1.1:1	20	13	1.5:1	20	17	1.2:1	22	18	1.2:1	24	22	1.1:1
Physical Educ. & Recreation	40	64	1:1.6	43	57	1:1.3	39	49	1:1.3	38	44	1:1.2	41	41	1:1.0
Public Health	27	95	1:3.5	28	99	1:3.5	25	100	1:4.0	26	80	1:3.1	27	71	1:2.6
Rehabilitation Medicine	42	37	1.1:1	48	41	1.2:1	42	39	1.1:1	44	48	1:1.1	44	49	1:1.1
Science	290	478	1:1.6	300	455	1:1.5	288	432	1:1.5	286	390	1:1.4	288	411	1:1.4
Total	2033	2207	1:1.1	2045	2217	1:1.1	1963	2128	1:1.1	1999	1966	1:1.0	2017	2051	1:1.0

Source: Strategic Analysis and Data Warehousing – accessed December 3, 2016.
Notes: (1) Figures represent the professor headcount by faculty (Prof) compared with Fall term enrolment headcount of graduate students by faculty (Grad); (2) Contingent faculty, administrative faculty, and faculty on long-term disability (LTD) are not captured; (3) Student numbers include students in Master's Thesis-based programs; (4) Students who have FGSR as their department are excluded; (4) Medicine and Dentistry figures include contingent faculty members, who represent (on average for the past 5 years) 66.5% of the total profesoriate figures.

1.3.4. Ratio of Faculty to Course-Based Master's Students, by Faculty

The population of course-based Master's students has been growing across the university, while the number of faculty has decreased. Across the campus as a whole, this has resulted in a slight increase in the number of students per faculty member. The individual figures are worth examining closely, as there is significant variation between Faculties.

Faculty	Fall 2012			Fall 2013			Fall 2014			Fall 2015			Fall 2016		
	Prof	Grad	Ratio	Prof	Grad	Ratio	Prof	Grad	Ratio	Prof	Grad	Ratio	Prof	Grad	Ratio
ALES	101	13	7.8:1	104	26	4:1	108	21	5.1:1	111	22	5:1	113	35	3.2:1
Arts	353	104	3.4:1	347	97	3.6:1	319	90	3.5:1	322	81	4:1	323	87	3.7:1
Business	77	448	1:5.8	73	499	1:6.8	74	543	1:7.3	72	558	1:7.8	71	556	1:7.8
Education	115	497	1:4.3	109	496	1:4.6	100	546	1:5.5	104	567	1:5.5	107	576	1:5.4
Engineering	184	188	1:1	200	148	1.4:1	194	93	2.1:1	201	36	5.6:1	204	111	1.8:1
Extension	17	57	1:3.4	17	49	1:2.9	16	54	1:3.4	17	54	1:3.2	15	52	1:3.5
Faculté Saint-Jean	33	30	1.1:1	30	24	1.3:1	25	16	1.6:1	29	20	1.5:1	30	13	2.3:1
Faculty of Native Studies	9	-	-	8	-	-	8	-	-	10	-	-	11	-	-
Law	32	1	32:1	32	2	16:1	29	-	-	27	-	-	28	1	28:1
Medicine and Dentistry	638	2	319:1	635	2	317.5:1	627	-	-	643	2	321.5:1	644	4	161:1
Nursing	52	32	1.6:1	51	43	1.2:1	49	47	1:1	47	45	1:1	47	36	1.3:1
Pharmacy	23	-	-	20	-	-	20	-	-	22	-	-	24	-	-
Physical Educ. & Recreation	40	15	2.7:1	43	16	2.7:1	39	18	2.2:1	38	18	2.1:1	41	15	2.7:1
Public Health	27	134	1:5	28	146	1:5.2	25	144	1:5.8	26	131	1:5	27	120	1:4.4
Rehabilitation Medicine	42	589	1:14	48	633	1:13.2	42	667	1:15.9	44	680	1:15.5	44	779	1:17.7
Science	290	87	3.3:1	300	91	3.3:1	288	90	3.2:1	286	111	2.6:1	288	113	2.5:1
Grand Total	2033	2197	1:1.1	2045	2272	1:1.1	1963	2329	1:1.2	1999	2325	1:1.2	2017	2498	1:1.2

Source: Strategic Analysis and Data Warehousing – accessed December 3, 2016.
Notes: (1) Figures represent the professor headcount by faculty (Prof) compared with Fall term enrolment headcount of graduate students by faculty (Grad); (2) Contingent faculty, administrative faculty, and faculty on long-term disability (LTD) are not captured; (3) Student numbers include students in Master's Course-based programs; (4) Students who have FGSR as their department are excluded; (4) Medicine and Dentistry figures include contingent faculty members, who represent (on average for the past 5 years) 66.5% of the total profesoriate figures.

1.4. Graduate Enrolment – Fall Headcount by Citizenship & Faculty

With over one third of our graduate students coming from outside Canada, ours is a highly international student body. As the following table shows, international students are distributed unevenly across Faculties. It is important to remember that there are citizenship implications for funding: Tri-Council awards, for example, are available only to Canadian citizens and Permanent Residents (which are grouped together here).

Int. % = Percentage International out of the total enrolled

Program Faculty	Fall 2012 Total	Fall 2012 Int. %	Fall 2013 Total	Fall 2013 Int. %	Fall 2014 Total	Fall 2014 Int. %	Fall 2015 Total	Fall 2015 Int. %	Fall 2016 Total	Fall 2016 Int. %
ALES	516	49%	524	51%	527	49%	500	52%	515	51%
Arts	902	30%	900	30%	834	33%	751	33%	770	34%
Business	516	16%	581	26%	614	33%	613	34%	618	28%
Education	896	7%	873	7%	925	9%	901	9%	896	7%
Engineering	1408	59%	1428	60%	1358	63%	1250	64%	1343	61%
Extension	62	5%	52	2%	55	4%	55	4%	60	3%
Faculté Saint-Jean	51	6%	46	2%	30	7%	31	3%	27	4%
Faculty of Native Studies	8	0%	10	0%	8	0%	12	0%	20	0%
Law	17	24%	16	25%	11	18%	12	25%	14	29%
Medicine and Dentistry	602	31%	586	35%	628	35%	611	34%	617	33%
Nursing	153	12%	146	14%	148	15%	131	16%	124	20%
Pharmacy	55	58%	48	65%	49	53%	50	58%	51	65%
Physical Educ. & Recreation	139	22%	139	23%	125	21%	121	22%	106	20%
Public Health	272	11%	291	14%	293	13%	262	11%	241	11%
Rehabilitation Medicine	694	4%	787	4%	787	4%	833	3%	963	3%
Science	1284	53%	1237	54%	1180	52%	1071	51%	1092	53%
Total	7575	33%	7664	34%	7572	35%	7204	34%	7457	34%

Source: Strategic Analysis and Data Warehousing – accessed December 3, 2016.
Notes: (1) Figures represent the Fall term enrolment headcount by citizenship status; (2) Domestic students = Canadian citizens and Permanent Residents; (3) International students = Students attending the university on a study/work visa; (4) Students who have FGSR as their department are excluded. (4) Total = international graduate student headcount.

1.5. Top 15 Source Countries by Student Citizenship

The international graduate population is much more diversified than the undergraduate population. We have had graduate students from over 170 countries, although the vast majority are represented by very few individuals. The table below shows the 15 countries with the largest numbers of citizens enrolled at the university (by headcount) over the 10-year period from 2007 to 2016.

The impact of major geopolitical changes like Brexit and the recent US election is hard to predict. The UK is not a major source of graduate students for us, and we have struggled to increase our US complement for a long time. It may be that an international recruitment strategy would have more success targeting those students who might otherwise have chosen to study in the UK or the US.

Country of Citizen	Fall 2007	Fall 2008	Fall 2009	Fall 2010	Fall 2011	Fall 2012	Fall 2013	Fall 2014	Fall 2015	Fall 2016
Canada	4077	4203	4287	4224	4238	4246	4249	4085	3967	4236
China	647	640	662	687	781	849	933	1021	963	922
Iran	228	288	397	477	510	538	493	477	445	428
India	184	204	285	331	305	288	314	308	287	302
USA	92	105	116	139	158	178	175	169	156	150
Bangladesh	74	95	126	134	129	125	150	137	105	105
Pakistan	83	93	133	145	136	130	98	86	74	78
Brazil	25	31	32	36	41	47	47	58	71	75
Nigeria	49	52	58	63	53	55	72	79	68	73
Egypt	68	77	87	94	90	83	82	79	62	62
Mexico	52	61	63	67	77	80	65	49	51	62
Saudi Arabia	18	24	34	49	47	63	63	77	71	59
South Korea	56	50	48	51	40	37	41	43	41	51
Colombia	35	34	36	43	53	55	54	47	45	50
Ghana	21	18	27	23	28	35	36	43	45	49

Source: Strategic Analysis and Data Warehousing – accessed December 3, 2016.
Notes: (1) Includes PhD candidates, Master's students and students in other categories; (2) Includes students with a home department of FGSR; (3) Top 15 out of 276 independent sovereignties, territories, and nations listed in UAlberta enterprise solution, PeopleSoft; (4) Top 15 listed in sequence according to Fall 2016 figures.

1.6. Sponsored Students

Sponsored students are international students who are either partially or fully supported by their governments, national or multinational companies, or third-party entities such as Fulbright. Support normally includes tuition, associated fees, and living expenses for the duration of the degree. Sponsored student numbers vary year to year, predominantly as a result of factors beyond our control.

The University of Alberta receives sponsored graduate students from a total of 43 countries, the top 11 of which are listed in sequence below. University of Alberta International administers the Sponsored Student Program, and has the authority to waive the international differential fee for sponsored students. Although sponsored students represent only about 5% of international graduate students, it is a segment of the student population that has grown.

Historically, almost 70% of sponsored students have been in doctoral programs. The duration of sponsorships has been between one and six years, although the majority of them last three or four years.

Country	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	Total
China	29	39	27	49	30	29	203
Saudi Arabia	18	24	13	18	11	9	93
Mexico	4	9	4	6	14	12	49
Libya	0	3	5	10	7	3	28
Vietnam	8	4	5	2	4	0	23
Brazil	2	3	1	9	6	0	21
Columbia	3	2	3	4	6	3	21
Chile	6	2	1	0	0	3	12
Pakistan	4	2	0	0	0	5	11
Kazakhstan	1	3	2	0	0	1	7
Egypt	0	1	1	2	0	1	5

Source: University of Alberta International Statistics – accessed October 25, 2016.
Notes: (1) Winter 2017 projections have been included in the 2016-17 numbers and are based on current confirmed admissions. These numbers are subject to change; (2) Academic year is represented.

1.7. Enrolment by Gender

The graphs below include students registered in graduate certificates and diplomas in addition to the three degree program types offered. Put briefly: women comprise an increasing percentage of doctoral students; are close to parity in thesis-based master's programs; and exceed men by nearly 2:1 in course-based master's programs. The national percentage of women in doctoral programs, as reported by the Canadian Association of Graduate Studies (CAGS), was 47.2% in 2012 (most recent data available, as per 41st Statistical Report). CAGS data does not differentiate between course-based and thesis-based Master's programs. It reports that women comprised 54.4% of all Master's registrations in 2012.

The new graduate admissions software allows applicants to identify as Male, Female, or Other, so over time we will be able to track gender diversity with more nuance.
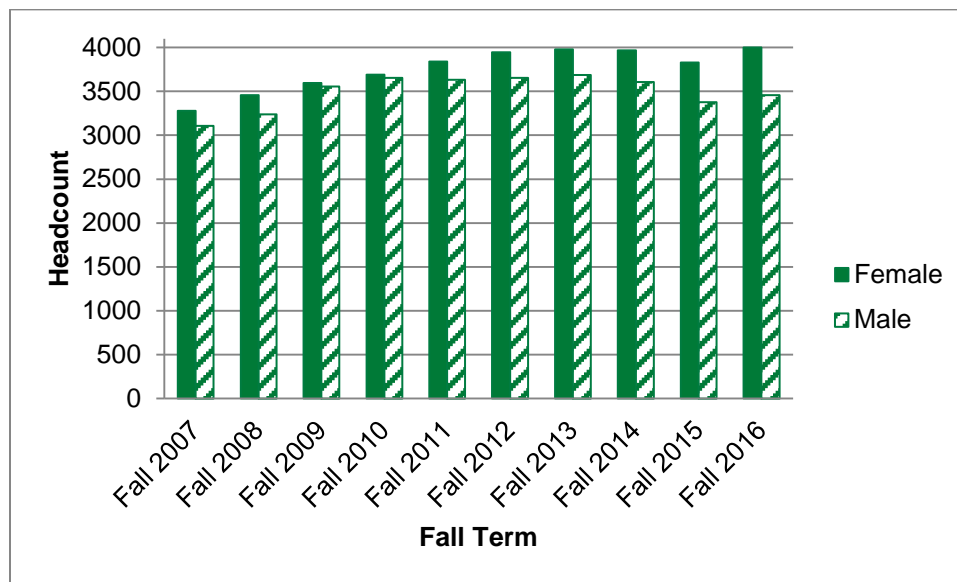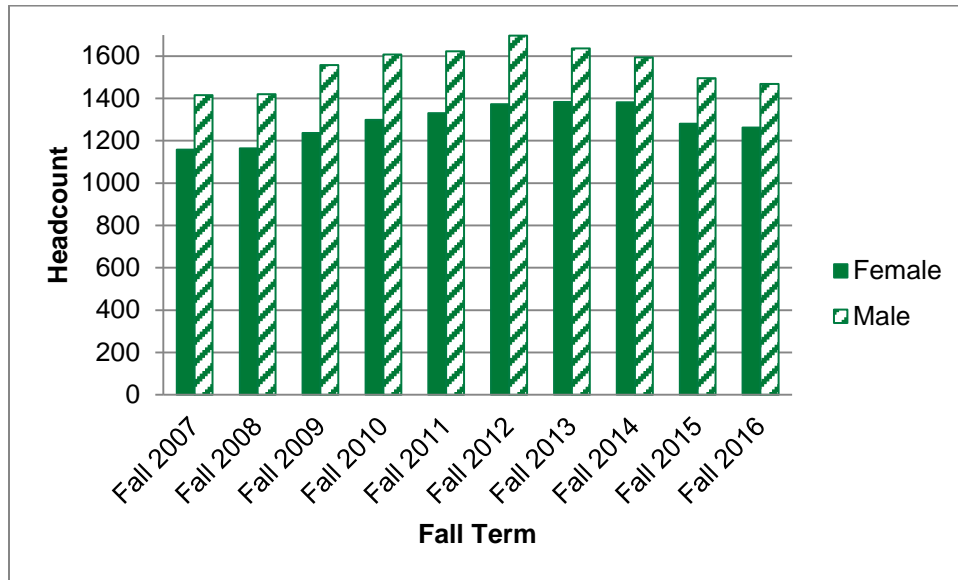

Source: Strategic Analysis and Data Warehousing – accessed December 3, 2016.
Notes: (1) Includes PhD, Master's and students in other categories; (2) Includes students with a home department of FGSR.

1.7.1. Doctoral Enrolment by Gender

The percentage of female doctoral students has gained one percentage point since 2015-16 and now stands at 46%. The national percentage of women in doctoral programs, as reported by the Canadian Association of Graduate Studies (CAGS), was 47.2% in 2012.

Source: Strategic Analysis and Data Warehousing – accessed December 3, 2016.

1.7.2. Thesis-Based Master's Enrolment by Gender
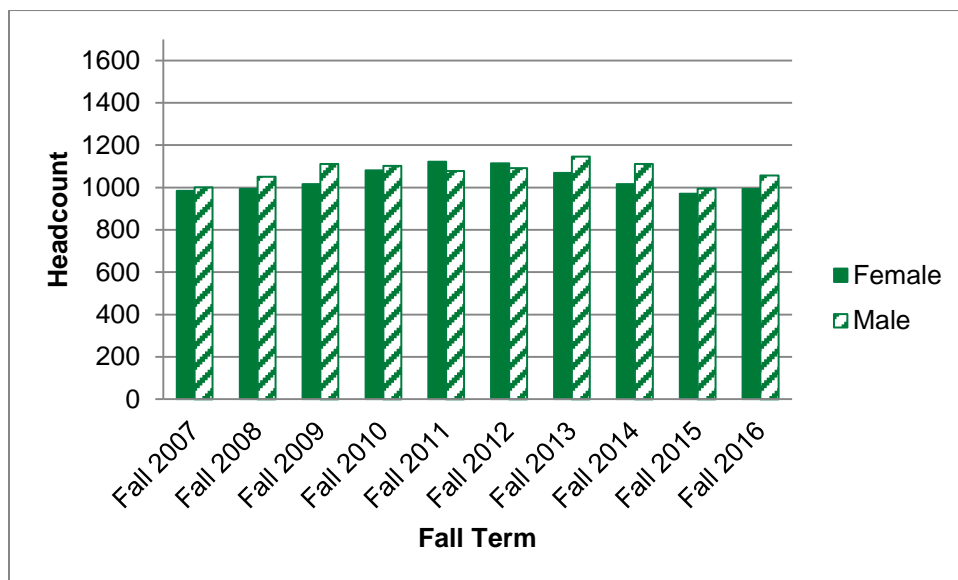
Source: Strategic Analysis and Data Warehousing – accessed December 3, 2016.

1.7.3. Course-Based Master's Enrolment by Gender

Source: Strategic Analysis and Data Warehousing – accessed December 3, 2016.
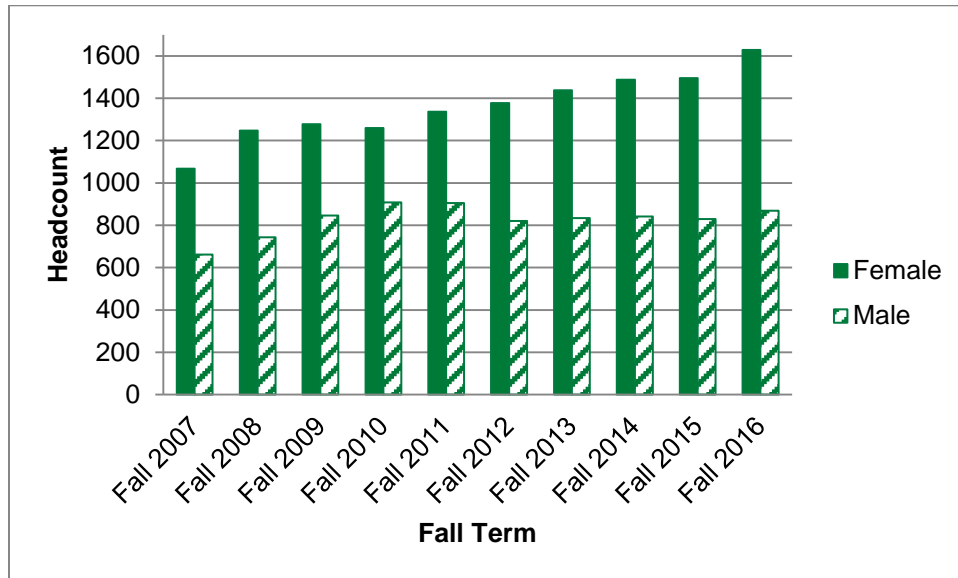
First Nations, Métis, and Inuit (FNMI) Applications, Admissions and Enrolment

3.7% of graduate students self-identified as Aboriginal in the 2016 Canadian Graduate and Professional Student Survey, which is a higher proportion than we see reflected in University sources. Part of the reason is bound to be the range of definitions and terminology in this important demographic. The gap between applications and admissions is smaller than what we see in non-Indigenous categories (56% of FNMI applicants are admitted, as opposed to 33% overall: see Table 2.1), suggesting that we have a significant recruitment effort. More can be done to ensure a deep and robust field of applicants, especially given that we have a high yield rate among these applicants.

1.8.1. FNMI Applications and Admissions
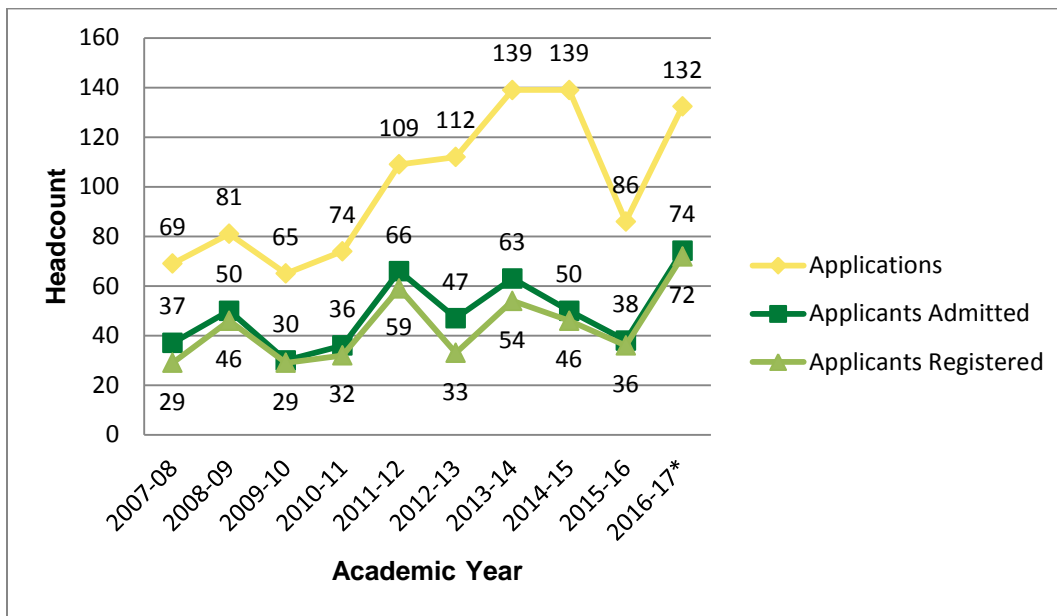
Source: Strategic Analysis and Data Warehousing – accessed December 3, 2016.
Notes: (1) The 2016-17 numbers were extracted from the December archive, which includes fall term data only. Total 2016-17 figures (i.e., for all terms) are estimated based on a three-year average of the overall proportion of FNMI fall admissions in the year; (2) Application figures can be higher than the number of applicants because one applicant can have multiple applications; (3) Applicants Admitted = students who applied and were admitted in the fall term of each year; (4) Applicants Registered = number of students who registered at the University of Alberta after being accepted.

1.8.2. FNMI Enrolment

As the following table shows, FNMI students are particularly interested in course-based Master's programs. It is exciting to report an all-time high in the number of FNMI students registered in our course-based master's programs, though the figures here are obviously volatile and the overall number is small.
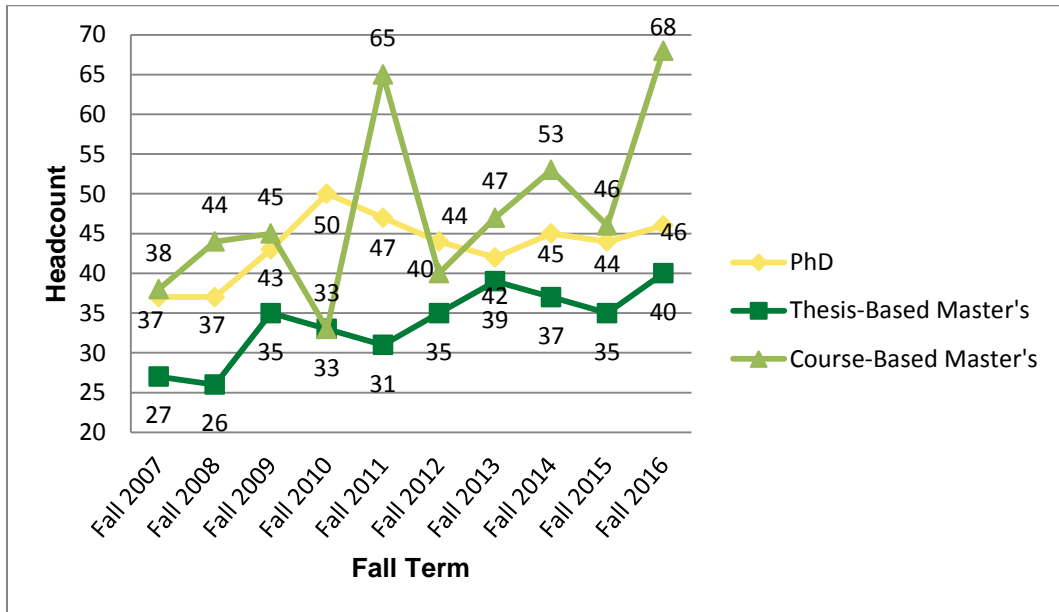
Source: Strategic Analysis and Data Warehousing – accessed December 3, 2016.
Note: Excludes students in other program categories (post Master's and post-baccalaureate certificates, postgraduate diplomas, qualifying, special graduate, visiting and probationary students).

1.9. Undergraduate to Graduate Student Ratio

This is a new data point for this year's report that demonstrates how graduate-intensive the University of Alberta is. Our proportion of graduate students now sits at approximately 20% of the total student population.

Academic Career	Fall 2007	Fall 2008	Fall 2009	Fall 2010	Fall 2011	Fall 2012	Fall 2013	Fall 2014	Fall 2015	Fall 2016
Undergraduate	29,795	29,338	29,642	30,087	30,419	30,986	30,700	30,172	29,625	29,841
Graduate	6,383	6,695	7,151	7,346	7,474	7,598	7,664	7,572	7,204	7,458
Ratio	5:1	4:1	4:1	4:1	4:1	4:1	4:1	4:1	4:1	4:1

	Fall 2007	Fall 2008	Fall 2009	Fall 2010	Fall 2011	Fall 2012	Fall 2013	Fall 2014	Fall 2015	Fall 2016
Total	36,178	36,033	36,793	37,433	37,893	38,584	38,364	37,744	36,829	37,299
Graduate % of total	17.6%	18.6%	19.4%	19.6%	19.7%	19.7%	20.0%	20.1%	19.6%	20.0%

Source: Strategic Analysis and Data Warehousing – accessed December 3, 2016.
Notes: (1) Figures represent the Fall term enrolment headcount on December 3, 2016; (2) Graduate students include all possible graduate degree types; (3) Undergraduate students exclude career preparation (17 students in Fall 2014, 24 students in fall 2015, 27 students in fall 2016).

1.9.1. Percentage of Graduate Students in Total by Faculty

This table, also new for 2016-17, expresses how graduate-intensive individual faculties are.

Program Faculty	Fall 2012		Fall 2013		Fall 2014		Fall 2015		Fall 2016	
	Total	Grad %	Total	Grad %	Total	Grad %	Total	Grad %	Total	Grad %
Agric, Life & Environ Sciences	2,124	24%	2,148	24%	2,086	25%	2,028	25%	2,067	25%
Arts	6,950	13%	6,902	13%	6,610	13%	6,463	12%	6,459	12%
Augustana Faculty	1,004	0%	1,002	0%	1,068	0%	1,016	0%	1,008	0%
Business	2,543	20%	2,627	22%	2,638	23%	2,631	23%	2,635	23%
Education	4,319	21%	3,921	22%	3,611	26%	3,659	25%	3,781	24%
Engineering	5,434	26%	5,608	25%	5,762	24%	5,588	22%	5,579	24%
Extension	62	100%	52	100%	55	100%	55	100%	60	100%
Faculté Saint-Jean	597	9%	598	8%	592	5%	578	5%	602	4%
Faculty of Native Studies	135	6%	141	7%	166	5%	163	7%	198	10%
Law	547	3%	542	3%	537	2%	561	2%	578	3%
Medicine and Dentistry	1,653	36%	1,614	36%	1,653	38%	1,651	37%	1,653	37%
Nursing	1,587	10%	1,753	8%	1,747	8%	1,617	8%	1,466	8%
Open Studies	1,004	0%	1,062	0%	1,025	0%	1,054	0%	1,120	0%
Pharmacy & Pharmaceutical Sciences	554	10%	565	8%	569	9%	577	9%	594	9%
Physical Educ. & Recreation	1,122	12%	1,118	12%	1,092	11%	1,059	11%	1,085	10%
Public Health	272	100%	291	100%	293	100%	262	100%	241	100%
Rehabilitation Medicine	725	96%	809	97%	807	98%	860	97%	984	98%
Science	7,929	16%	7,611	16%	7,433	16%	7,007	15%	7,189	15%
Total	38,561	20%	38,364	20%	37,744	20%	36,829	20%	37,299	20%

Source: Strategic Analysis and Data Warehousing – accessed December 3, 2016.
Notes: (1) Figures represent the Fall term enrolment headcount by faculty on December 3, 2016; (2) Graduate students include all possible graduate degree types; (3) Students who have FGSR as their department are excluded; (4) Undergraduate students exclude career preparation (17 students in fall 2014, 24 students in fall 2015, 27 students in fall 2016).

2. Applications and Admissions

Graduate applications show early signs of rebounding from last year's low, which appears to be the tail end of a multi-year decline from the 2012-2013 academic year. Expanding the pool of qualified applicants is a component of active recruitment strategies.

The yield rate (the percentage of registrations resulting from offers of admission) has been extremely steady, at about two thirds. Increasing the yield rate is another component of active recruitment strategies.

In the Applications and Admissions tables, the effect of not including non-Fall registrations can be seen. Therefore we have provided a table stating the average Fall percentage of applications, admissions and registrations as compared to the year as a whole.

There is gender imbalance in the number of applications for different degrees, with doctoral programs attracting almost twice as many male as female applicants, while the proportion is almost reversed for course-based Master's programs. Female applicants tend to have a higher yield rate than their male counterparts.

2.1. Graduate Admissions

The following graph shows the total number[2] of applications for admission to graduate programs, the number of admissions offered and the number of subsequent registrations. This approach counts applications, not applicants: some applicants may have submitted multiple applications. We continue to be competitive, admitting only about one third of the students who apply to our graduate programs. The yield rate moves in tandem with the rate of admission, which gives stability and predictability – factors that are especially important for funding projections.
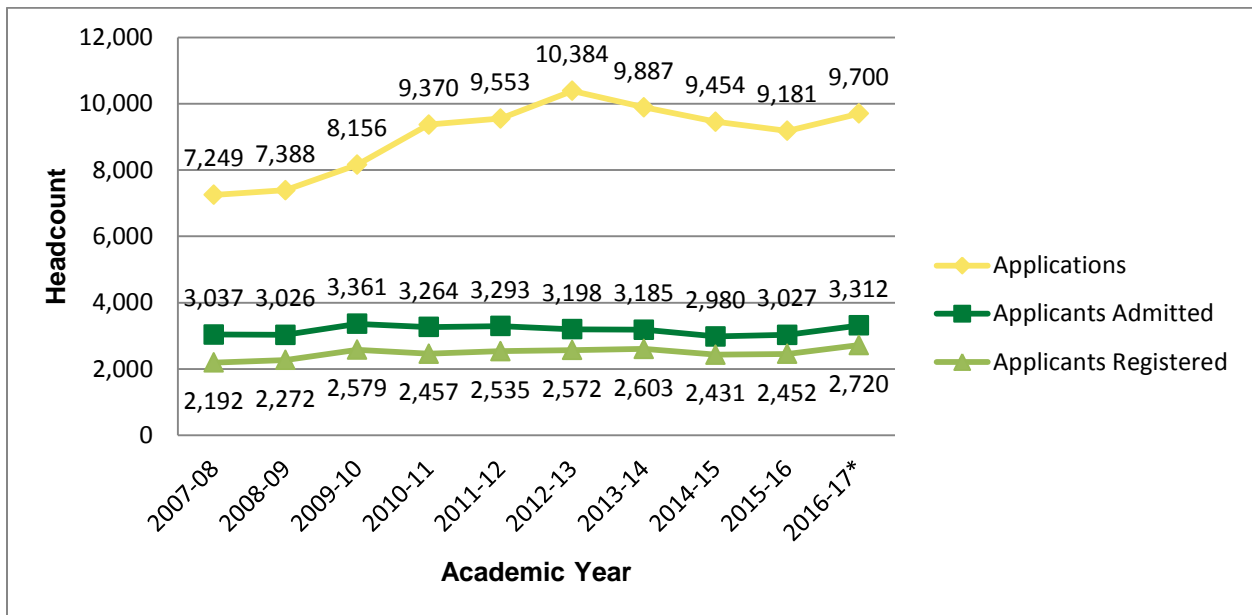
Fall Proportion in total year	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Applications	85%	85%	86%	85%	85%	82%	81%	81%	81%
Applicants Admitted	80%	80%	81%	80%	78%	75%	77%	74%	73%
Applicants Registered	79%	78%	80%	79%	76%	73%	75%	72%	74%

Source: Strategic Analysis and Data Warehousing – accessed December 3, 2016.
Notes: (1) *Academic year figures (Sept to Aug) for 2016-17 were extracted from December archive, which includes Fall term numbers only. The total 2016-17 figures are projected based on the average proportion of fall admissions to total admissions over the preceding three-year period; (2) Applicants Admitted = students who applied and were admitted in the fall term of each year; (3) Applicants Registered = Number of students who registered at the U of A after being accepted.

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[2] The numbers given are for those applying in a given academic year. The date of first registration is frequently in a different academic year. Unlike the vast majority of undergraduate students, approximately 25% of graduate students do not start in the fall term.

2.2. Domestic Graduate Admissions

Domestic graduate admissions are showing signs of recovering. The rate of admission is keeping pace with the number of applications, as is the yield rate.
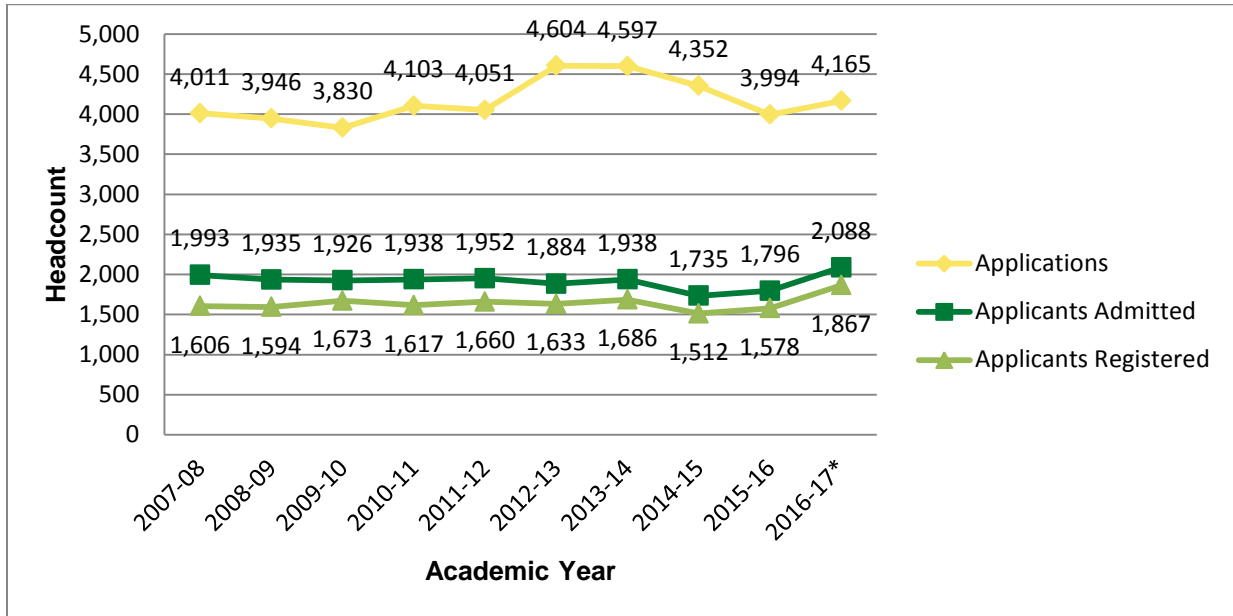

Source: Strategic Analysis and Data Warehousing – accessed December 3, 2016.
Notes: (1) Academic year figures (Sept to Aug) for 2016-17 were extracted from December archive, which includes Fall term numbers only; the total 2016-17 figures are projected based on the average proportion of fall admissions to total admissions over the preceding three-year period; (2) Citizenship status is not available for some of our application records. As a result, the sum of the total domestic (Table 2.2) and total international (Table 2.3) application numbers does not equal the total applications in some cases. There is a similar data gap for applicants admitted in Fall 2008.

2.3. International Graduate Admissions

Applicants on a study permit form an increasingly large part of the total graduate applicant pool. While domestic applications are showing modest recovery, international applications (and, concomitantly, admissions and registrations) are rebounding rapidly. Since admission rates are staying relatively constant, this graph suggests that our programs are becoming more highly sought after and competitive.
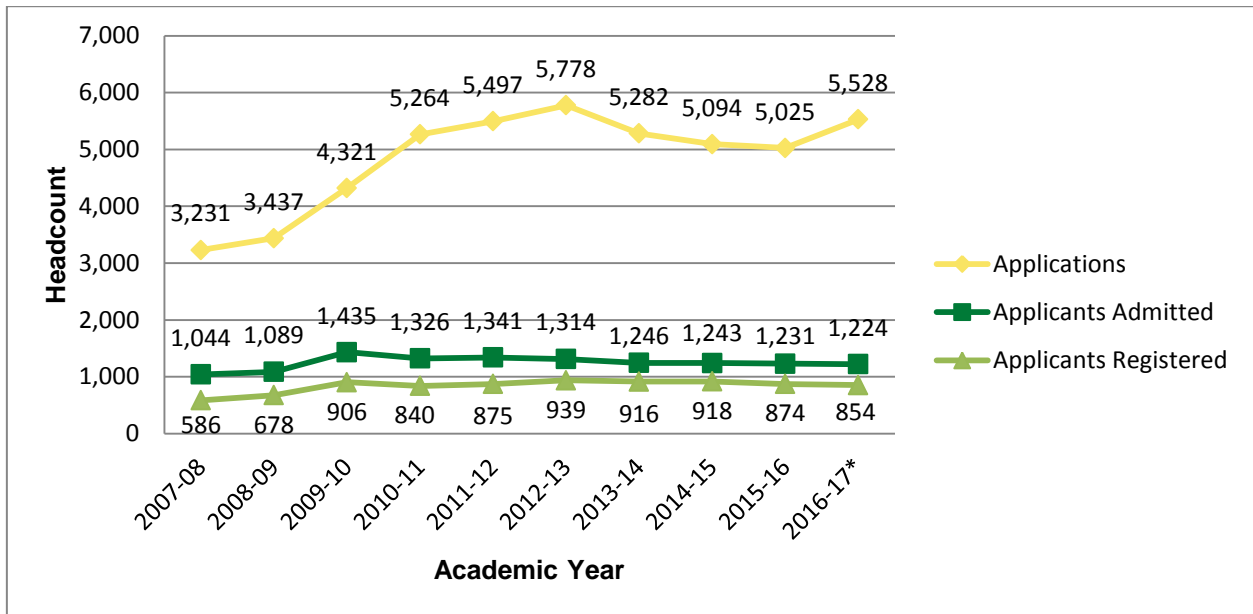
Source: Strategic Analysis and Data Warehousing – accessed December 3, 2016.
Notes: (1) *Academic year figures (Sept to Aug) for 2016-17 were extracted from December archive, which includes Fall term numbers only; the total 2016-17 figures are projected based on the average proportion of fall admissions to total admissions over the preceding three-year period; (2) International students = students attending the university on a study/work visa.

2.4. Admissions Grade Point Average (AGPA)

The admissions grade point average (AGPA)[3] is one of the basic eligibility criteria for graduate admissions, although it is not usually a final determining factor. Our average AGPAs have remained very high, although our (quite small) group of applicants with AGPAs below 3.0 remains our highest-yielding group.

The next few tables show the average AGPA by program type. The tables demonstrate consistently high entry AGPAs over the last decade.

This section considers only those students in doctoral and master's degree programs. Students in other program categories including qualifying, visiting and probationary students as well as those registered in post baccalaureate certificates or postgraduate diplomas are not included.

2.4.1. Doctoral Average AGPA

| Academic Year	Average AGPA	Applicants Admitted	Applicants Registered	Percentage Yield
2007-08	3.64	647	457	71%
2008-09	3.67	663	487	73%
2009-10	3.68	724	561	77%
2010-11	3.69	691	527	76%
2011-12	3.70	716	518	72%
2012-13	3.65	711	548	77%
2013-14	3.66	610	477	78%
2014-15	3.64	587	466	79%
2015-16	3.72	596	469	79%
Fall 2016	3.74	413	334	81%

Source: Strategic Analysis and Data Warehousing – accessed December 3, 2016.
Notes: (1) Academic year figures (Sept to Aug) for 2016-17 were extracted from December archive, which includes Fall term numbers only.

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[3] The Admission Grade Point Average (AGPA) is calculated from the grades on the most recent 60 course credits taken by the applicant. Please note that with the paper-based application system in use until December 2014, the FGSR could only see the transcripts, and calculate the AGPA, for the applicants being offered admission. The AGPAs of the applicants who were not admitted is unknown.

2.4.2. Thesis-Based Master's Average AGPA

Term	Average AGPA	Applicants Admitted	Applicants Registered	Percentage Yield
2007-08	3.58	1,051	710	68%
2008-09	3.57	1,012	735	73%
2009-10	3.59	1,060	813	77%
2010-11	3.57	923	707	77%
2011-12	3.59	974	749	77%
2012-13	3.58	985	799	81%
2013-14	3.57	912	767	84%
2014-15	3.60	886	759	86%
2015-16	3.64	930	778	84%
Fall 2016	3.62	778	673	87%

Source: Strategic Analysis and Data Warehousing – accessed December 3, 2016.
Notes: (1) Academic year figures (Sept to Aug) for 2016-17 were extracted from December archive, which includes Fall term numbers only.

2.4.3. Course-Based Master's Average AGPA

Term	Average AGPA	Applicants Admitted	Applicants Registered	Percentage Yield
2007-08	3.46	1,177	883	75%
2008-09	3.46	1,161	892	77%
2009-10	3.51	1,366	1,040	76%
2010-11	3.53	1,430	1,053	74%
2011-12	3.49	1,425	1,129	79%
2012-13	3.49	1,235	981	79%
2013-14	3.49	1,403	1,136	81%
2014-15	3.52	1,247	991	79%
2015-16	3.55	1,263	1002	79%
Fall 2016	3.50	1,125	863	77%

Source: Strategic Analysis and Data Warehousing – accessed December 3, 2016.
Notes: (1) Academic year figures (Sept to Aug) for 2016-17 were extracted from December archive, which includes Fall term numbers only.

3. Convocation

This section provides information on graduate degrees by graduating cohort, which includes all individuals who graduate in a given calendar year. The method used here provides the most accurate picture of completion times based on the information available to us.

An alternative approach would be to follow a cohort who started in a particular year, and analyze their various characteristics over time. At present, it is not possible to complete that analysis using the Office of Strategic Analysis institutional data warehouse information. This is important to note because, as outlined in Section 4, U15 comparator data uses the cohort-forward approach.

It is also important to note that since convocation numbers are reported by calendar year, that they cannot be precisely correlated with admissions, which operate on an academic year.

3.1. Number of Graduate Degrees Granted
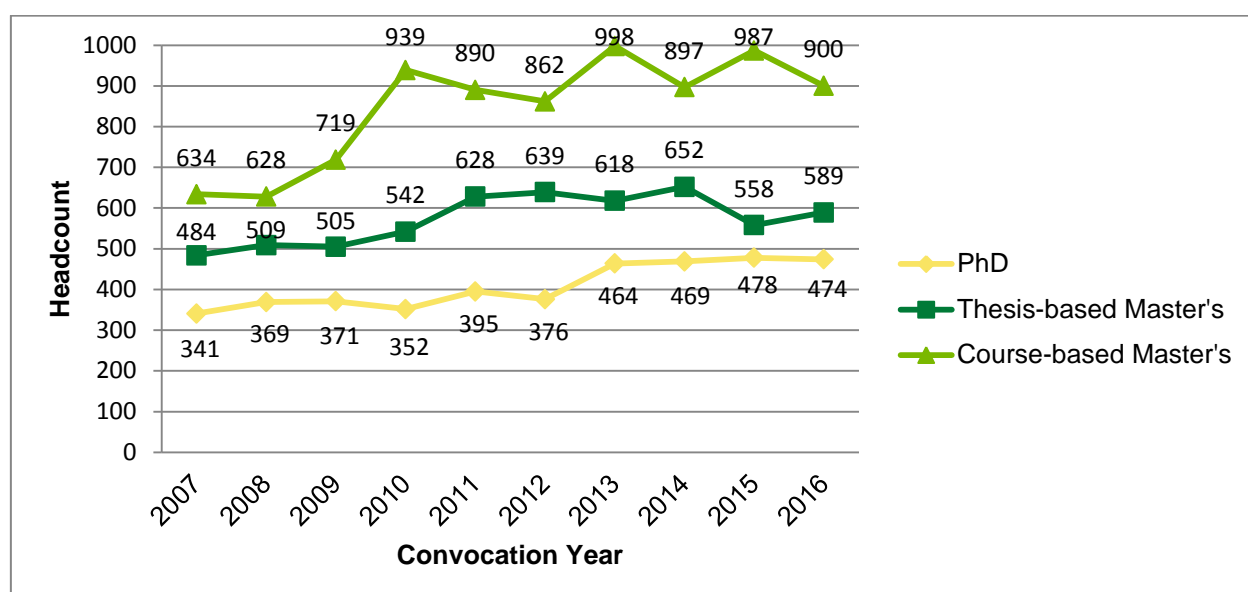
Convocation Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Total Convocants	1459	1507	1602	1835	1914	1890	2095	2038	2037	1995

Source: Strategic Analysis and Data Warehousing – accessed December 3, 2016.
Notes: (1) Convocation year = calendar year (January 1 to December 31); (2) Includes June and November convocations of a particular year; (3) Table includes convocants from the other program categories (qualifying, visiting and probationary students as well as people registered in post baccalaureate certificates or postgraduate diplomas), while the graph does not.

3.2. Average Completion Times by Degree Type

The time to completion for doctoral students continues to rise in spite of efforts to reduce completion times. While it is not entirely clear what is driving this increase, the dismal academic job market is likely to be part of the reason. This year we have indicated the average amount of time spent on approved Leave of Absence (LOA). Such leaves currently include parental, medical and a small number of compassionate leaves. As of January 2017, students may also take professional leaves to pursue career-building internships and similar opportunities. We know from other analyses that taking formal LOA increases the likelihood of completion, particularly among doctoral students, even though it will obviously increase program length.

Course-based Master's programs have become shorter, possibly because they have a higher proportion of international students, who consistently demonstrate shorter completion times (see Table 3.3).

Convocation Year	PhD	M-T	M-C	Average LOA
2007	6.09	3.43	3.03	0.70
2008	6.29	3.47	3.11	0.70
2009	6.25	3.49	2.98	0.79
2010	6.52	3.39	2.76	0.74
2011	6.28	3.33	2.63	0.71
2012	6.26	3.32	2.80	0.66
2013	6.22	3.30	2.87	0.79
2014	6.17	3.31	2.70	0.84
2015	6.33	3.34	2.72	0.74
2016	6.72	3.41	2.79	0.84

M-T = Thesis-Based Master's, M-C = Course-Based Master's (D=Domestic) (Int.=International), LOA = Leave of Absence

Source: Strategic Analysis and Data Warehousing – accessed December 3, 2016.
Notes: (1) Convocation year = calendar year (January 1 to December 31); (2) Figures show average completion time in years; (3) Completion time calculated as: first term of attendance to milestone completion date; (4) Any time spent in an official Leave of Absence (LOA) has not been deducted from the total completion time; (5) Excludes students in other program categories (qualifying, visiting and probationary students as well as people registered in post baccalaureate certificates or postgraduate diplomas).

3.3. Average Completion Times by Citizenship

In every single year, in every type of degree, international graduate students complete their degrees faster than domestic students do. International students also take fewer/shorter leaves of absence, on average.

Convocation Year	PhD		M-T		M-C		Average LOA	
	D	Int.	D	Int.	D	Int.	D	Int.
2007	6.17	5.53	3.47	3.27	3.08	2.46	0.72	0.42
2008	6.36	5.82	3.56	3.11	3.18	2.40	0.71	0.67
2009	6.32	5.62	3.56	3.31	3.02	2.61	0.81	0.50
2010	6.60	5.98	3.52	3.06	2.80	2.44	0.76	0.50
2011	6.41	5.46	3.44	3.15	2.72	2.20	0.72	0.50
2012	6.48	5.32	3.40	3.19	2.94	2.23	0.70	0.38
2013	6.43	5.52	3.46	3.09	3.04	2.11	0.80	0.64
2014	6.51	5.40	3.45	3.12	2.82	2.04	0.91	0.58
2015	6.62	5.69	3.55	3.12	2.88	2.08	0.79	0.56
2016	6.97	6.28	3.55	3.19	2.97	2.14	0.90	0.60

M-T = Thesis-Based Master's, M-C = Course-Based Master's (D=Domestic) (Int.=International), LOA = Leave of Absence

Source: Strategic Analysis and Data Warehousing – accessed December 3, 2016.
Notes: (1) Convocation year = calendar year (January 1 to December 31); (2) Figures show average completion time in years; (3) Completion time calculated as: first term of attendance to milestone completion date; (4) Time spent in an official Leave of Absence (LOA) has not been deducted from the total completion time; (5) Domestic = Canadian citizens and permanent residents; (6) International = students attending the university on a study/work visa at time of completion; (7) Excludes students in other program categories (qualifying, visiting and probationary students as well as people registered in post baccalaureate certificates or postgraduate diplomas).

3.4. Attrition Rates

This section of the Graduate Enrolment Report shows the most significant changes from the 2015-16 version, due to using new, sustainable data sources. We have extended the length of our analysis back to 1999-2000 in order to highlight trends, which are the most reliable indicators given the complexity of calculating attrition rates. In general, Master's attrition rates are falling. Doctoral attrition remains an area of concern. While we would never want the attrition rate to be 0% - because a PhD is not for everybody – it is particularly expensive to both students and the institution when doctoral students leave late in their programs.

In the chart below, each cohort of graduate students starting in a given academic year has been divided into those who still had an active registration as of June 2015 and those who have obtained a degree. The remainder ("in attrition") consists of those who have left the University without any credential. Students currently recorded as "still active" may either convocate or leave their program without a degree. Thus attrition rates become increasingly speculative as we move toward the present.

In the aggregate table that follows, we decline to calculate attrition rates for cohorts that fall within the average time to completion of a PhD (~6 years, or 2011-12) – of course, this hides the Master's rates. The program-specific tables that follow break out this information more fully.

	Applicants Registered	Convocations	Still Active	In Attrition	Attrition rate
1999-00	1,284	1,035	0	249	19%
2000-01	1,351	1,143	0	208	15%
2001-02	1,441	1,209	1	231	16%
2002-03	1,630	1,379	0	251	15%
2003-04	1,739	1,481	0	258	15%
2004-05	1,654	1,403	0	251	15%
2005-06	1,601	1,361	4	236	15%
2006-07	1,825	1,537	8	280	15%
2007-08	2,026	1,716	19	291	14%
2008-09	2,085	1799	32	254	~12%
2009-10	2,367	2004	95	268	~11%
2010-11	2221	1797	191	233	~10%
2011-12	2337	1763	340	234	~10%
2012-13	2274	1448	600	226	N/A
2013-14	2331	1240	901	190	N/A
2014-15	2171	571	1453	147	N/A
2015-16	2201	53	2066	82	N/A
Fall 2016	1942	0	1941	1	N/A

Source: Extracted from PeopleSoft; internal script
Notes: (1) Figures are calculated taking into account the convocant's program at the time of admission; (2) Excludes students in other program categories (qualifying, visiting and probationary students as well as people registered in post baccalaureate certificates or postgraduate diplomas); (3) Academic year figures (Sept to Aug) for 2016-17 were extracted from December archive, which includes Fall term numbers only; (4) ~ = approximately.

3.4.1. Doctoral Attrition Rates

Attrition rates become increasingly speculative as we move to the present. Since the average time to completion for PhD students at the University of Alberta is greater than six years, the attrition rates from 2011-12 onward should be disregarded, and those for the preceding two or three years used only cautiously. Tracking the absolute *number* of convocating, still active and remaining students is useful to view over time, and that is why those figures have been reported here.

Importantly, these tables do not indicate when students leave the PhD program. Generally speaking, the later, the more expensive – for both students and the university. The rule that students complete candidacy exams within the first 36 months of a PhD program is designed to provide a solid checkpoint before students get too far along.

	Applicants registered	Convocations	Still active	In attrition	Attrition rate
1999-00	327	231	0	96	29%
2000-01	351	267	0	84	24%
2001-02	386	300	0	86	22%
2002-03	413	325	0	88	21%
2003-04	440	354	0	86	20%
2004-05	392	283	0	109	28%
2005-06	376	280	2	94	25%
2006-07	455	343	7	105	23%
2007-08	450	347	15	88	20%
2008-09	477	376	20	81	~17%
2009-10	547	395	73	79	~14%
2010-11	507	303	136	68	~13%
2011-12	502	204	225	73	N/A
2012-13	532	74	379	79	N/A
2013-14	469	29	389	51	N/A
2014-15	458	6	401	51	N/A
2015-16	452	0	420	32	N/A
Fall 2016	357	0	357	0	N/A

Source: PeopleSoft; internal script
Notes: (1) Figures are calculated taking into account the convocant's program at the time of admission. This has implications for students who move from Master's to PhD programs without formally reapplying (and, conversely, for students who are repositioned in Master's programs from the doctoral programs they entered, usually as a result of a failed candidacy exam); (2) Academic year figures (Sept to Aug) for 2016-17 were extracted from December archive, which includes Fall term numbers only; (3) ~ = approximately.

3.4.2. Thesis-Based Master's Attrition Rates

A reminder that attrition rates become more speculative as they approach the present, and that average time to completion for a Thesis-Based Master's degree is currently 3.41 years.

	Applicants registered	Convocations	Still active	In attrition	Attrition rate
1999-00	534	451	0	83	16%
2000-01	556	487	0	69	12%
2001-02	585	504	0	81	14%
2002-03	674	581	0	93	14%
2003-04	643	560	0	83	13%
2004-05	646	566	0	80	12%
2005-06	613	532	1	80	13%
2006-07	649	561	1	87	13%
2007-08	702	597	3	102	15%
2008-09	726	633	10	83	11%
2009-10	801	711	17	73	9%
2010-11	689	585	36	68	10%
2011-12	740	591	78	71	10%
2012-13	782	566	144	72	~9%
2013-14	752	451	239	62	~8%
2014-15	748	192	511	45	N/A
2015-16	763	5	724	34	N/A
Fall 2016	706	0	705	1	N/A

Source: PeopleSoft; internal script
Notes: (1) Figures are calculated taking into account the convocant's program at the time of admission; (2) Excludes students in other program categories (qualifying, visiting and probationary students as well as people registered in post baccalaureate certificates or postgraduate diplomas); (3) Academic year figures (Sept to Aug) for 2016-17 were extracted from December archive, which includes Fall term numbers only; (4) ~ = approximately.

3.4.3. Course-Based Master's Attrition Rates

A reminder that attrition rates become more speculative as they approach the present, and that average time to completion for a Course-Based Master's degree is currently 2.79 years.

	Applicants registered	Convocations	Still active	In attrition	Attrition rate
1999-00	423	353	0	70	17%
2000-01	444	389	0	55	12%
2001-02	470	405	1	64	14%
2002-03	543	473	0	70	13%
2003-04	656	567	0	89	14%
2004-05	616	554	0	62	10%
2005-06	612	549	1	62	10%
2006-07	721	633	0	88	12%
2007-08	874	772	1	101	12%
2008-09	882	790	2	90	10%
2009-10	1,019	898	5	116	11%
2010-11	1025	909	19	97	~9%
2011-12	1095	968	37	90	~8%
2012-13	960	808	77	75	~8%
2013-14	1110	760	273	77	N/A
2014-15	965	373	541	51	N/A
2015-16	986	48	922	16	N/A
Fall 2016	879	0	879	0	N/A

Source: PeopleSoft; internal script
Notes: (1) Figures are calculated taking into account the convocant's program at the time of admission; (2) Excludes students in other program categories (qualifying, visiting and probationary students as well as people registered in post baccalaureate certificates or postgraduate diplomas); (3) Academic year figures (Sept to Aug) for 2016-17 were extracted from December archive, which includes Fall term numbers only; (4) ~ = approximately.

4. National Comparisons

At present, there are two main data sources for understanding graduate enrolment trends across Canada. The Canadian Association for Graduate Studies (CAGS) publishes annual Statistical Reports on enrolments by degree, by province, by field of study and by demographic characteristics. It correlates data from all graduate degree granting Canadian universities.

The second source of information comes from the U15 Group of Canadian Research Universities Data Exchange. This data provides a better basis for comparison. However, it is not public.

For this year's Graduate Enrolment report, we focused on recent U15 material that allows us to compare the University of Alberta's thesis-based degrees (both Master's and PhD) with those of our peers in two areas: rate of completion, and time to completion. While we are not at liberty to reproduce raw data, we can describe the latest results of a recurrent analysis.

In June 2014, the U15 Group of Canadian Research Universities released a study of graduate students' academic progression for the cohorts of doctoral students who began their programs in 2003 and 2007, and for the research master's cohort that began in 2007. A team at the Université de Montréal prepared the study, which is the twelfth set of published results on times to completion for graduate students in Canadian institutions.

The times to completion study follows students forward, defining a cohort at the beginning of their programs and tracking calendar time elapsed until the last term of study. For doctoral students, the measure of success is degree completion, whereas for Master's students, success is measured in terms of completion or promotion to a doctoral program. The results include absolute completion rates, length of study and cumulative completion rates over time. (The authors note that the distribution of students across disciplinary divisions can significantly affect both average completion rates and completion times.)[4]

Overall, student cohorts at the University of Alberta show high rates of program completion (or promotion): both the 2003 doctoral cohort and the 2007 master's cohort are above the U15 average for success in this category, with the doctoral cohort ranking 4th in the U15. The rate of completion for University of Alberta doctoral candidates has also steadily improved over time. Degree completion after nine years by the 1999 doctoral cohort was below the U15 average, whereas, five years later, the 2003 cohort had a nearly 10% higher completion rate, well above the U15 average.

In contrast, times to completion for both doctoral and research Master's students at the University of Alberta are relatively high. Compared to the U15 average, students in the 2003 doctoral cohort took, on average, 1 term longer to complete their programs, and those in the 2007 research master's cohort took an additional 1.6 terms to complete their degrees.

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[4] For example, in the 2003 doctoral cohort, the Sciences and Health Sciences students had the highest completion rates (U15 average above 77%), whereas the Engineering students had the fastest completion times (U15 average of 4.9 years). In an internal UofA multi-variate analysis conducted during the last year, our data demonstrates that students in the Health Sciences are most likely to complete (though there is a range, from a low of 70% in Pharmacy and Pharmaceutical Sciences to a high of 89% completion in Medicine and Dentistry). Engineering doctoral students complete at the rate of 76%: the same as ALES and Nursing.

Combined completion and retention of the 2007 doctoral cohort after five years at the university, an early indicator of success, is just below the U15 average. However, given longer-than-average completion times in the 2003 cohort and a high percentage of students still enrolled at the time of the study, the overall success rate for the 2007 doctoral cohort may still be strong.

Although we must close on a note of caution, since some of this data is soft and important variation (by program, by field of study, by international vs domestic, etc.) can be obscured by generalization, the key takeaways here are that our thesis-based Master's and PhD students have strong rates of degree completion, and we have been improving our time-to-degree, relative to our peer institutions.