



**UNIVERSITY OF ALBERTA**  
**FACULTY OF GRADUATE**  
**STUDIES & RESEARCH**

# **Graduate Student Enrolment Report**

## **2015-2016**



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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 first annual report on graduate enrolment at the University of Alberta. Overall, this report confirms what our everyday interactions with graduate students suggest: that our programs are attractive (application rates have traditionally been high), our students are strong (consistently showing high admission GPAs), our support systems are working (the attrition rate rarely exceeds 20%), and our supervision is conscientious (our time to completion is stable, and competitive with Canadian and American averages).

Graduate recruitment, admission and enrolment are highly decentralized. Our 7500 graduate students work in over 300 research areas with 250 official specializations. The Faculty of Graduate Studies and Research exerts a centripetal force in this context, and is in a prime position to collate disparate data and connect local to national and international trends. By its nature, this report looks to the past: five to ten years, depending on the availability and reliability of data. The historical knowledge it offers will allow us to chart the right course for the future.

Among the important insights contained here: after a decade of growth, doctoral enrolments may be softening, particularly in Arts and Science. Since PhD enrolment is closely tied to the size of the professoriate and to available research dollars, both of which have stalled, this makes sense. (Anecdotal evidence suggests this is a national trend.) On the other hand, demand for course-based Master's programs continues to surge. The Province of Alberta does not have a specific designation for Professional Master's programs, but a deeper dive into the enrolment data presented here might support the call for such a distinction. The information on time to completion demonstrates that international students complete their degrees more quickly than do domestic students (including Permanent Residents). Attrition rates are highest in thesis-based programs. The cost – to students and to the institution – of doctoral non-completion is high, and deserves further thought. The number of First Nations, Métis and Inuit (FNMI) applicants and students is very low. If the University identifies FNMI recruitment as a strategic goal, special consideration must be given to bringing those students into graduate programs.

A few notes on data and methodology: all graduate enrolment data is expressed in terms of headcount rather than Full Load Equivalent (FLE). Headcount is the only reliable way to count graduate students, since the FLE calculation over-estimates the number of students, due to a changing denominator (number of credits). Wherever possible, we have used the December 1<sup>st</sup> headcount, which provides the most accurate snapshot, capturing all of the students who start their studies in September and excluding everyone who completes their program during the fall semester. However, even the December 1<sup>st</sup> headcount is only a snapshot: in a minority of Faculties, there can be a significant influx of students during the other semesters, and that will not be captured here.

Wherever possible, we have used the University of Alberta data warehouse as our statistical source. For some of the more historical analysis, however, we have used in-house FGSR figures. These figures do not always square with one another. In future editions, we will be able to rely on the data warehouse exclusively, solving the problem of inconsistency.

Your comments and questions – about this report or its successors – are very welcome. One element that we know would be welcome is benchmarking to national and international standards. Frustratingly, much of the comparative data is privacy-protected or out of date; we hope that future enrolment reports will provide more comparative data.

I must close with a note of appreciation for my predecessor, Dr. Mazi Shirvani, who compiled a great deal of data concerning graduate students in his seven years as Dean of the Faculty. I also appreciate the contributions of Deborah Williams, Gurbinder Gandhara and Denise Giles. Of course, I accept responsibility for any shortcomings.

FGSR welcomes the opportunity to be a key partner in strategic enrolment management and presents this report with great pride.

Heather Zwicker, PhD

Interim Vice-Provost and Dean, Faculty of Graduate Studies and Research

3 February 2016

# 1. Enrolment

In this section, all numbers are the standard December 1<sup>st</sup> headcounts, as reported to Statistics Canada and the provincial government.

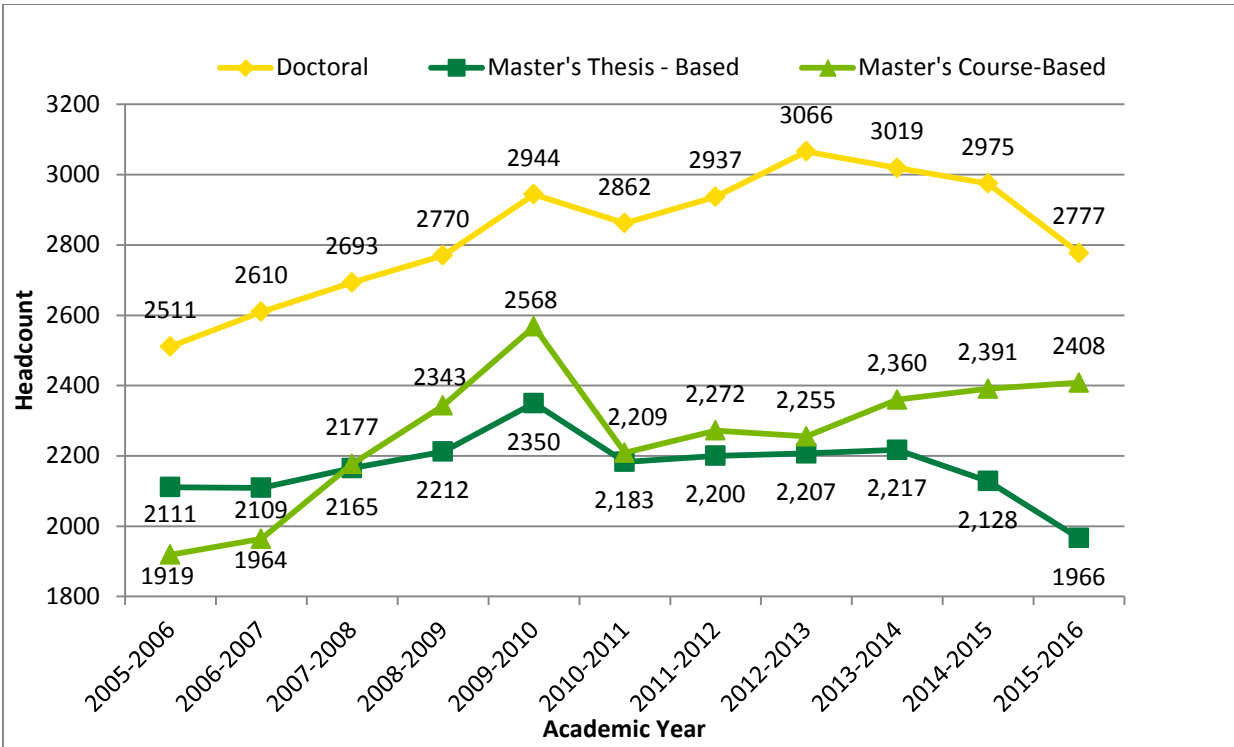
Variation in graduate enrolment from one academic year to the next is due to three independent factors. The number increases by the total number of **new registrations**, and it decreases by the number of those leaving, through **convocation** or through **attrition** (see section 3). As an aggregate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

It is also 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 1<sup>st</sup> headcounts are a snapshot of the Fall Term registrations only.)

## 1.1 Graduate Enrolment by Degree Type

This graph demonstrates the overall increase in graduate enrolment over the last decade: from 6541 (2511 doctoral + 2111 Master’s thesis-based + 1919 Master’s course-based) to 7228 (2777 doctoral + 1966 Master’s thesis-based + 2408 Master’s course-based). The largest increase has been in course-based Master’s programs, suggesting that an appetite for Professional Master’s programs is strong.

Source: FGSR Statistics & Strategic Analysis and Data Warehousing, Enrolment Management Report – January 7, 2016



## 1.2 Graduate Enrollment – Fall Headcount for Doctoral Degree by Faculty

Source: Strategic Analysis and Data Warehousing, Enrolment Management Report – January 7, 2016

Faculty	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
<b>ALES</b>	219	215	245	235	237	230
<b>Arts</b>	458	463	472	478	451	413
<b>Business</b>	61	53	59	61	51	45
<b>Education</b>	270	291	296	291	295	257
<b>Engineering</b>	610	666	717	702	711	678
<b>Extension</b>						
<b>Faculte Saint-Jean</b>						
<b>Faculty of Native Studies</b>						
<b>Law</b>	4	8	8	8	7	7
<b>Medicine and Dentistry</b>	281	303	319	316	340	342
<b>Nursing</b>	80	74	69	63	68	64
<b>Pharmacy</b>	38	34	34	33	32	32
<b>Physical Educ. &amp; Recreation</b>	65	62	60	65	55	56
<b>Public Health</b>	40	42	42	43	45	50
<b>Rehabilitation Medicine</b>	33	34	36	38	36	37
<b>Science</b>	703	692	709	686	646	566
<b>Total</b>	<b>2862</b>	<b>2937</b>	<b>3066</b>	<b>3019</b>	<b>2975</b>	<b>2777</b>

### 1.3 Graduate Enrollment – Fall Headcount for Master’s Degree by Faculty

Source: Strategic Analysis and Data Warehousing, Enrolment Management Report – January 7, 2016

Faculty	2010-2011			2011-2012			2012-2013			2013-2014			2014-2015			2015-2016		
	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	M-C	M-T	Total
ALES	14	260	274	18	248	266	14	249	263	26	258	284	22	261	283	22	244	266
Arts	123	331	454	134	346	480	114	313	427	105	311	416	105	269	374	90	240	330
Business	430		430	447		447	449		449	499		499	544	1	545	558		558
Education	446	89	535	523	99	622	499	97	596	496	85	581	547	80	627	568	70	638
Engineering	375	483	858	304	491	795	189	496	685	148	566	714	93	545	638	36	527	563
Extension	51	1	52	59	1	60	58	2	60	49	2	51	54	1	55	55		55
Faculté Saint-Jean	34	16	50	37	18	55	30	20	50	24	16	40	16	13	29	21	8	29
Law	2	6	8	5	5	10	1	8	9	2	6	8		4	4		5	5
Medicine and Dentistry	4	270	274	2	287	289	2	277	279	2	265	267		281	281	2	260	262
Native Studies							1	7	8		10	10		7	7		12	12
Nursing	42	44	86	44	28	72	39	43	82	45	33	78	49	29	78	47	20	67
Pharmacy		22	22		25	25		21	21		13	13		17	17		18	18
Physical Educ. & Recreation	9	58	67	14	59	73	15	64	79	16	57	73	18	49	67	19	44	63
Public Health	122	88	210	132	91	223	135	95	230	149	99	248	144	100	244	131	80	211
Rehabilitation Medicine	496	42	538	499	38	537	621	37	658	708	41	749	709	39	748	748	48	796
Science	61	473	534	54	464	518	88	478	566	91	455	546	90	432	522	111	390	501
<b>Total</b>	<b>2,209</b>	<b>2,183</b>	<b>4,392</b>	<b>2,272</b>	<b>2,200</b>	<b>4,472</b>	<b>2,255</b>	<b>2,207</b>	<b>4,462</b>	<b>2,360</b>	<b>2,217</b>	<b>4,577</b>	<b>2,391</b>	<b>2,128</b>	<b>4,519</b>	<b>2,408</b>	<b>1,966</b>	<b>4,374</b>

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

This table demonstrates a steady increase in enrolments in course-based Master's degrees. This may be because of increasing interest – on the part of students and on the part of the university – in professional Master's degrees. Currently we have no way to differentiate professional Master's from other course-based Master's. This may be an area for the institution to consider.

## 1.4 Graduate Enrollment – Fall Headcount by Citizenship & Faculty

We have the second most diverse graduate student body in Canada, after UBC. Over one third of our graduate students are international. As the following table shows, they are distributed unevenly across Faculties. It is important to remember that there are citizenship implications for funding: Tri-Council awards are available only to Canadian citizens and Permanent Residents (which are grouped together here), for example.

Source: *Strategic Analysis and Data Warehousing, Enrolment Management Report – January 7, 2016*

Faculty	2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016	
	Total	Int. %	Total	Int. %	Total	Int. %	Total	Int. %	Total	Int. %	Total	Int. %
ALES	504	43%	485	48%	518	49%	523	51%	526	49%	500	52%
Arts	930	25%	952	27%	904	30%	898	30%	833	33%	751	33%
Business	506	19%	514	18%	532	19%	581	26%	614	33%	613	34%
Education	810	5%	916	6%	897	7%	872	7%	923	9%	901	9%
Engineering	1,481	53%	1,471	56%	1,408	59%	1,427	60%	1355	63%	1,250	64%
Extension	52	2%	60	2%	61	5%	51	2%	55	4%	55	4%
Faculte Saint-Jean	50	2%	55	5%	51	6%	40	3%	29	3%	31	3%
Faculty of Native Studies		0%		0%	8	0%	10	0%	8	0%	12	0%
Law	12	33%	18	22%	17	24%	16	25%	11	18%	12	25%
Medicine and Dentistry	560	24%	596	29%	602	31%	586	35%	628	35%	611	34%
Nursing	172	8%	149	11%	152	12%	144	13%	147	15%	131	16%
Pharmacy	62	53%	61	59%	55	58%	48	65%	49	53%	50	58%
Physical Educ & Recreation	133	20%	137	20%	139	22%	139	23%	125	21%	121	22%
Public Health	250	9%	265	11%	273	12%	291	14%	289	12%	262	11%
Rehabilitation Medicine	571	3%	571	4%	694	4%	787	4%	787	4%	833	3%
Science	1,247	41%	1,217	47%	1,284	53%	1,237	54%	1180	52%	1,071	51%
<b>Total</b>	<b>7346</b>	<b>29%</b>	<b>7474</b>	<b>31%</b>	<b>7598</b>	<b>34%</b>	<b>7664</b>	<b>34%</b>	<b>7572</b>	<b>35%</b>	<b>7226</b>	<b>35%</b>

Int. % = International Percentage out of the total enrolled



## 1.5 Top 15 Source Countries by Student Citizenship – International Enrolment Headcount

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 top 15 countries as selected by the greatest sum of enrolled citizenship headcount over the 10 year period.

Source: FGSR Statistics

Enrolment by Citizenship Country	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
Canada	4041	3998	4101	4226	4308	4237	4245	4255	4258	4091	3967
China	690	654	660	649	672	704	790	857	946	1036	963
Iran (Islamic Republic Of)	133	179	228	287	397	477	505	537	491	476	445
India	147	156	183	206	282	328	306	287	311	307	287
United States	73	69	91	104	117	139	157	179	173	168	156
Bangladesh	47	57	74	93	125	134	129	125	150	137	105
Pakistan	58	66	84	94	131	143	136	129	98	86	74
Saudi Arabia	9	14	18	24	35	49	47	64	63	77	71
Brazil	19	26	25	31	32	36	41	47	47	58	71
Nigeria	42	41	49	50	59	63	52	55	72	79	68
Egypt	40	55	68	77	87	93	90	82	79	79	62
Mexico	54	54	55	68	72	78	83	83	69	54	51
Columbia	26	29	35	34	36	42	53	55	54	47	45
Korea, Republic of (South Korea)	59	52	56	50	49	51	39	37	41	43	41
Germany	27	28	35	41	43	49	51	58	52	50	35

Top 15 out of 276 independent sovereignties, territories, and nations listed in U of A enterprise solution, PeopleSoft.  
Top 15 listed in sequence according to 2015-2016 figures.

## 1.6 Sponsored Students

Source: University of Alberta International Statistics

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.

The University has received sponsored students from 51 countries since 2009-2010<sup>1</sup>, although almost 90% of all new sponsored students have come from the 11 countries in the table 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.

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.

	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	Total
<b>China</b>	18	28	29	39	27	49	<b>190</b>
<b>Saudi Arabia</b>	26	17	18	24	13	18	<b>116</b>
<b>Mexico</b>	14	15	4	9	4	6	<b>52</b>
<b>Vietnam</b>	4	7	8	4	5	2	<b>30</b>
<b>Libya</b>	0	5	0	3	5	10	<b>23</b>
<b>Brazil</b>	0	1	2	3	1	9	<b>16</b>
<b>Chile</b>	3	4	6	2	1	0	<b>16</b>
<b>Colombia</b>	2	2	3	2	3	4	<b>16</b>
<b>Kazakhstan</b>	2	6	1	3	2	0	<b>14</b>
<b>Pakistan</b>	7	1	4	2	0	0	<b>14</b>
<b>Egypt</b>	6	1	0	1	1	2	<b>11</b>

The China Scholarship Council (CSC) is one of our most important sponsoring partners. According to a CSC report from 2013, University of Alberta is their top global partner.<sup>2</sup> This is a valuable connection, but we must keep an eye on the trend, since we do not want to risk building on a narrow base. Other partners include the King Abdullah Scholarship Program, Colfuturo, the Vietnam Ministry of Education and Training, Ministry of Higher Education of Egypt, and the Canadian Commonwealth Scholarship Program.

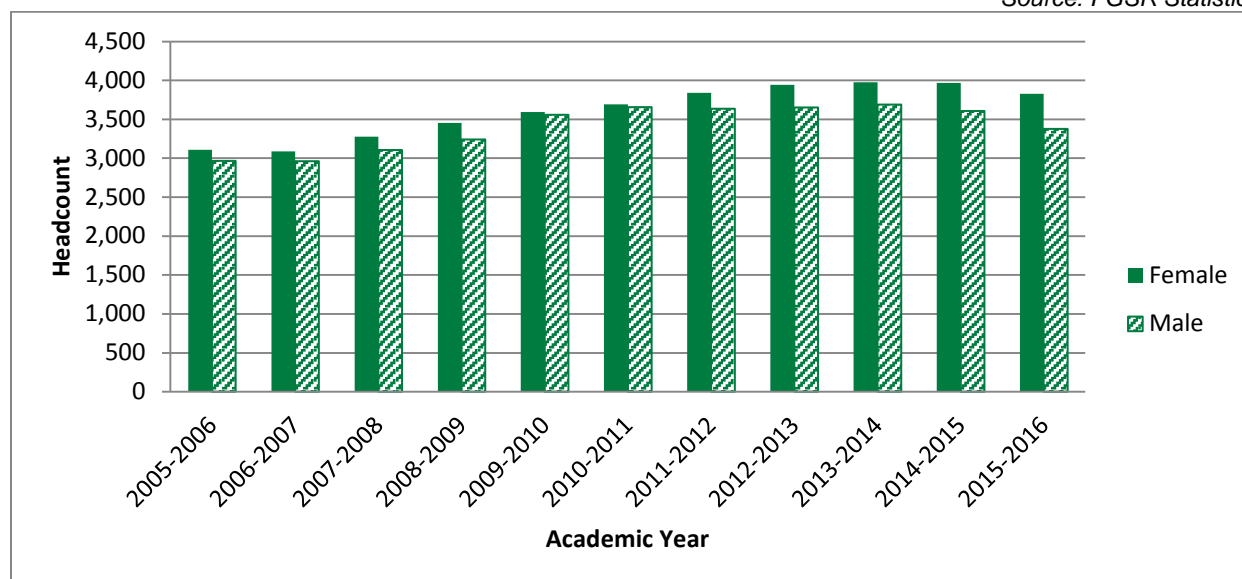
<sup>1</sup> There were 106 sponsored students reported in the first year of the program (2008-2009), but we have not completed the verification of their status.

<sup>2</sup> Since fall 2012, FGSR has paid the domestic tuition and non-instructional fees for all new winners of the four-year CSC doctoral scholarships, and the Provost's Office has paid the international differential tuition for these students.

## 1.7 Enrolment by Gender

The graphs below also include students registered in graduate certificate and diplomas in addition to the three degree program types offered. Our current university systems provide only two gender options; becoming truly inclusive remains a work in progress.

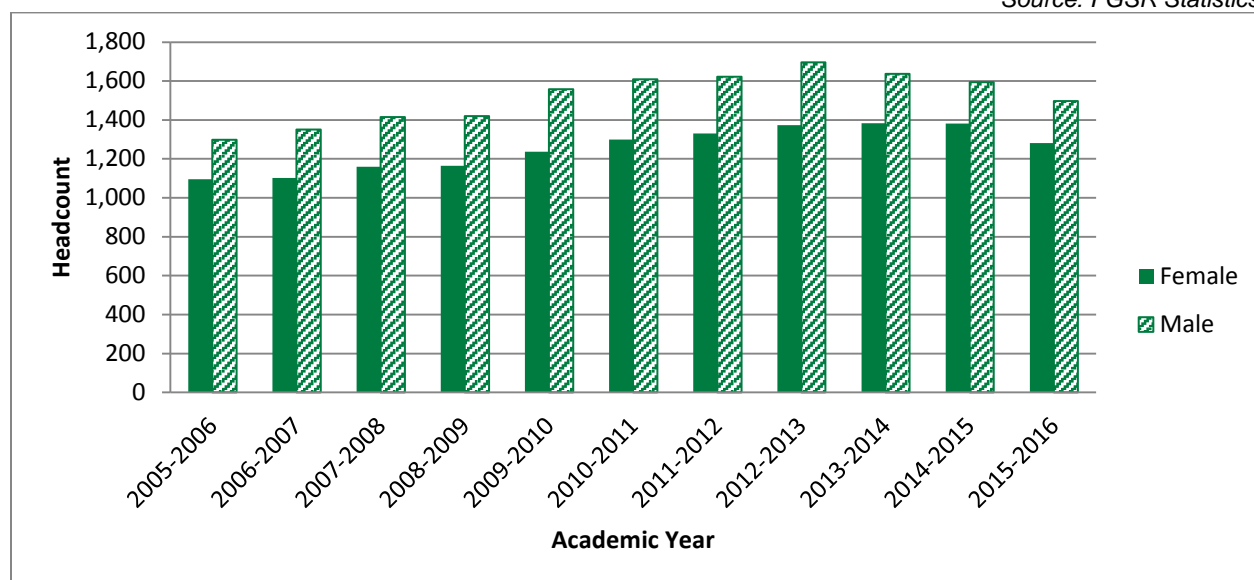
Source: FGSR Statistics



### 1.7.1 Doctoral Enrolment by Gender

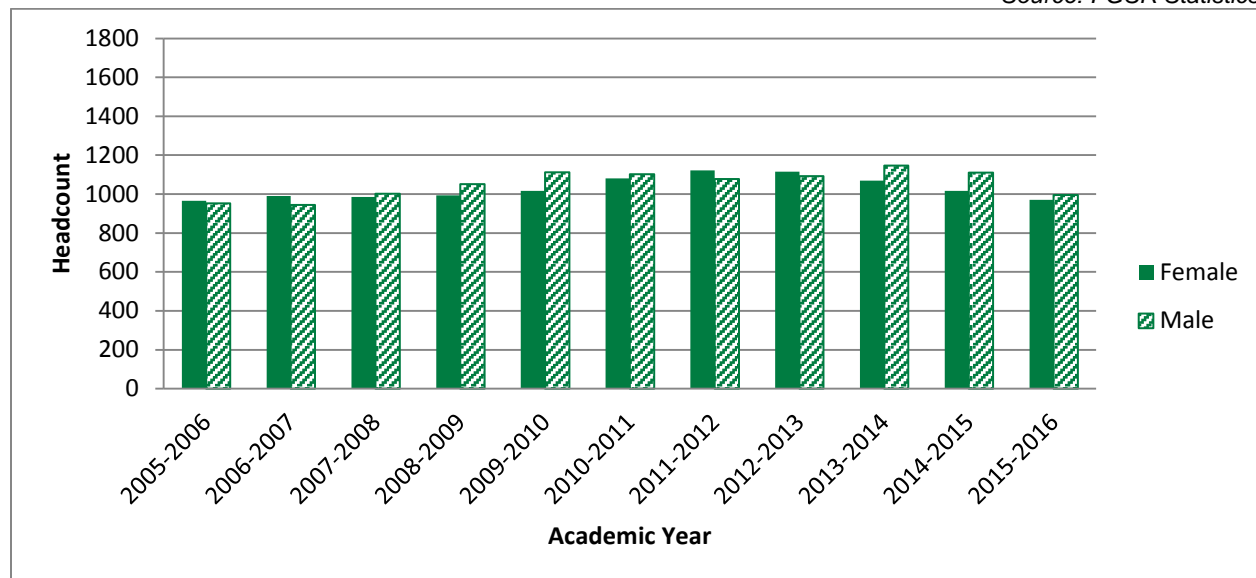
The percentage of female doctoral students has remained relatively stable at around 45%. The national percentage of women in doctoral programs, as reported by the Canadian Association of Graduate Studies (CAGS), was 44.2% in 2009.

Source: FGSR Statistics



### 1.7.2 Master's Thesis-Based Enrolment by Gender

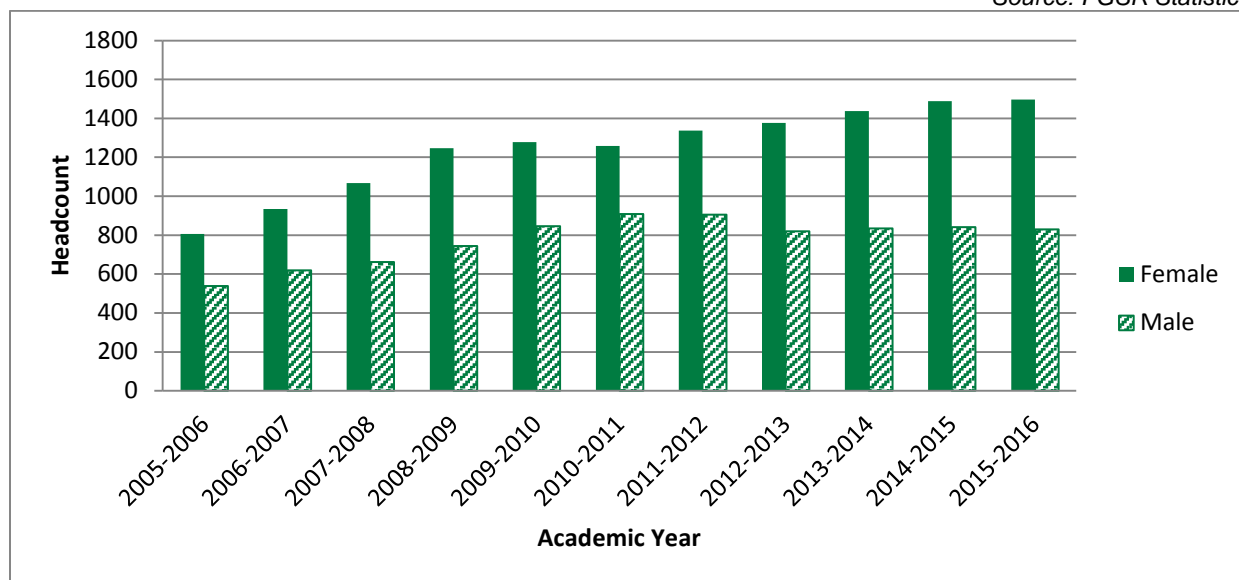
Source: FGSR Statistics



### 1.7.3 Master's Course-Based Enrolment by Gender

The gender ratio has been essentially stable in course-based Master's programs, with female students constituting between 60-65% of the population. CAGS data does not differentiate between course-based and thesis-based Master's programs. It reports that women comprised 55.4% of all Master's registrations in 2009.

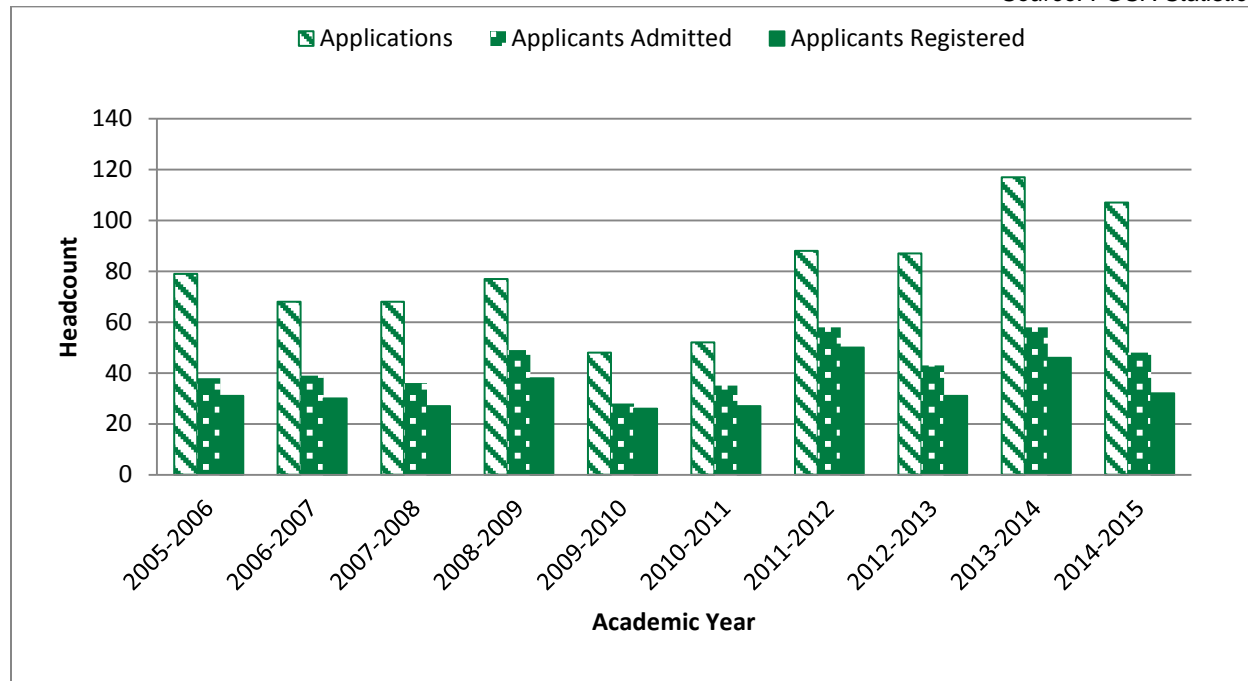
Source: FGSR Statistics



## 1.8 Graduate First Nations, Métis, and Inuit (FNMI) Applications, Admissions and Enrolment

### Applications and Admissions

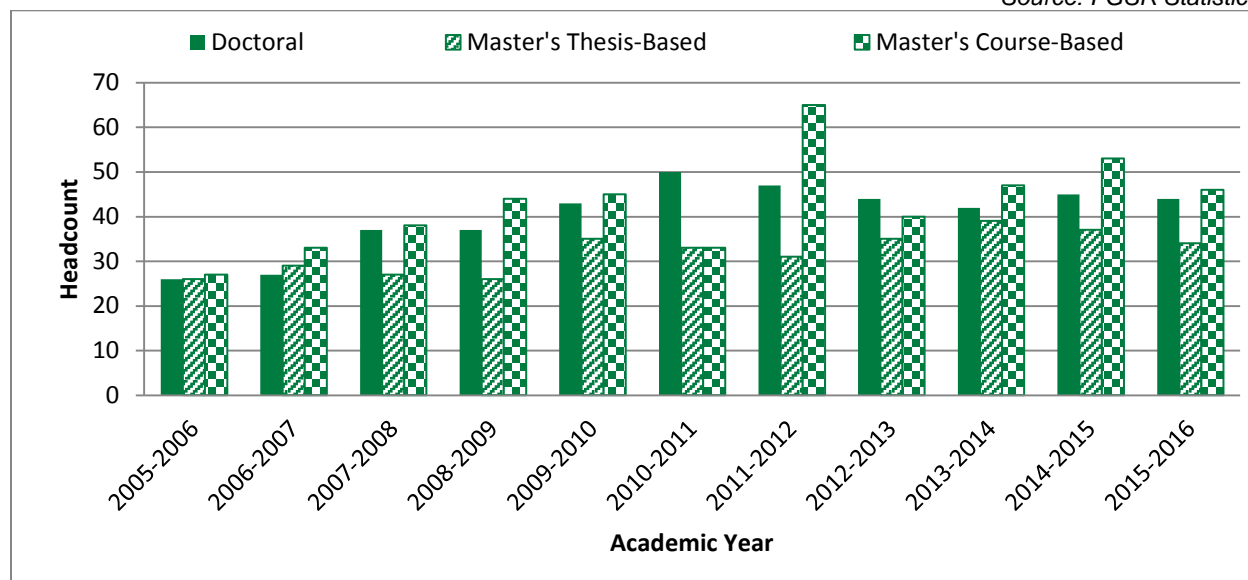
Source: FGSR Statistics



A significant recruitment effort has to be part of an FGSR student outreach strategy, to increase the number of applicants to more than 1% of the domestic applicant pool. As the following table shows, FNMI students are particularly interested in course-based Master's programs.

### Enrolment

Source: FGSR Statistics



## 2. Applications and Admissions

Following a fairly rapid rise for several years, the number of applicants for admission<sup>3</sup> has been declining since the 2012-2013 academic year, in both the domestic and the international applicant pools. 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.

We have an extremely diverse pool of international applicants, which has resulted in one of the most international graduate student populations in the country (on par with UBC). This is particularly true at the doctoral level. At the same time, however, we have observed a decline in the number of domestic doctoral applicants, contrary to the national trend. An effective domestic doctoral recruitment strategy is one option for reversing this trend.

By contrast, international applicants remain a relatively small part of the applicant pool for our course-based Master's programs – contrary to much of the commentary concerning the attractiveness of these programs to international students. Marketing and promotion of our course-based Master's programs may be necessary as the University proceeds with the development of new programs.

Expanding the pool of qualified First Nations, Métis, and Inuit (FNMI) applicants requires careful planning and recruitment strategies.

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.

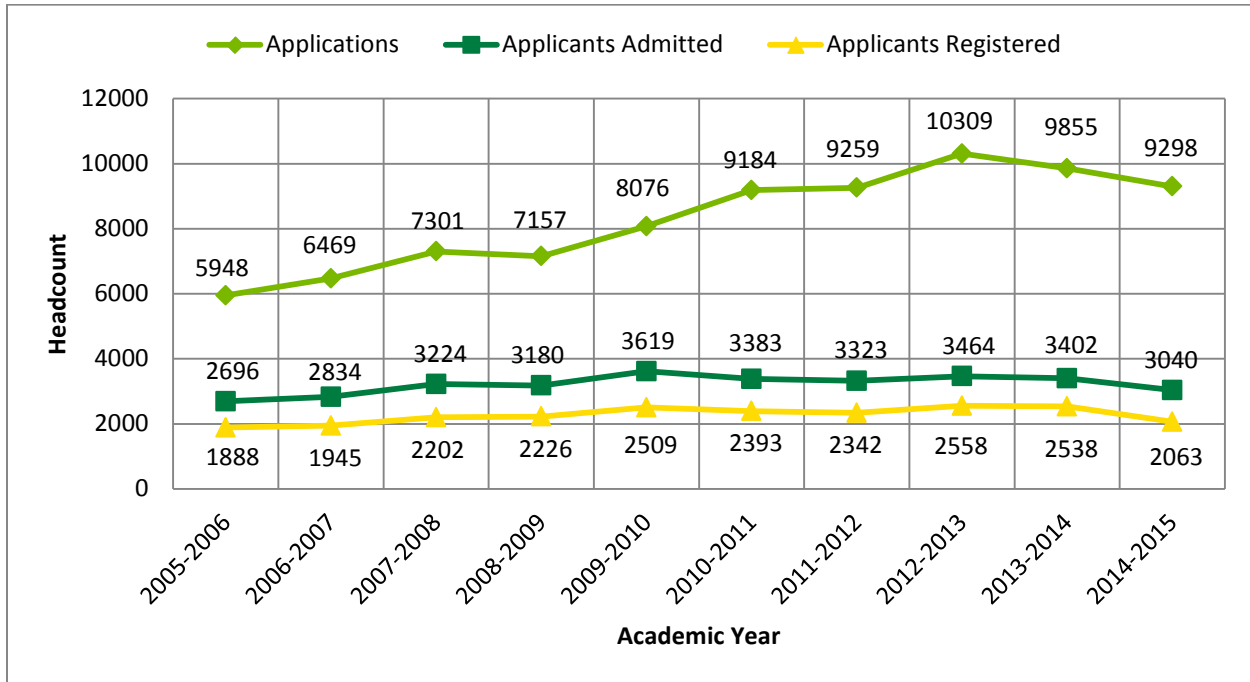
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<sup>3</sup> Our institutional graduate admission requirements are having a degree equivalent to a U of A baccalaureate degree, having an admission GPA of at least 3.0, and a reasonable English Language Proficiency score if from an institution where the main language of instruction was not English. Numerous programs set higher standards. At the same time, programs can waive some of the standards for a particular applicant in the light of other circumstances.

## 2.1 Graduate Admissions

The following graph shows the total number<sup>4</sup> of applications for admission to graduate programs, the number of offers of admissions made, and the number of subsequent registrations. (Please note some applicants may have submitted more than one application.)

Source: FGSR Statistics

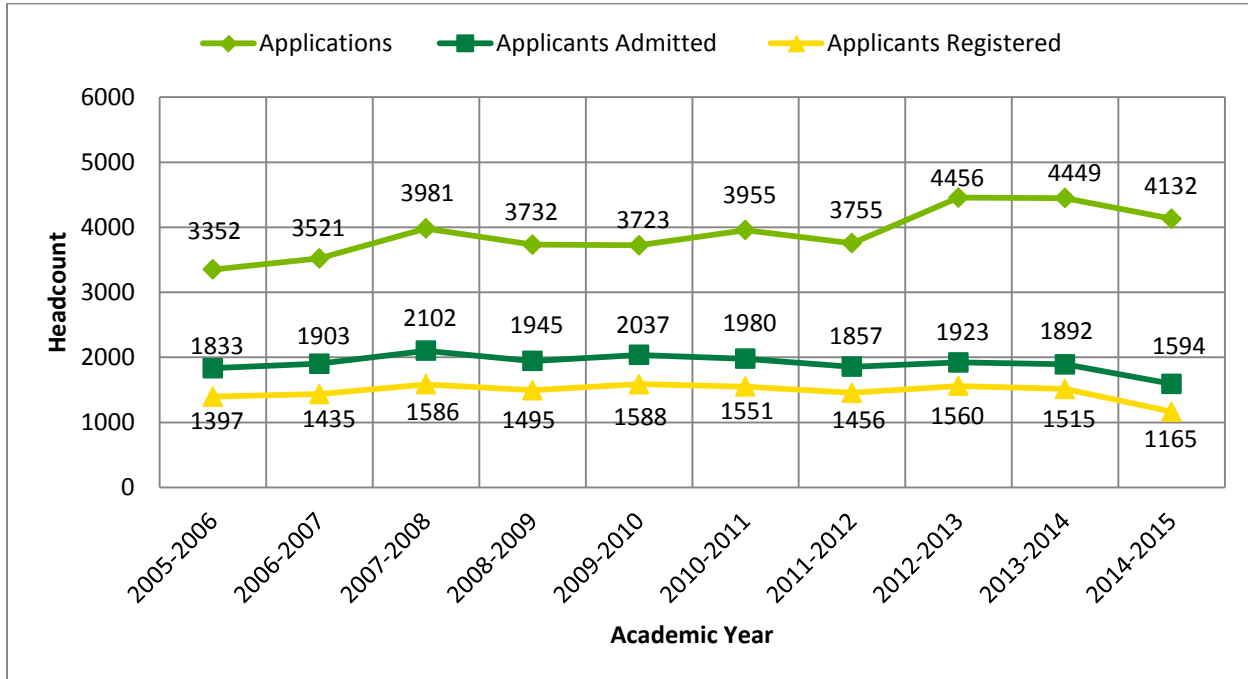


Anecdotal evidence suggests that the trend at University of Alberta – a peak in 2012-13 leading to a period of decline – is consistent with national trends, particularly at the PhD level. However, up-to-date U-15 data is not yet available to confirm this.

<sup>4</sup> 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, almost 15% of graduate students do not start in the fall term.

## 2.2 Domestic Graduate Admissions

Source: FGSR Statistics



Between 2011-2012 and 2014-2015, the number of domestic doctoral applicants fell by more than 30%, the number of Master's thesis-based applicants was almost stable, and the number of Master's course-based applicants grew by almost 24%. The declines in offers and registrations were in both doctoral and Master's course-based pools.

The ten-year trend, however, shows an increase of 23% in applications and, concomitantly, a decline from 42% (1397 of 3352) to 39% in our admit rate. A decline in the number of applicants admitted demonstrates greater selectiveness: an important quality indicator.

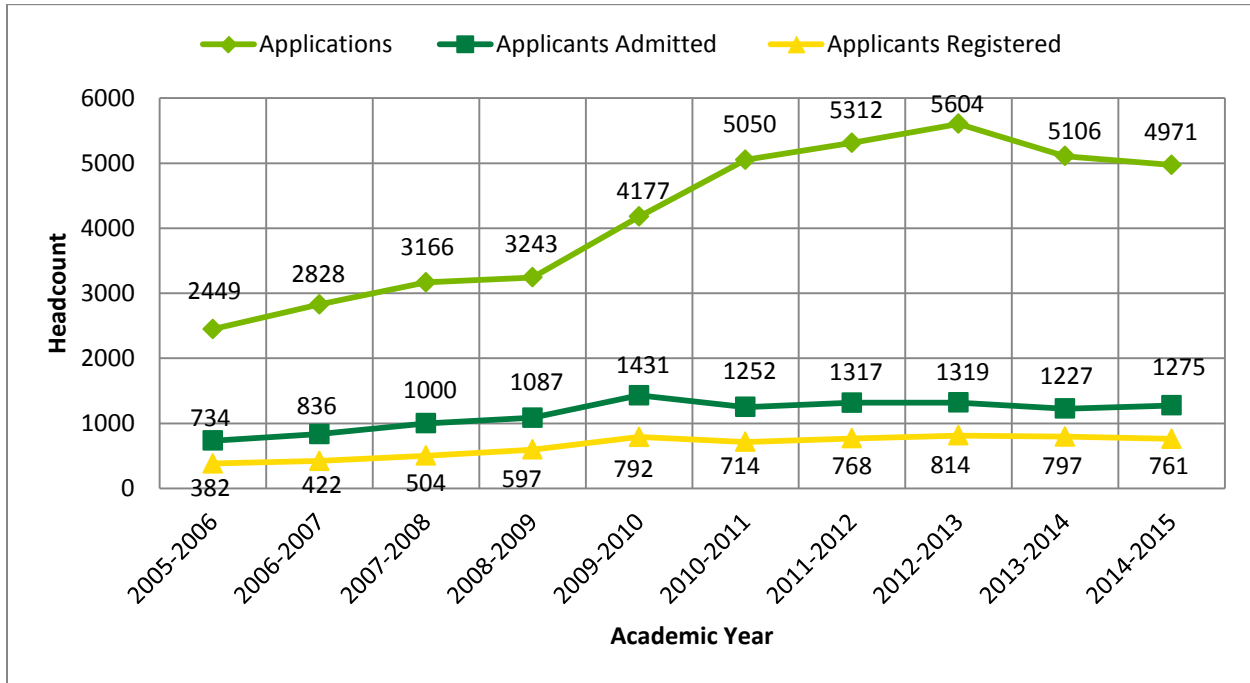
It is noteworthy that yield rates for domestic applicants have always been significantly higher than for international (around 75%, versus under 60%).



## 2.3 International Graduate Admissions

Applicants on a study permit form an increasingly large part of the total graduate applicant pool.

Source: FGSR Statistics



As is the case with domestic admissions, the ten-year trend here is remarkable, with international applicants more than doubling (at their peak) over the last decade. Admission rate in 2005-06 was 30% (734 of 2449); in 2014-15 it is down to 25.6%. Again, this is an indication of quality.

The decline of more than 11% since 2012-2013 is mainly in the doctoral (19%) and Master's thesis-based (10%) pools. The number of offers and registrations has grown for the international doctoral and Master's course-based pools. The increase in doctoral offers on a shrinking pool of applicants is an issue to be addressed.

## Admissions Grade Point Average (AGPA)

The admissions grade point average (AGPA)<sup>5</sup> 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, and 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 GPAs over the last decade.

### 2.4 Doctoral Average AGPA

Source: FGSR Statistics

Academic Year	Average AGPA	Applicants Admitted	Applicants Registered	Percentage Yield
2005-2006	3.63	682	446	65%
2006-2007	3.64	708	467	66%
2007-2008	3.66	782	498	64%
2008-2009	3.68	801	504	63%
2009-2010	3.71	836	545	65%
2010-2011	3.7	783	524	67%
2011-2012	3.67	794	517	65%
2012-2013	3.66	776	529	68%
2013-2014	3.64	665	476	72%
2014-2015	3.64	674	445	66%

Although AGPAs are not a primary factor in doctoral admission decisions, the relative stability of the average AGPA at a high level is a good sign.

### 2.5 Master's Thesis-Based Average AGPA

Source: FGSR Statistics

Academic Year	Average AGPA	Applicants Admitted	Applicants Registered	Percentage Yield
2005-2006	3.58	955	655	69%
2006-2007	3.57	1013	665	66%
2007-2008	3.58	1061	687	65%
2008-2009	3.57	1026	710	69%
2009-2010	3.6	1129	773	68%
2010-2011	3.59	998	694	70%
2011-2012	3.58	1004	728	73%
2012-2013	3.59	1067	774	73%
2013-2014	3.59	996	716	72%
2014-2015	3.62	952	664	70%

<sup>5</sup> 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.

## 2.6 Master's Course-Based Average AGPA

Source: FGSR Statistics

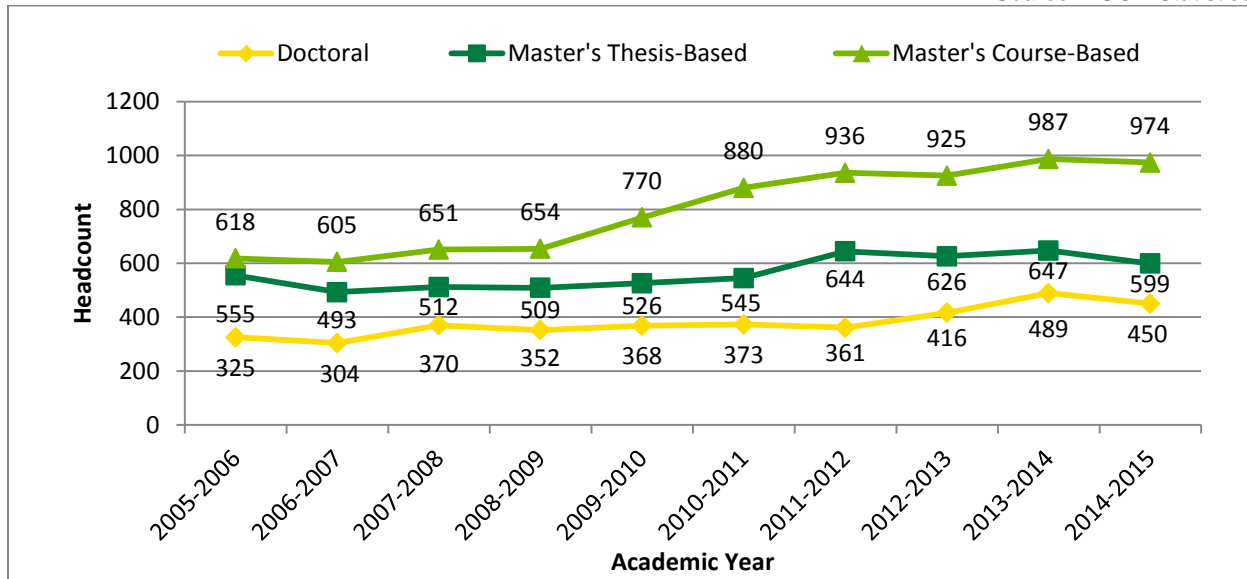
Academic Year	Average AGPA	Applicants Admitted	Applicants Registered	Percentage Yield
2005-2006	3.48	894	659	74%
2006-2007	3.46	1001	713	71%
2007-2008	3.47	1242	891	72%
2008-2009	3.48	1191	868	73%
2009-2010	3.51	1481	1045	71%
2010-2011	3.52	1433	1031	72%
2011-2012	3.48	1348	960	71%
2012-2013	3.52	1376	1050	76%
2013-2014	3.48	1428	1094	77%
2014-2015	3.52	1069	739	69%

### 3. Convocation and Completion

This section provides information on graduate students obtaining graduate degrees by graduating cohort. This means looking at the cohort who graduated in a given year. An alternative is to take a cohort who started in a particular year, and analyze their various characteristics over time. The method used here provides a more accurate picture of completion times, while the other method is to be used for analyzing completion and attrition rates.

#### 3.1 Number of Graduate Degrees Granted

Source: FGSR Statistics



This chart does not show the small but increasing number of post-baccalaureate certificates that are also awarded: typically, now, two to three dozen per year.

### 3.2 Average Completion Times by Degree Type

Efforts have been underway to reduce completion times, particularly for doctoral students. As the chart below shows, however, times to completion have remained relatively stable for the last decade. An investigation of the distribution of completion times, particularly for doctoral students, may be warranted. This will answer questions such as whether the average completion times are being skewed by a relatively small number of students taking an inordinate amount of time to complete their programs.

Source for this section: FGSR Statistics

Academic Year	Doctoral	M-T	M-C
2005-2006	5.6	2.88	2.58
2006-2007	5.45	2.85	2.59
2007-2008	5.57	2.96	2.56
2008-2009	5.77	2.87	2.58
2009-2010	5.83	2.82	2.48
2010-2011	5.88	2.85	2.33
2011-2012	5.63	2.7	2.32
2012-2013	5.63	2.79	2.33
2013-2014	5.67	2.78	2.36
2014-2015	5.67	2.71	2.27

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

### 3.3 Average Completion Times by Citizenship

International graduate students complete their degrees significantly faster. (Domestic includes permanent residents.)

Academic Year	PhD - D	PhD - Int.	M-T - D	M-T - Int.	M-C - D	M-C - Int.
2005-2006	5.66	4.93	2.92	2.56	2.63	1.95
2006-2007	5.49	5.09	2.9	2.58	2.66	1.76
2007-2008	5.63	5.05	3.01	2.67	2.59	2.12
2008-2009	5.84	5.11	2.93	2.62	2.62	2.09
2009-2010	5.9	5.02	2.91	2.51	2.54	1.93
2010-2011	5.95	5.27	2.93	2.59	2.4	1.86
2011-2012	5.73	4.92	2.81	2.45	2.44	1.79
2012-2013	5.83	4.78	2.92	2.57	2.45	1.74
2013-2014	5.89	5.04	2.97	2.47	2.49	1.73
2014-2015	5.95	5.04	2.93	2.43	2.42	1.63

PhD=Doctoral, M-T = Master's Thesis-Based, M-C = Master's Course-Based (D=Domestic) (Int.=International)

### 3.4 Attrition Rates

In the chart below, each cohort of graduate students starting in a given academic year has been divided into those who still have an active registration as of June 2015 and those who have obtained a degree. The remainder consists of those who have left the University without any credential.

Attrition rates and attrition times (how long it takes a graduate student to stop having a registration without having obtained a credential) are matters that the University has to understand and monitor.

The issue is subtle: The attrition rate in 2005-2006 was about 21.5%, while the attrition rate in 2009-2010 was about 14.7%. This number, however, can rise to as high as 27%, depending on how many of the 2009-2010 students who are still registered eventually convocate with a degree.

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 (5.67 years, or 2010-11) – of course, this hides the Master’s rates. The program-specific tables that follow break out this information more fully. It must be emphasized that attrition rates become more speculative as we move toward the present.

Academic Year	Applicants Registered	Convocations	Still Active	Remaining	Attrition Rate
2005-2006	1897	1479	9	409	21.5%
2006-2007	1951	1552	27	372	19.0%
2007-2008	2204	1740	52	412	18.7%
2008-2009	2228	1701	139	388	17.4%
2009-2010	2516	1840	305	371	14.7%
2010-2011	2397	1553	529	315	N/A
2011-2012	2345	1355	698	292	N/A
2012-2013	2563	1024	1215	324	N/A
2013-2014	2538	352	1959	227	N/A
2014-2015	2063	5	2037	21	N/A

### 3.4.1 Doctoral Attrition Rates

Doctoral attrition, especially if it happens after several years, represents a significant cost to both the student and the University. Yet it is important to emphasize that the trend on these data is not clear because so many of these students are still in the system. Attrition rates and time, and their costs, are issues that require investigation.

Academic Year	Applicants Registered	Convocations	Still Active	Remaining	Attrition Rate
2005-2006	380	283	7	90	23.7%
2006-2007	429	310	22	97	22.6%
2007-2008	443	323	38	82	18.5%
2008-2009	448	277	95	76	16.9%
2009-2010	476	224	200	52	10.9%
2010-2011	472	84	337	51	N/A
2011-2012	453	17	377	59	N/A
2012-2013	479	2	423	54	N/A
2013-2014	445	0	415	30	N/A
2014-2015	421	0	415	6	N/A

### 3.4.2 Master's Thesis-Based Attrition Rates

We decline to calculate attrition rates for cohorts that fall within the average time to completion of these degrees (2.71 years for Thesis-based, 2.27 years for Course-based).

Academic Year	Applicants Registered	Convocations	Still Active	Remaining	Attrition Rate
2005-2006	658	555	0	103	15.6%
2006-2007	669	567	3	99	14.8%
2007-2008	689	589	9	91	13.2%
2008-2009	713	604	31	78	10.9%
2009-2010	777	638	68	71	9.1%
2010-2011	698	521	111	66	9.4%
2011-2012	732	489	177	66	9.0%
2012-2013	780	357	367	56	7.1%
2013-2014	724	49	630		N/A
2014-2015	674	0	665		N/A

### 3.4.3 Master's Course-Based Attrition Rates

Attrition rates for Course-based Master's are lower than either the thesis-based Master's or the doctoral program. This suggests that students founder on the thesis. Scholarship on graduate studies suggests that setting clear guidelines and providing attentive supervision can help students succeed in thesis-based degrees.

Academic Year	Applicants Registered	Convocations	Still Active	Remaining	Attrition Rate
2005-2006	680	591	1	88	12.9%
2006-2007	725	642	2	81	11.1%
2007-2008	903	784	4	115	12.7%
2008-2009	875	776	11	88	10.0%
2009-2010	1061	916	28	117	11.0%
2010-2011	1043	885	67	91	8.7%
2011-2012	972	791	119	62	6.3%
2012-2013	1067	650	371	46	4.3%
2013-2014	1108	301	787		N/A
2014-2015	800	5	790		N/A