

University of  
**Waterloo**



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**BUILDING A TALENT TRUST**

Annual Performance Indicators

October 2007

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## INTRODUCTION

*Academic excellence is the cornerstone of the University of Waterloo's mission. It is achieved by the commitment of the University community to the highest quality teaching, research, scholarship and services which support the academic enterprise. That commitment underlies admission and examination standards, hiring and promotion decisions, criteria for performance evaluation, and academic goals.*  
– Sixth Decade Plan

The University of Waterloo's (UW) central mandate is to offer excellent undergraduate and graduate programs and to carry out cutting-edge research. The University also serves its community and society at large through the transfer of knowledge and cultural enrichment beyond the borders of campus.

The University of Waterloo has a reputation for excellence in undergraduate education, and in particular for supporting a vibrant undergraduate co-operative education program. We have invested in resources that support learning, research and innovation. As we move into our sixth decade, we recognize the increasing role of research and will work to further engage our undergraduate students in research. We also recognize the crucial role of graduate studies in a research intensive university, and the enriching effect graduate studies can have on the undergraduate experience. Therefore, we will be seeking to increase our graduate student enrolment. We will be aided in this endeavour by the Ontario government, which has invested directly in graduate education for the first time. At UW, we will maintain our strengths in undergraduate studies through strategic investments and recruitment, while taking advantage of this provincial funding to improve the quality, impact and visibility of our graduate studies and research portfolios.

The University of Waterloo is concerned about performance, quality, accountability and transparency. We recognize that institutional performance measurement is key to the strategic management of our resources and to sound planning for our future. Like other universities, we first undertook this performance indicator exercise for our own benefit. Recent developments in government accountability and reporting will also render this exercise both timely and useful at the provincial level.

Prepared by the Office of Institutional Analysis & Planning, with the oversight of the Task Force on Performance Indicators, and the support of the Data Working Group, this third annual Performance Indicator Report highlights measures in the following key areas: undergraduate studies, graduate studies, research, faculty, staff, co-operative education, resources, fundraising, and the library. Where new data for this report year was not available we have presented last year's figures. This report is one vehicle to communicate our strengths, our challenges, and our opportunities to the broader community. It reflects our commitment to the culture of access, quality and accountability in Ontario today.

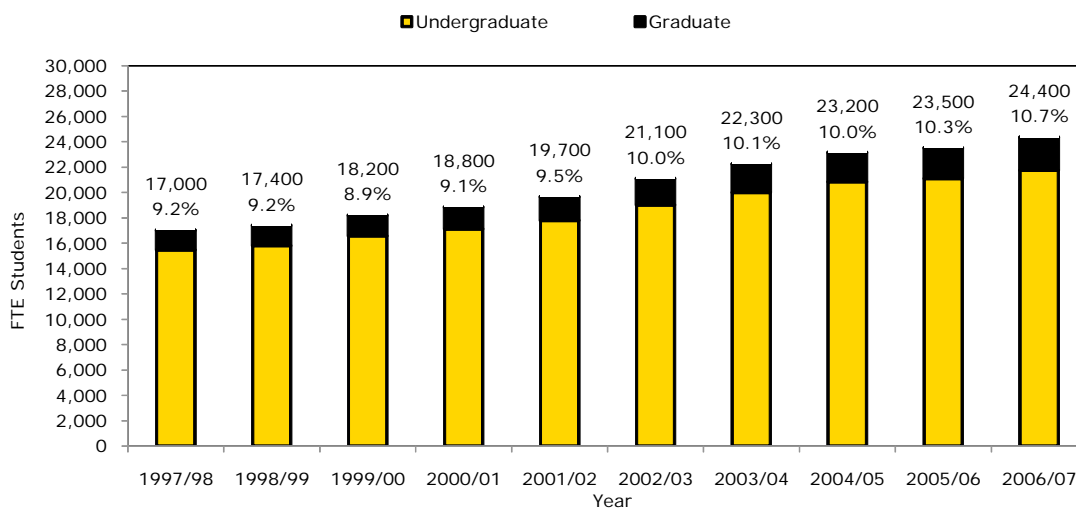


## OVERVIEW FOR 2007 REPORT

As we move into our sixth decade we will begin to track our progress using the metrics and indicators in this report. The overview section has been redesigned to add commentary that explains the relevance of each overview indicator and our performance, so far, particularly as they relate to the sixth decade plan. The design and delivery of benchmarks to track our progress requires further investigation and work – this is simply a starting point. The indicators reported in the overview may change to better reflect the priorities of the sixth decade plan.

### Our Students<sup>1</sup>

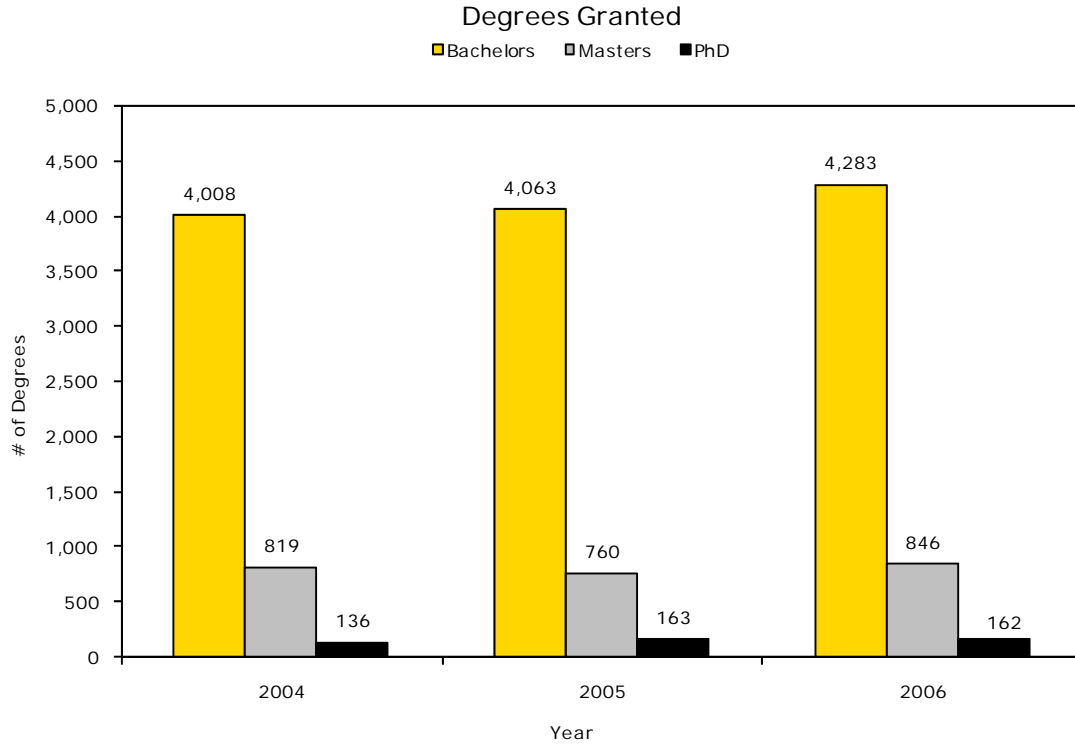
FTE Enrolment - Undergraduate and Graduate



Relevance: Graduate student enrolment will be 20 per cent of our total population.

Performance: In 2006/07, graduate enrolment represented 10.7 per cent of our student population.

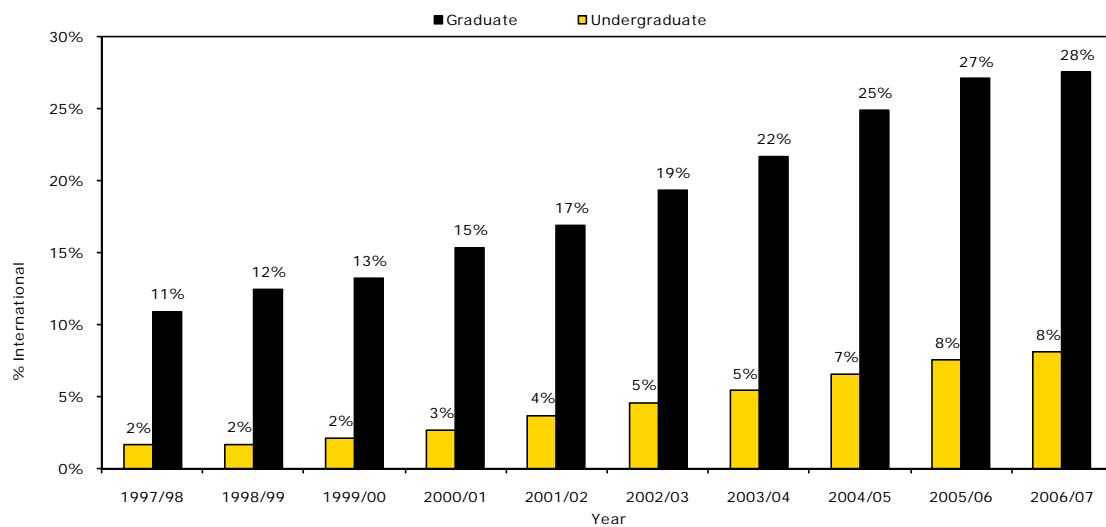
<sup>1</sup> FTE = full-time equivalent.



Relevance: An output measure of our academic programs and quality of students.

Performance: We hope to see a steady increase in the number of graduate degrees granted, as we realize our graduate enrolment targets.

## International Students as % of their Respective Populations



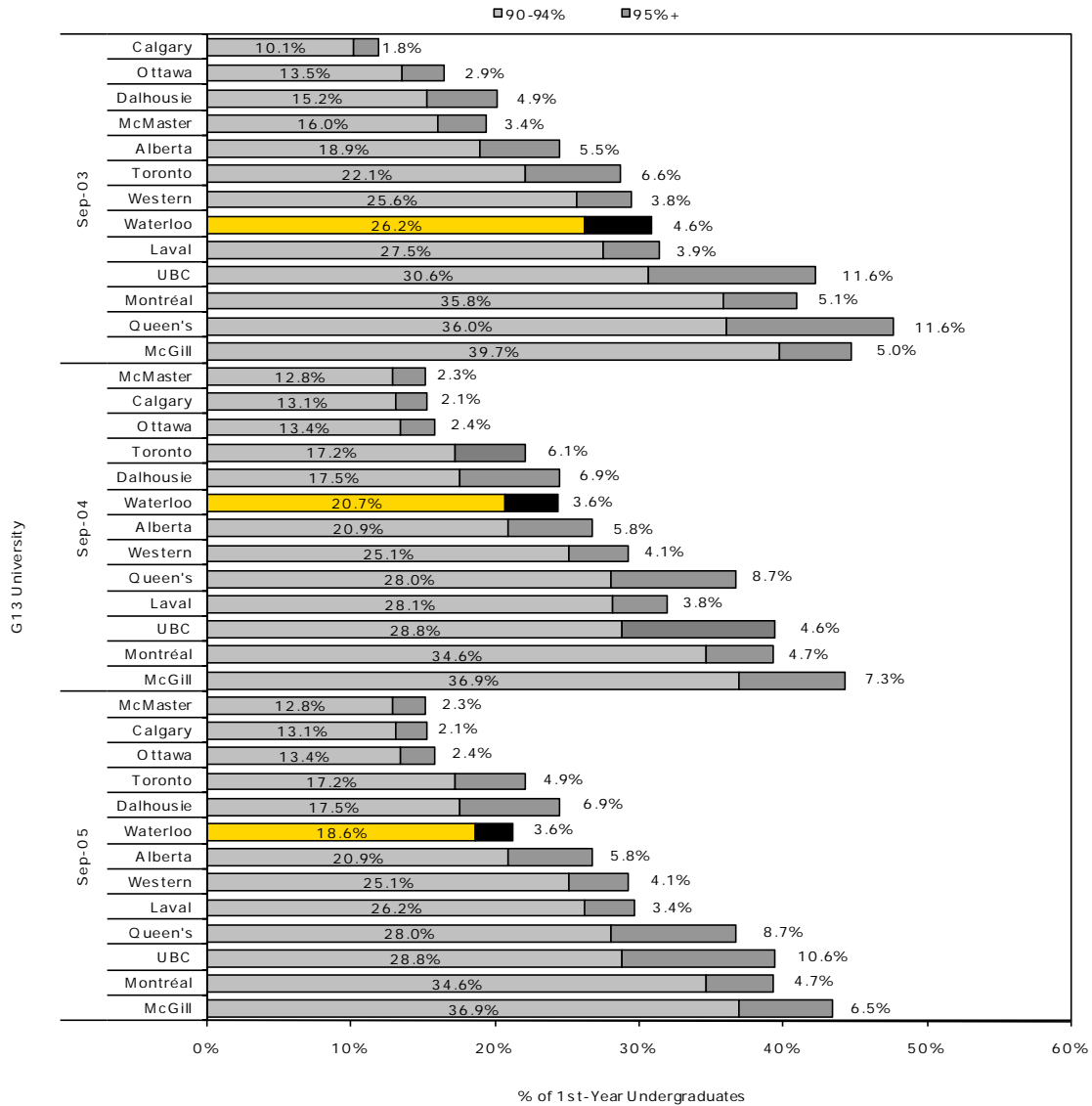
**Relevance:** Internationalization is a corner stone of our sixth decade report. International students will represent 20 per cent of our undergraduate student population and 30 per cent of our graduate student population.

**Performance:** Currently, eight per cent of our undergraduate and 28 per cent of our graduate student populations are international students. In fall 2005, Ontario universities had 3.5 per cent of their students register from out-of province, and five percent from out-of-country, UW had eight per cent and 12 per cent, respectively.

Internationalization at UW includes the experience gained through study abroad and exchange opportunities and international co-op work terms. We have established a base of 200 UW out-going study abroad and exchange students from which to measure our future activity. We are working with the Department of Co-operative Education to establish a process to track and report international work terms.

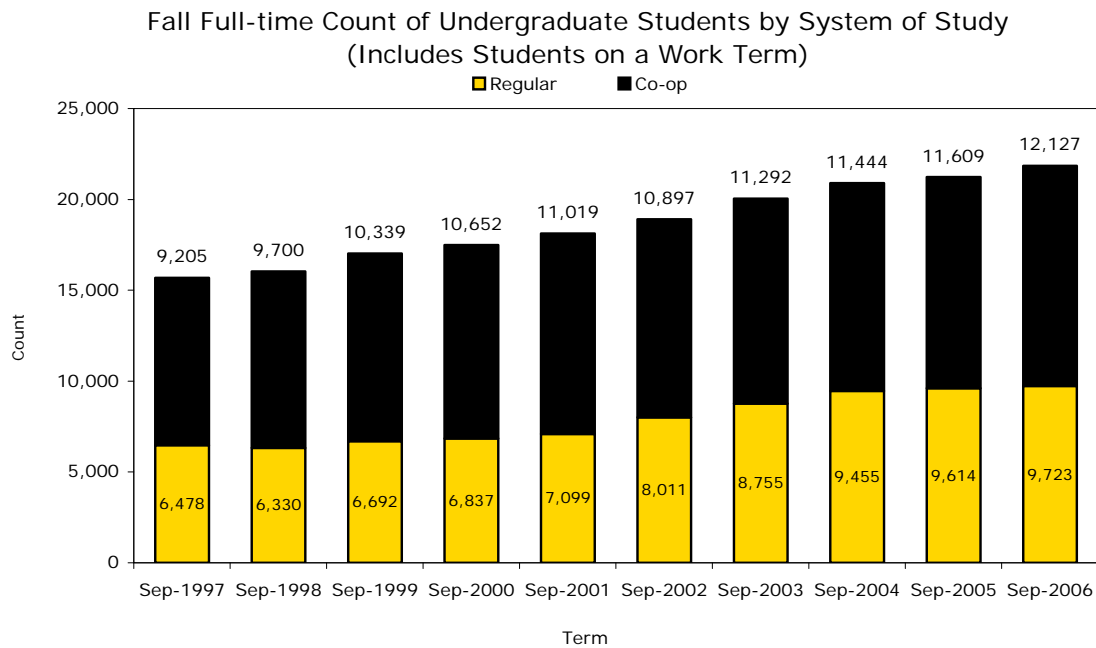


## Entering Averages of 90%+ as Compared to G13 Universities



**Relevance:** We strive to be among the top three institutions in Canada attracting first-year students with entering average grades of 90 per cent plus.

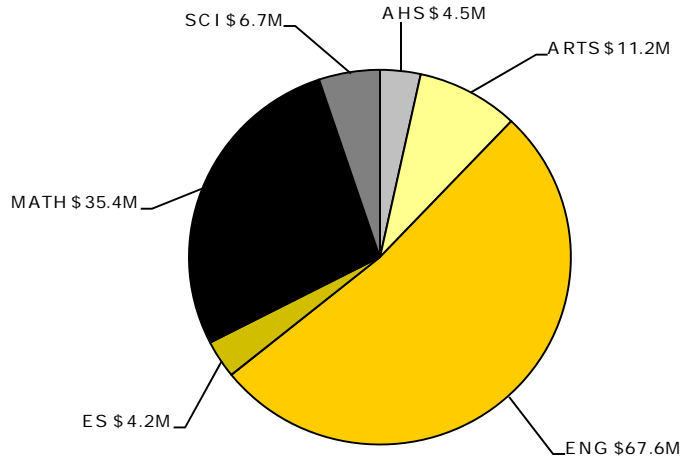
**Performance:** From 2003 to 2005 our position, among our G13 Data Exchange peers, slipped from sixth to eighth in terms of registering students with entering grade averages of 90 per cent or higher. While the 2006 data is not available for our peers, we know, in fall 2006, 33 per cent of our first year undergraduate students had an entering grade average of 90 per cent or higher, and eight per cent had an entering grade average of 95 per cent or higher.



**Relevance:** UW will re-affirm its position as the leading co-operative education university in the world.

**Performance:** The percent of students registered in undergraduate co-operative education programs remains steady at about 55 per cent. In fall 2006, we see a three per cent increase in our total fall full-time count, with a one per cent increase in our regular stream programs and a four per cent increase in our co-operative programs over fall 2005.

Total Earnings by Students on Co-op Work Term 2006/07  
\$129,000,000



Relevance: Guarantee to meet the financial needs of ALL qualified Canadian students through a combination of scholarships, research internships, student loans, and co-op jobs.

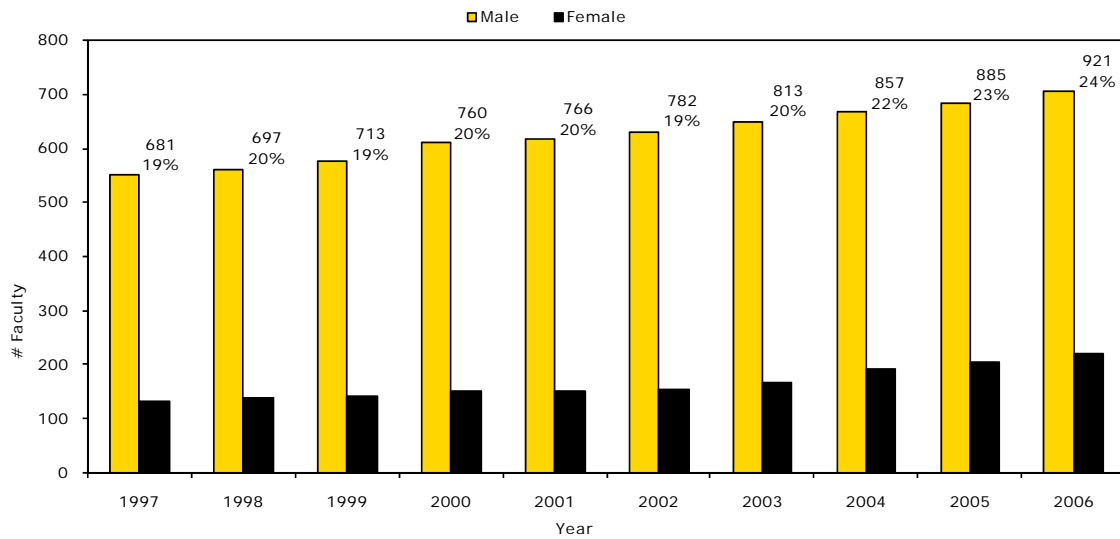
Performance: In 2006/07 co-op students earned \$129 million compared to \$124 million in 2005/06, an increase of four per cent overall.

In 2005, UW completed a comprehensive review of Co-operative Education and Career Services, resulting in several observations and recommendations. Many of the recommendations of the review have been implemented, most notably the appointment of Associate Deans with responsibility for co-operative education in each of the six Faculties; the formation of a Co-operative Education Council (CEC) with representation from students, the six Associate Deans mentioned above, and three senior staff from the Department of Co-operative Education and Career Services; and the introduction of required, for-credit Professional Development courses for co-op students in all Faculties. Plans for implementing the remaining recommendations are underway, and progress is tracked at the CEC.

The Employment Process Review was completed in fall 2006. The review, conducted by faculty members in Management Science, covered all aspects of the core employment process, including but not limited to JobMine. One of the seven major recommendations of the review was to replace JobMine with "an improved and comprehensive information technology solution." Development for the new system has begun with production targeted for spring 2009.

## Our Faculty

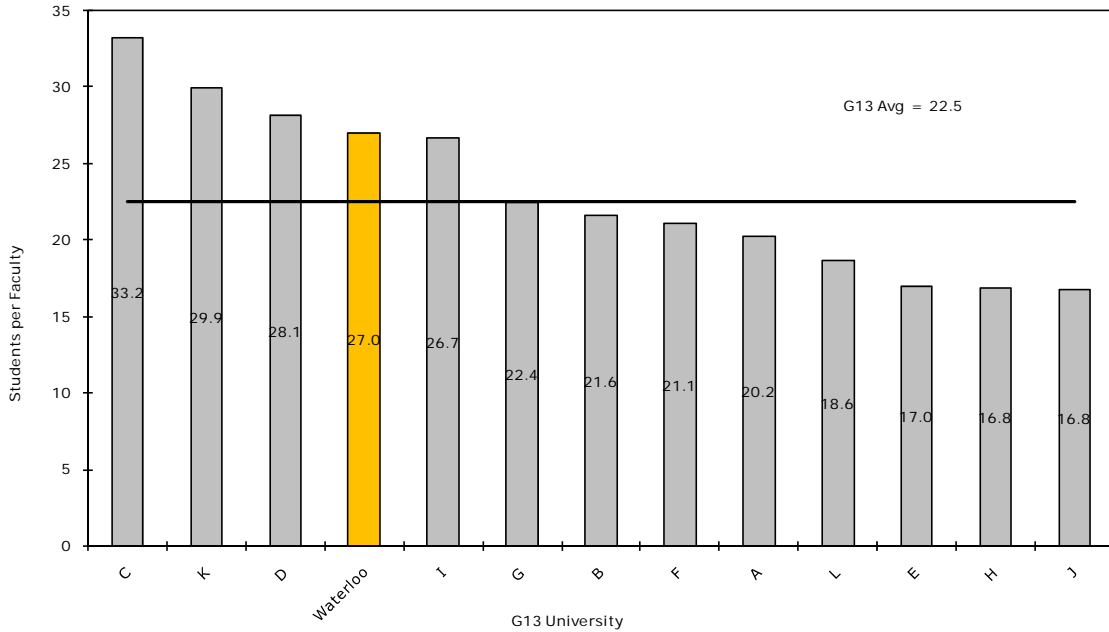
Count of Full-time Faculty by Gender and Percent Female



Relevance: At least 1,000 full-time equivalent faculty members by 2017.

Performance: We have experienced a steady increase in the number of full-time faculty over the past several years. With 921 in 2006, we are at 92 per cent of our target for 2017.

Full-Time Student to Full-Time Tenure and Tenure-Stream Faculty Ratio as Compared to G13 Universities 2005/06<sup>2</sup>

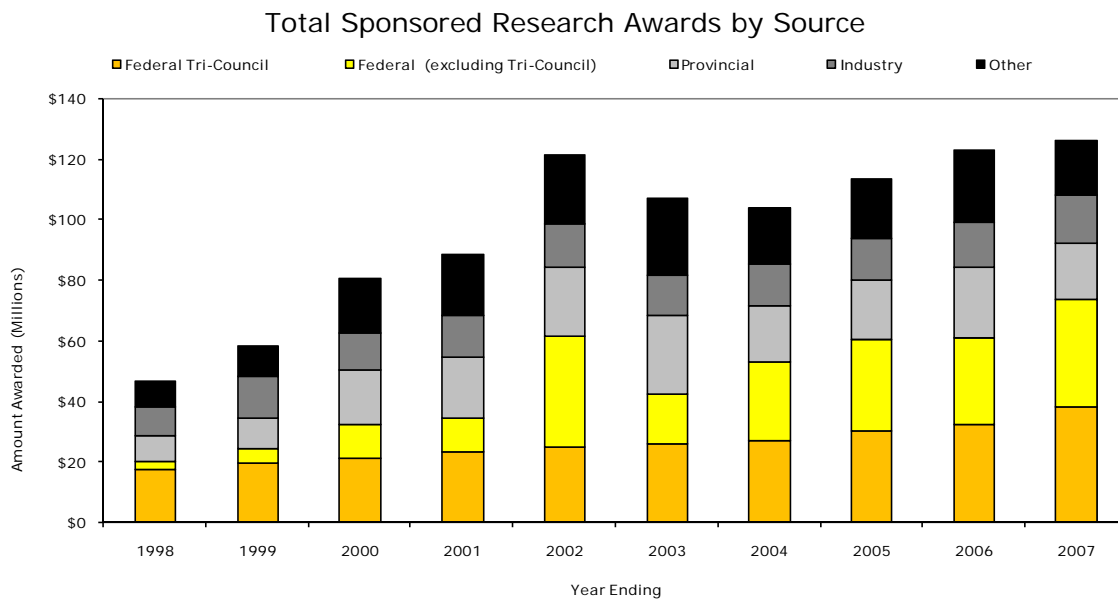


Relevance: Reduce the student/faculty ratio to 20:1.

Performance: In 2005/06 UW had the fourth highest ratio of full-time student to full-time tenure and tenure-stream faculty, among our G13 Data Exchange peers, a slight improvement from third highest in 2004/05.

<sup>2</sup> The G13 Universities are the universities of British Columbia, Alberta, Western, Waterloo, McMaster, Toronto, Queens, McGill, Montréal, Laval, Dalhousie, Calgary, and Ottawa. The protocol under which the G13 members exchange data requires us to randomly re-label the other individual G13 members when results are published, as in this document.

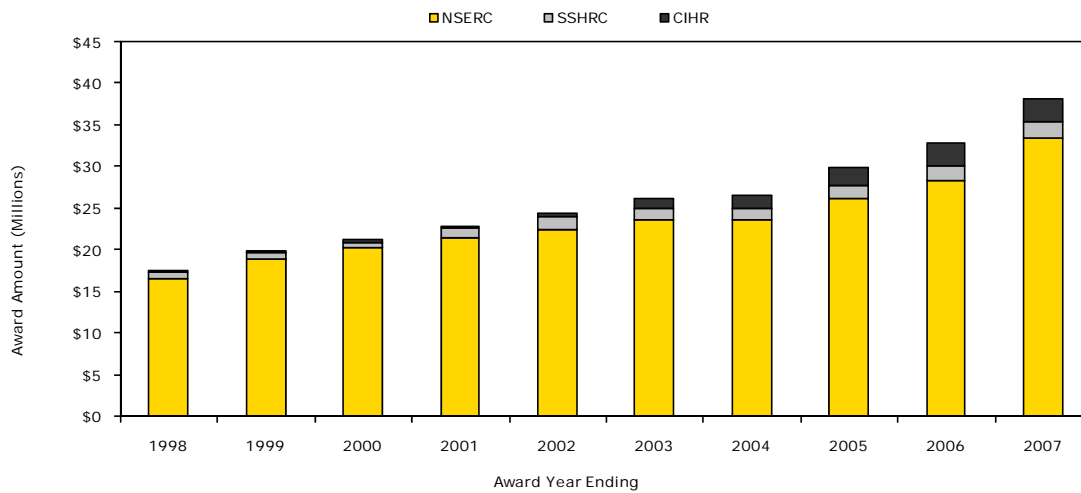
## Our Research



Relevance: Increase research revenue to 50 per cent of the operating revenue from the current level of 30 per cent.

Performance: Our 2006/07 research revenue represents about 32 per cent of our 2006/07 operating revenue.

### Federal Tri-Council Research Awards 1998-2007<sup>3</sup>



Relevance: NSERC grants – to be among the top three institutions in Canada; SSHRC grants – to be among the top ten institutions in Canada; to quadruple CIHR grants – to \$12.5 million.

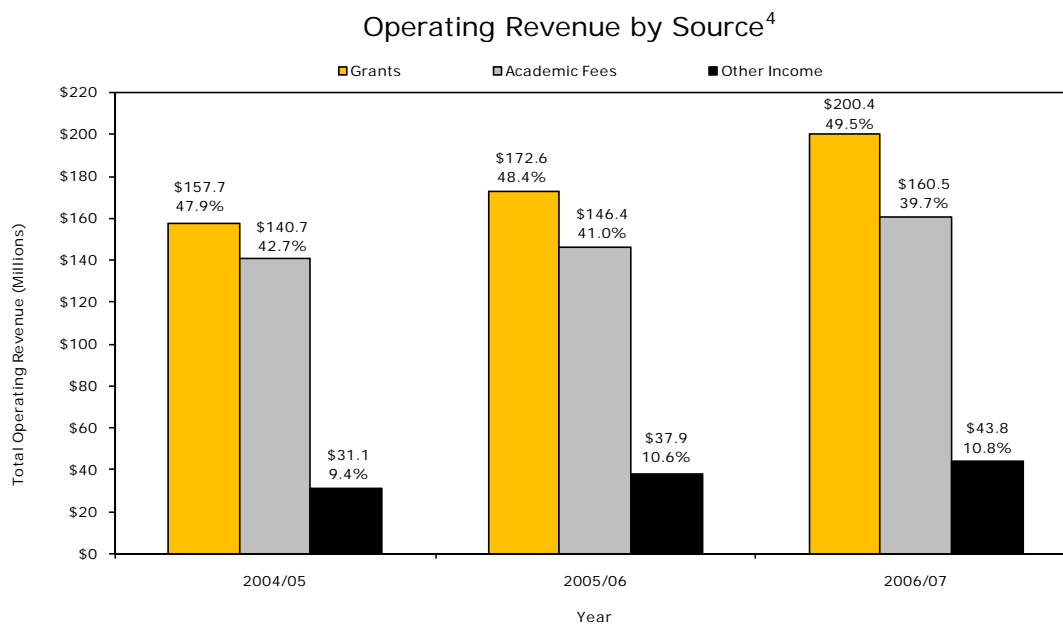
Performance: Relative to our G13 Data Exchange peers, in the period 2001 to 2006, we ranked fourth in percent increase in monies received from NSERC granting council. In 2006/07, we ranked sixth in absolute dollars received (see figure 3.2.H in the research section).

Relative to our G13 Data Exchange peers, in the period 2001 to 2006, we ranked 11<sup>th</sup> in percent increase in monies received from SSHRC granting council. In 2006/07, we ranked 12<sup>th</sup> in absolute dollars received (see figure 3.2.I in the research section).

Relative to our G13 Data Exchange peers, in the period 2001 to 2006, we ranked first in percent increase in monies received from CIHR granting council. In 2006/07, our absolute dollars received was \$2.9 million (see figure 3.2.H in the research section).

<sup>3</sup> NSERC = Natural Sciences and Engineering Research Council; SSHRC = Social Sciences and Humanities Research Council; CIHR = Canadian Institutes of Health Research

## Our Resources



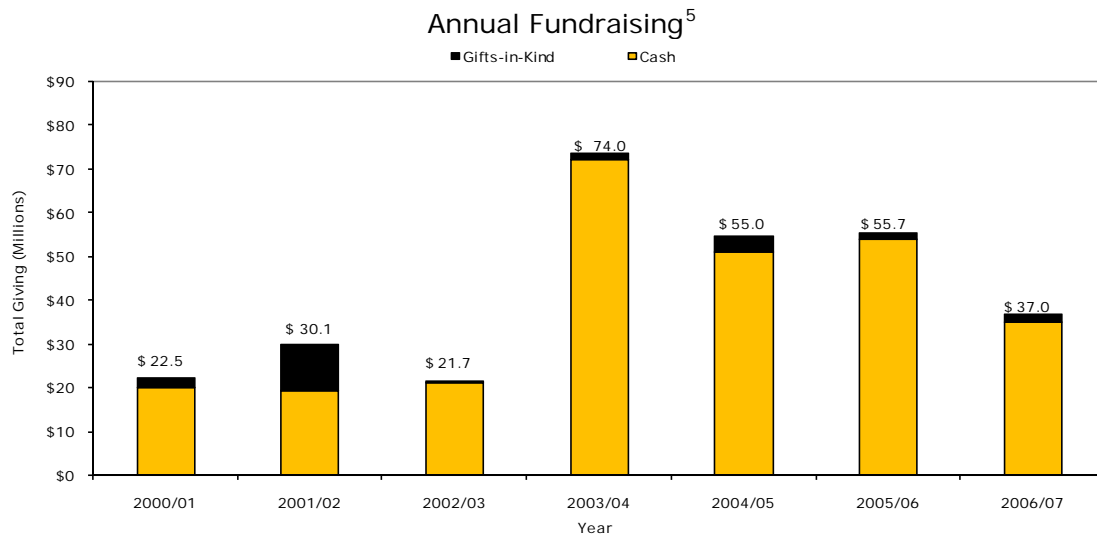
**Relevance:** UW will have incremental resources to support its pursuit of academic excellence. Starting in 2007, UW will reallocate two per cent of the operating budget, on an ongoing basis, to support its academic excellence goals.

**Performance:** In 2006/07, our operating revenue increased to about \$405 million, up from \$357 million in 2005/06, an increase of nearly 14 per cent.

In 2006/07, our operating expenses per FTE student increased by three per cent, or about \$500 dollars per student.

<sup>4</sup> Grants are comprised mainly of Ministry of Training, Colleges and Universities operating grants; other income includes items such as external sales of goods and services (by academic and academic support units), investment income and application fees.





Relevance: Annual funds raised to reach 20 per cent of the operating budget. Cumulative funds raised by Campaign Waterloo, by 2017, to exceed one billion dollars.

Performance: Annual funds raised in 2006/07 was \$37 million, representing nine per cent of the operating revenue. In 2006/07, the cumulative campaign results stood at \$344 million, 98 per cent of the 2007 campaign goal and 34 per cent of the 2017 goal.

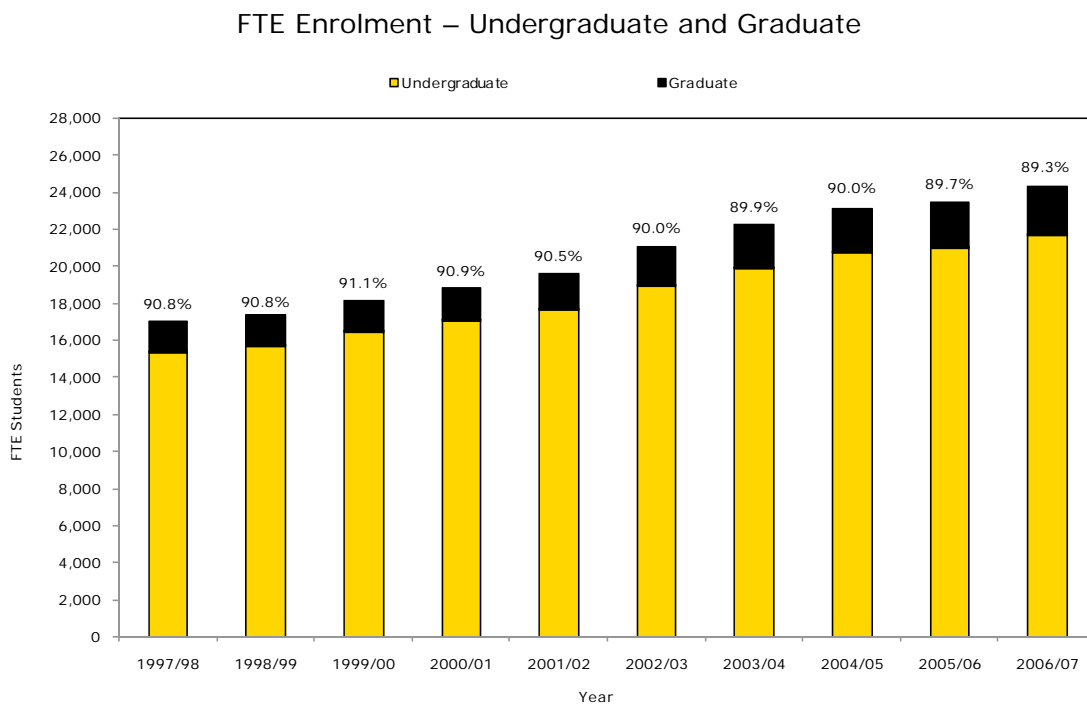
<sup>5</sup> Annual fundraising achievements measure overall performance of advancement activities across the entire University and are important indicators of how well we are doing to raise private-sector gifts. The graph above shows a rise in private-sector giving to the University from 2000/01 to 2006/07, with a dramatic leap in 2003/04 part of which can be accounted for by a single gift of \$32.8 million.

## 1. UNDERGRADUATE STUDIES

The University’s vision for our sixth decade supports a proactive approach to innovative undergraduate education, including strategic management of our undergraduate enrolment, continued focus on relevance and excellence in co-operative education, global engagement, improved student-faculty ratio, and the recruitment and retention of excellent students. We believe in the value of covering the scope of higher education from quality undergraduate programs to much needed and innovative graduate and professional education.

### 1.1. Enrolment

Figure 1.1.A<sup>6</sup>

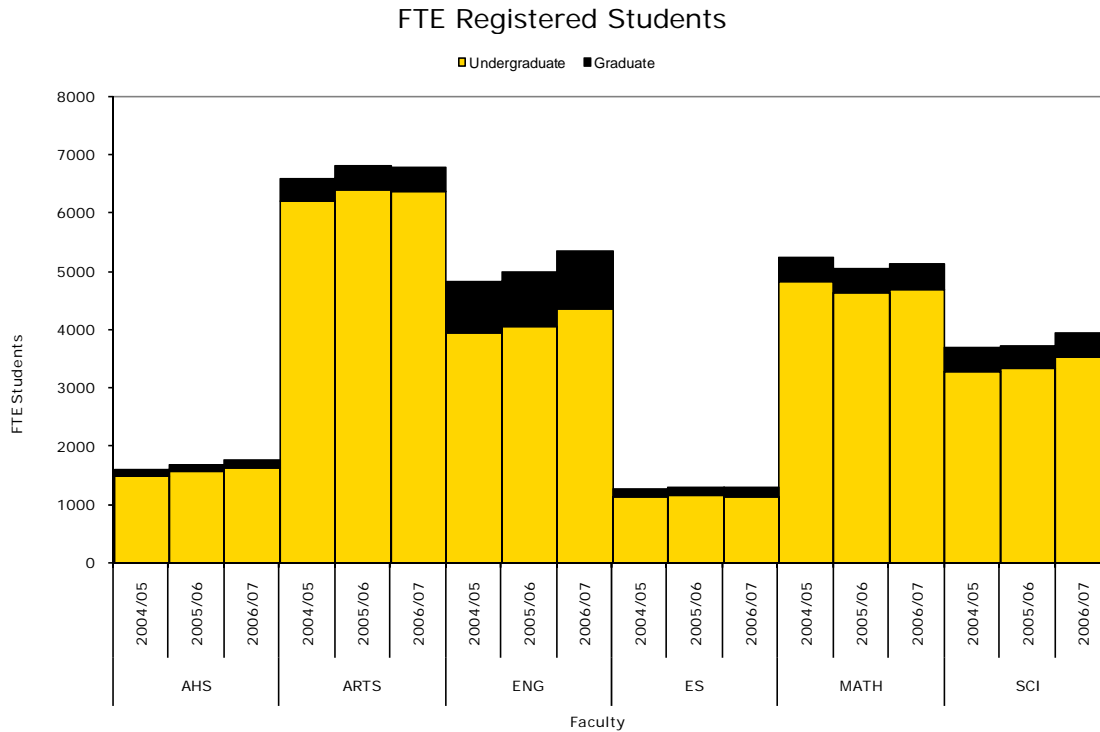


For most schools with a regular system of study – where students register in the fall and winter terms – the count of fall, full-time students is the best method to measure the size of their student population. At UW, because of co-op, we count students in two ways: annual full-time equivalent students, and term counts of students. In an academic year, full-time students usually register for two terms; co-op students, depending on their program, will register for one or two terms and will be on work term for the remaining terms. When we count annual FTEs our goal is to measure the size of our on-campus student population and to represent each student once. Since a full-time student usually registers for two terms, we count them as .5 FTE in each term; part-time enrolment is converted to FTEs by dividing the total annual (three terms) courses taken by 10, the expected annual number of courses for a full-time student.

<sup>6</sup> Percentage of undergraduate FTE students displayed.

When we count students in the fall term, we also include those in our co-operative education programs who are off-campus on a work term. Since co-op students are not always registered for two academic terms in a year, our annual FTE count is lower than our count of fall full-time students. Based on the count of students in the fall term, about 56 per cent of undergraduates were registered in co-operative programs in the fall of 2006.

Figure 1.1.B<sup>7</sup>



<sup>7</sup> Software Engineering is offered jointly by the Faculties of Engineering and Mathematics and enrolment is split evenly between these two Faculties. Bachelor of Social Work, Independent Studies and Inter-disciplinary Studies are included in the total for the Faculty of Arts.

Figure 1.1.C to Figure 1.1.E show the distribution, over time and by Faculty, of co-op and regular students.

Figure 1.1.C

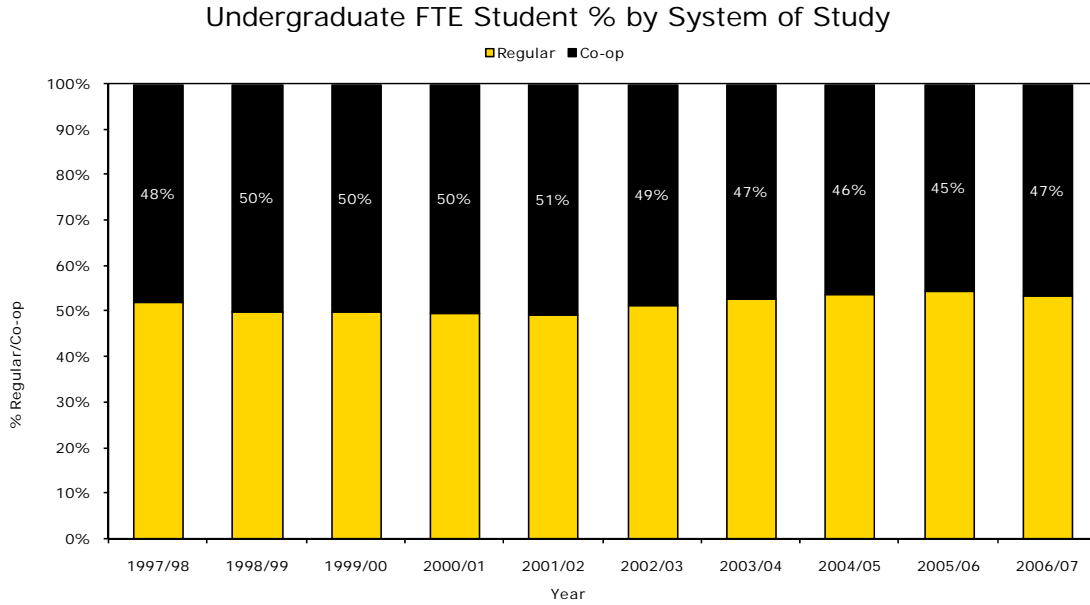


Figure 1.1.D

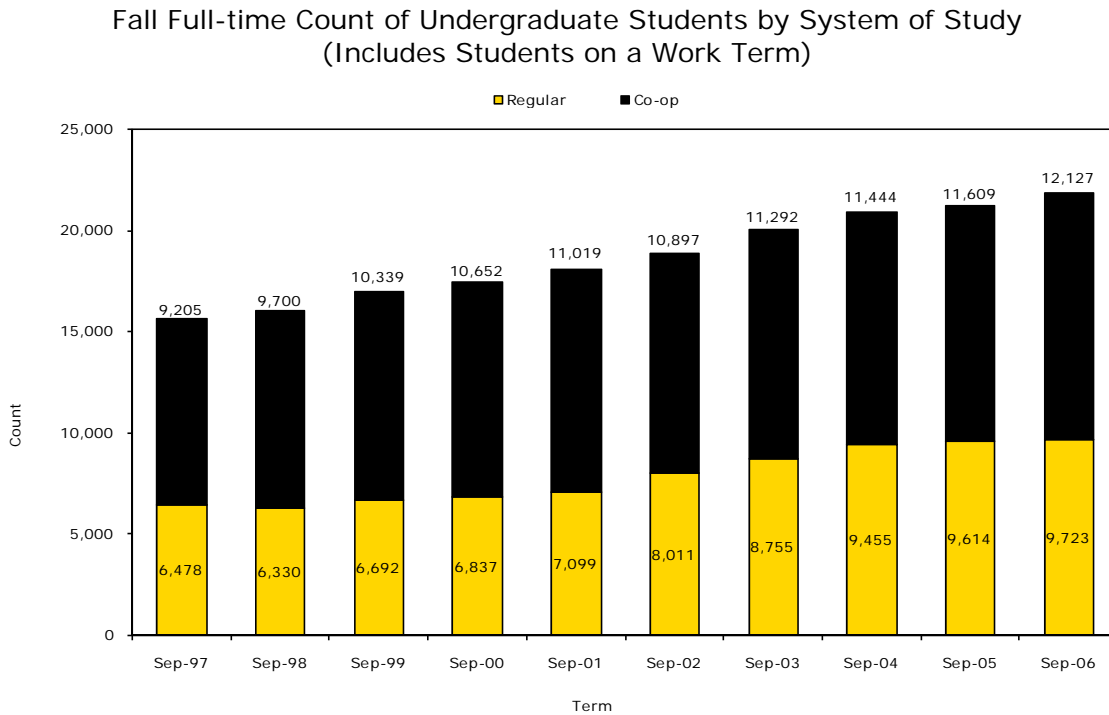
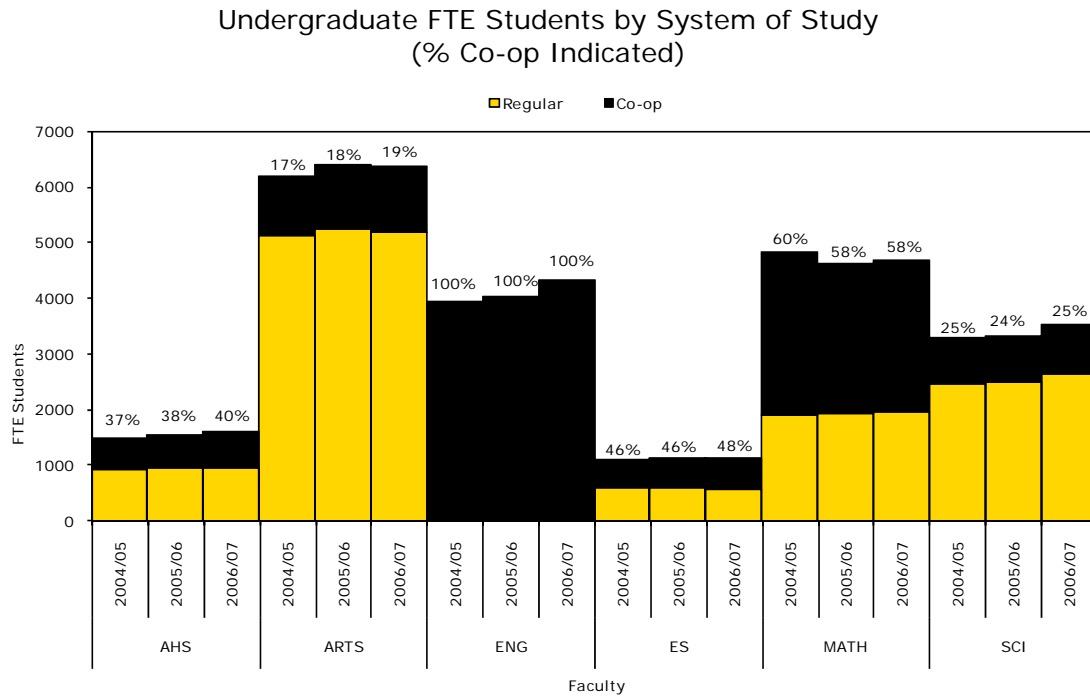


Figure 1.1.E



The international percentages in Figure 1.1.F will help us to assess our annual progress on the University's priority of increased internationalization. We see that in Mathematics, international students make up 38 per cent of graduate students and 23 per cent of undergraduate students. At the University level, international students make up eight per cent of undergraduate enrolment and 28 per cent of graduate enrolment.

Figure 1.1.F

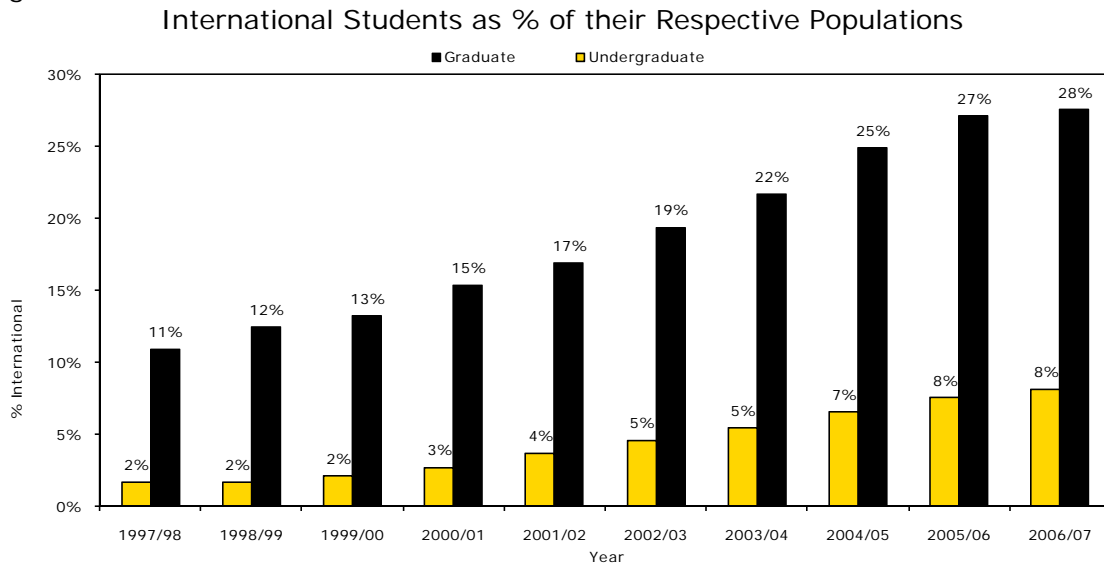
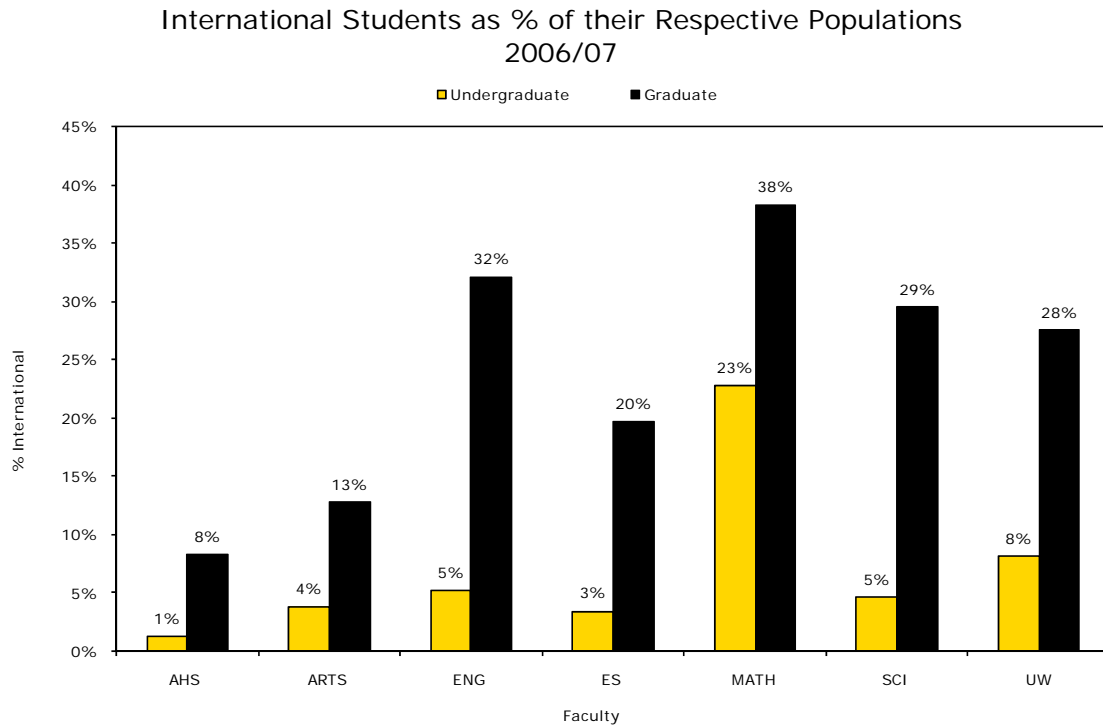


Figure 1.1.G



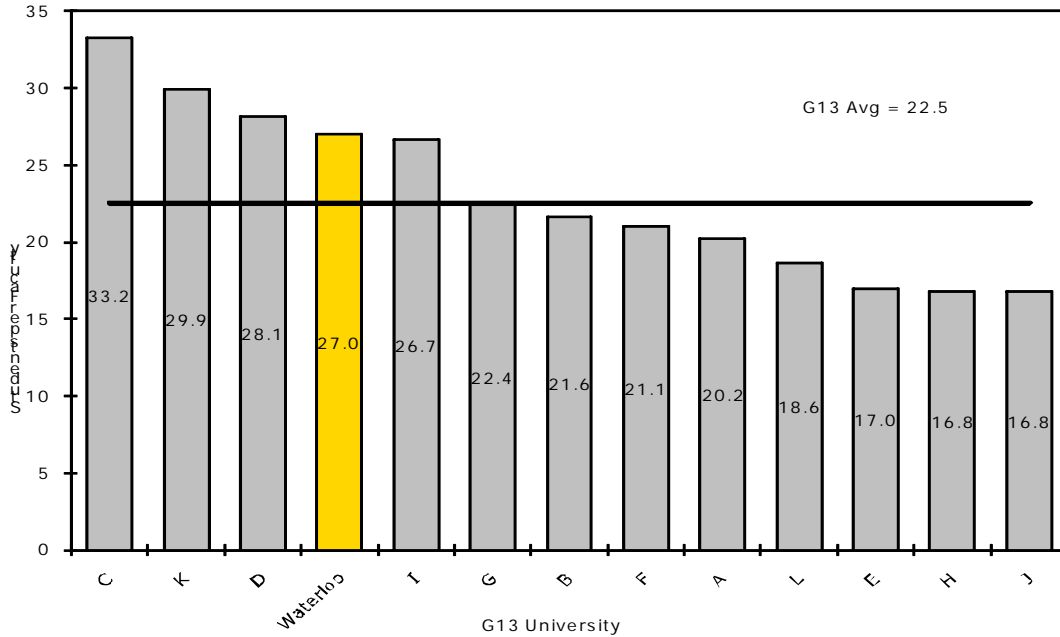
## 1.2. Student to Faculty Ratio

The student-faculty ratio is considered a reasonable indicator of the quality of education at universities. The time and attention a faculty member is able to devote to each individual student is directly related to the quality of that student’s educational experience. The student-faculty ratio is also an indicator of the level and allocation of resources in our academic units.

In order to measure ourselves against our peers, we look at FTE students per tenure and tenure-stream faculty (Figure 1.2.A). Despite efforts to increase the number of faculty members – 6.5 per cent since 2004/05 – our student-faculty ratio remains one of the highest of the G13 universities since FTE student enrolment increased by 4.5 per cent in the same period.

Figure 1.2.A<sup>8</sup>

Full-Time Student to Full-Time Tenure and Tenure-Stream Faculty Ratio as Compared to G13 Universities 2005/06



At UW, we have two additional measures that we use internally for decision-making and resource allocation—full-time equivalent (FTE) students taught by each Faculty (distinct from students registered in each Faculty); and the capacity of a Faculty to generate operating grants, a measure we call basic income unit teaching units, or BTUs. We then take ratios of these measures to the size of our complement faculty, which is the number of ongoing faculty positions (filled and open) for which the University has made a budgetary commitment.

The concept of FTE students taught is fairly straight forward—it represents the total number of FTE students who are taught in the Faculty including students registered in other Faculties. We convert courses taught by each Faculty to equivalent students taught using a formula that takes into account course weights, and the average course load for students in the Faculty.

For example, the Faculty of Arts may register 100 students and teach the equivalent of 140 students because students in other Faculties take Arts courses to complete their degree requirements.

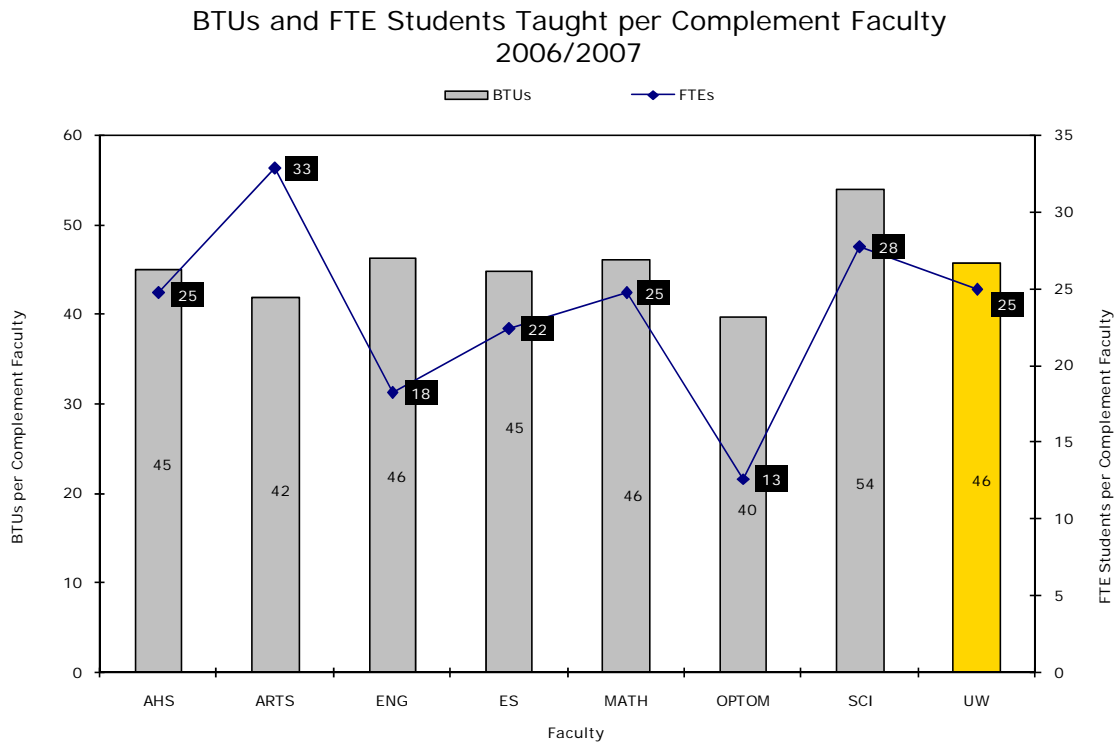
The concept of BTUs brings in another dimension—the operating grant revenue generated by students registered in a Faculty. Each student reported to the government for funding purposes generates a specified number of *basic income units*, or BIUs, depending on their program and level of study. BIUs are defined by the Ministry of Training, Colleges and Universities. In order to distribute the BIU funds across the Faculties according to the amount of teaching activity, we

<sup>8</sup> Source: G13 Data Exchange, G13 university names are suppressed in accordance with our data exchange protocol.

convert student term courses taught to BTUs using the average course load for the Faculty and the BIU weight of the students registered in that Faculty.

The chart below shows the two measures described above – FTE students taught per complement faculty and the BTUs generated per complement faculty.

Figure 1.2.B





### 1.3. Grade Averages

Entering grade average is one indicator of the quality of the student. At UW we seek to admit the brightest students possible. In fall 2005, UW established The President's Scholarship to guarantee a minimum \$2,000 scholarship to all students with an incoming average of over 90 per cent. In fall 2006, UW established a \$1,000 scholarship for students with an 85-90 per cent average.

Figure 1.3.A<sup>9</sup>

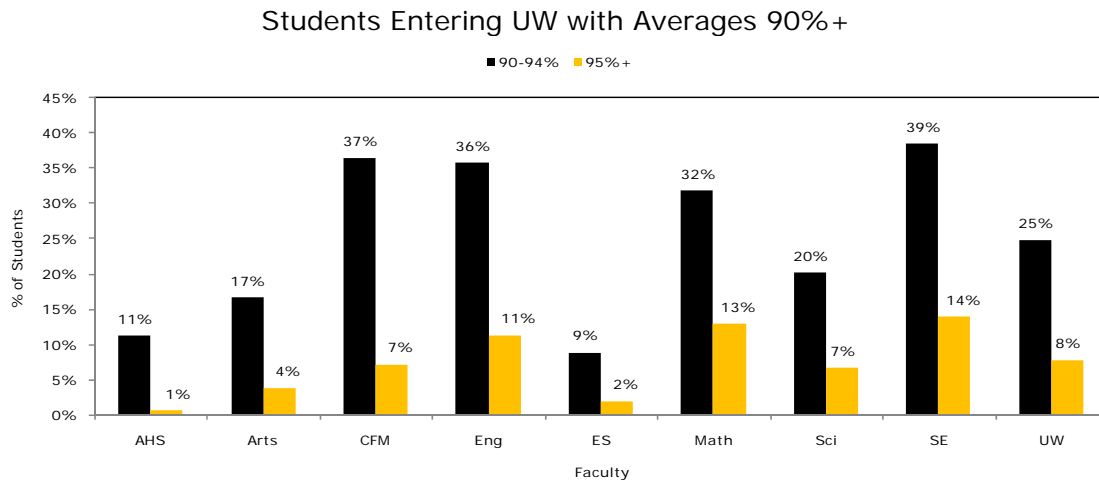
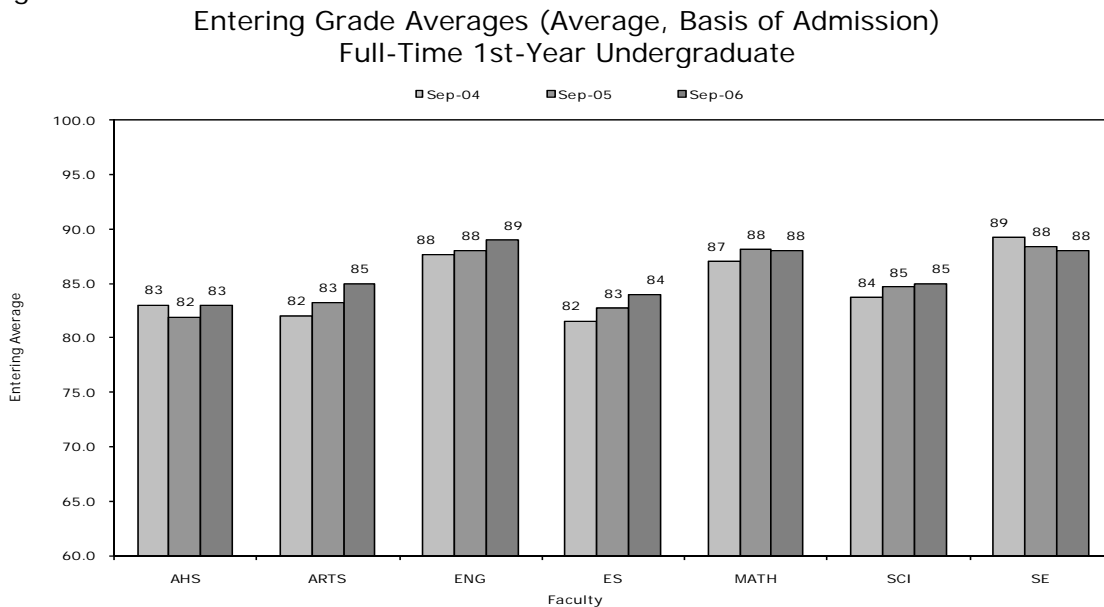


Figure 1.3.B



<sup>9</sup> AHS = Applied Health Sciences; CFM = Computing and Financial Management; ENG = Engineering; ES = Environmental Studies; SCI = Science; SE = Software Engineering.

To better understand the range of entering averages we present the break out of the 25<sup>th</sup> and 75<sup>th</sup> percentiles. For example, in 2006, for the Faculty of Arts, we see that the average entering grade was 85 per cent; we see the 25<sup>th</sup> percentile entering grade average was 81 per cent and the 75<sup>th</sup> percentile entering grade average was 89 per cent. These measures tell us that 75 per cent of the students registered in the Faculty of Arts, in fall 2006, had a grade average higher than 81 per cent and 25 per cent had a grade average higher than 89 per cent.

Figure 1.3.C<sup>10</sup>

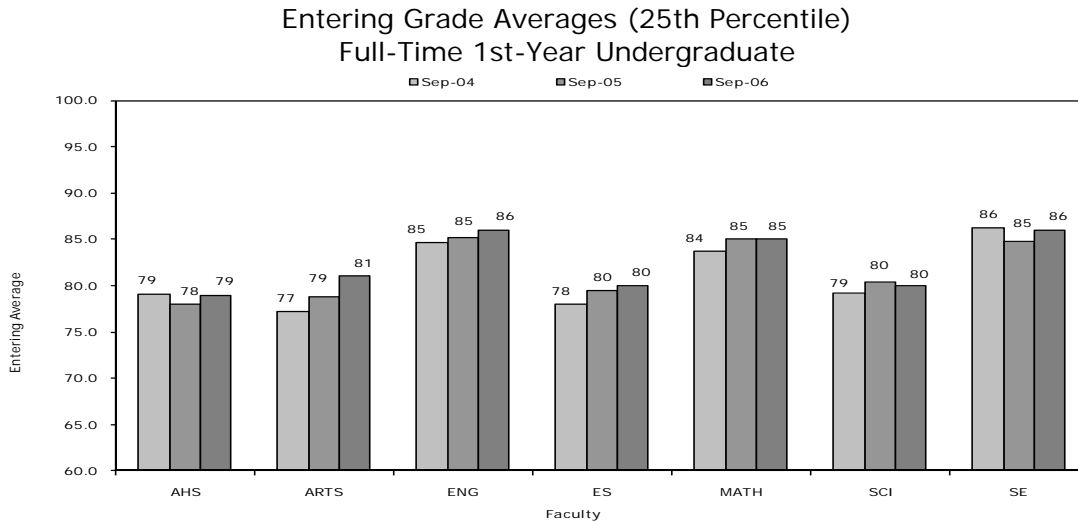
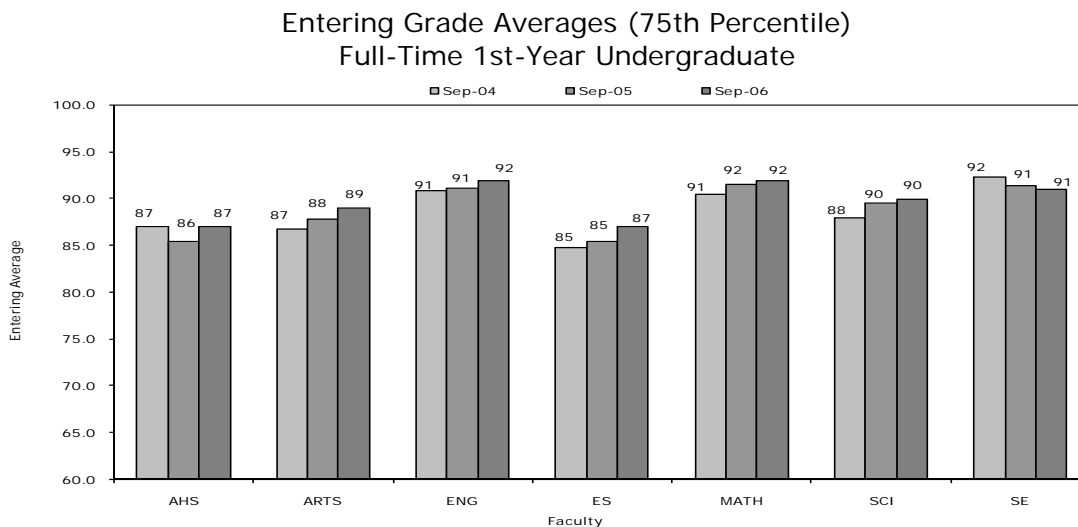


Figure 1.3.D<sup>11</sup>

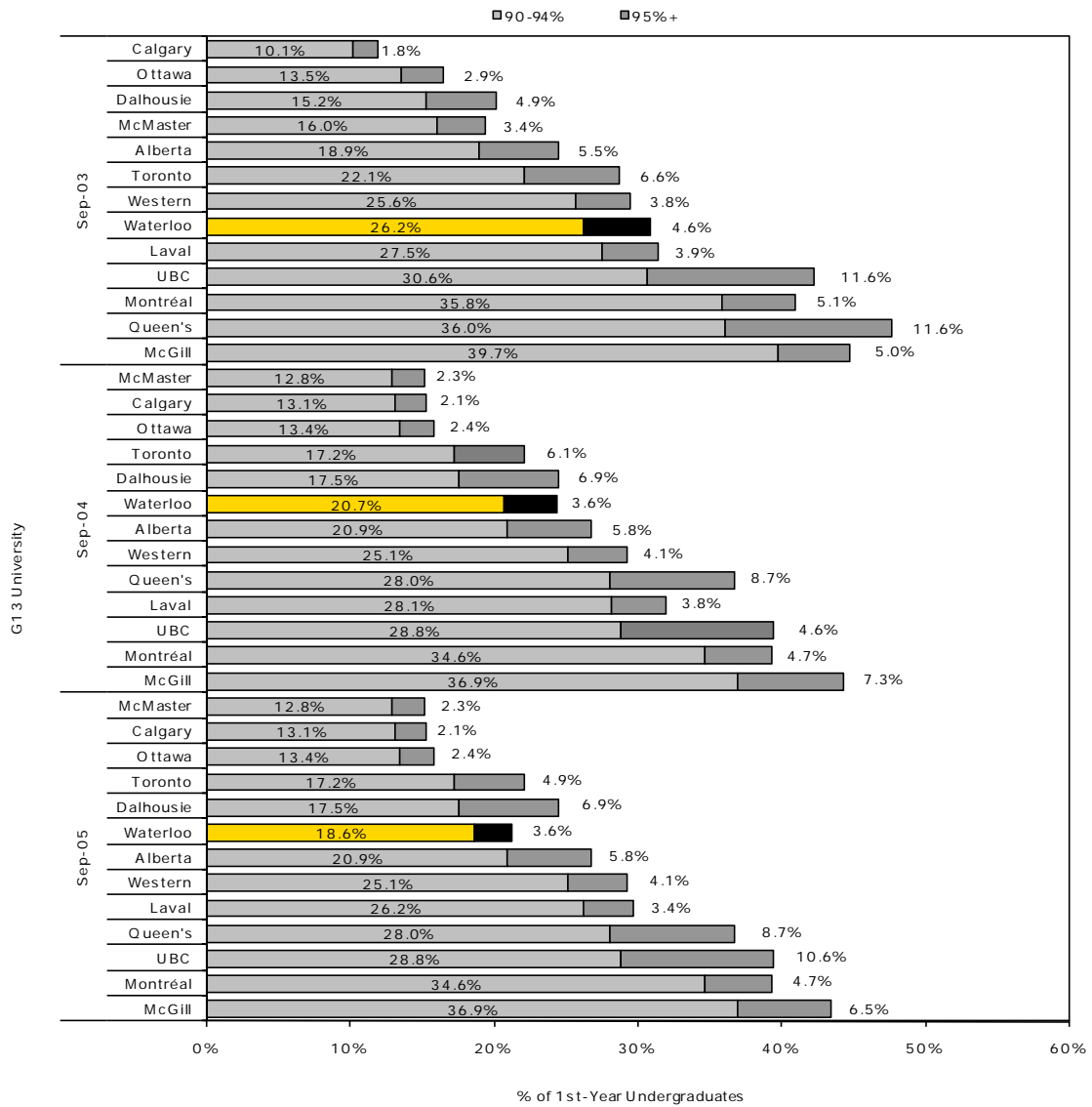


<sup>10</sup> The 25th Percentile means that 75 per cent of students entered with grade averages higher than the mark indicated.

<sup>11</sup> The 75th Percentile means that 25 per cent of students entered with grade averages higher than the mark indicated.

Figure 1.3.E<sup>12</sup>

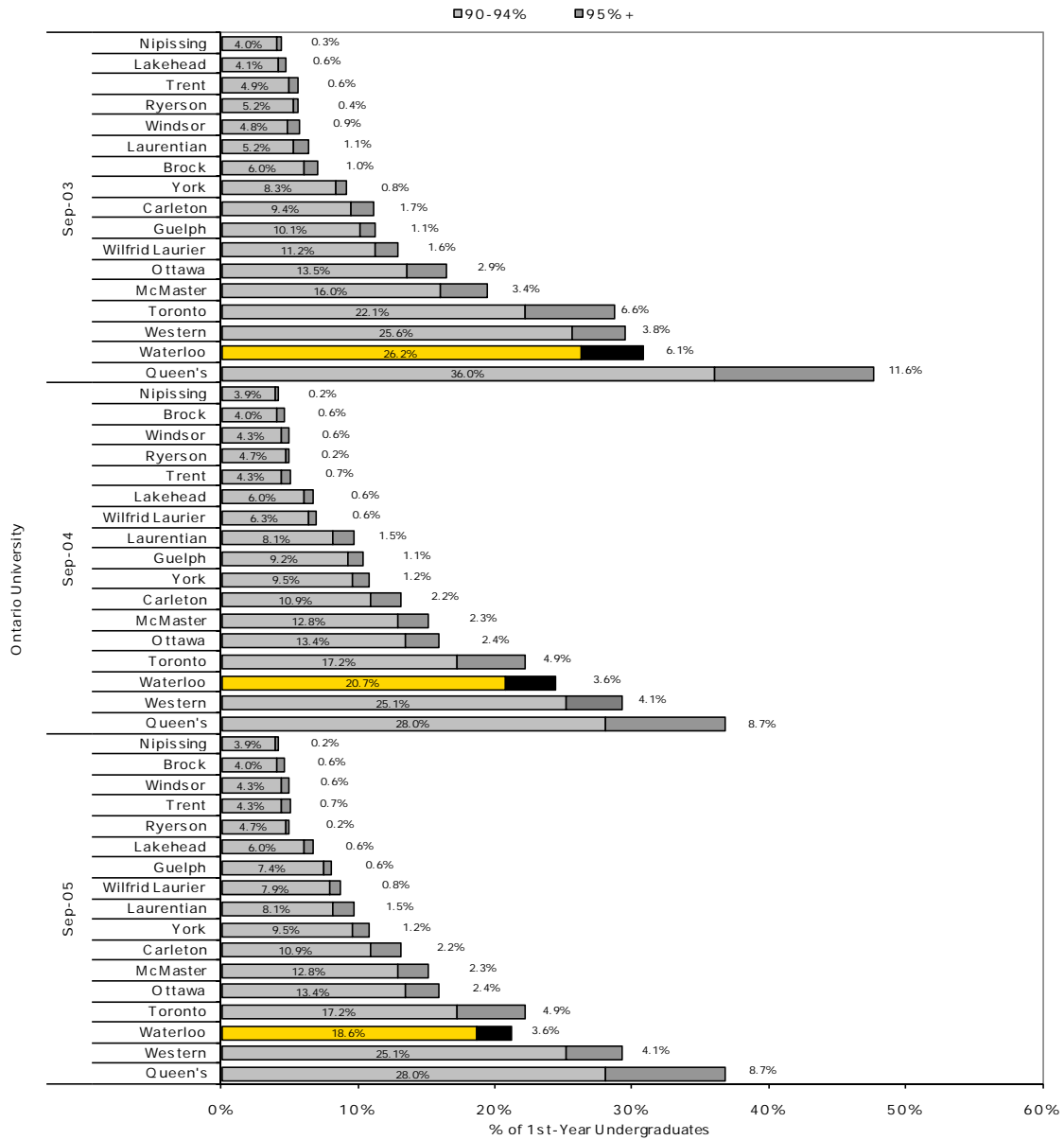
Entering Averages of 90%+ as Compared to G13 Universities



<sup>12</sup> Source: Maclean's Rankings 2003, 2004 and 2005.

Figure 1.3.F<sup>13</sup>

Entering Averages of 90%+ as Compared to Ontario Universities



<sup>13</sup> Source: Maclean's Rankings 2003, 2004, 2005.

## 1.4. Offer, Acceptance, and Yield Rates

In this section, we look at the number of applications, offers, confirmations, and registrations by Faculty. We monitor these measures to gauge the level of interest in a particular Faculty, the offer rate (number of offers versus number of applications), the acceptance rate (number of confirmations versus number of offers), and the yield rate (number of registrations versus number of applications).

These rates help us to understand and predict demand for our programs, and to improve our strategy for making offers. For example, if we want 100 students to register from a pool of 2,000 applicants, we need to decide how many students to whom to make offers. Depending on the anticipated acceptance rate, the answer may be 150, 200 or even 600 students.

Figure 1.4.A through Figure 1.4.G show three recent years of application activity including changes in activity levels in each Faculty.

Figure 1.4.A

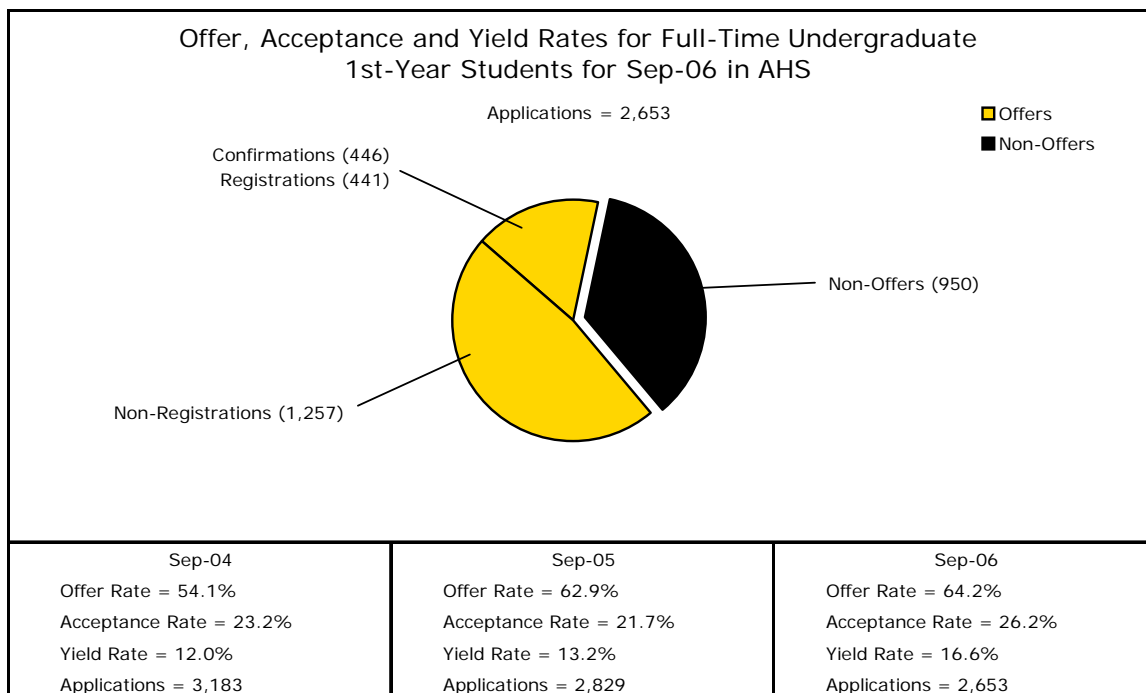


Figure 1.4.B

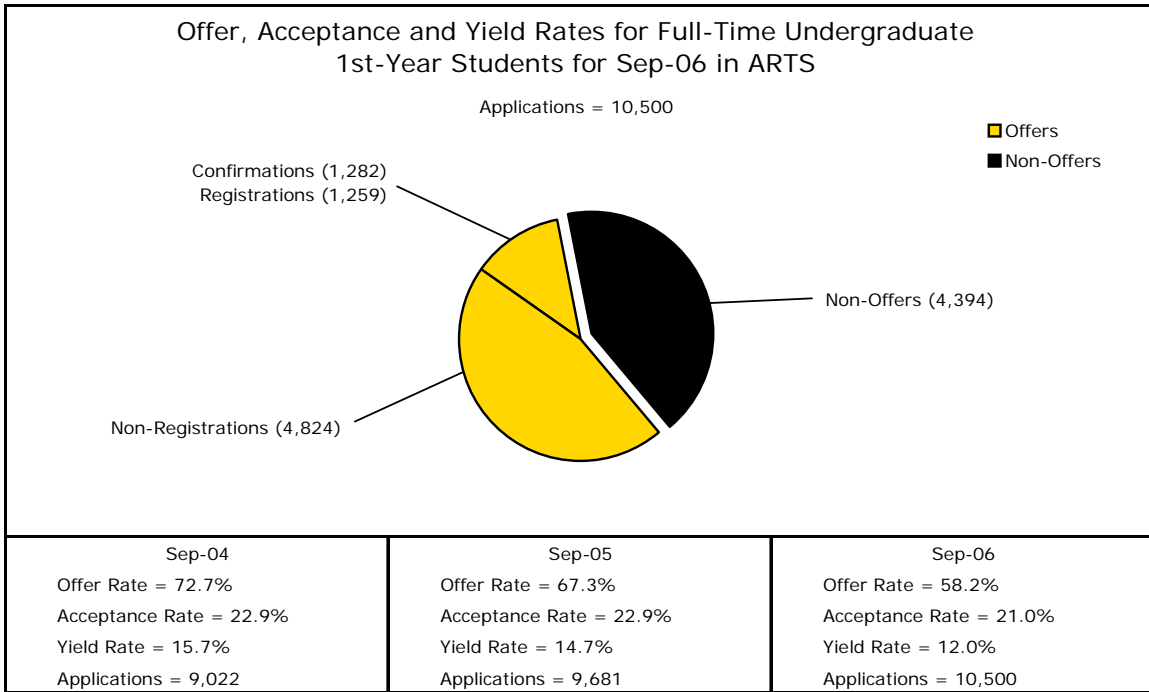


Figure 1.4.C

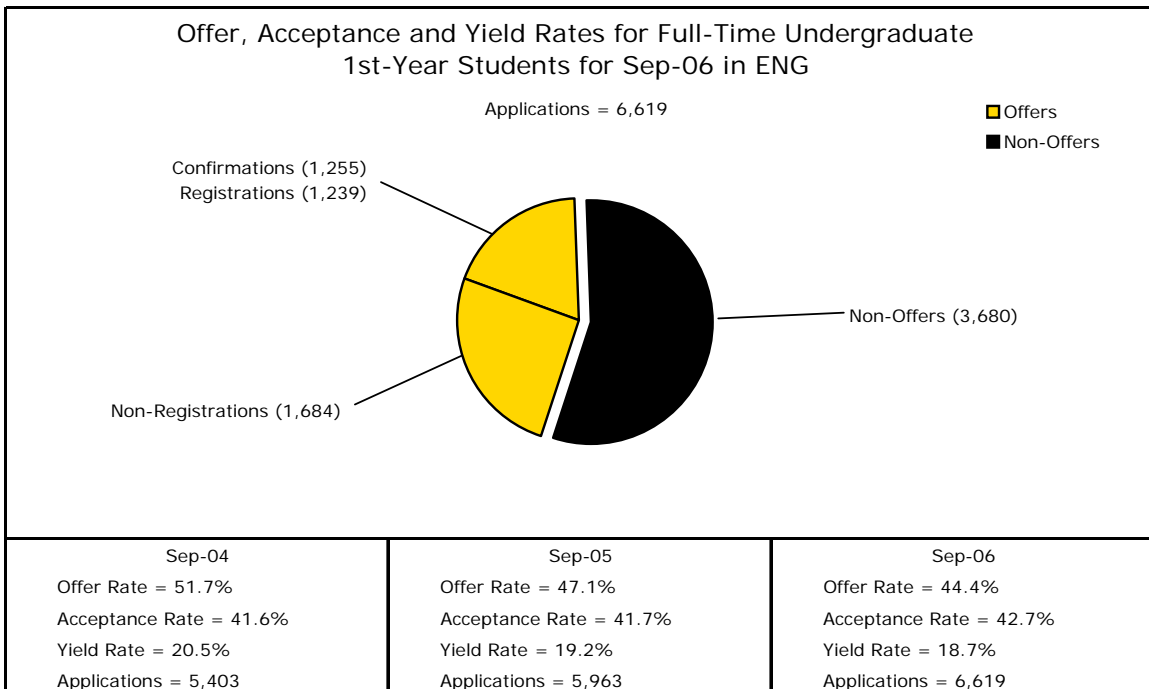


Figure 1.4.D

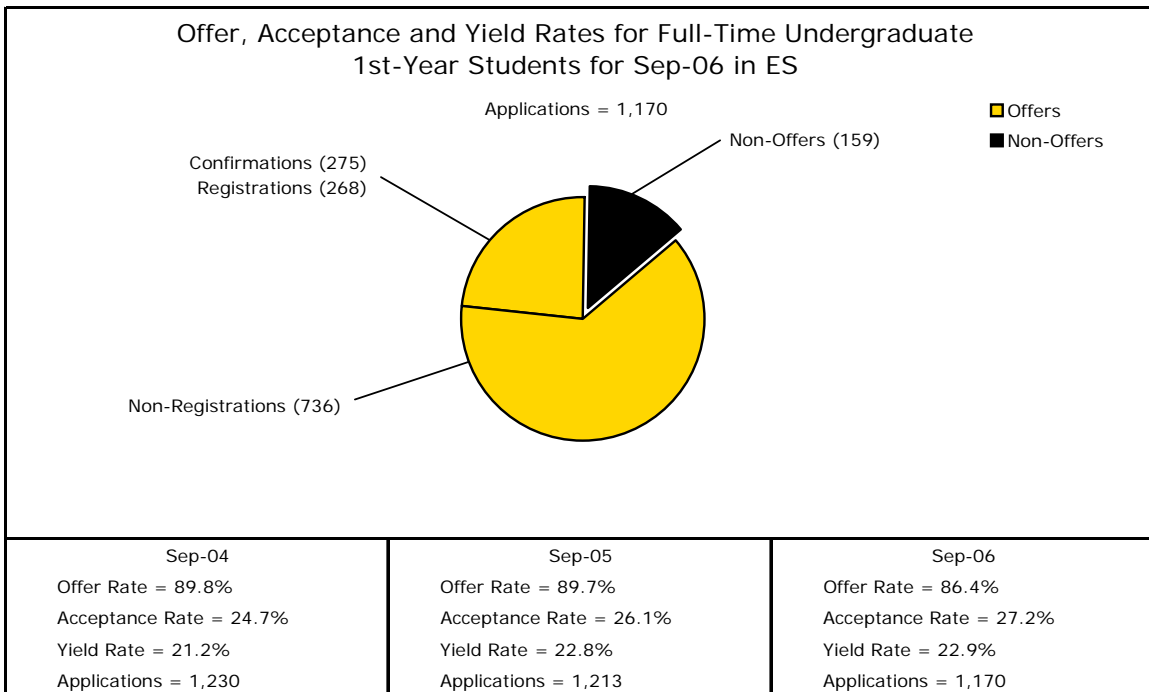


Figure 1.4.E

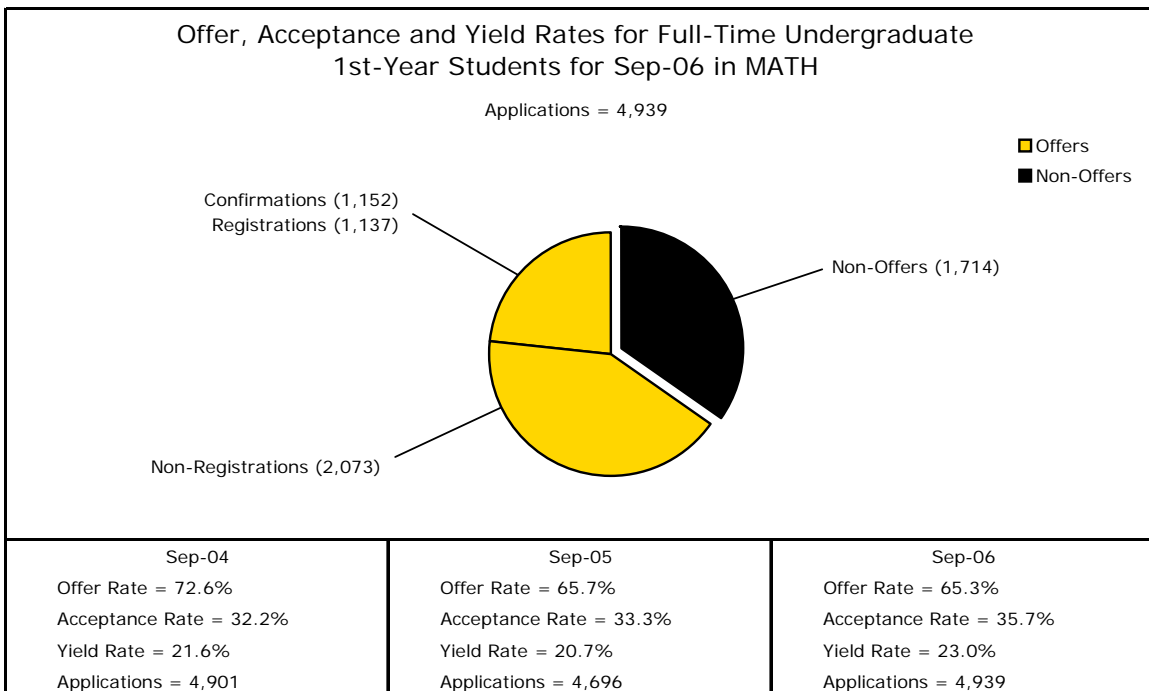


Figure 1.4.F

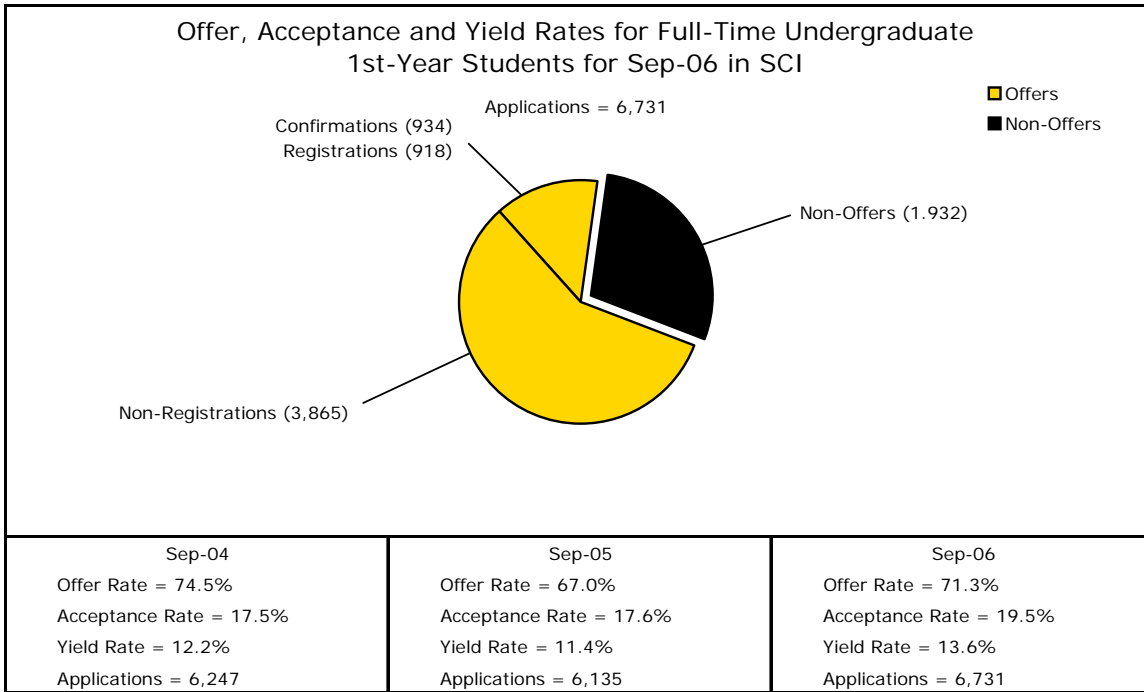
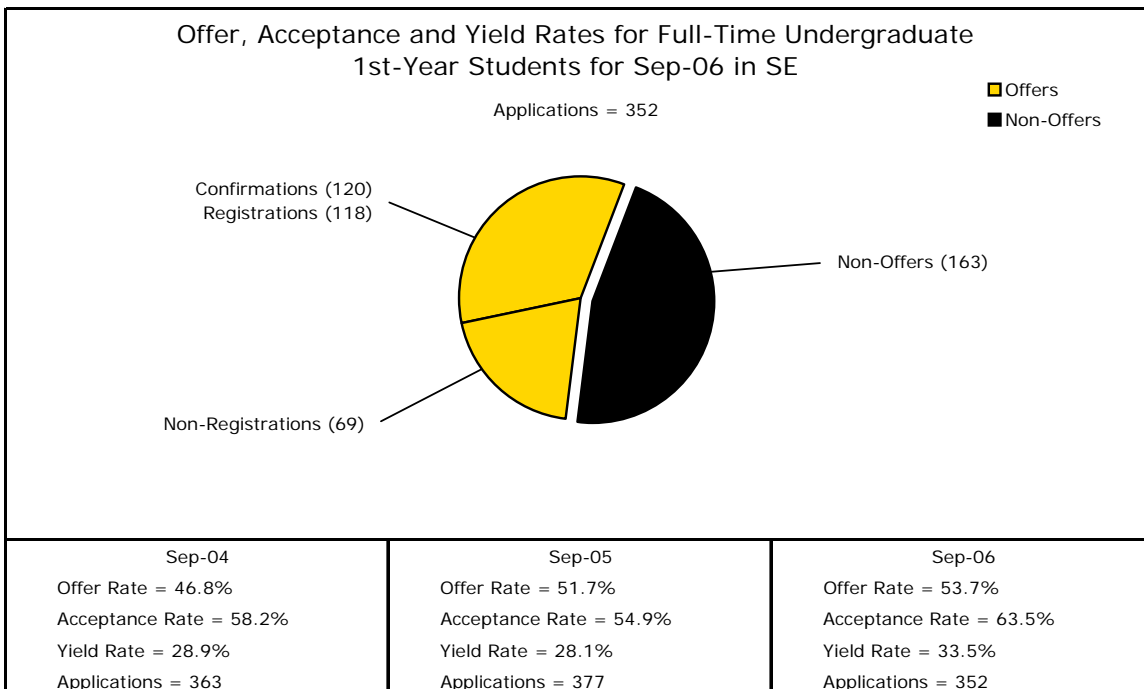


Figure 1.4.G





## 1.5. Geographic Source

Understanding the geographical outreach of the University of Waterloo allows us to determine the strength of our reputation and influence beyond the local community.

Figure 1.5.A<sup>14</sup>

Geographic Distribution of 1st-Year Registrants as Reported by City of School Last Attended Sep-06

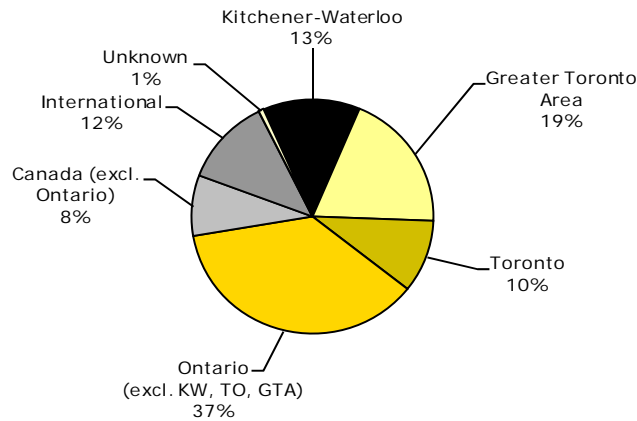
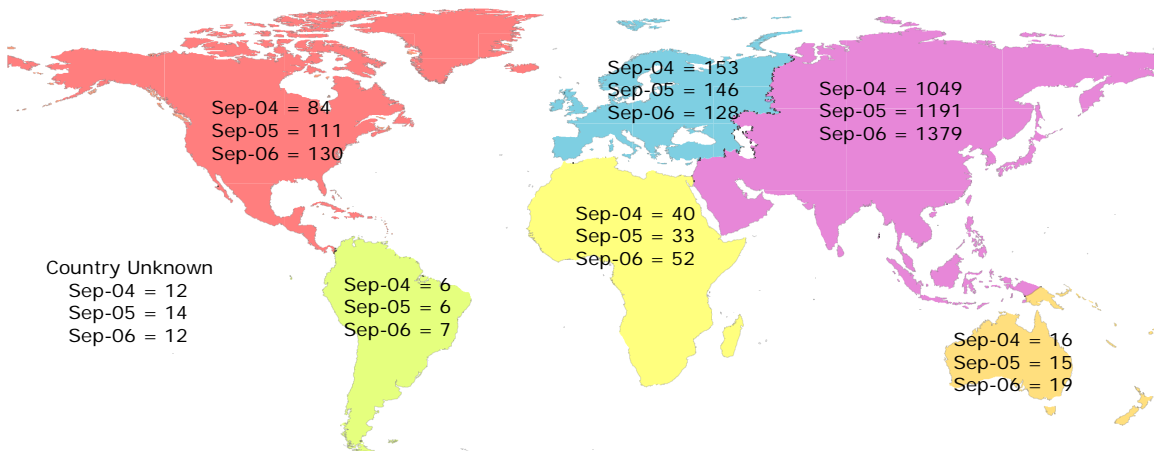


Figure 1.5.B<sup>15</sup>

International Undergraduate Students by Region of Origin (By Continent, Excluding Permanent Residents)



<sup>14</sup> Visa students are placed into the "international" category first, then for the remaining students, the country and city of last school attended is examined.

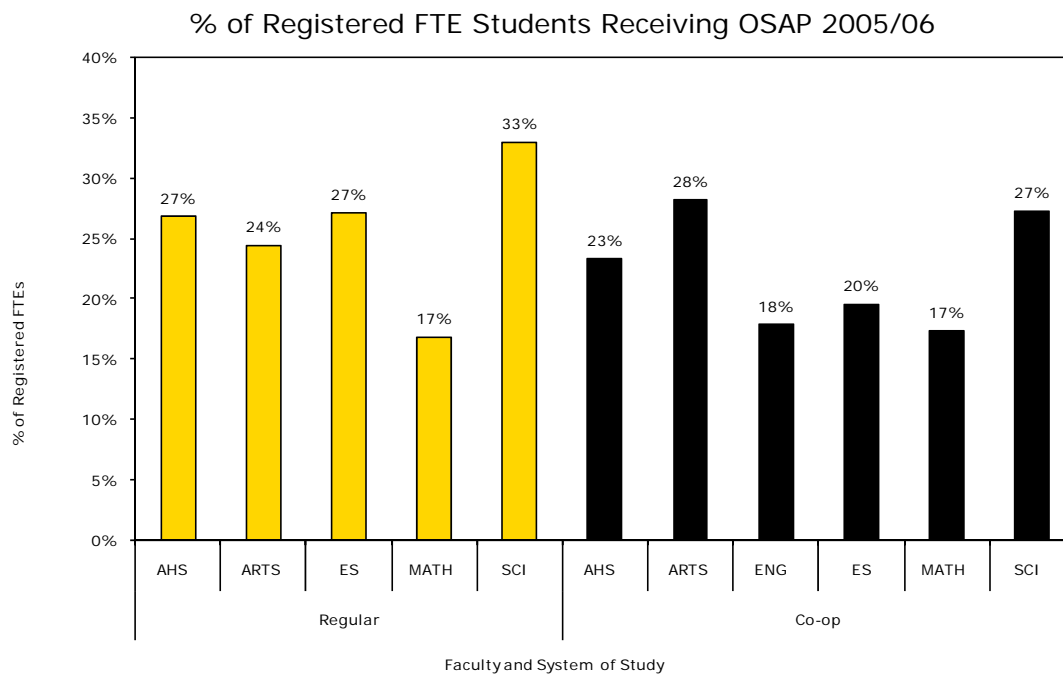
<sup>15</sup> Permanent Residents are not included in this chart because UW's definition of international involvement focuses more on students who have recently come from another country than those students who have been in Canada for a number of years and have become Permanent Residents. Continental North America excludes Canada. Source: USIS country of citizenship, visa students only, fall terms only.

## 1.6. OSAP Participation

The Ontario Student Assistance Program (OSAP) provides eligible students with various types of assistance based on financial need. Figure 1.6.A shows the percentage of our students receiving OSAP by Faculty and system of study, while Figure 1.6.B shows the average dollar amount of the awards received by those students participating in the program, also by Faculty and system of study.

In some cases, OSAP funds are not sufficient to meet the financial need of the student. To address this issue, UW guarantees to fund unmet need as defined by OSAP or a student assistance program from another Canadian province. The University aspires to identify students in need and ensure that all eligible students admitted to full-time undergraduate programs have the financial assistance necessary to complete their studies. Students are required to seek financial support from all sources, including family, employment, loans, and government support programs.

Figure 1.6.A



We expect lower participation rates from our students in co-operative education than students in the regular stream programs. However, participation rates from co-op students increased in 2005/06, in all Faculties, compared to 2004/05.

We expect co-op earnings to offset the financial commitments of students; and may expect the average OSAP paid to be lower for co-op students than regular stream students. In 2005/06, the average OSAP paid to co-op students remains higher in Applied Health Sciences and Arts than the average OSAP paid to regular stream students.

Figure 1.6.B

Average OSAP per FTE Student 2005/06

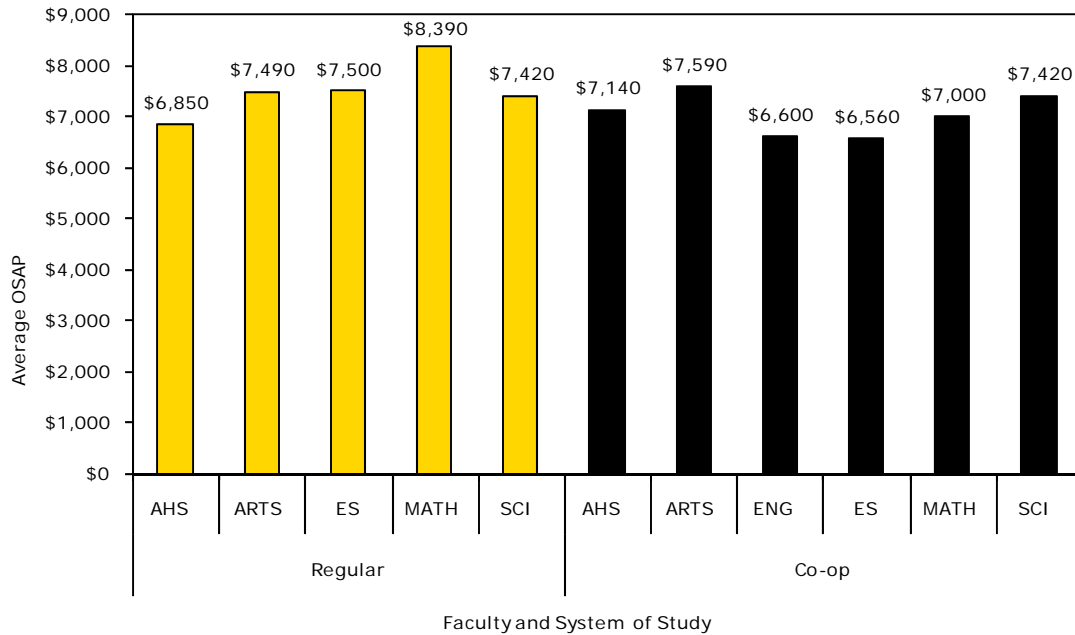


Figure 1.6.C

Financial Support to Undergraduate Regular FTE Students 2005/06							
Faculty	OSAP	Scholarships	Bursaries	Other (Non-UW)	Total Support	Average Support	% Supported
AHS	\$1,772,000	\$56,000	\$281,000	\$139,000	\$2,249,000	\$7,414	31%
ARTS	\$9,591,000	\$432,000	\$1,550,000	\$756,000	\$12,329,000	\$7,808	30%
ES	\$1,245,000	\$15,000	\$178,000	\$54,000	\$1,492,000	\$8,198	30%
MATH	\$2,946,000	\$408,000	\$657,000	\$132,000	\$4,143,000	\$8,984	22%
SCI	\$5,225,000	\$212,000	\$905,000	\$377,000	\$6,718,000	\$8,401	36%

Figure 1.6.D

Financial Support to Undergraduate Co-op FTE Students 2005/06							
Faculty	OSAP	Scholarships	Bursaries	Other (Non-UW)	Total Support	Average Support	% Supported
AHS	\$973,000	\$101,000	\$212,000	\$183,000	\$1,469,000	\$7,931	32%
ARTS	\$2,547,000	\$526,000	\$696,000	\$700,000	\$4,469,000	\$8,633	44%
ENG	\$4,622,000	\$1,889,000	\$2,498,000	\$1,469,000	\$10,477,000	\$8,235	32%
ES	\$665,000	\$81,000	\$151,000	\$102,000	\$1,000,000	\$6,738	29%
MATH	\$3,299,000	\$1,409,000	\$1,007,000	\$1,002,000	\$6,717,000	\$7,750	32%
SCI	\$1,591,000	\$192,000	\$327,000	\$263,000	\$2,373,000	\$8,099	37%

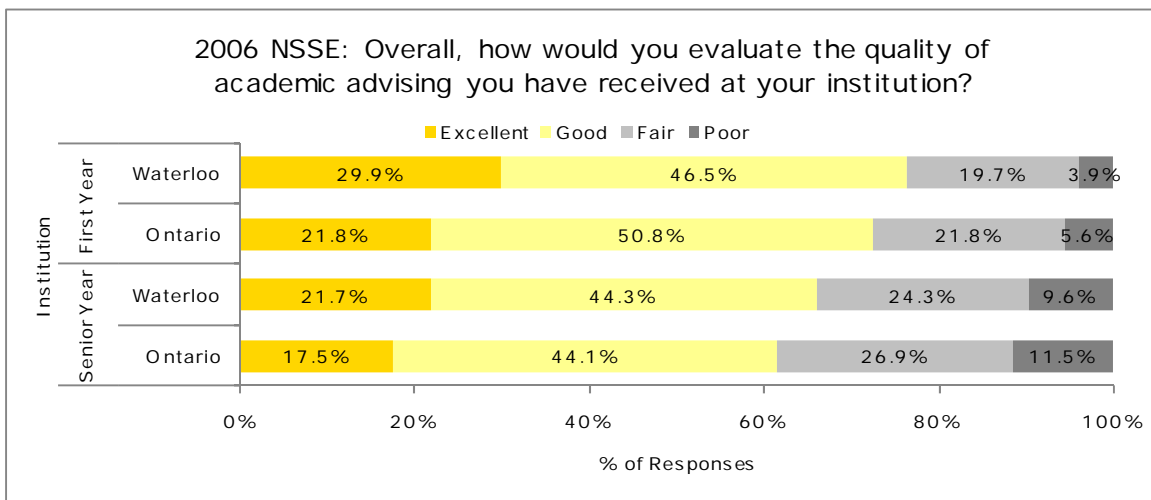
## 1.7. Student Engagement

The National Survey of Student Engagement (NSSE) was launched in 1999 by the Indiana University Centre for Postsecondary Research with a mandate to investigate the relationship between student behavior and educational success. Through hundreds of thousands of survey responses collected since 1999, at more than 1,000 different universities and colleges across Canada and the United States a clear conclusion has emerged. What students *do* while in University matters. Specifically, the degree to which students are *engaged* in their education, and with their institution, matters a great deal. Student engagement, measured by participation in productive learning activities such as working on group projects outside of class, and discussing ideas from readings or classes with others outside of class, involvement in campus organizations, interaction with peers and faculty members, and satisfaction with their educational experience are all positively correlated with desired outcomes such as higher retention and graduation rates.

In 2006 all Ontario universities participated in the NSSE survey allowing us to examine the responses of our students as compared to those from students at our peer institutions across Ontario. All Ontario universities will participate in NSSE again in 2008. The University of Waterloo had an overall participation rate of 49.5 per cent collecting responses from 4,448 students.

Interaction with faculty members, and the quality and value of those interactions is one indication of student engagement. Receiving prompt feedback from faculty on academic performance, working with faculty members on research projects, discussing ideas from class with faculty members outside of class, all contribute to improved faculty-student interaction and increased student engagement. Figure 1.7.A charts the responses of students asked to evaluate the quality of academic advising they have received. As compared to our peers in Ontario UW appears to be performing slightly above the provincial average. Our positive responses drop somewhat between our first-year students and our graduating-year students, as they do at our peer institutions in Ontario.

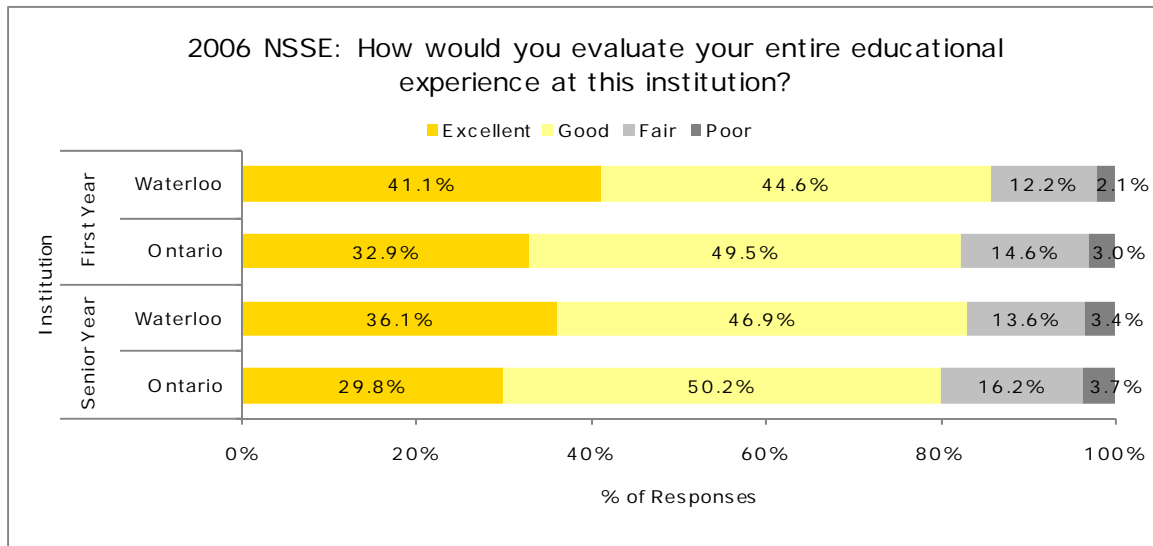
Figure 1.7.A<sup>16</sup>



<sup>16</sup> Source: The National Survey of Student Engagement.

When asked to evaluate their entire educational experience at UW as shown in Figure 1.7.B, UW has roughly the same proportion of our students responding positively with a rating of “Excellent” or “Good” as the students at our peer institutions across Ontario. The University of Waterloo does have a slightly larger proportion of students answering Excellent with 41.1 per cent of first-year students and 36.1 per cent of graduating-year students giving us the highest possible response to this question. Again there is a small decline between our first-year and graduating-year students, as there also was in students across Ontario.

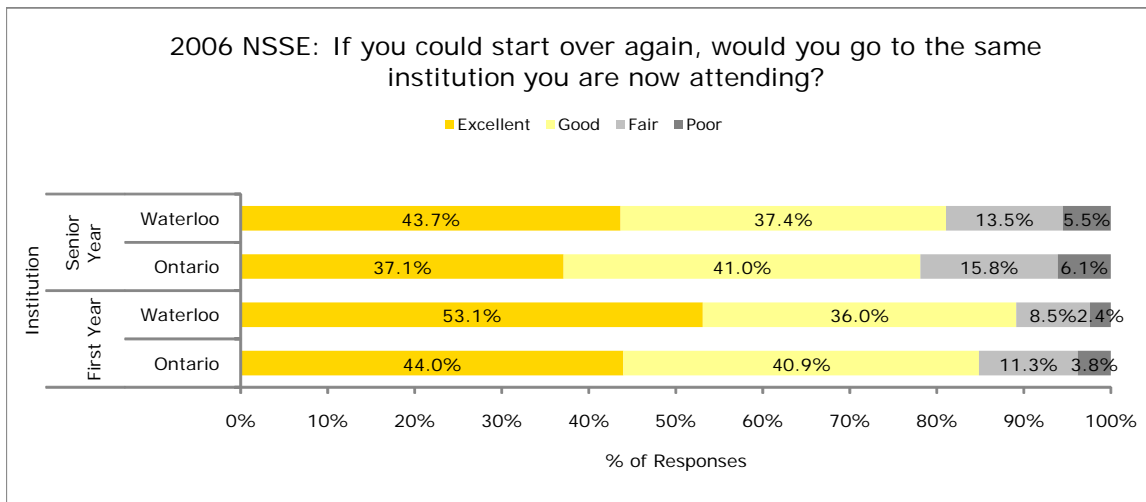
Figure 1.7.B<sup>17</sup>



<sup>17</sup> Source: The National Survey of Student Engagement.

The choice of which institution to attend for their post-secondary education is one of the most important decisions many of our students have ever had to make. Numerous factors weigh heavily when making that decision and Figure 1.7.C shows their response when asked if given the opportunity to start over again whether they would choose the same institution. Overall 89.1 per cent of our first-year students and 81.1 per cent of our graduating-year students responded that they would ‘Definitely’ or ‘Probably’ choose UW again, as compared to 84.9 per cent of first-year students and 78.1 per cent of graduating-year students across Ontario. While encouraging to know that so many of our students express satisfaction with their decision, there are 50 first-year students and 109 graduating students that responded that they would ‘Definitely Not’ choose UW again. A better understanding of the reasons why these students express such dissatisfaction with their choice, and investigation of what can be done to address those concerns is only one of the many ways in which our NSSE results can be used to help us improve as an institution.

Figure 1.7.C<sup>18</sup>



<sup>18</sup> Source: The National Survey of Student Engagement.

## 1.8. Retention, Graduation, Degrees Granted and Degree Distribution

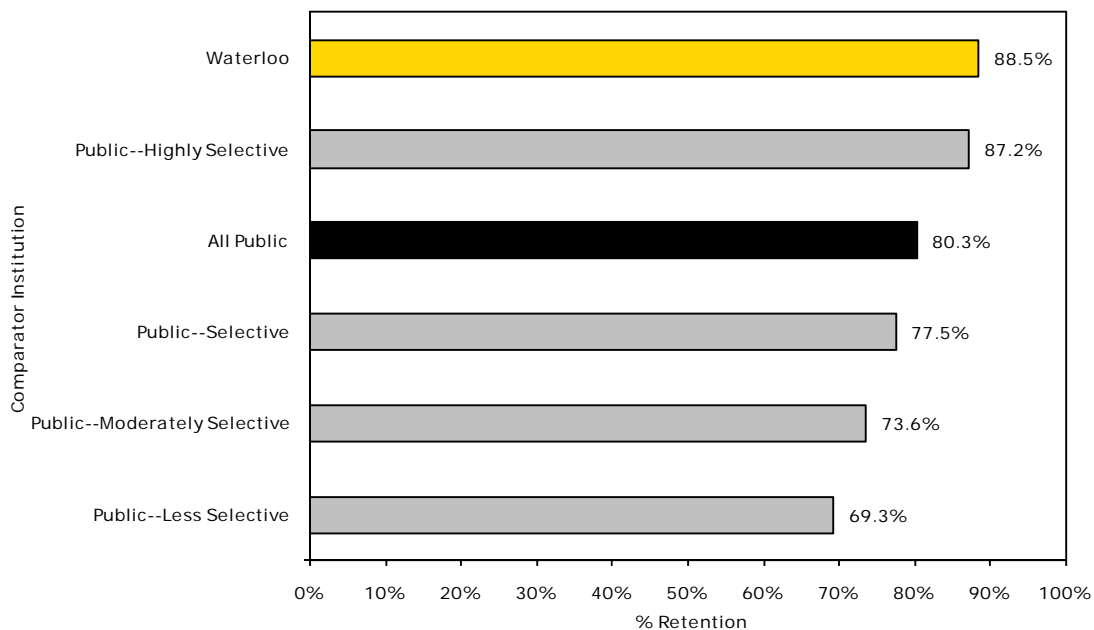
In 2006, the University of Waterloo participated, for the first time, in the Consortium for Student Data Exchange (CSRDE) retention and graduation study. The CSRDE is a consortium of colleges and universities, both public and private, who share student retention and graduation data. Along with many Canadian institutions, and all Ontario universities, UW will use the CSRDE results to help us measure our performance against similar institutions across North America.

In the charts below we have chosen public institutions as our comparator. The CSRDE survey is based on the premise that an institution's retention and completion rates depend largely on how selective the institution is, where selectivity is defined by entering students' average SAT or ACT test scores. CSRDE reports the retention and graduation results by four levels of selectivity – Highly Selective – SAT above 1100 (maximum 1600) or ACT above 24 (maximum 36); Selective – SAT 1045 to 1100 or ACT 22.5 to 24; Moderately Selective – SAT 990 to 1044 or ACT 21 to 22.4; Less Selective – SAT below 990 or ACT below 21.

Figure 1.8.A indicates that 88.5 per cent of UW's full-time, first-year students who entered into a first-entry undergraduate program in 2005 continued their studies in 2006. This is compared to an 87.2 per cent retention rate cited at highly selective public institutions.

Figure 1.8.A<sup>19</sup>

Retention Rate Waterloo vs Other North American Public Institutions by Selectivity of the 2005 Full-Time 1st-Year Cohort Continuing in their Studies in 2006



<sup>19</sup> For the purposes of CSRDE, Software Engineering is split 50:50 between Math and Engineering, Architecture is in Engineering, and includes those students who graduated with a three-year degree.

Figure 1.8.B

Six-Year Graduation Rate Waterloo vs Other North American Public Institutions by Selectivity of the 2000 Full-Time 1st-Time 1st-Year Cohort Graduating by 2005

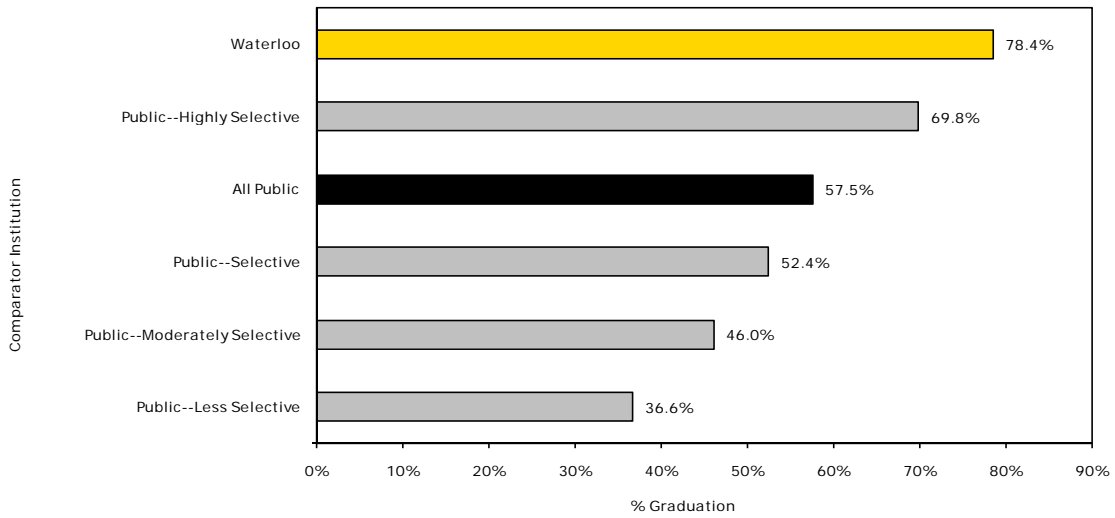
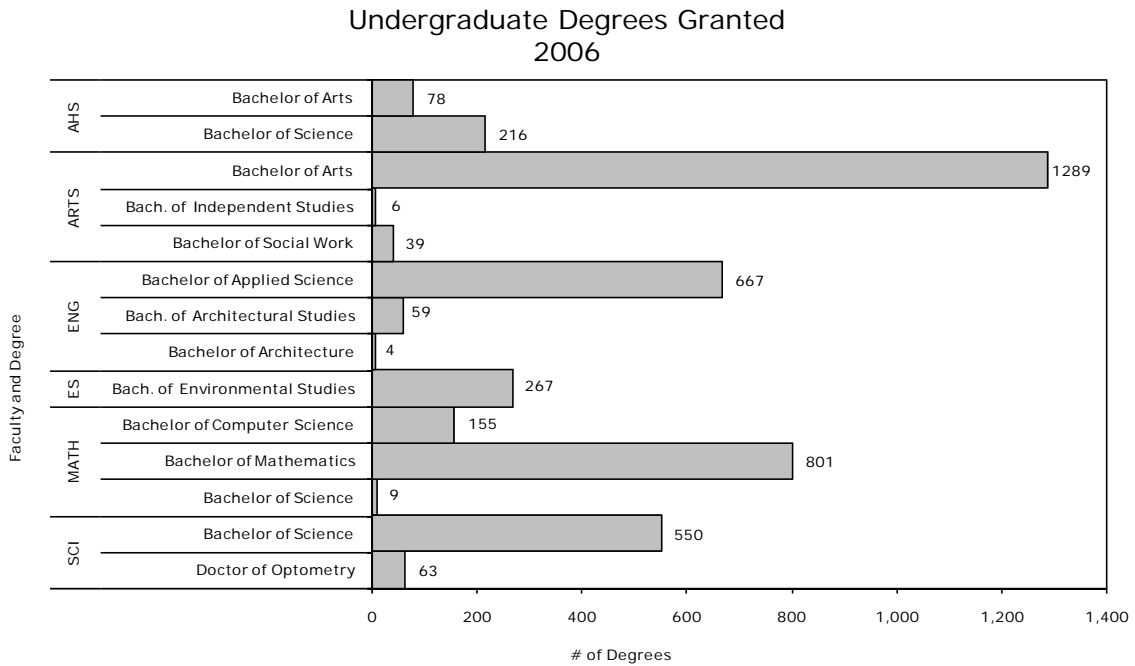


Figure 1.8.C shows the number of undergraduate degrees conferred in 2006 by Faculty and the type of degree granted.

Figure 1.8.C





The University of Waterloo also monitors undergraduate degree distribution by academic Faculty. We track each cohort of students to determine the percent who graduate with a degree from their Faculty of first registration, who graduate from another UW Faculty, who are still studying, or who have withdrawn. We also calculate the three-year average of the number of full-time terms to complete a degree in their Faculty of first registration.

When the Ministry of Training, Colleges and Universities measures degree completion rates, it typically allows a six-year window for students in a four-year program to complete their degree. Since students in a co-operative program generally require an extra year to complete their academic studies, due to their work term employment, we typically allow a seven-year window. Hence, in the next series of charts, we begin with the 2000/2001 cohort.

Figure 1.8.D

Degree Distribution of the 2000/2001 Full-Time, 1st-Time, 1st-Year Undergraduate Cohort in AHS

(Degree Completion as of May 2007 Convocation)

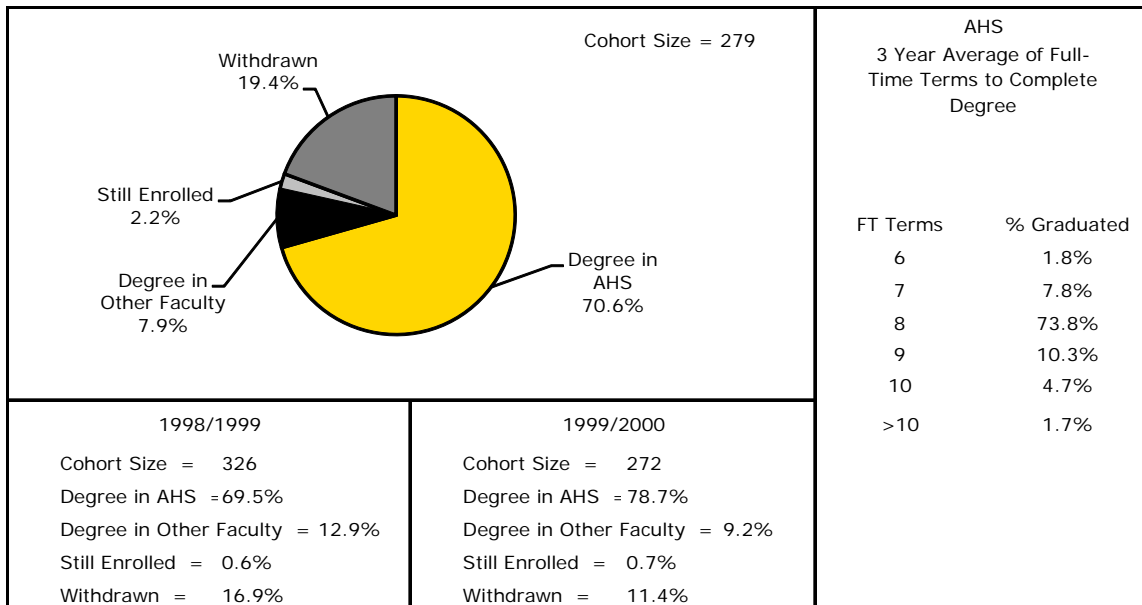


Figure 1.8.E

Degree Distribution of the 2000/2001 Full-Time, 1st-Time, 1st-Year Undergraduate Cohort in ARTS

(Degree Completion as of May 2007 Convocation)

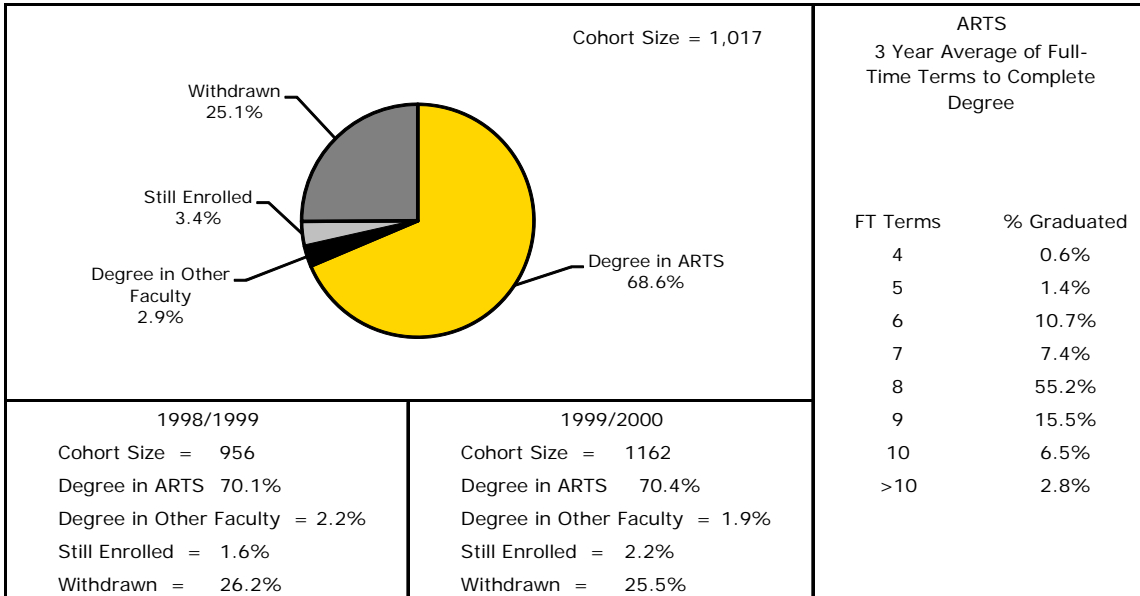


Figure 1.8.F

Degree Distribution of the 2000/2001 Full-Time, 1st-Time, 1st-Year Undergraduate Cohort in ENG

(Degree Completion as of May 2007 Convocation)

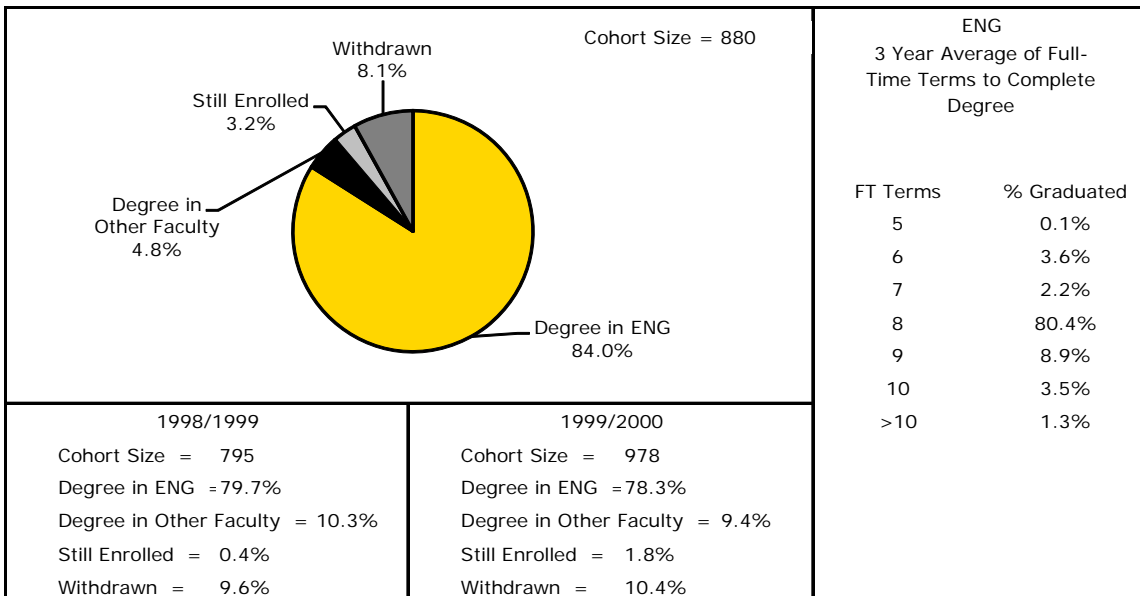


Figure 1.8.G

Degree Distribution of the 2000/2001 Full-Time, 1st-Time, 1st-Year Undergraduate Cohort in ES

(Degree Completion as of May 2007 Convocation)

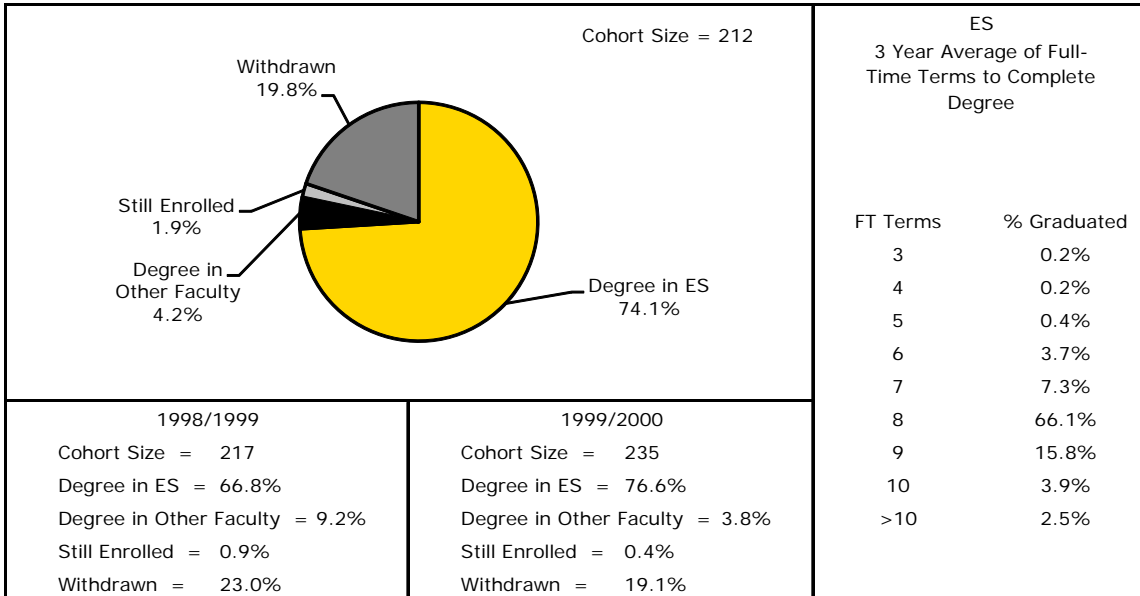


Figure 1.8.H

Degree Distribution of the 2000/2001 Full-Time, 1st-Time, 1st-Year Undergraduate Cohort in MATH

(Degree Completion as of May 2007 Convocation)

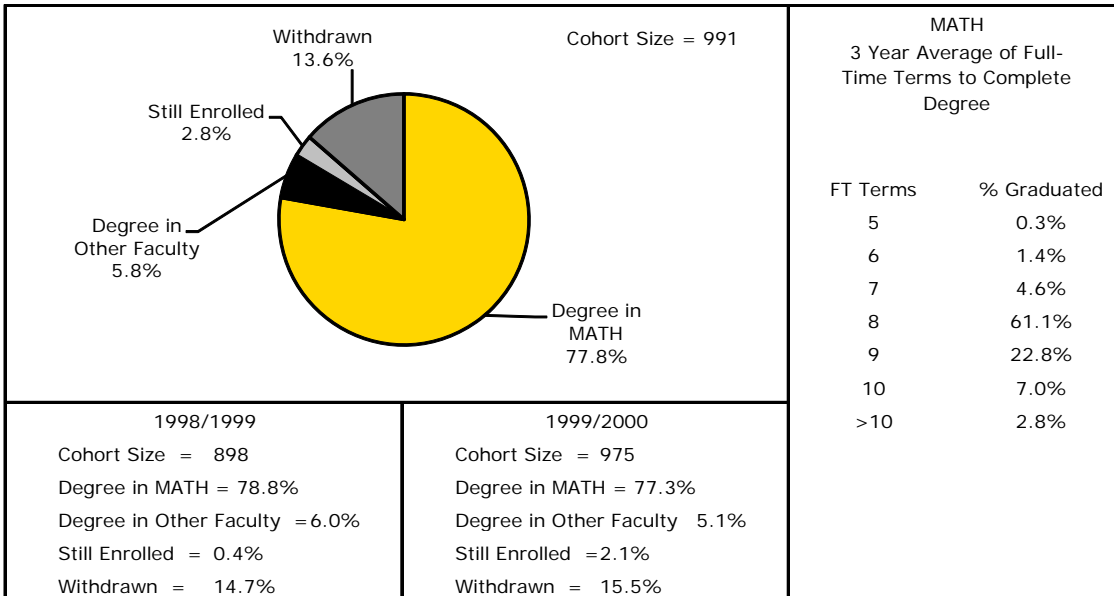


Figure 1.8.I

Degree Distribution of the 2000/2001 Full-Time, 1st-Time, 1st-Year Undergraduate Cohort in SCI

(Degree Completion as of May 2007 Convocation)

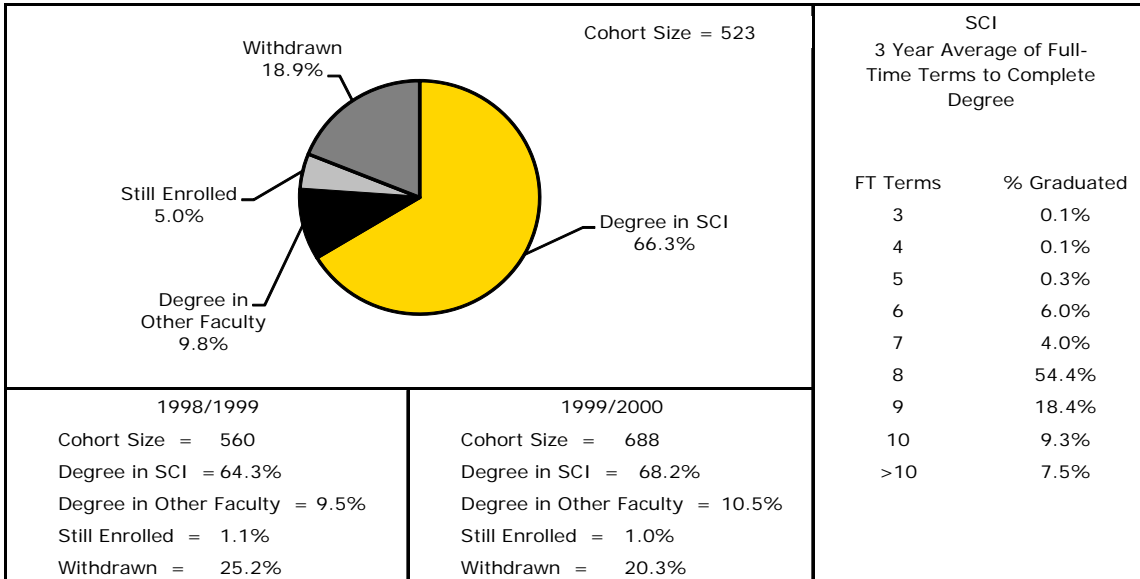
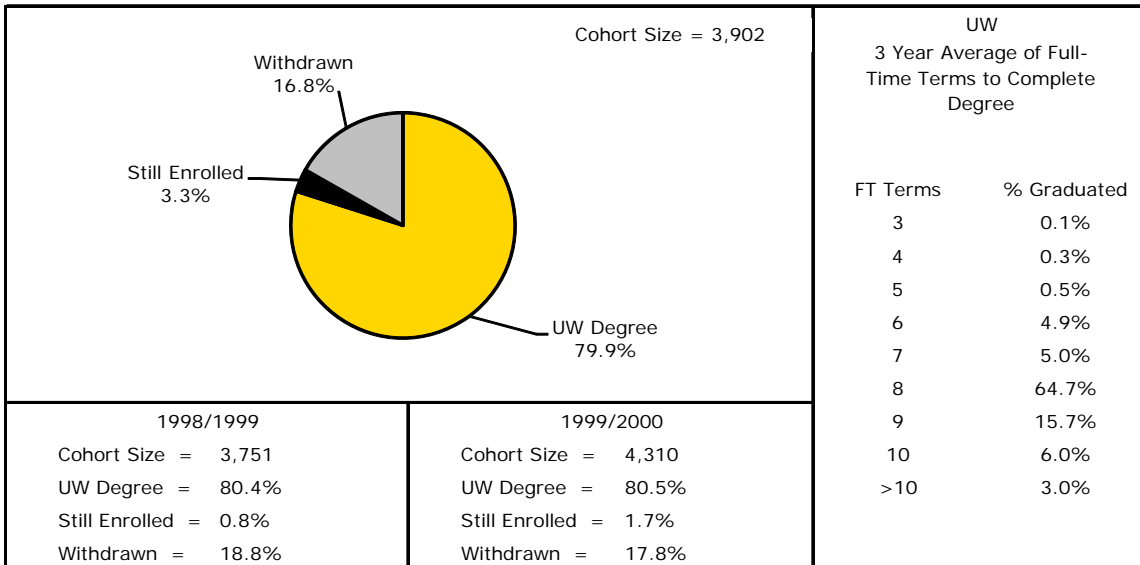


Figure 1.8.J<sup>20</sup>

Degree Distribution of the 2000/2001 Full-Time, 1st-Time, 1st-Year Undergraduate Cohort for UW

(Degree Completion as of May 2007 Convocation)



<sup>20</sup> The degree completion rate here differs from that in the CSRDE chart due to a difference in methodology and timing.

## 2. GRADUATE STUDIES

The University of Waterloo's vision for our sixth decade supports a proactive approach to innovative graduate education, with a goal to double our graduate enrolment. To guide that process and to monitor our progress we focus in this section, on our graduate enrolment, student to faculty ratio, quality of students, global engagement, recruitment, student support, student satisfaction, degree completion rates, and degrees granted.

### 2.1. Enrolment

Figure 2.1.A

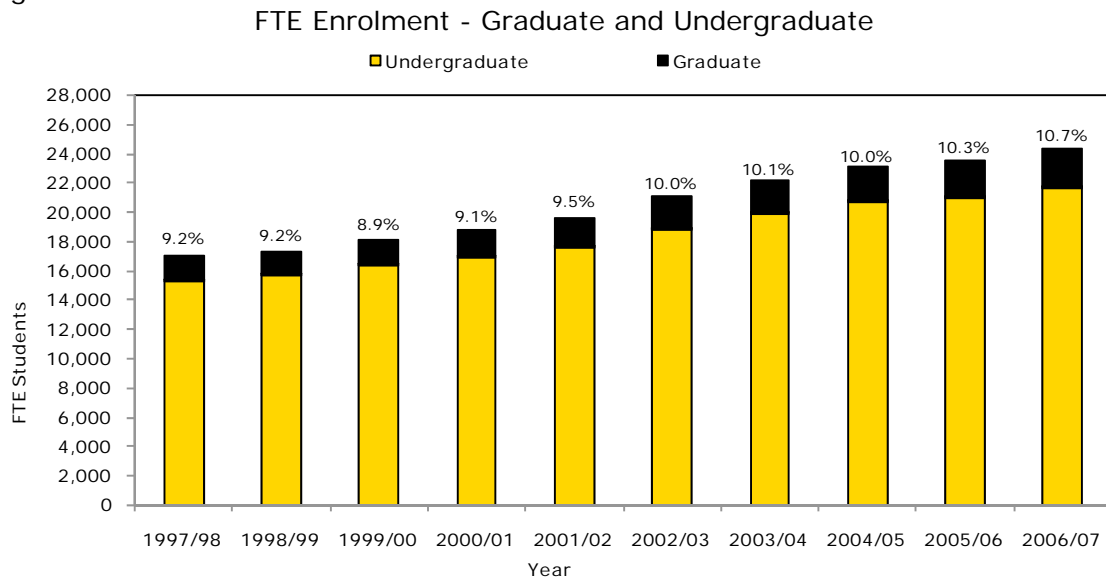
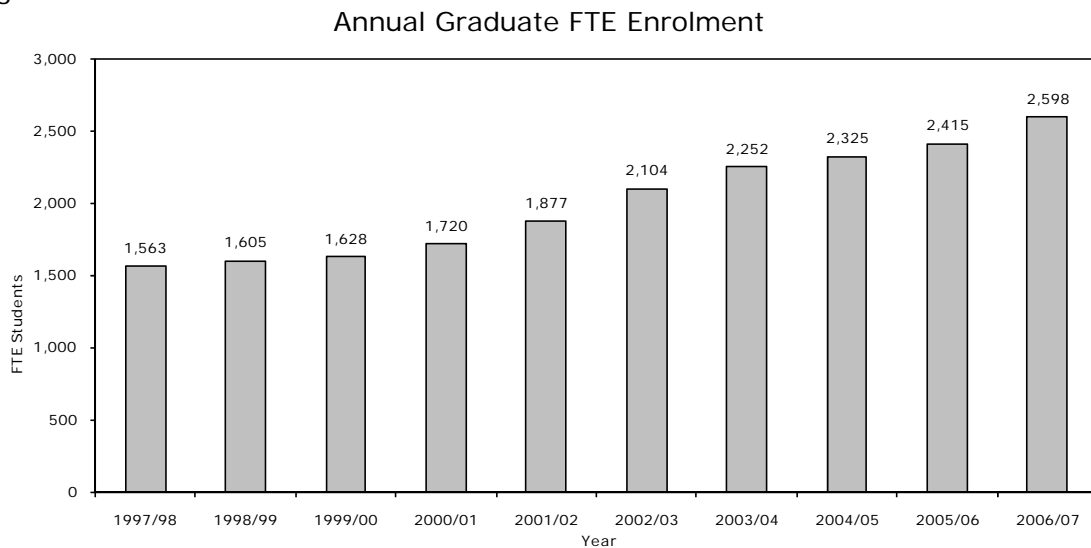


Figure 2.1.B



Graduate students normally register for three terms per year and generate an annual 1.0 FTE. A part-time student would generate 0.3 FTE.

Figure 2.1.C<sup>21</sup>

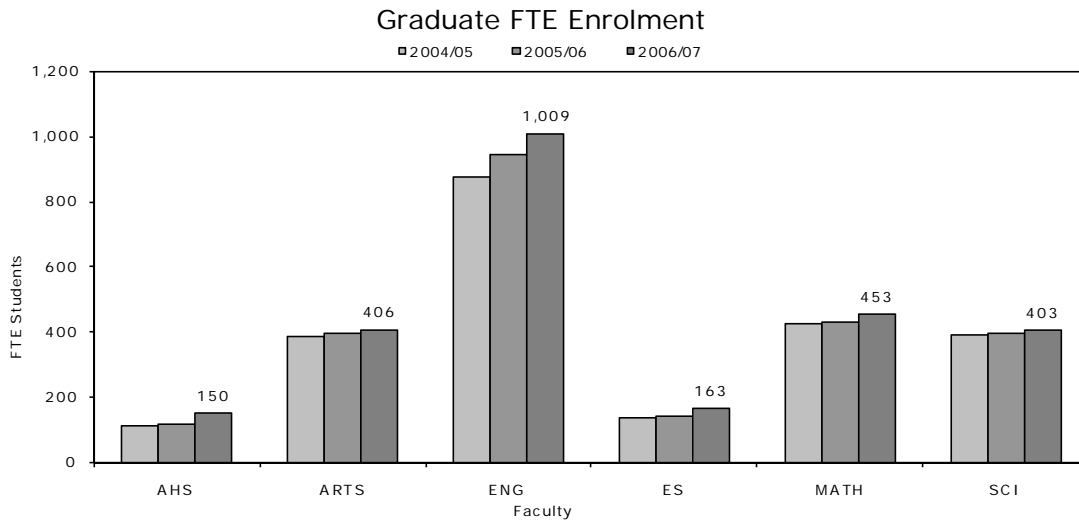
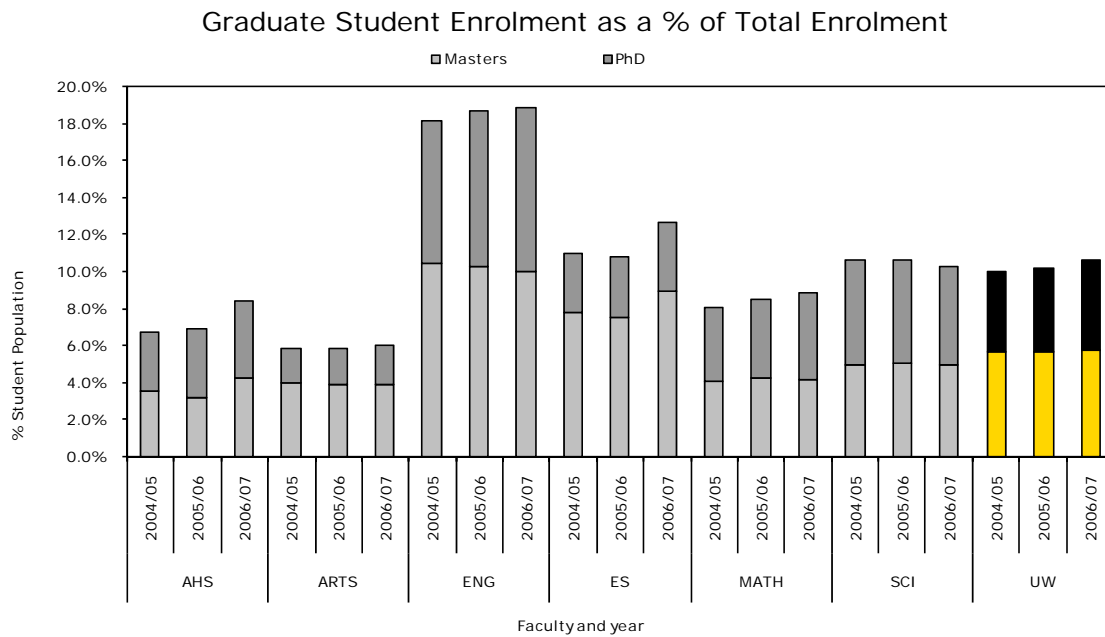


Figure 2.1.D

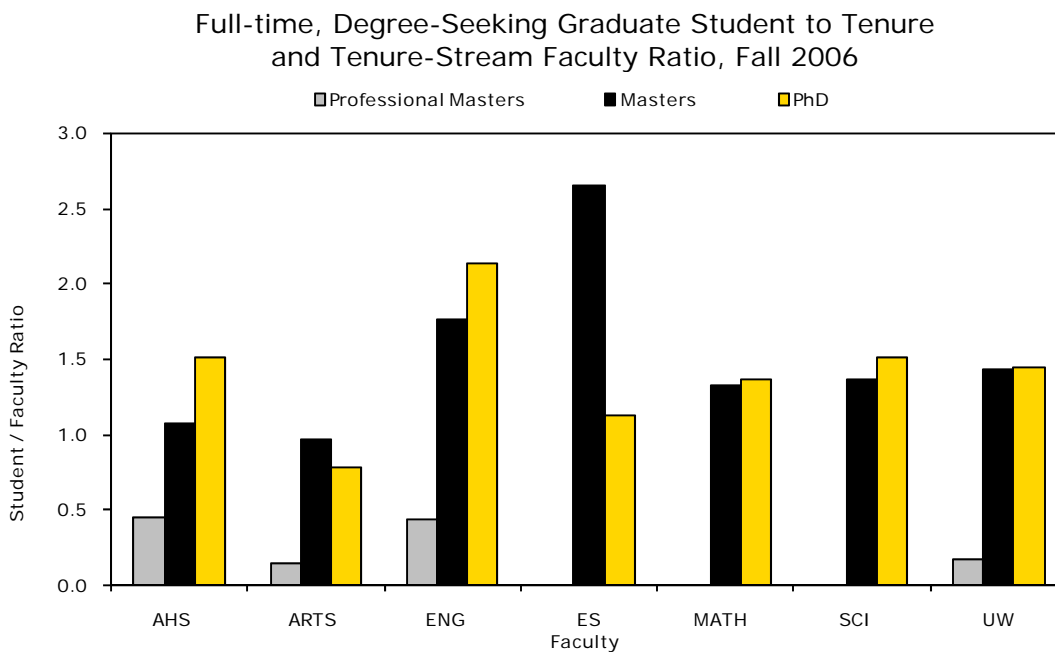


<sup>21</sup> Software Engineering is offered jointly by the Faculties of Engineering and Mathematics and enrolment is split between these two Faculties. In 2006/07, there were 13.8 FTE enrolled in Theology that are not represented in the graph.

## 2.2. Student to Faculty Ratio

The graduate student-faculty ratio is considered a reasonable indicator of the intensity of graduate education at universities. The ratios below are intended to represent this graduate studies intensity at the Faculty level. However, we recognize that some faculty members supervise as many as six students at a time, and some supervise no graduate students—an issue that requires management and monitoring at the department level.

Figure 2.2.A<sup>22</sup>



## 2.3. Quality of Students

The amount of external scholarship support generated by graduate students is one measure of their quality.

Rather than counting the number of individual students, we calculate the number of students in a given Faculty, and the number of students receiving some form of external scholarship funding, in terms of annual full-time equivalents (FTEs). FTEs allow for three terms of changing data to be reported in an annual time frame. For example, if a student studies for two terms in Engineering and then changes to the Faculty of Science in the third term of a year, we would report 0.66 FTEs of activity in the Faculty of Engineering and 0.33 FTEs of activity in Science. The same is true for calculating FTEs of funding. If a student receives an external scholarship for two terms in a year, then we would say that he or she received 0.66 FTEs of external scholarship support.

<sup>22</sup> Professional masters programs at UW are defined by the Graduate Studies Office and include Accounting, Architecture, Business Entrepreneurship & Technology, Master of Engineering programs, and Taxation.

Figure 2.3.A and Figure 2.3.B show the percentage of annual FTE students (who are Canadians or Permanent Residents) in a particular Faculty at the master’s or doctoral level receiving an external scholarship.

Figure 2.3.A

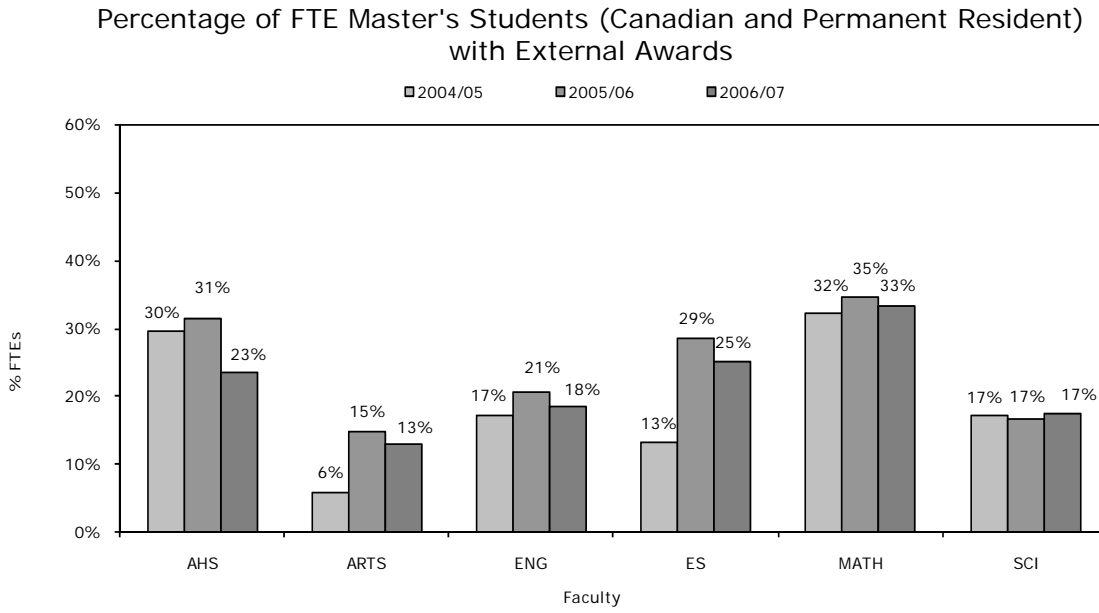


Figure 2.3.B

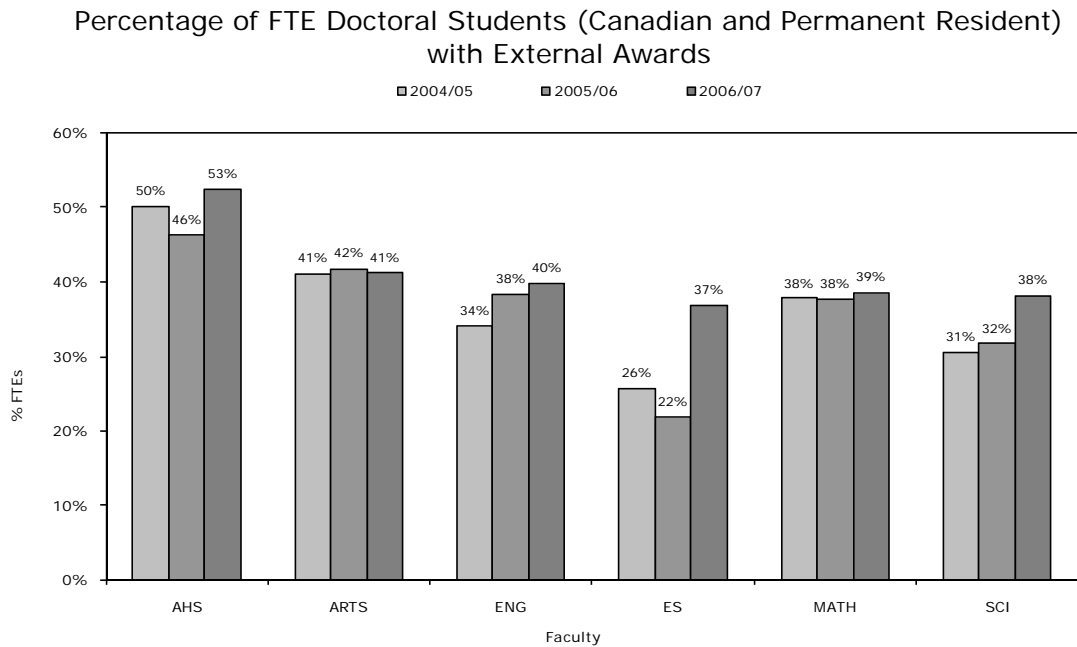
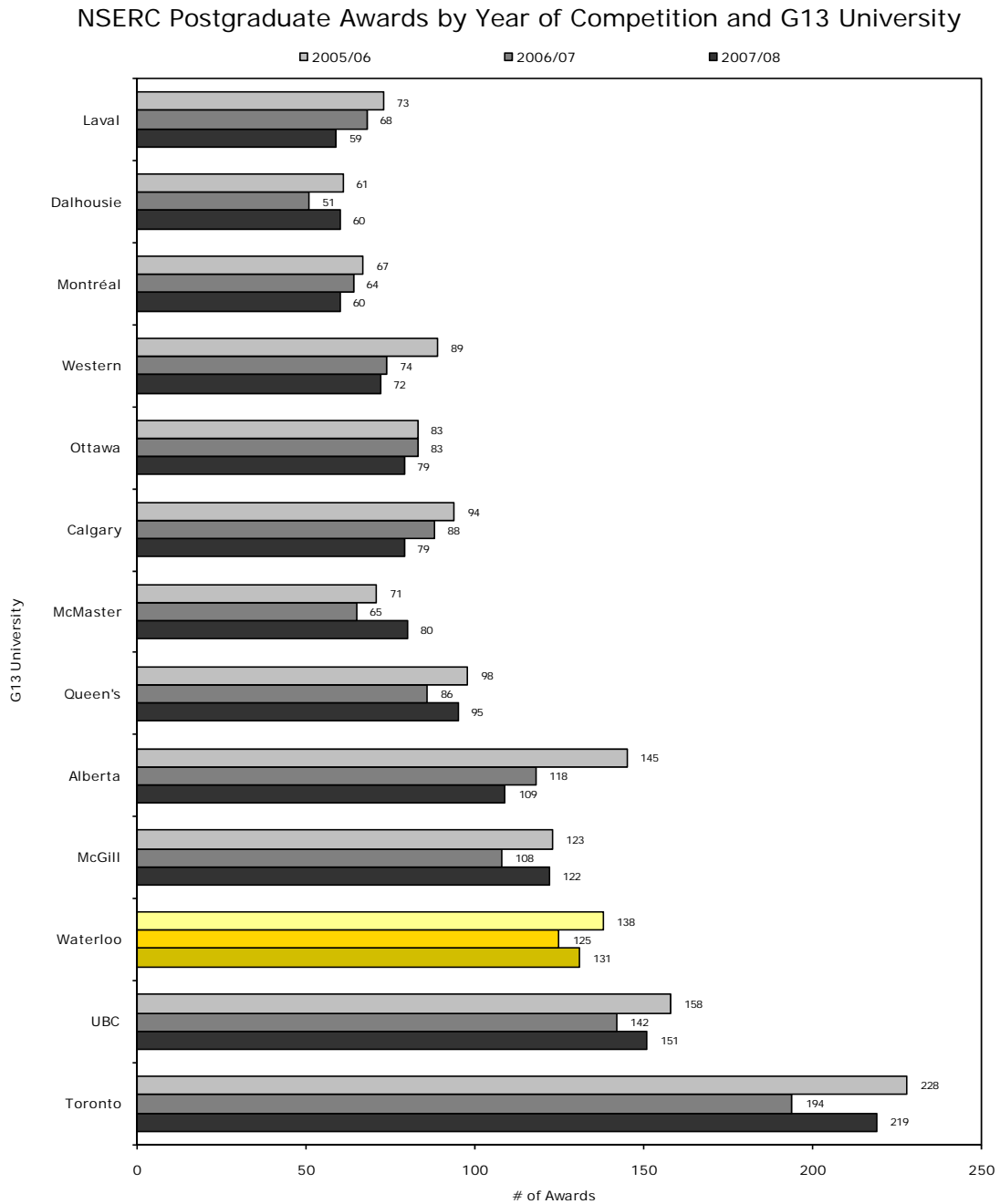




Figure 2.3.C, below, shows Natural Sciences and Engineering Research Council postgraduate awards to UW students, including those who may have gone on to graduate studies at other institutions and similar data for those institutions in the G13 Data Exchange. In 2004/05, Canada Graduate Scholarship (CGS) awards were introduced. In 2006/07, fewer awards were made available system-wide due to the introduction of a Three-year doctoral award for some award recipients.

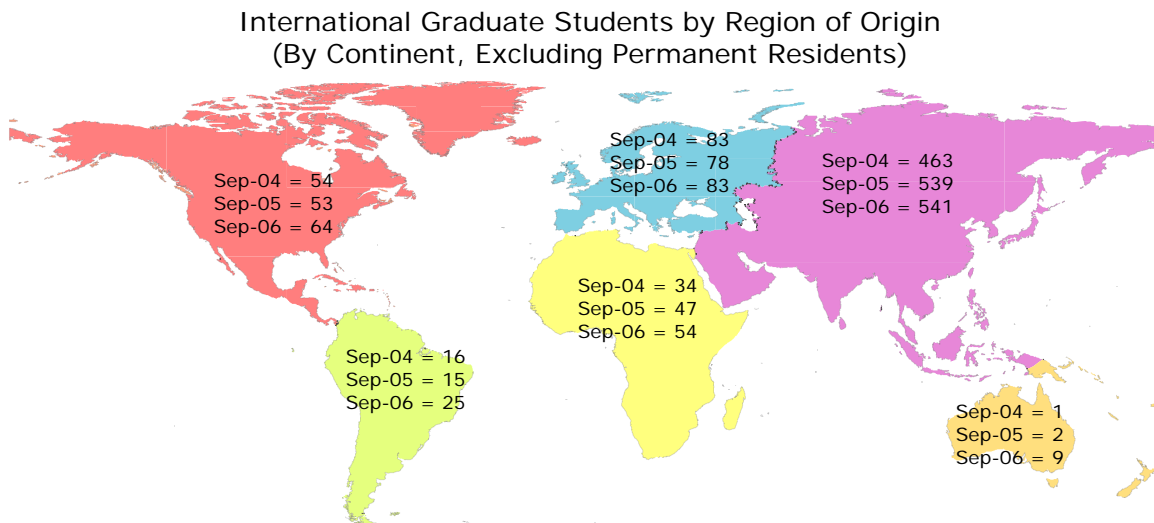
Figure 2.3.C



## 2.4. Geographic Source

Understanding the geographical outreach of the University of Waterloo allows us to determine the strength of our reputation and influence beyond the local community. The strength of our reputation can be measured in part by the breadth of the area from which we draw students.

Figure 2.4.A<sup>23</sup>



## 2.5. Graduate Application, Offer and Yield Rates

Entry to graduate studies is fundamentally different from the undergraduate programs, particularly in the area of offer and yield rates. Similar to the undergraduate case, we track the offer rate (number of offers versus number of applications), and the yield rate (number of registrations versus number of applications). However, the process and expectations for applications in graduate studies are decidedly different. Applicants seek more specialized and advanced programs based on their unique research interests and career plans. In some cases, applicants seek to study with a particular faculty member.

At any time, up to the start of the admission term, applicants can choose a competitive offer from another university. Science and Technology programs are highly competitive. All programs endeavour to attract highly qualified students.

Figure 2.5.A through Figure 2.5.L show numbers of applications and the offer and yield rates for each of the most recent three years, by level of study (master's or doctoral) for each Faculty.

<sup>23</sup> Permanent Residents are not included in this chart because UW's definition of international involvement focuses more on students that have recently come from another country than those students who have been in Canada for a number of years and have become Permanent Residents. Continental North America excludes Canada. Source: USIS Country of Citizenship, Visa Students only, fall terms only.

Figure 2.5.A

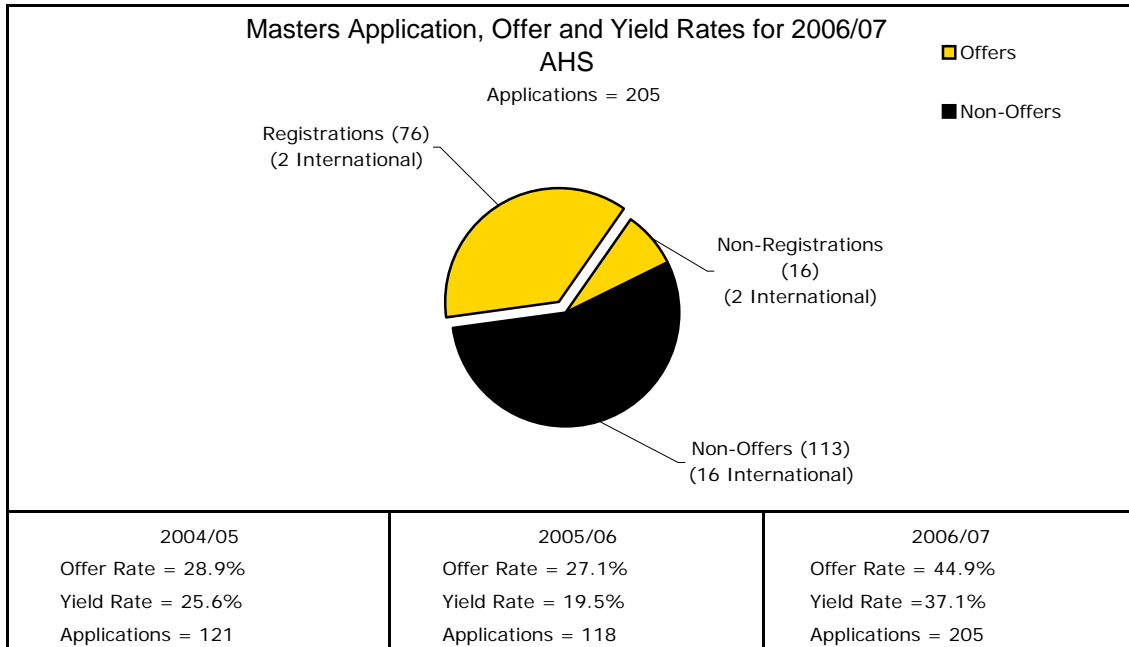


Figure 2.5.B

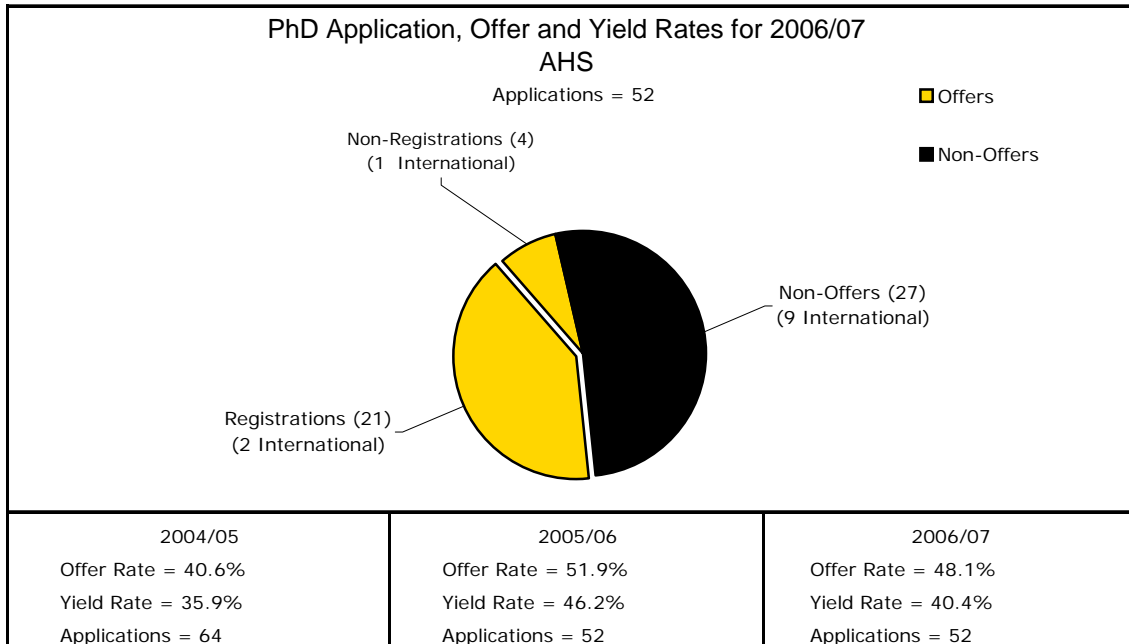


Figure 2.5.C

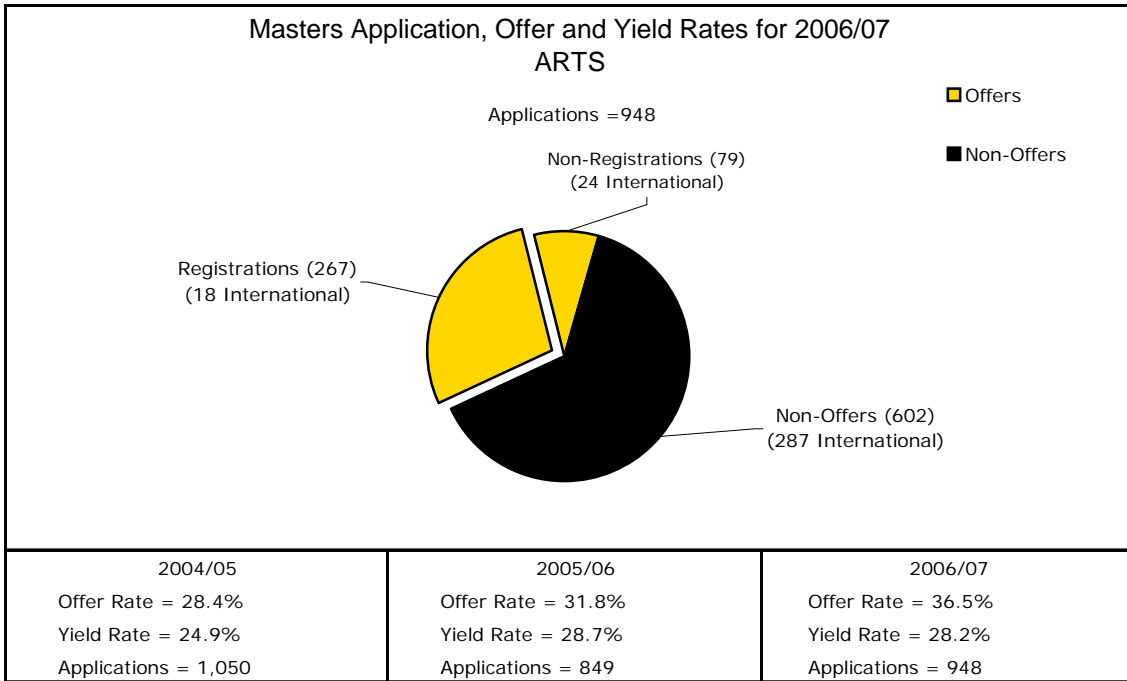


Figure 2.5.D

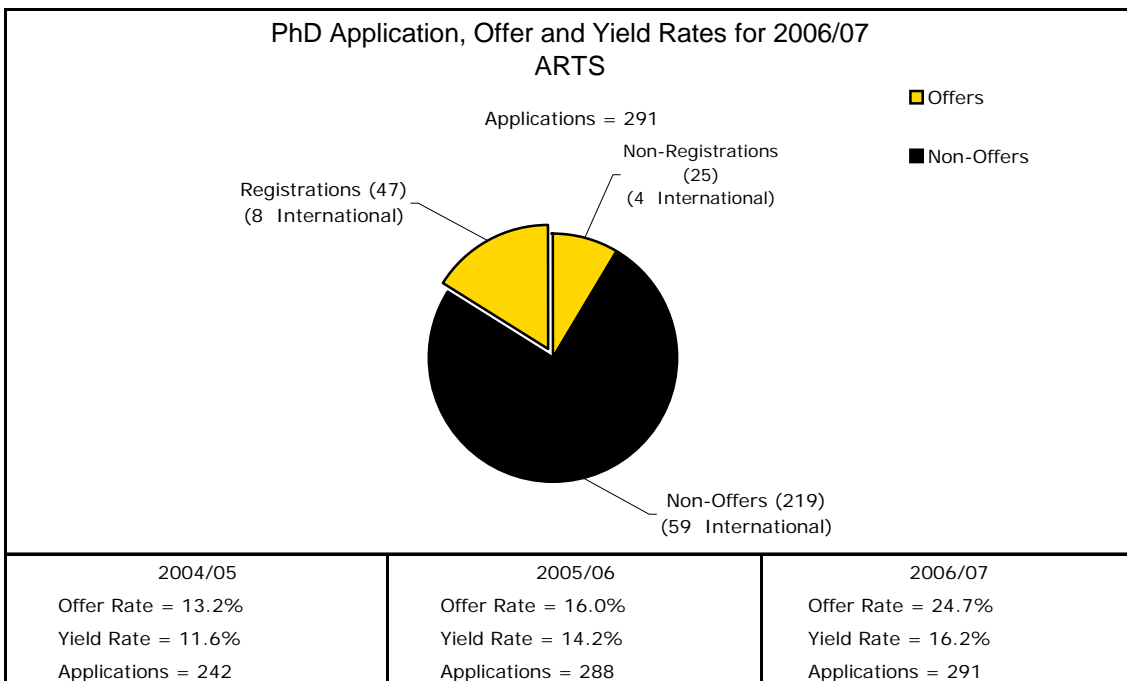


Figure 2.5.E

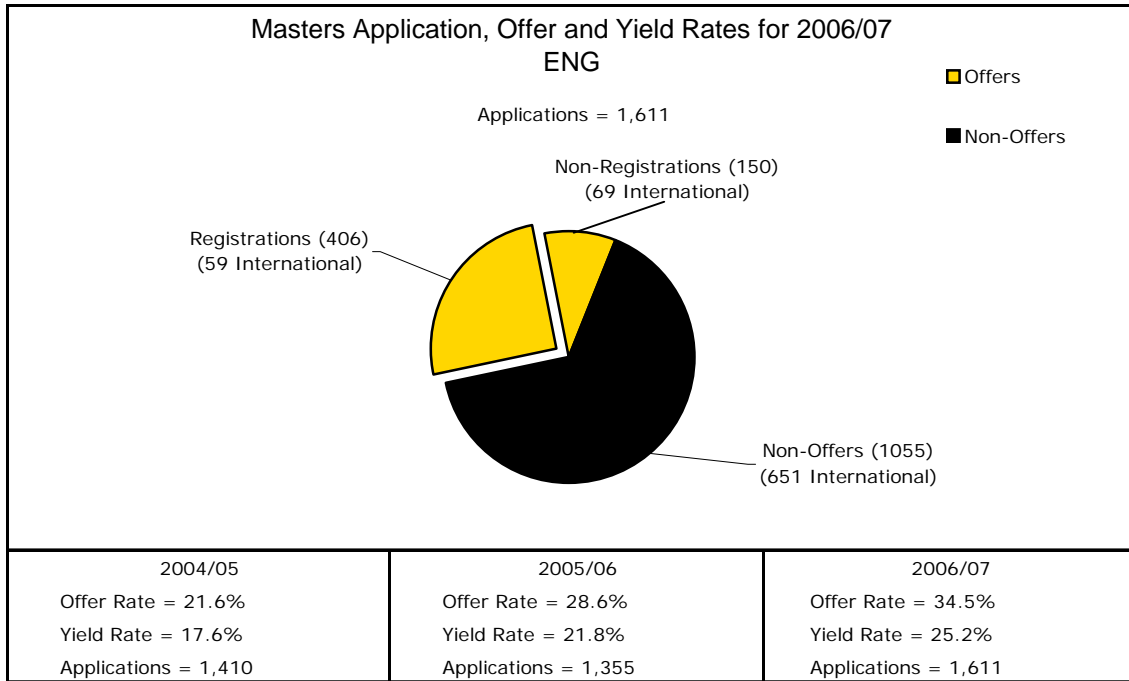


Figure 2.5.F

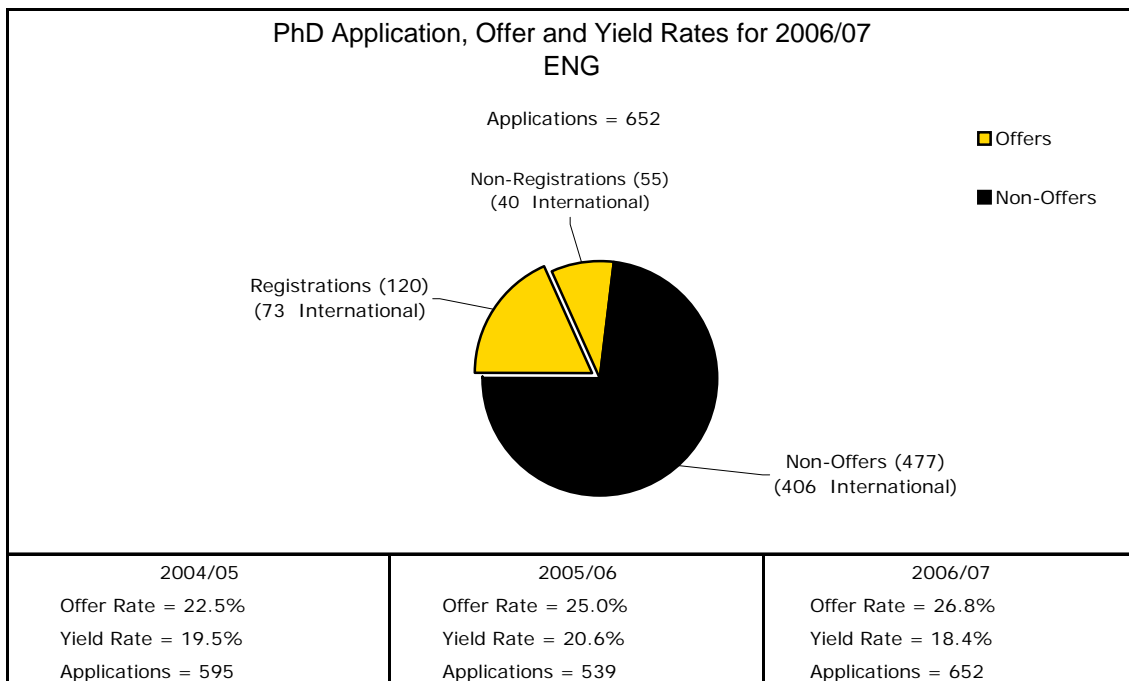


Figure 2.5.G

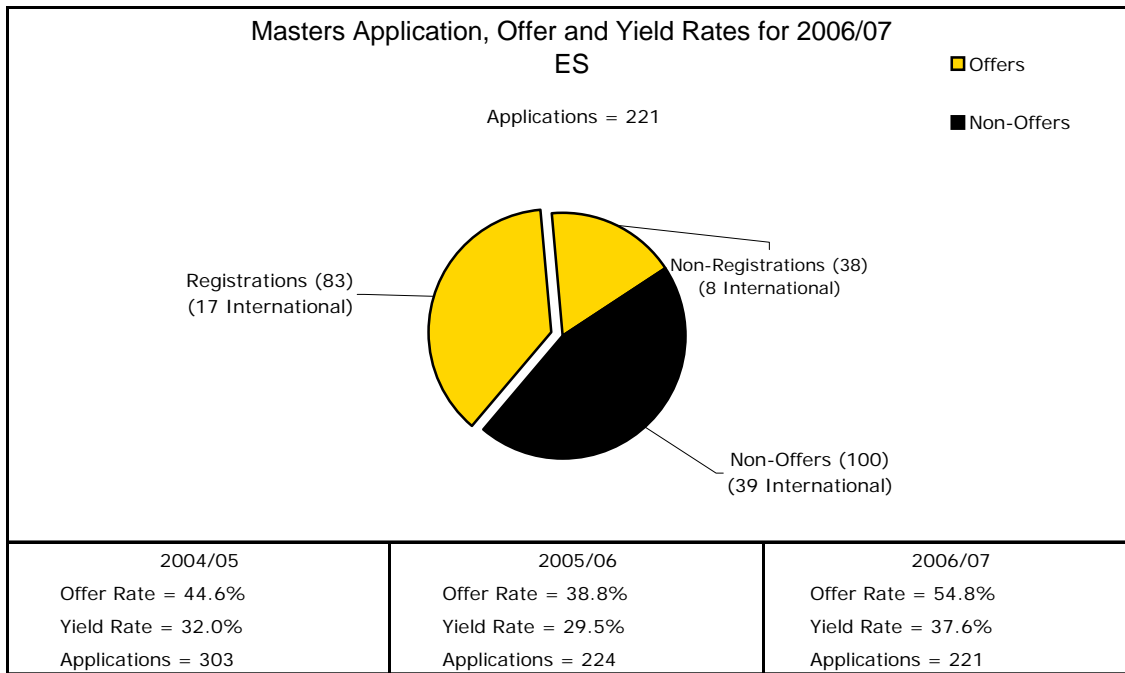


Figure 2.5.H

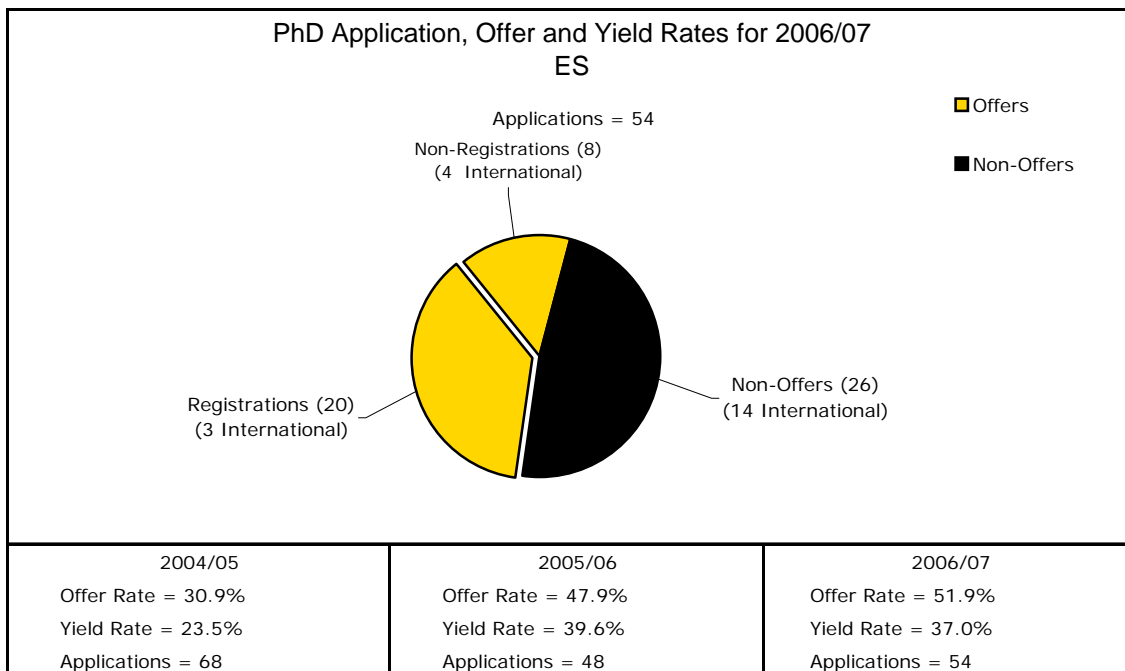


Figure 2.5.I

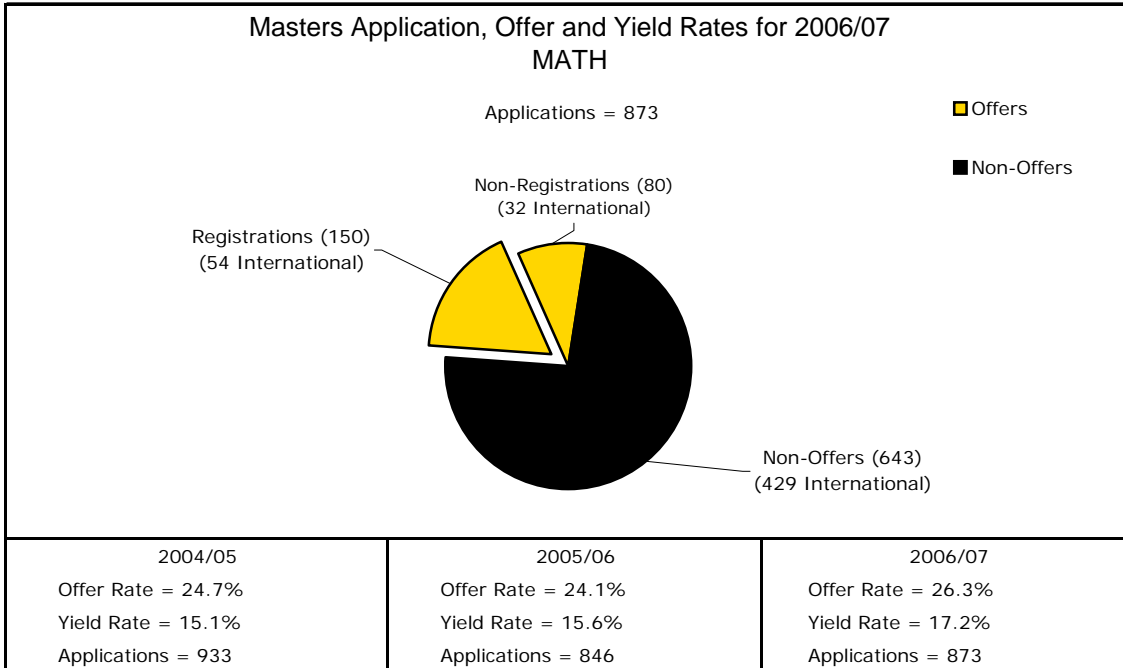


Figure 2.5.J

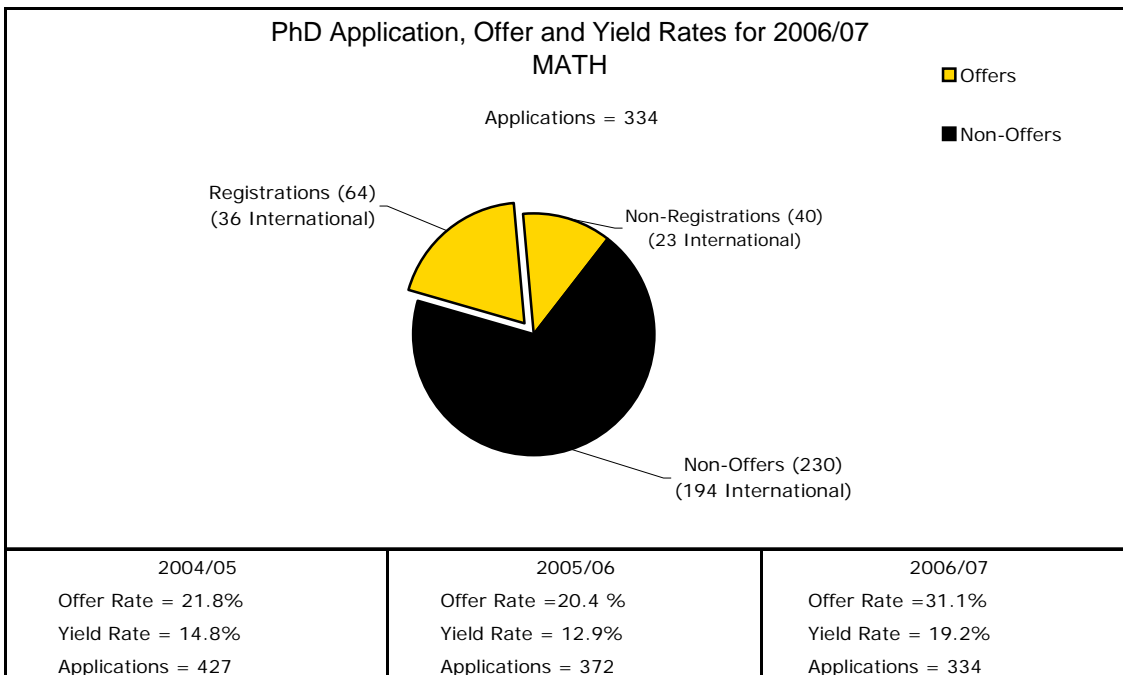


Figure 2.5.K

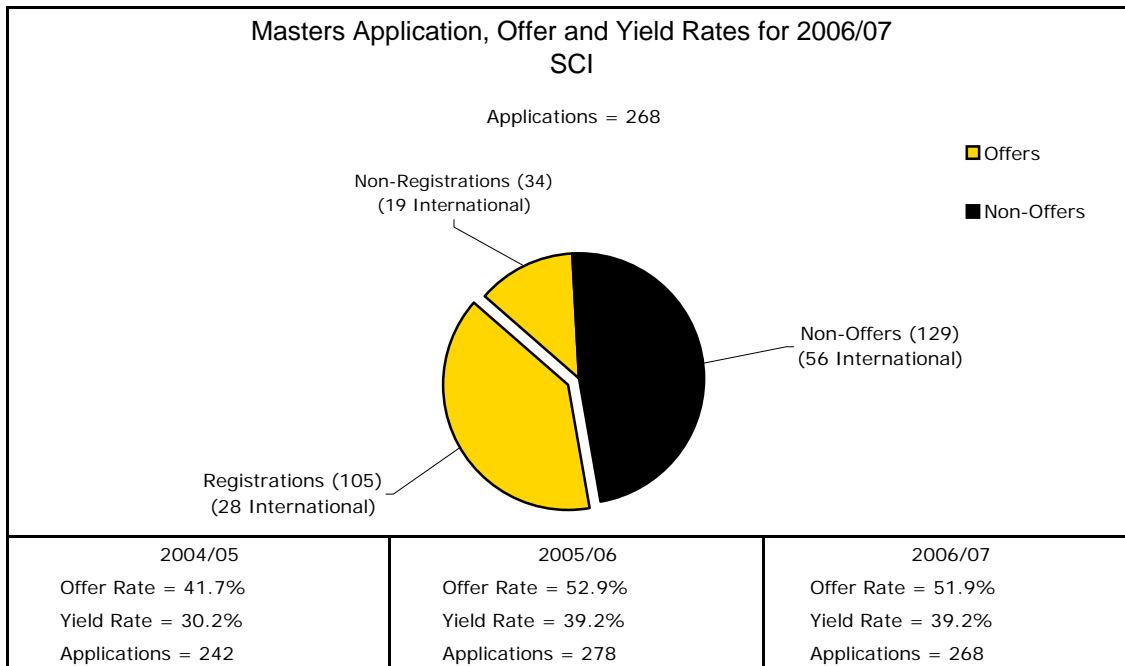
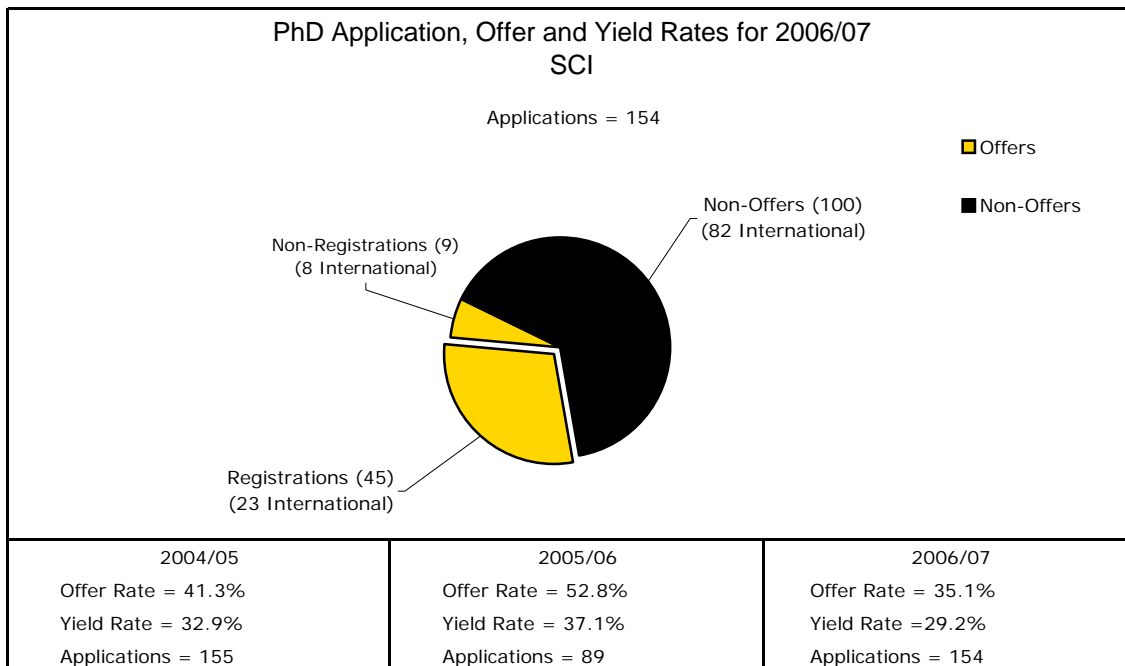


Figure 2.5.L





## 2.6. Student Support

Graduate student support is provided in a number of ways, including scholarships (\$27 million) and remuneration for work as teaching assistants (\$12 million) and research assistants (\$17.6 million). Graduate students are the third-largest pay group at UW, after staff and faculty.

This indicator shows graduate student support for master's and doctoral students by Faculty and by type including teaching assistantships (TAs), research assistantships (RAs), internal University of Waterloo scholarships, external scholarships, and other sources. Other sources of income include vacation pay from TAs and RAs and needs-based bursaries.

The figures below (Figure 2.6.A and 2.6.B)<sup>24</sup> show differences in the levels of graduate student support across Faculties for master's and doctoral candidates. More specifically, they demonstrate whether particular Faculties emphasize particular kinds of student support over others, i.e. research rather than teaching assistantships. As we can see from Figure 2.6.A and 2.6.B, in 2006/07 UW graduate students received in excess of \$62 million, up from \$54 million in 2005/06.

Figure 2.6.A

Financial Support to Master's Students 2006/07							
Faculty	External Scholarships	Internal Scholarships	Teaching Assistantships	Research Assistantships	Other	Total	Average Income / Supported Student
AHS	\$324,300	\$288,000	\$462,000	\$298,000	\$146,000	\$1,518,000	\$21,379
ARTS	\$540,000	\$953,000	\$991,000	\$131,000	\$454,000	\$3,069,000	\$18,516
ENG	\$2,402,000	\$1,194,000	\$1,143,000	\$3,275,000	\$988,000	\$9,002,000	\$22,379
ES	\$485,000	\$340,000	\$514,000	\$215,000	\$271,000	\$1,823,000	\$20,958
MATH	\$881,000	\$1,314,000	\$1,762,000	\$1,404,000	\$288,000	\$5,650,000	\$27,516
SCI	\$605,000	\$698,000	\$1,004,000	\$1,825,000	\$348,000	\$4,479,000	\$24,050
Total	\$5,236,000	\$4,799,000	\$5,895,000	\$7,148,000	\$2,474,000	\$25,552,000	\$22,770

Figure 2.6.B

Financial Support to Doctoral Students 2006/07							
Faculty	External Scholarships	Internal Scholarships	Teaching Assistantships	Research Assistantships	Other	Total	Average Income / Supported Student
AHS	\$874,000	\$338,000	\$401,000	\$293,000	\$177,000	\$2,082,000	\$31,002
ARTS	\$1,218,000	\$1,213,000	\$1,120,000	\$375,000	\$522,000	\$4,448,000	\$32,152
ENG	\$4,647,000	\$2,609,000	\$1,558,000	\$5,279,000	\$1,210,000	\$15,303,000	\$32,906
ES	\$388,000	\$230,000	\$223,000	\$112,000	\$154,000	\$1,107,000	\$27,746
MATH	\$1,397,000	\$1,788,000	\$1,613,000	\$2,315,000	\$470,000	\$7,584,000	\$32,529
SCI	\$1,188,000	\$1,080,000	\$1,175,000	\$2,125,000	\$486,000	\$6,054,000	\$29,328
Total	\$9,712,000	\$7,257,000	\$6,091,000	\$10,500,000	\$3,014,000	\$36,599,000	\$31,806

<sup>24</sup> Total may not add up due to rounding (to the nearest \$1,000).

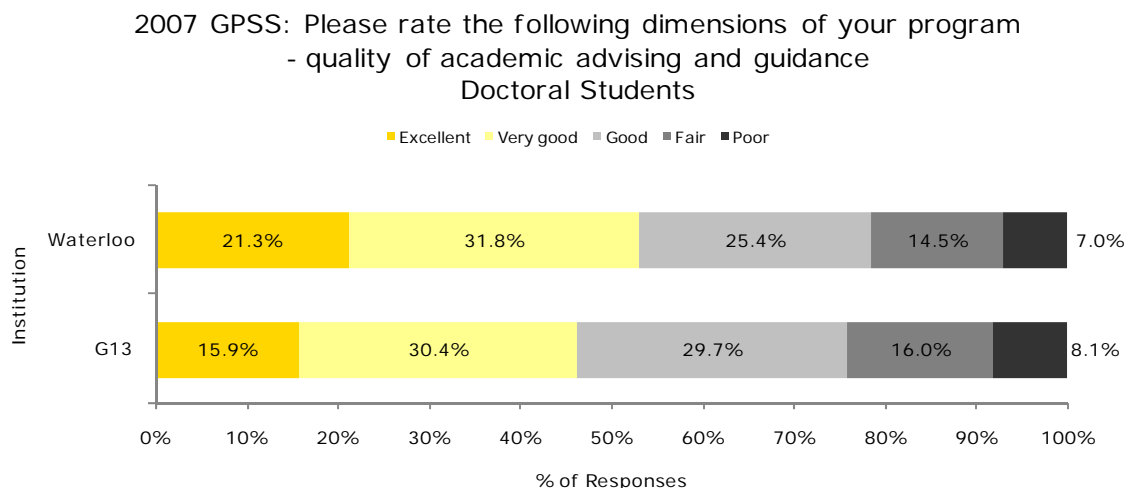
## 2.7. Graduate Student Satisfaction

Like the National Survey of Student Engagement (NSSE) for undergraduates, the Graduate and Professional Student Survey (GPSS) is designed to gather feedback from our graduate students about their educational experience at UW. The GPSS asks students about their satisfaction with their experience at UW, the degree of support they receive from their program or department, the effectiveness of their supervisor, the financial support they received, as well as university resources and student life.

The University of Waterloo participated in the GPSS in 2005 and again in 2007 with a survey invitation being sent out to every graduate student enrolled at UW. In 2007 a number of peer institutions across Ontario and all G13 Universities from across Canada also participated, allowing us to compare our results with those received by our peer institutions, and to identify areas where UW is excelling as well as issues and concerns for improvement or further investigation. Graduate students are divided into three separate groups when the results are analyzed, masters students with a thesis component to their program, masters students with no thesis, and doctoral students.

As in the NSSE survey the GPSS contains a number of general assessment questions where students are asked to rate the quality and effectiveness of different aspects of their experience. Figure 2.7.A shows the responses of doctoral students when asked to rate the quality of academic advising and guidance they have received in their program. Overall the University of Waterloo seems to have a slight advantage over our peer institutions in the G13 with 53.1 per cent of our Doctoral students responding with 'Excellent' or 'Very Good' as compared to 46.3 per cent of Doctoral students across the G13. At the other end of the spectrum both groups have very similar proportions of students responding with only 'Fair' or 'Poor'.

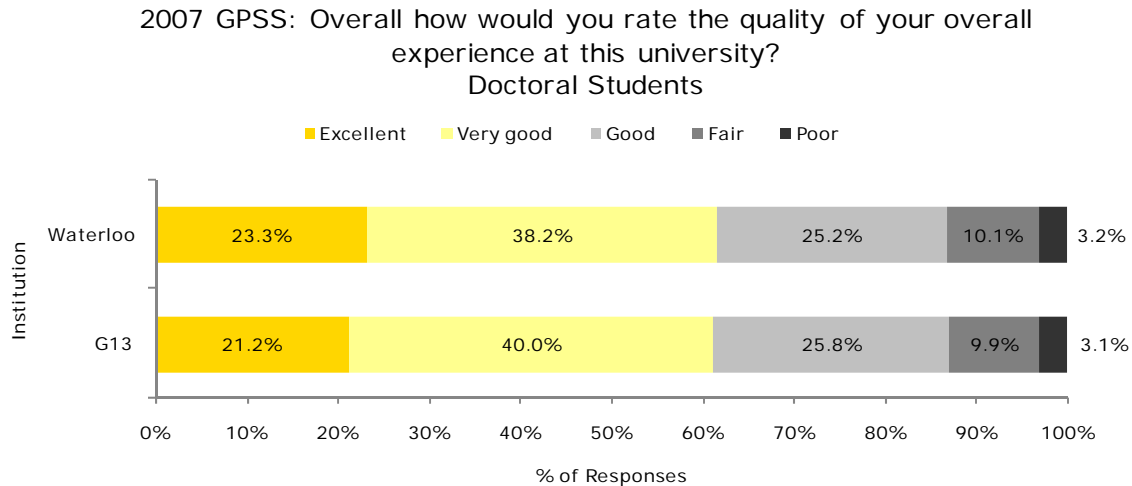
Figure 2.7.A



When asked to evaluate their overall experience at UW as shown in Figure 2.7.B UW's results mirror those of the G13 very closely with 23.3 per cent responding with 'Excellent', and 38.2 per

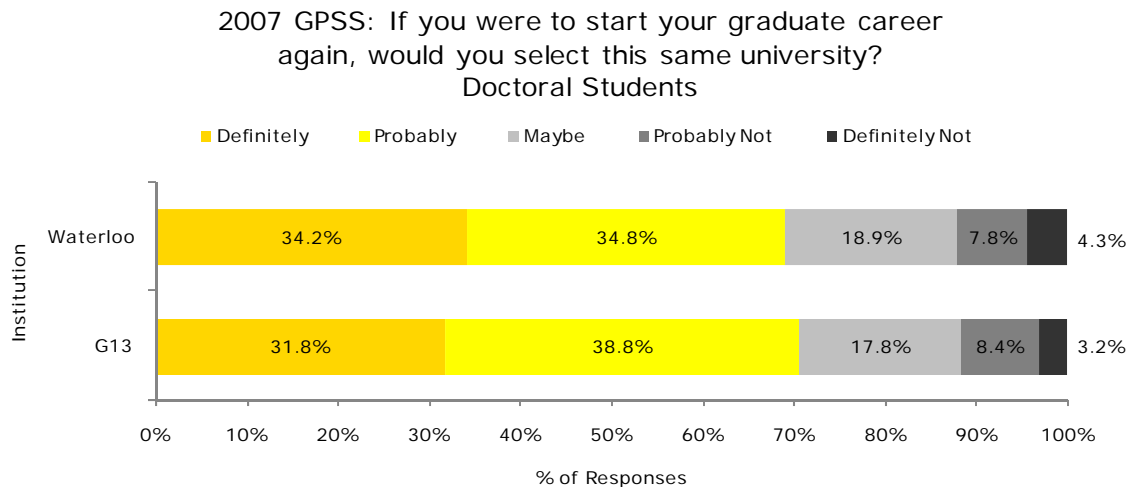
cent with 'Good', compared to 21.2 per cent and 40.0 per cent respectively from students at the G13 institutions.

Figure 2.7.B



Our results continue to correspond very closely to those of the G13 in Figure 2.7.C when students were asked if given the opportunity to begin their graduate career again whether or not they would choose the same institution. 34.2 per cent of our Doctoral students responded with 'Definitely' and 34.8 per cent responded 'Probably', but 12.1 per cent responded that they would 'Probably Not' or 'Definitely Not' choose UW again.

Figure 2.7.C



Further work to isolate factors that contribute to student satisfaction and dissatisfaction with their experience at UW by analyzing the survey responses may help us to improve the graduate student experience for future UW students.

## 2.8. Completion Rates and Degrees Granted

This indicator shows the 1996 cohort completion rates of UW graduate students as compared to the nine other universities in the G13 (identities masked as per G13 DE protocol). Specifically, Figure 2.8.A through Figure 2.8.F show the size and progress of the 1996 starting master's and doctoral cohorts including the length of time it took students to graduate, the number of those who had either completed their studies or were still studying as of the winter 2005 term, and the number of study terms for those who withdrew.

Figure 2.8.A

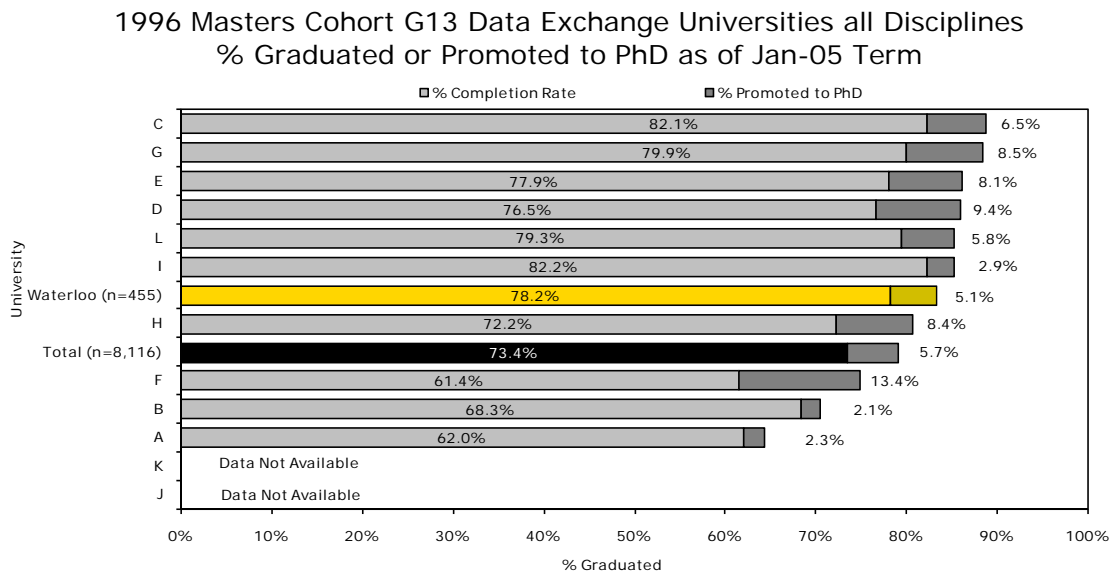


Figure 2.8.B

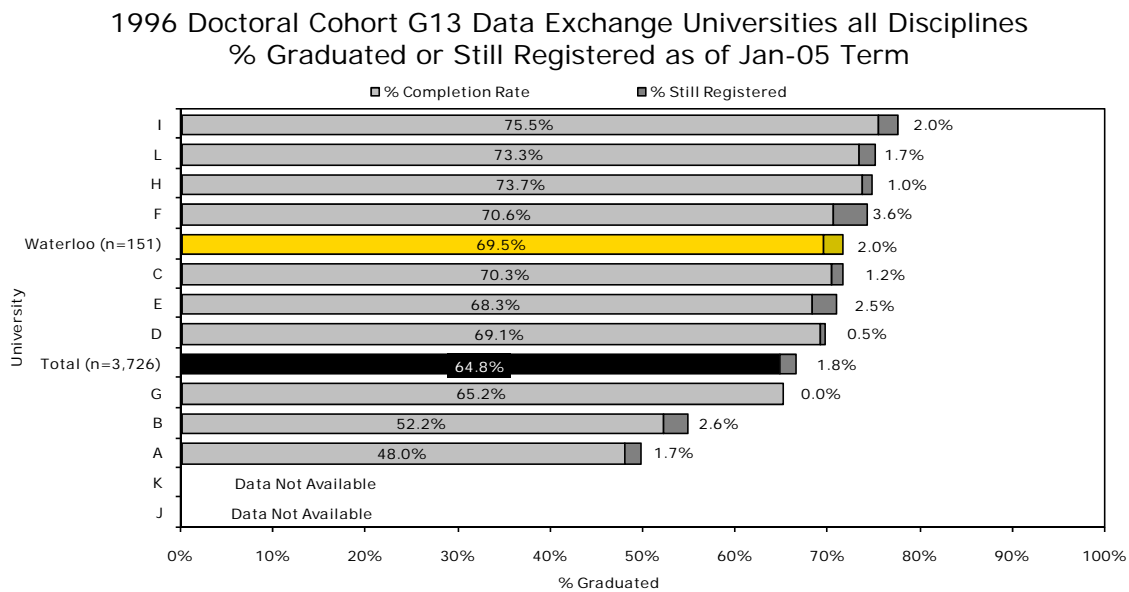


Figure 2.8.C

1996 Masters Cohort G13 Data Exchange Universities all Disciplines  
Median Number of Terms Registered to Degree Completion

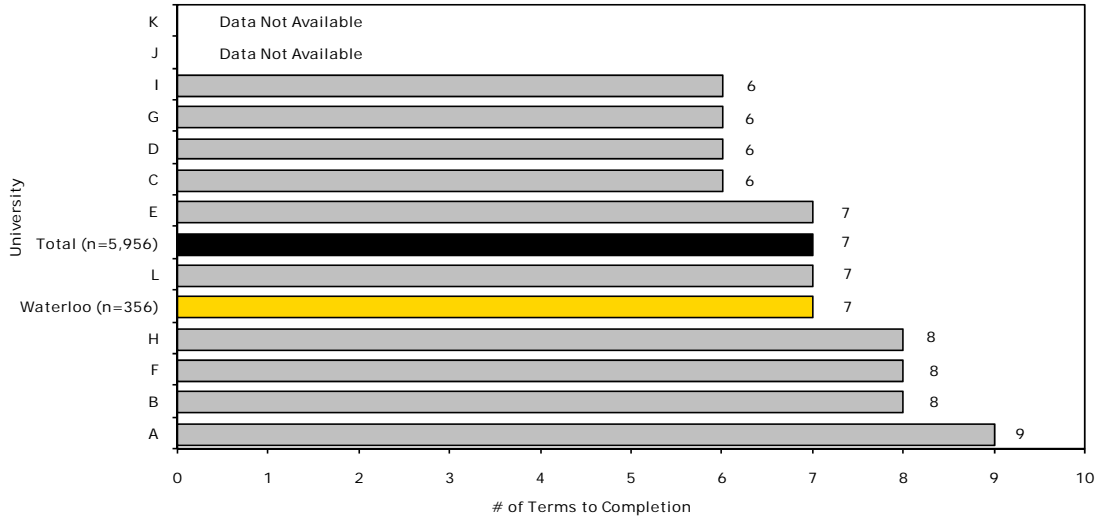


Figure 2.8.D

1996 Doctoral Cohort G13 Data Exchange Universities all Disciplines  
Median Number of Terms Registered to Degree Completion

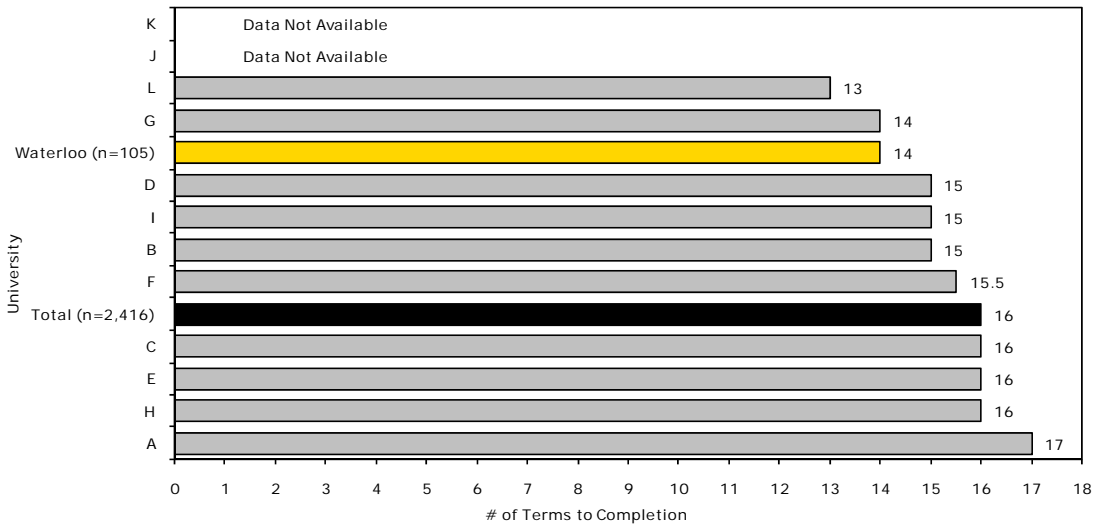


Figure 2.8.E

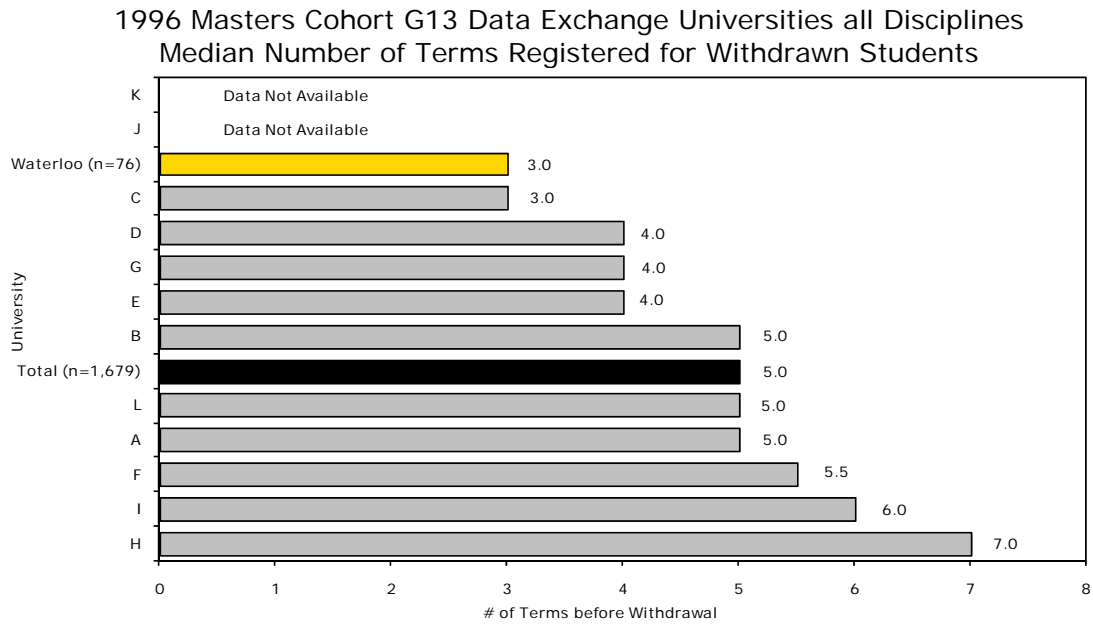
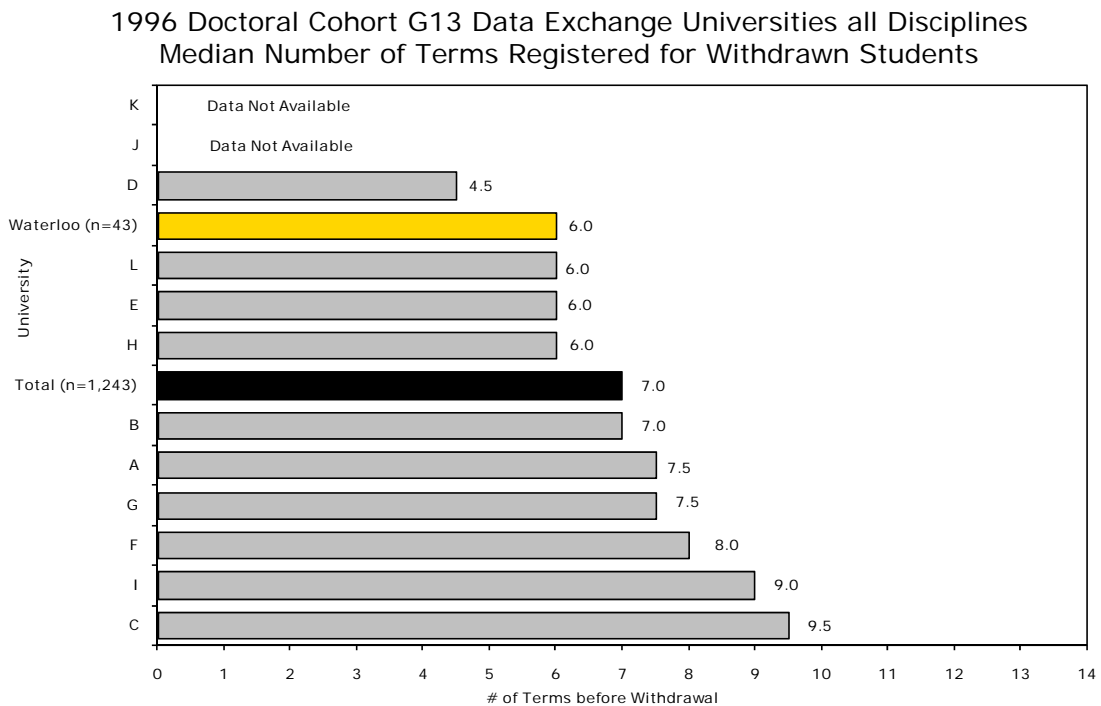


Figure 2.8.F



The next two figures show the average time to completion for those students who earned their degree between 2004 and 2006, distinct from the cohort analyses above.

Figure 2.8.G

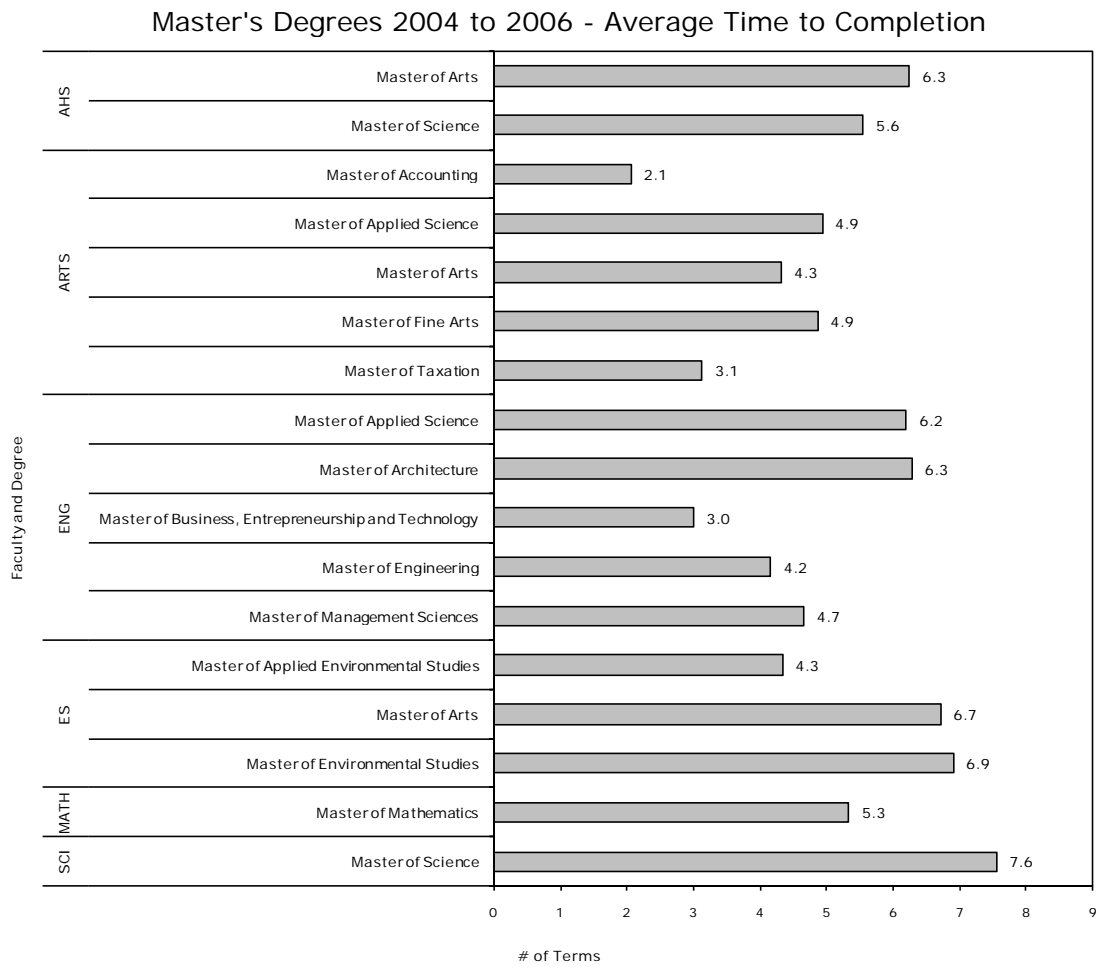


Figure 2.8.H

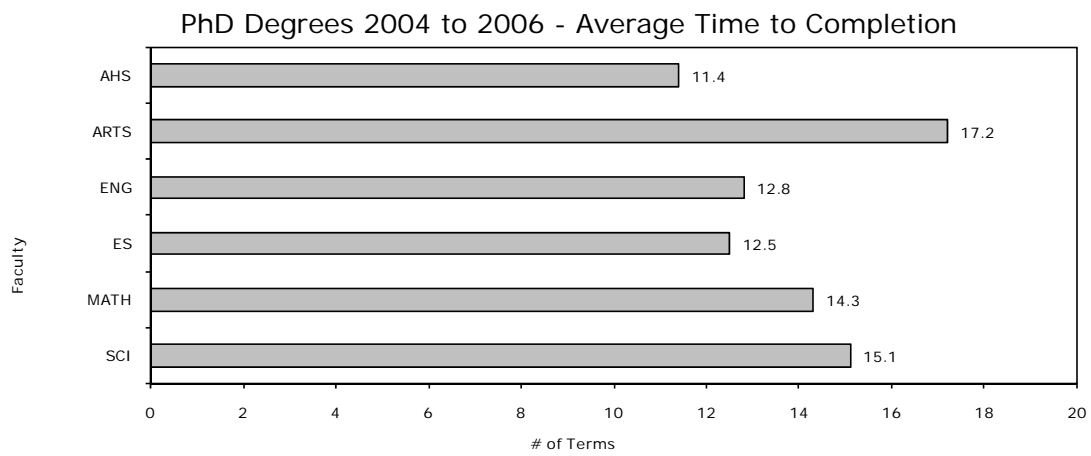


Figure 2.8.1

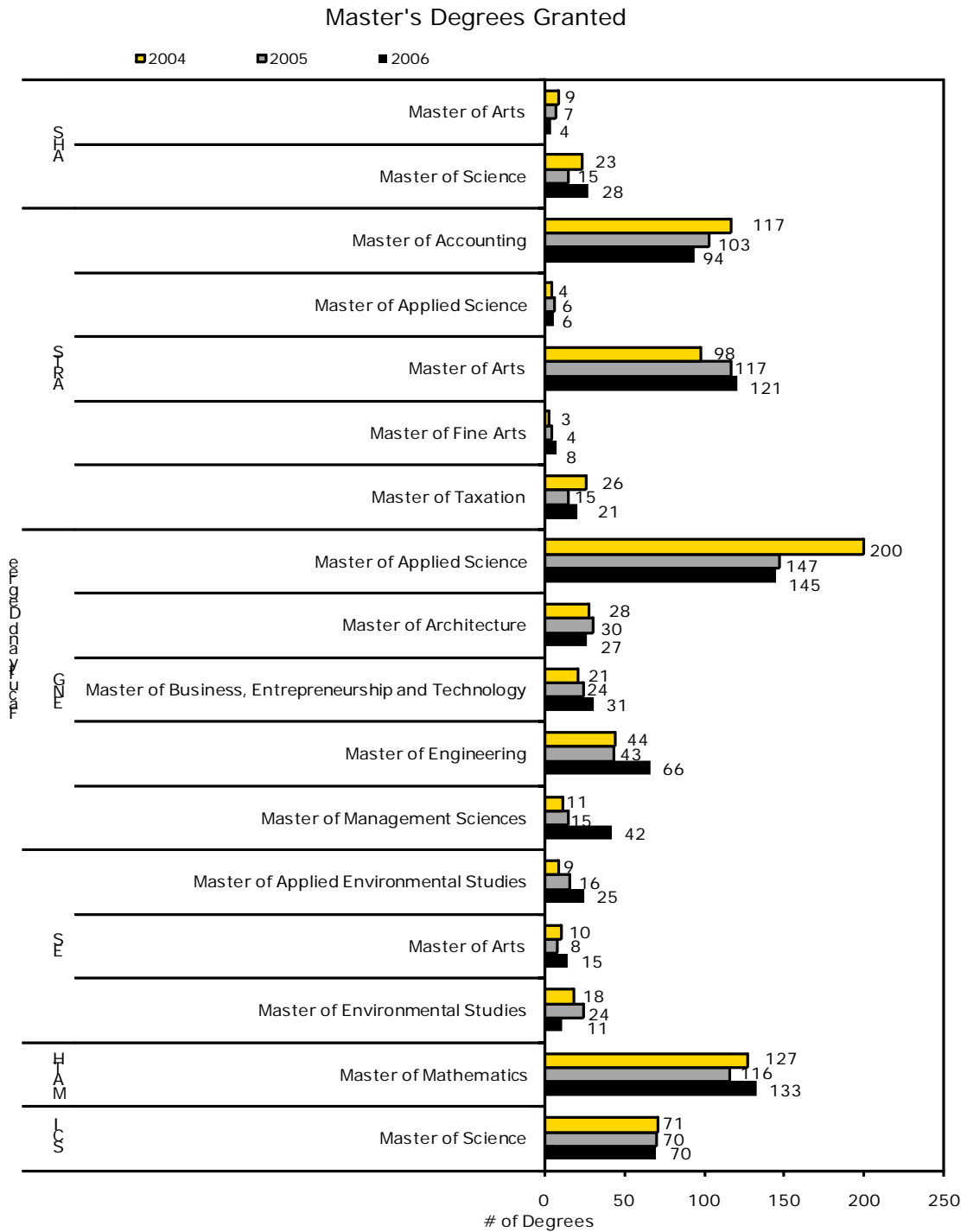
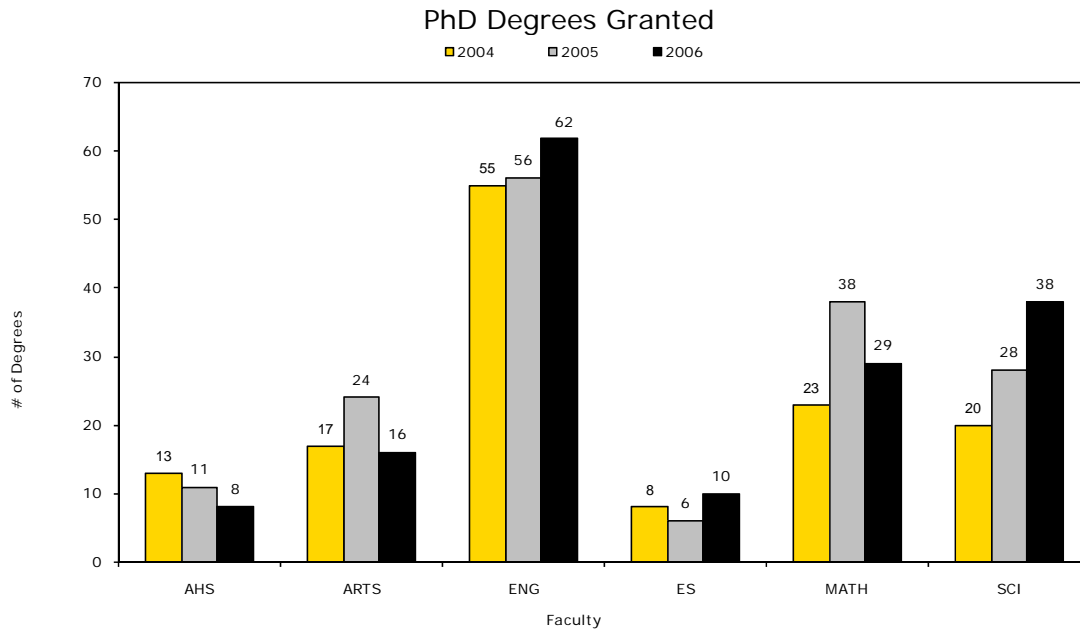




Figure 2.8.J



As our double-cohort students complete their undergraduate education, UW recognizes our responsibility to ensure access to a range of graduate education opportunities in a range of disciplines. The professional communities we serve with our undergraduate students – accountancy, engineering, planning, pharmacy, optometry, architecture – demand graduate degrees in their disciplines. Our goal is to meet that demand.

### 3. RESEARCH

The University of Waterloo is a research-intensive university, and our faculty members are actively involved in research, scholarship, and creative work in a wide variety of departments, centres, and institutes. Their teaching is enhanced by current discoveries, and their public service is informed by current knowledge. The University of Waterloo is committed both to basic research, which is essential to the discovery of new knowledge, and to applied research, which seeks novel ways to use that knowledge for the benefit of society and the world around us.

A distinguishing feature of UW's research profile is its outstanding record of contract research with both private and public sectors. The University has an unparalleled record of spawning new companies and otherwise capitalizing on its many research accomplishments for the benefit of society. Research at UW encompasses a full spectrum of work in the arts, social and behavioural sciences, humanities, engineering, environmental studies, health, physical and life sciences and mathematics.

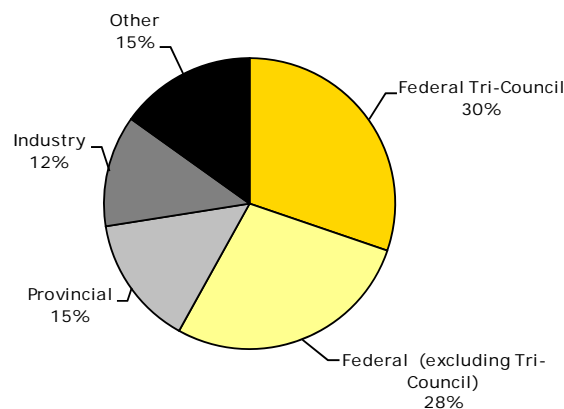
In this section, we examine total research awards, including those from international sources, awards from the tri-council agencies and the government of Ontario.

#### 3.1. Research Awards

Research Awards for the 2006/07 year were up by 4 per cent from 2005/06, totalling \$127 million. Funding from Federal government agencies made up 58 per cent of all funding with roughly half of that coming from the Tri-Councils.

Figure 3.1.A<sup>25</sup>

Total Sponsored Research Awards by Source 2006/07  
\$127,654,700



<sup>25</sup> "Other" includes revenue from analytical services, general external charge-outs (primarily for lab services), research seminars, and incidental income to institutes and centres.

Figure 3.1.B<sup>26</sup>

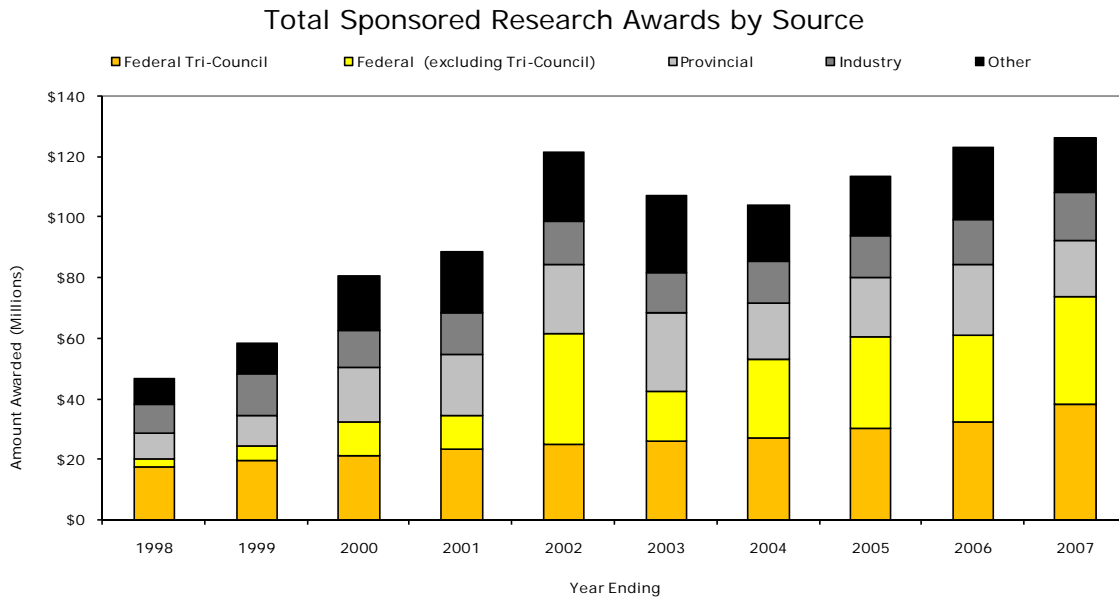
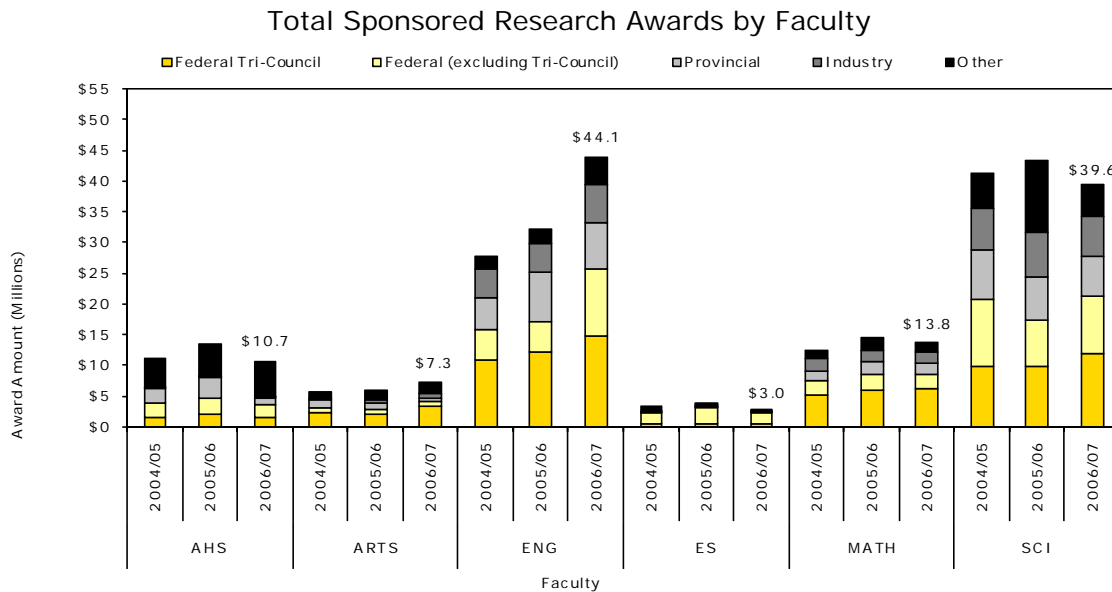


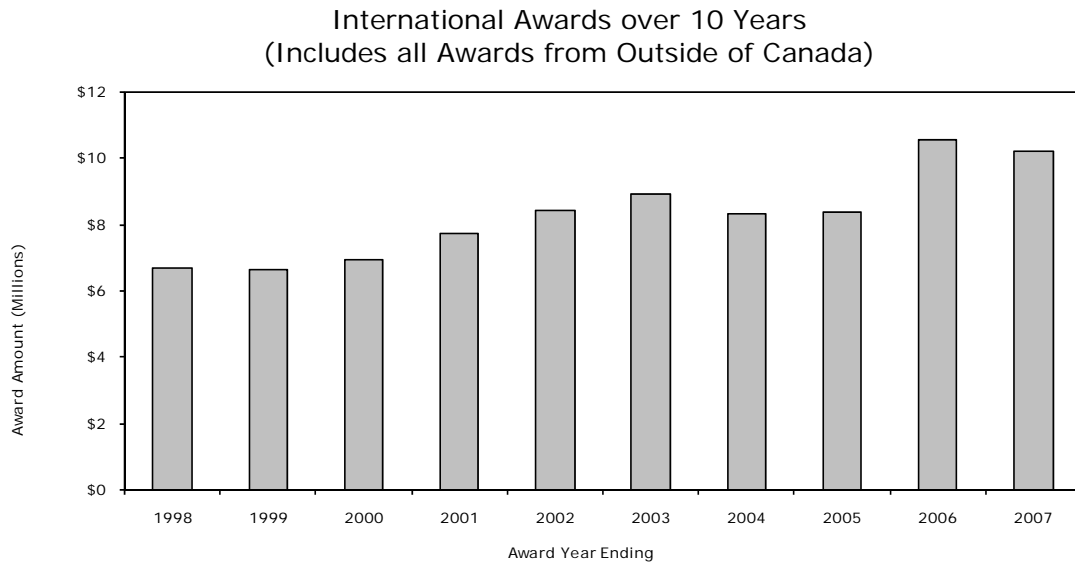
Figure 3.1.C excludes about \$9.1 million in awards to the federated and affiliated colleges and universities and/or non-academic units at UW.

Figure 3.1.C



<sup>26</sup> 2002 was an unusual year in Federal (excluding Tri-Council) funding due to a large number of Canada Foundation for Innovation awards.

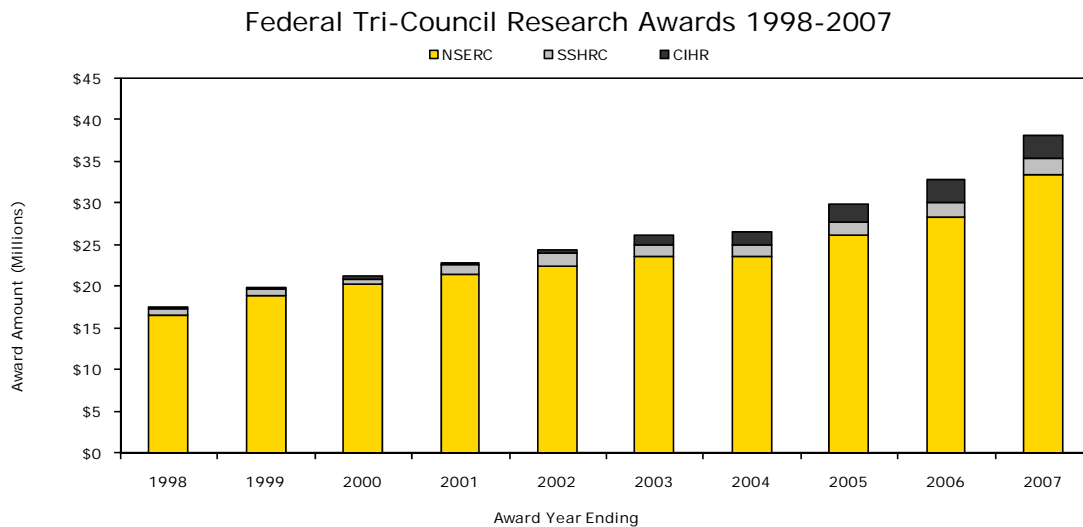
Figure 3.1.D<sup>27</sup>



### 3.2. Federal Tri-Council

Research awards from the three major granting councils – the Natural Sciences and Engineering Research Council (NSERC), the Canadian Institutes of Health Research (CIHR), and the Social Sciences and Humanities Research Council (SSHRC) are presented for the past 10 years.

Figure 3.2.A



<sup>27</sup> On average, about 87 per cent of international awards are from sponsors in the United States, the majority of which come from industry. The Canadian International Development Agency (CIDA) sponsors research in other countries but is not included in these figures.

Figure 3.2.B

Breakout of Federal Tri-Council Research Awards 2006/07  
\$ 38,608,000

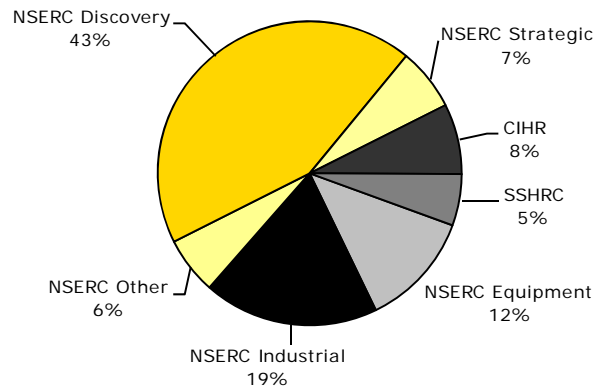


Figure 3.2.C

Breakout of Federal Tri-Council Research Awards

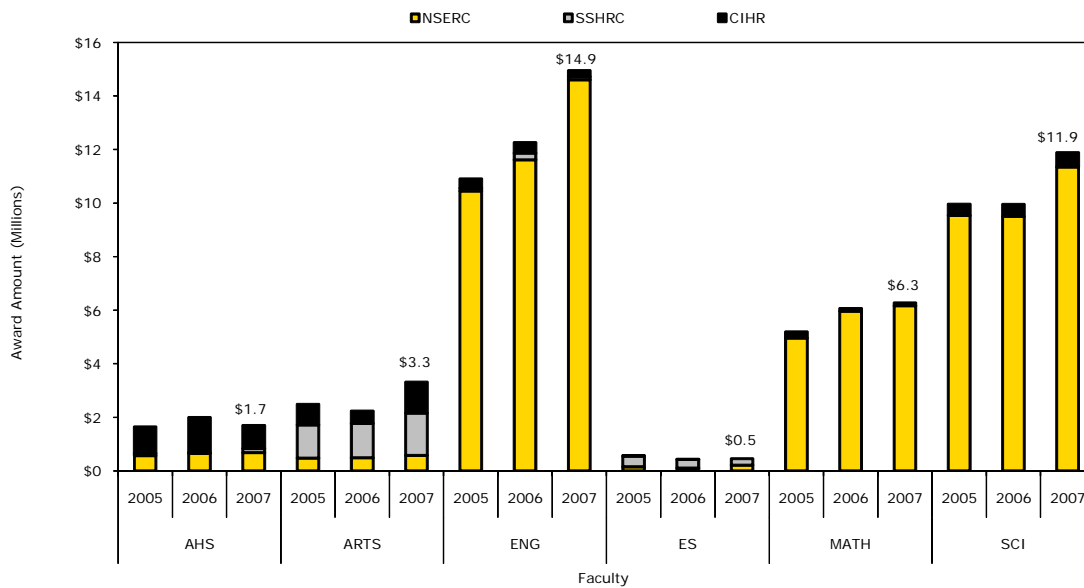


Figure 3.2.D

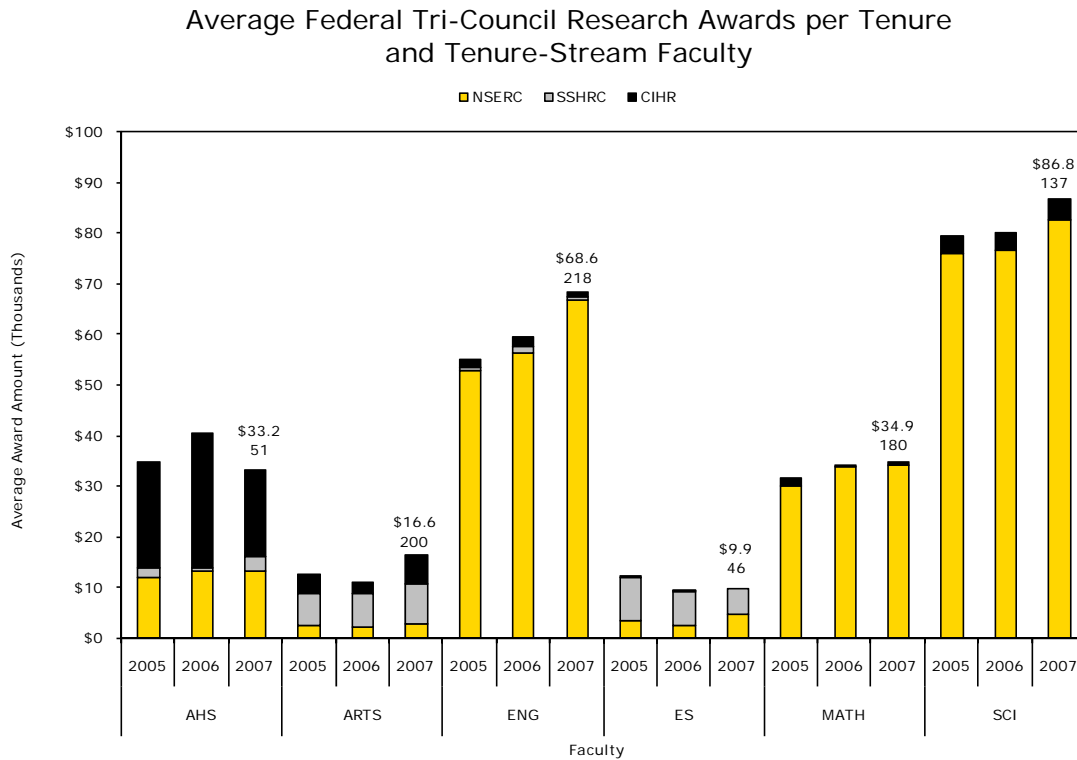


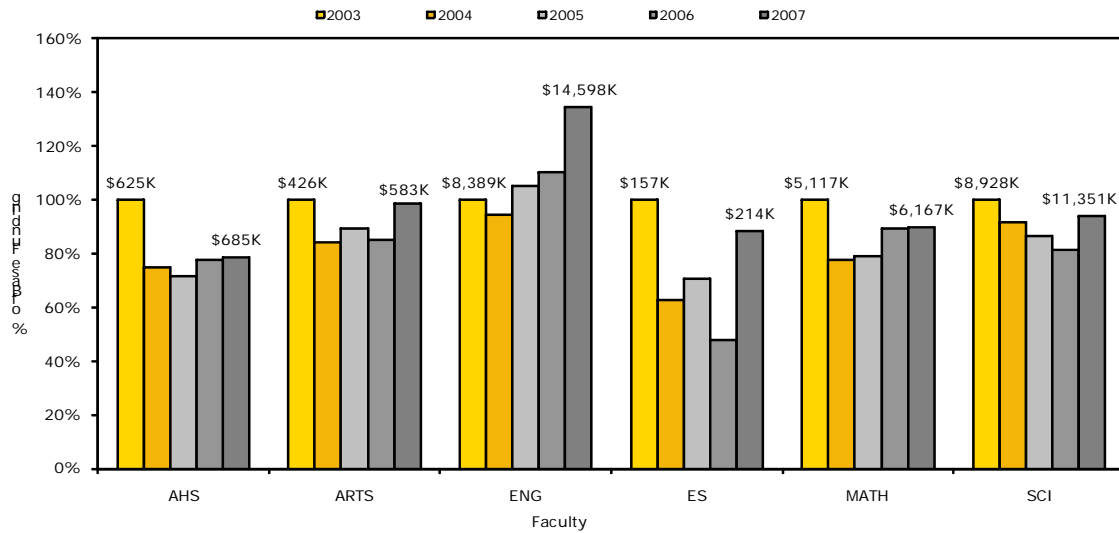
Figure 3.2.E to Figure 3.2.G illustrate the change in funding, relative to the base year<sup>28</sup>, from each of the tri-council agencies. For example, if the funds available from NSERC in 2004 increased by 5 per cent from 2003 and AHS’s 2004 funding remained at the 2003 level, then AHS’s 2004 funding would be 95.2 per cent of the 2003 level.

If AHS’s 2004 level *increased* by 5 per cent then it would be at 100 per cent funding relative to its 2003 base year.

<sup>28</sup> The base year is 2003.

Figure 3.2.E

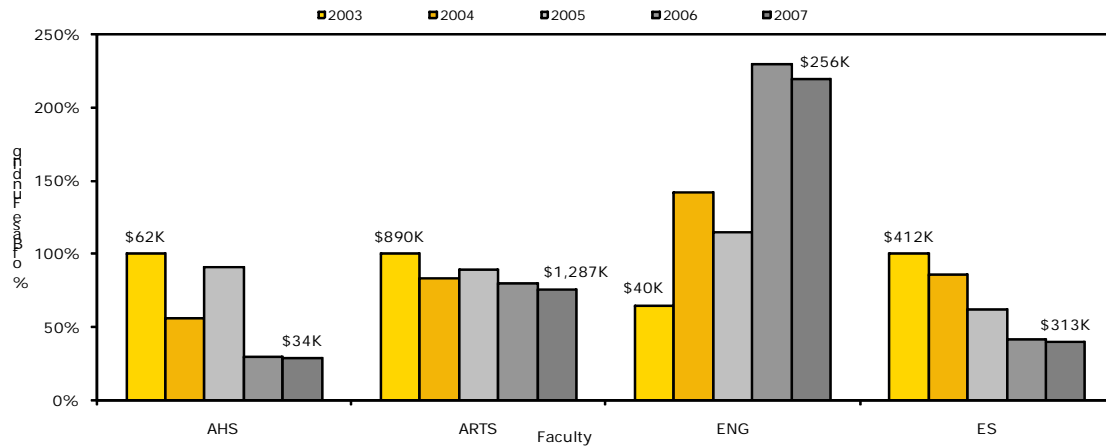
NSERC % of Annual Funding Compared to Base Year 2003  
Adjusted by Annual Agency Growth



Though Figure 3.2.F shows a general decline in “adjusted” SSHRC awards over the past five years in all Faculties, except Engineering, caution needs to be exercised when interpreting these figures since the overall numbers of grants are low and the gain or loss of one research award could substantially change the results.

Figure 3.2.F

SSHRC % of Annual Funding Compared to Base Year 2003  
Adjusted by Annual Agency Growth



In Figure 3.2.G, three of the six Faculties show an increase in their 2006/07 “adjusted” CIHR awards relative to their 2002/03 base year funding.

Figure 3.2.G

CIHR % of Annual Funding Compared to Base Year 2003  
Adjusted by Annual Agency Growth

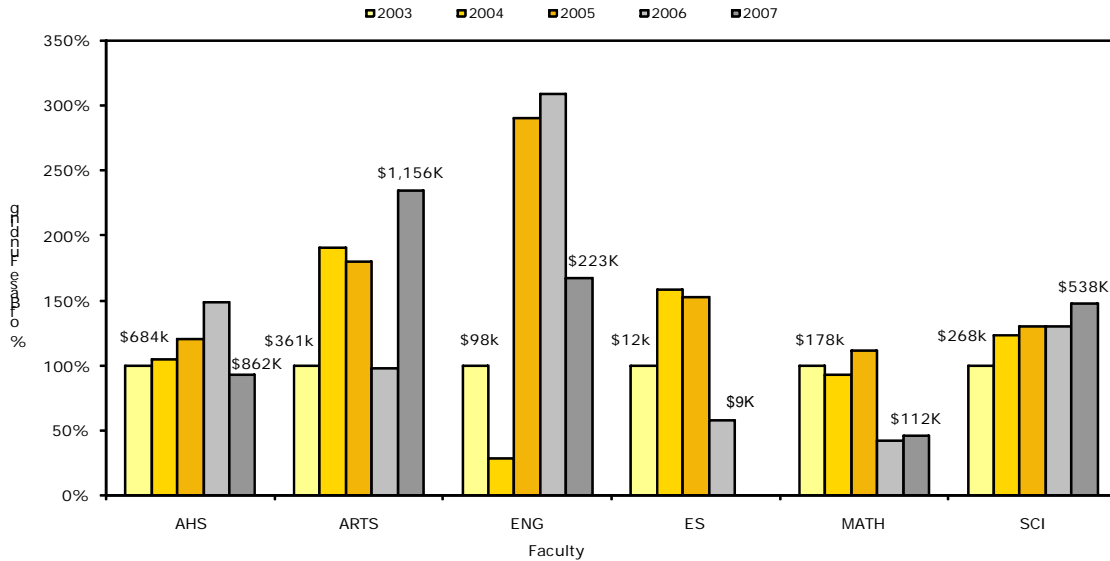


Figure 3.2.H through Figure 3.2.J show the total dollars allocated by the tri-councils to the G13 universities in 2001 and 2006, and the percentage change for each institution. The data in these tables have been taken from the council databases.

Figure 3.2.H

NSERC - % Change in \$ to G13 2001-2006					
	G13 University	2001/2002 \$ x 000s	2006/2007 \$ x 000s	Change \$ x 000s	Change %
1	Ottawa	11,091	18,491	7,400	66.7%
2	McGill	25,413	40,096	14,683	57.8%
3	McMaster	15,948	24,210	8,262	51.8%
4	Waterloo	26,722	39,708	12,986	48.6%
5	Laval	28,217	40,537	12,320	43.7%
6	UBC	37,324	53,574	16,250	43.5%
7	Toronto	45,875	64,065	18,190	39.7%
8	Western	15,048	20,073	5,025	33.4%
9	Calgary	17,980	23,741	5,761	32.0%
10	Queen's	19,089	24,505	5,416	28.4%
11	Montréal	19,999	25,460	5,461	27.3%
12	Dalhousie	14,958	17,811	2,853	19.1%
13	Alberta	35,681	41,813	6,132	17.2%
	G13 Total	313,345	434,084	120,739	38.5%
	Total/all Institutions	527,649	743,389	215,740	40.9%



Figure 3.2.I

SSHRC - % Change in \$ to G13 2001-2006					
	G13 University	2001/2002 \$ x 000s	2006/2007 \$ x 000s	Change \$ x 000s	Change %
1	McGill	5,008	16,011	11,003	219.7%
2	UBC	8,450	20,692	12,242	144.9%
3	Queen's	3,563	8,679	5,116	143.6%
4	Western	4,602	11,121	6,519	141.7%
5	Dalhousie	1,598	3,514	1,916	119.9%
6	Ottawa	6,230	13,197	6,967	111.8%
7	Toronto	13,788	28,687	14,899	108.1%
8	Montréal	8,288	16,695	8,407	101.4%
9	Laval	7,392	13,583	6,191	83.8%
10	Calgary	3,761	6,797	3,036	80.7%
11	Waterloo	2,728	4,881	2,153	78.9%
12	McMaster	4,678	8,330	3,652	78.1%
13	Alberta	8,206	13,684	5,478	66.8%
	G13 Total	78,292	165,871	87,579	111.9%
	Total/all Institutions	125,997	282,837	156,840	124.5%

Figure 3.2.J, below, shows a 165 per cent change in funding to UW from 2001/02. In 2000, the Medical Research Council (MRC) was replaced by the Canada Institutes for Health Research (CIHR) which provided research awards to a much wider spectrum of research fields. CIHR not only included funding for Biomedical and Clinical research, but also the areas of Health Services and Policy, and Public and Population Health. This explains the large increase in funding from 2001/02 - 2006/07. Unlike the other G13 universities, UW has no medical school, limiting the funds that were available through MRC. The change to CIHR has made available a wider range of grants for which UW researchers are eligible.

Figure 3.2.J

CIHR - % Change in \$ to G13 2001-2006					
	G13 University	2001/2002 \$ x 000s	2006/2007 \$ x 000s	Change \$ x 000s	Change %
1	Waterloo	1,087	2,879	1,792	164.9%
2	Laval	20,852	36,918	16,066	77.0%
3	Queen's	10,916	19,014	8,098	74.2%
4	McMaster	20,856	36,245	15,389	73.8%
5	Toronto	100,741	171,669	70,928	70.4%
6	UBC	45,670	77,319	31,649	69.3%
7	Montréal	43,429	69,574	26,145	60.2%
8	Dalhousie	11,261	17,799	6,538	58.1%
9	Ottawa	27,684	42,319	14,635	52.9%
10	Western	21,981	33,404	11,423	52.0%
11	McGill	64,056	93,892	29,836	46.6%
12	Alberta	31,862	45,384	13,522	42.4%
13	Calgary	25,408	32,938	7,530	29.6%
	G13 Total	425,803	679,354	253,551	59.5%
	Total/all Institutions	494,540	799,647	305,107	61.7%

Figure 3.2.K through Figure 3.2.M show the distribution of the total dollars by the tri-councils to the G13 universities in 2006/07, and the percentage of those dollars for each institution.

Figure 3.2.K

NSERC - Distribution of \$ to G13				
	G13 University	2006/2007 \$ x 000s	% of Total G13 \$	% of Total \$
1	Toronto	64,065	14.76%	8.62%
2	UBC	53,574	12.34%	7.21%
3	Alberta	41,813	9.63%	5.62%
4	Laval	40,537	9.34%	5.45%
5	McGill	40,096	9.24%	5.39%
6	Waterloo	39,708	9.15%	5.34%
7	Montréal	25,460	5.87%	3.42%
8	Queen's	24,505	5.65%	3.30%
9	McMaster	24,210	5.58%	3.26%
10	Calgary	23,741	5.47%	3.19%
11	Western	20,073	4.62%	2.70%
12	Ottawa	18,491	4.26%	2.49%
13	Dalhousie	17,811	4.10%	2.40%
	Total	434,084	100.00%	58.39%
	Total/all Institutions	743,389		

Figure 3.2.L

SSHRC - Distribution of \$ to G13				
	G13 University	2006/2007 \$ x 000s	% of Total G13 \$	% of Total \$
1	Toronto	28,687	17.29%	10.14%
2	UBC	20,692	12.47%	7.32%
3	Montréal	16,695	10.07%	5.90%
4	McGill	16,011	9.65%	5.66%
5	Alberta	13,684	8.25%	4.84%
6	Laval	13,583	8.19%	4.80%
7	Ottawa	13,197	7.96%	4.67%
8	Western	11,121	6.70%	3.93%
9	Queen's	8,679	5.23%	3.07%
10	McMaster	8,330	5.02%	2.95%
11	Calgary	6,797	4.10%	2.40%
12	Waterloo	4,881	2.94%	1.73%
13	Dalhousie	3,514	2.12%	1.24%
	Total	165,871	100.00%	58.65%
	Total/all Institutions	282,837		

Figure 3.2.M

CIHR - Distribution of \$ to G13				
	G13 University	2006/2007 \$ x 000s	% of Total G13 \$	% of Total \$
1	Toronto	171,669	25.27%	21.47%
2	McGill	93,892	13.82%	11.74%
3	UBC	77,319	11.38%	9.67%
4	Montréal	69,574	10.24%	8.70%
5	Alberta	45,384	6.68%	5.68%
6	Ottawa	42,319	6.23%	5.29%
7	Laval	36,918	5.43%	4.62%
8	McMaster	36,245	5.34%	4.53%
9	Western	33,404	4.92%	4.18%
10	Calgary	32,938	4.85%	4.12%
11	Queen's	19,014	2.80%	2.38%
12	Dalhousie	17,799	2.62%	2.23%
13	<b>Waterloo</b>	<b>2,879</b>	<b>0.42%</b>	<b>0.36%</b>
	Total	679,354	100.00%	84.96%
	Total/all Institutions	799,647		

Figure 3.2.N

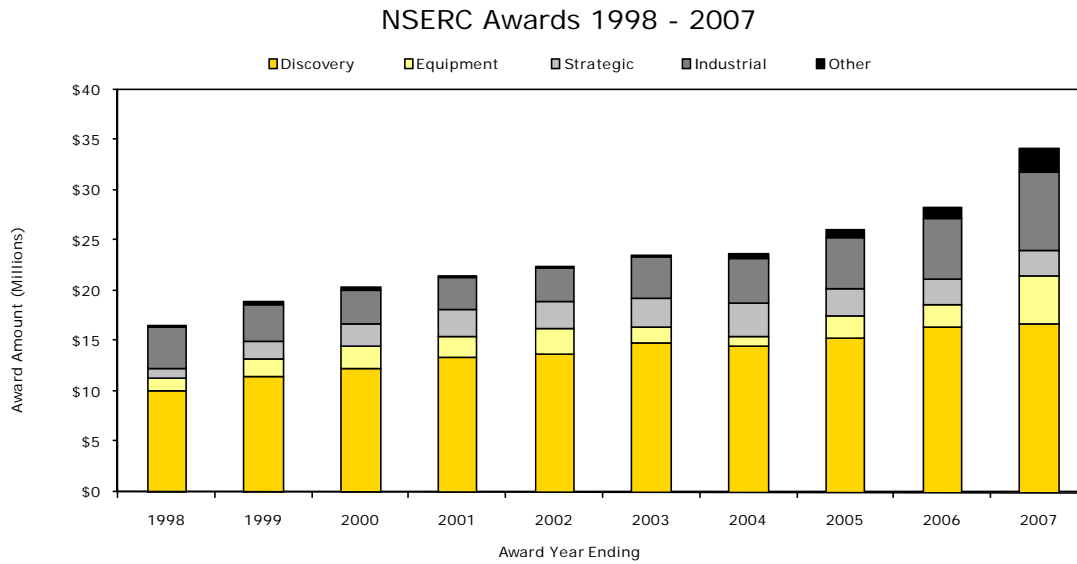


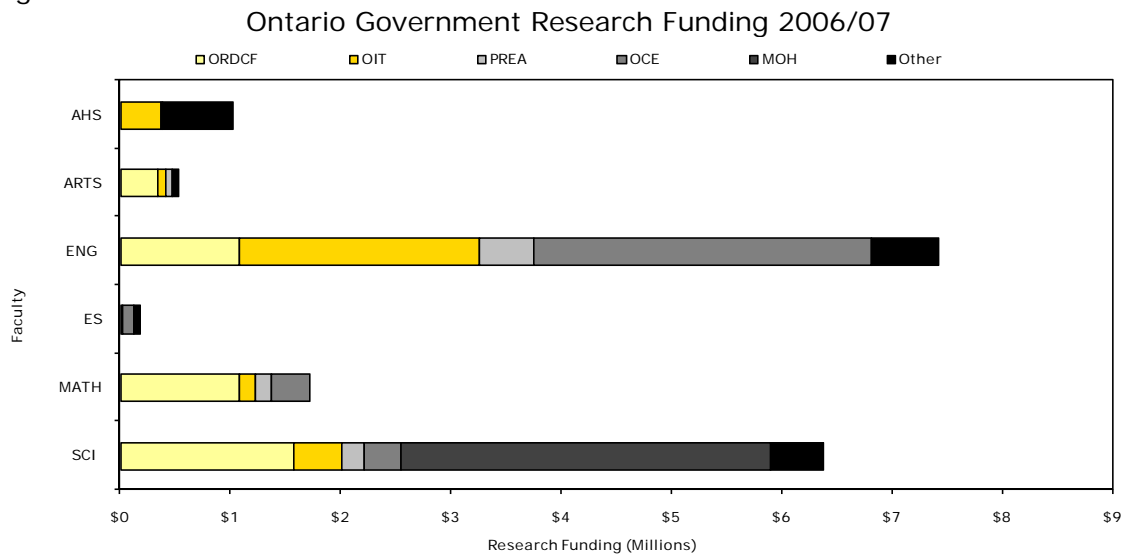
Figure 3.2.0

NSERC Discovery Grants					
G13 University	Number		Amount		Average Award (\$)
	N	%	\$	%	
Toronto	712	7.26%	\$26,862,167	8.98%	\$37,728
UBC	647	6.60%	\$22,577,391	7.55%	\$34,896
Alberta	535	5.46%	\$18,337,155	6.13%	\$34,275
<b>Waterloo</b>	<b>526</b>	<b>5.37%</b>	<b>\$16,447,395</b>	<b>5.50%</b>	<b>\$31,269</b>
McGill	495	5.05%	\$17,057,660	5.70%	\$34,460
Calgary	372	3.79%	\$11,280,370	3.77%	\$30,324
Western	355	3.62%	\$10,537,541	3.52%	\$29,683
McMaster	354	3.61%	\$11,899,436	3.98%	\$33,614
Queen's	297	3.03%	\$10,365,068	3.46%	\$34,899
Dalhousie	288	2.94%	\$8,911,634	2.98%	\$30,943
Laval	281	2.87%	\$9,701,977	3.24%	\$34,527
Montréal	281	2.87%	\$9,701,977	3.24%	\$34,527
Ottawa	272	2.77%	\$8,225,513	2.75%	\$30,241
<b>G13 Total</b>	<b>5,415</b>	<b>55.24%</b>	<b>\$181,905,284</b>	<b>60.81%</b>	<b>\$33,183</b>
<b>Total Awarded</b>	<b>9,803</b>	<b>100.00%</b>	<b>\$299,149,016</b>	<b>100.00%</b>	<b>\$30,516</b>

### 3.3. Ontario

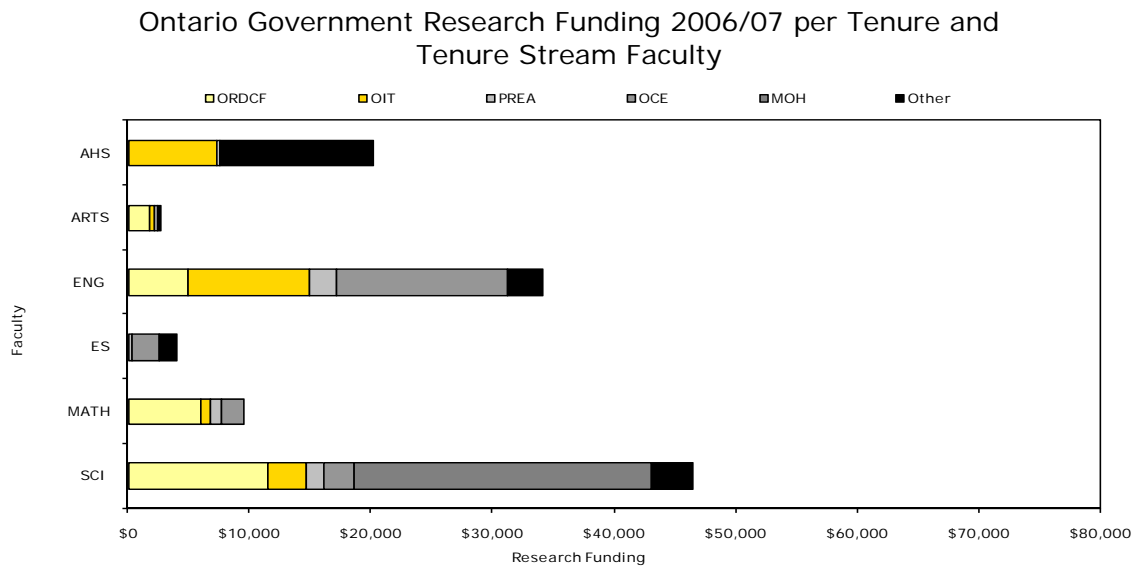
The next indicators<sup>29</sup> show the annual income from the Ontario Research and Development Challenge Fund (ORDCF), the Ontario Innovation Trust (OIT), the Ontario Centres of Excellence (OCE), Ministry of Health (MOH), and other sources for each Faculty.

Figure 3.3.A



<sup>29</sup> Excludes funds received for overhead expenses through the Research Performance Fund.

Figure 3.3.B



From its beginning, UW has been a leader in conducting research in partnership with the private sector and transferring new knowledge and advances in technology to society for the benefit of all. In 2006/07, we had 14 active industrially sponsored NSERC Research Chairs, and our Technology Transfer and Licensing Office helps researchers commercialize the results of their research. The University of Waterloo's inventor-owned intellectual property policy provides a stimulus for attracting faculty members and offers great incentive for the entrepreneurial graduate student who may want to create a spin-off company.

The University of Waterloo's sixth decade planning is dedicated to achieving increased research intensity and the vigorous promotion and encouragement of frontier and reflective research.

## 4. FACULTY

The University of Waterloo recognizes the importance of our innovative, collaborative, and committed leaders – our academic faculty who teach, engage in research, and serve our students and our community. In this section we highlight our faculty appointments and our hiring practices; and we monitor the age distribution of our professoriate, ever mindful of the need to revitalize the pool of individuals who share our vision of continuous improvement and innovation.

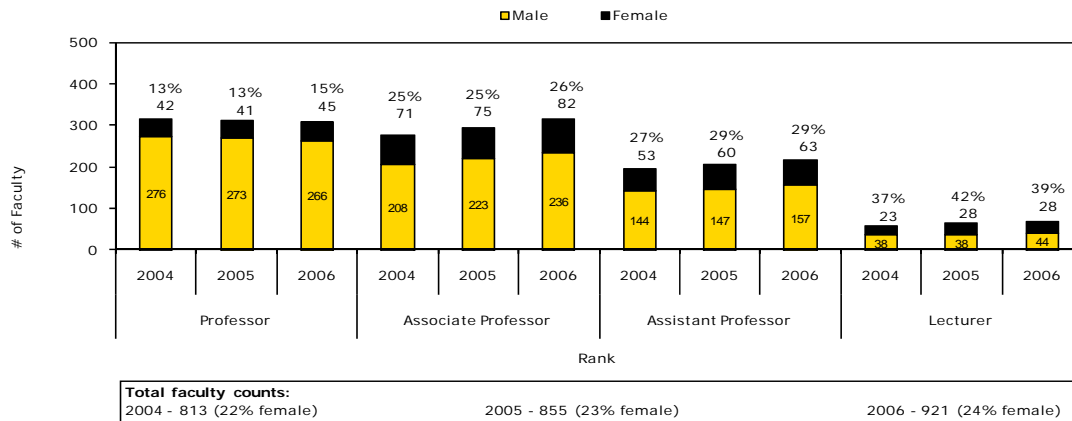
Total Faculty Count by Gender - October 1, 2006 <sup>30</sup>			
Faculty	Male	Female	Total
Applied Health Sciences	33	23	56
Arts	144	75	219
Engineering	202	30	232
Environmental Studies	31	15	46
Mathematics	164	38	202
Science	129	37	166
Colleges	47	34	81
Total	750	252	1002

### 4.1. Faculty Counts by Gender

To support our goal to achieve the highest-quality learning environment for our students, we actively seek out and hire the best and the brightest in their fields of study. We are committed to improving the gender balance in our faculty complement by hiring highly qualified female faculty. The charts below exclude faculty at our affiliated and federated colleges and universities.

Figure 4.1.A

Count of Full-time Faculty by Rank and Gender and Percent Female (Source Statistics Canada)



<sup>30</sup> Count of all new full-time regular faculty hirings as of October 1<sup>st</sup> of the survey year. Percent represents the number of female faculty hirings. Source: Stats Canada UCASS.

Figure 4.1.B

Gender Distribution of Full-time Regular Appointments  
by Faculty Percent Female  
(Source Statistics Canada)

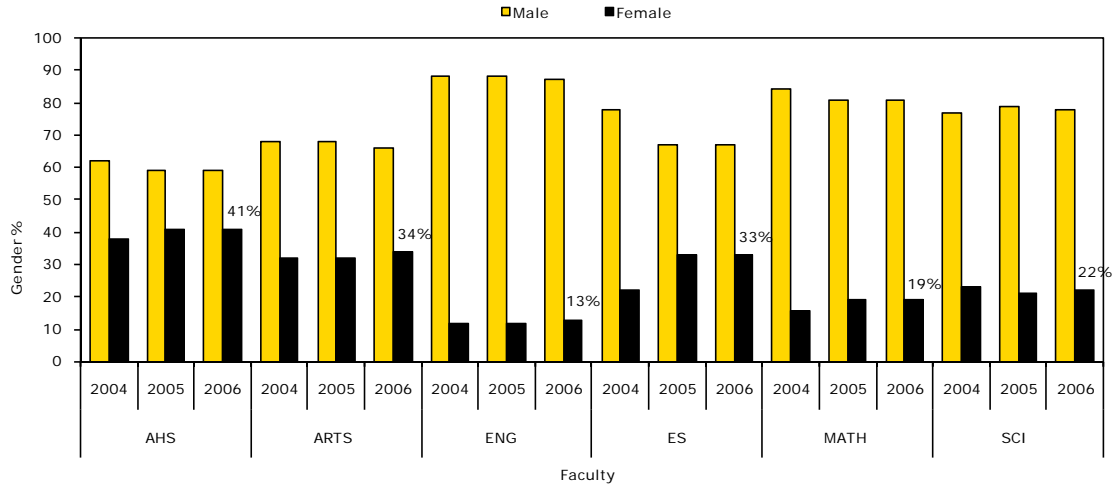
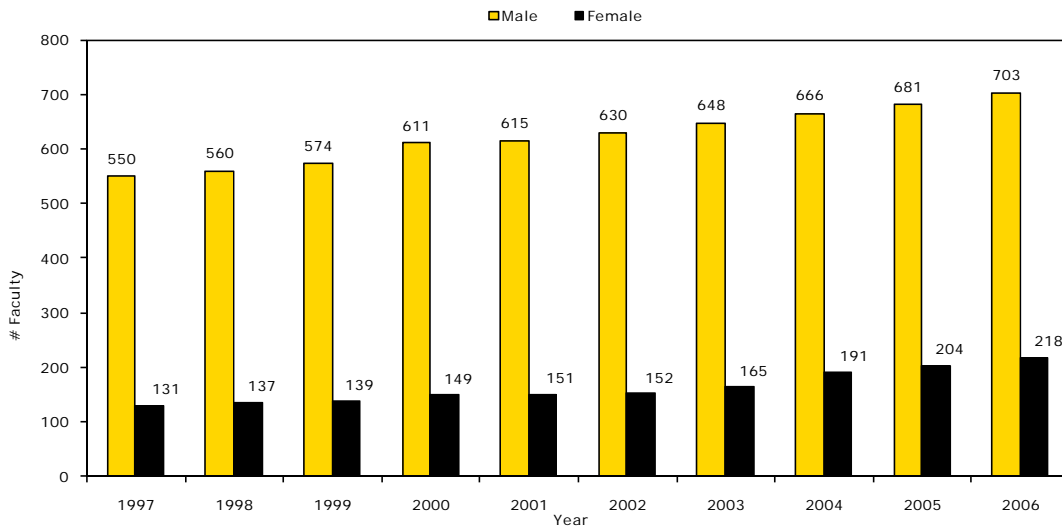


Figure 4.1.C

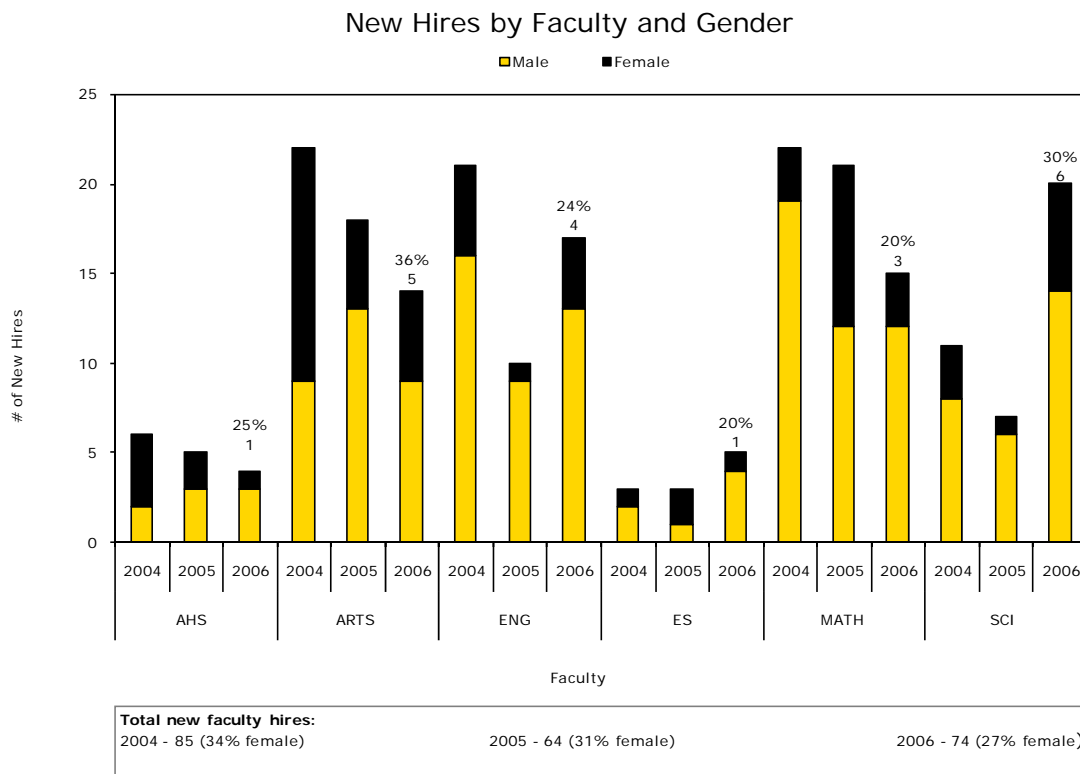
Full-time Regular Faculty Appointments by Gender - 10 Year History  
(Source Statistics Canada)



## 4.2. New Hires by Gender

Two factors contribute to UW's seemingly low percentage of female faculty, particularly in the areas of math, engineering and science: UW has higher proportions of faculty in these disciplines than other universities; and the percentage of female doctoral graduates of mathematics, engineering and science is smaller than the percentage of females in other disciplines. Data available from the Association of Universities and Colleges of Canada indicate, over the past three years, the available pool of females in mathematics has been about 5 per cent, in engineering 15 per cent and in science 20 per cent. At the University of Waterloo our percentage of female faculty in Mathematics is close to 20 per cent, in Engineering about 13 per cent and in Science over 20 per cent. Each decade, UW establishes female faculty targets. For 2010, our female faculty target is 199; as of 2006, we have already surpassed the target with 218 female faculty.

Figure 4.2.A<sup>31</sup>



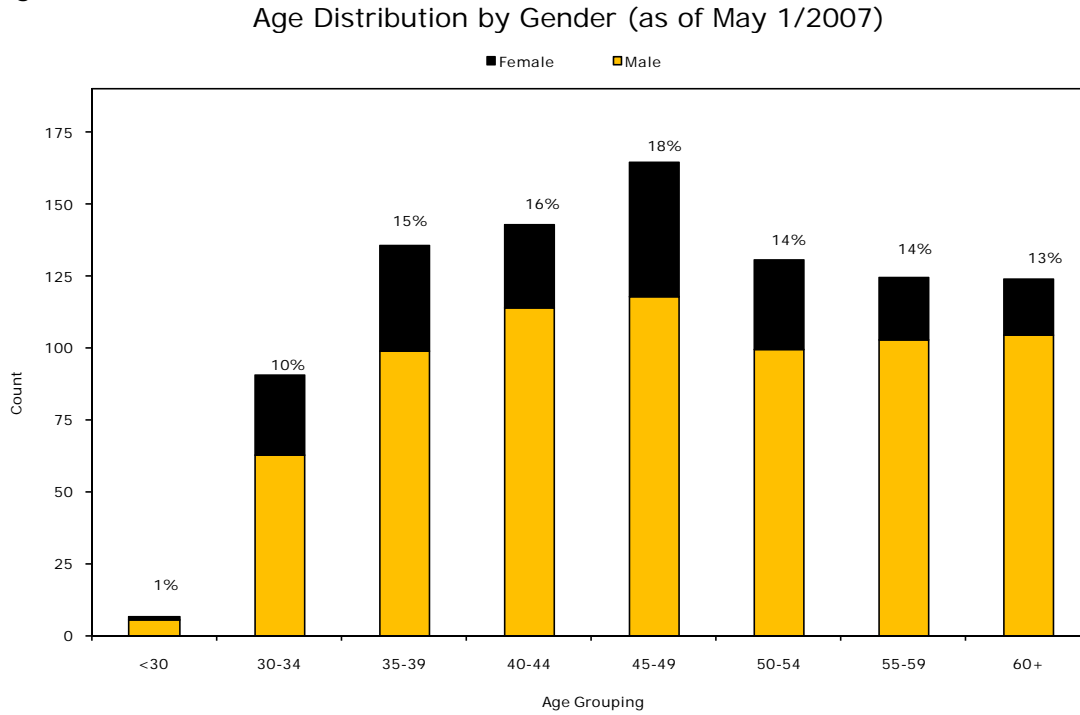
<sup>31</sup> Count of all new full-time regular faculty hirings as of October 1<sup>st</sup> of the survey year. Percent represents the number of female faculty hirings. Source: Stats Canada UCASS.



### 4.3. Age Distribution

As of May 2007, 41 per cent of UW's faculty population was age 50 years or older.

Figure 4.3.A<sup>32</sup>



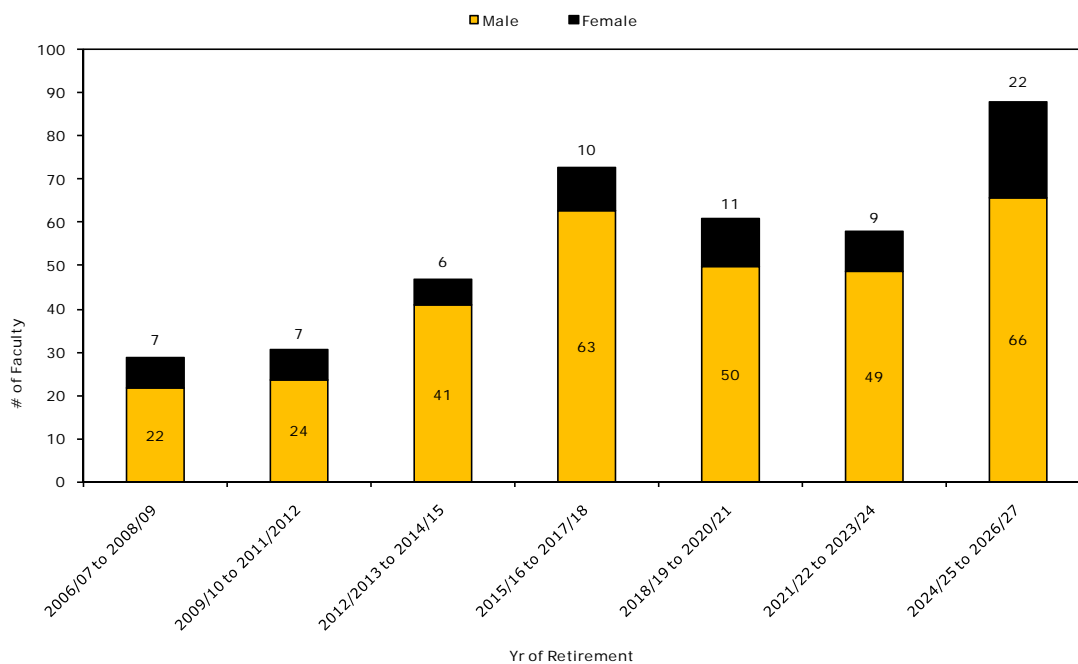
<sup>32</sup> Source Human Resource Management System

#### 4.4. Retirement Projections

Retirement projections are for those faculty members holding tenured, probationary, or continuing appointments holding a complement position at University of Waterloo. Faculty holding definite term appointments have been removed from the data. Full-time visitors or researchers are excluded from the data. The data includes those who have stated what their expected retirement date will be. With the abolition of mandatory retirement, a retirement age of 68 has been assumed.

Figure 4.4.A<sup>33</sup>

Faculty Retirement Projections to 2026/2027



Based on retirement projections, the UW faces a significant loss of experienced faculty members in the next 10 to 15 years. This emphasizes the need to attract and mentor younger faculty members in sufficient time to assume the duties of retiring faculty.

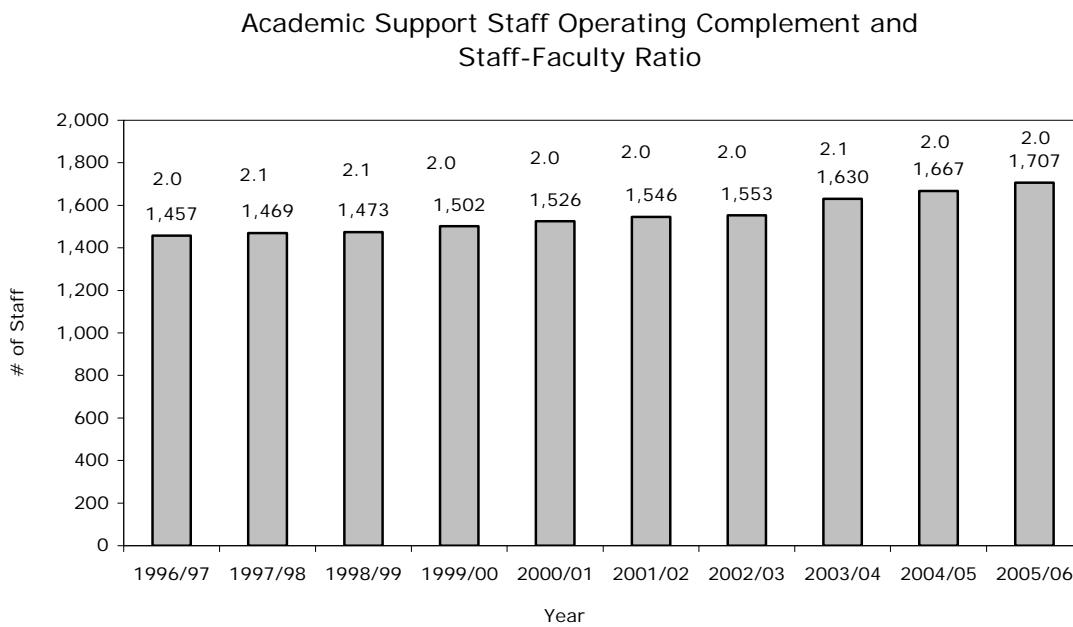
<sup>33</sup> Source Human Resource Management System

## 5. STAFF

A world-leading university needs highly competent staff. The University of Waterloo promotes the recruitment of staff of the highest quality; recognizes the importance of staff involvement in, and contribution to, the educational process; and seeks to engage staff in all aspects of our student and campus life. In this section, we highlight our staff complement<sup>34</sup>, over time, and monitor the age distribution recognizing the need to revitalize the pool of individuals so important to our overall operations.

### 5.1. Operating Staff Complement

Figure 5.1.A

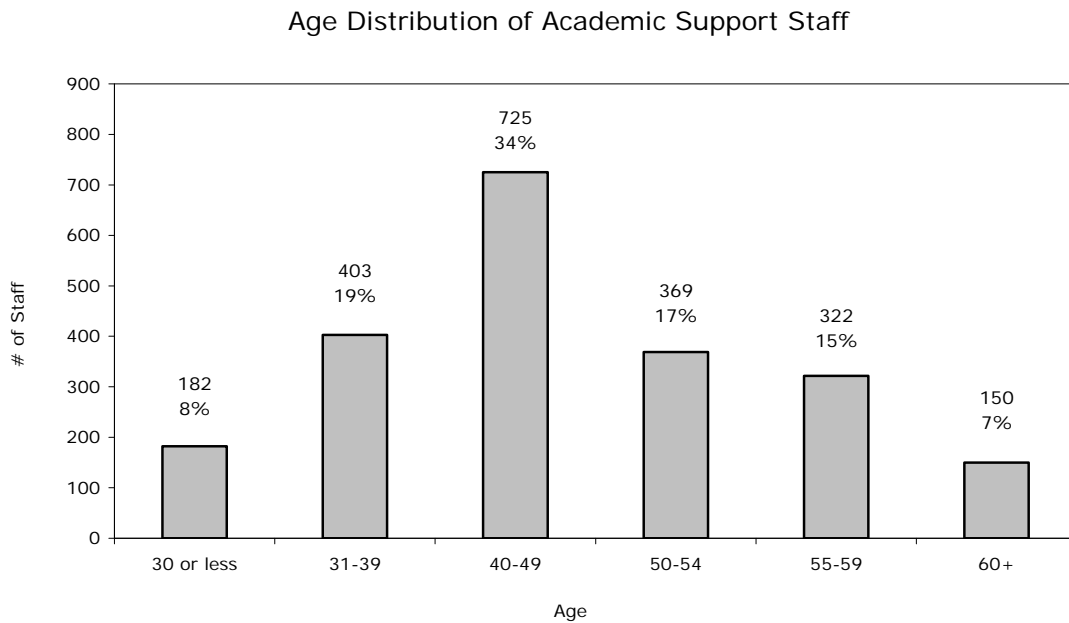


<sup>34</sup> Staff complement positions are ongoing positions—filled and open—supported by operating funds, for which the University has made a budgetary commitment. Source: Finance.

## 5.2. Staff Age Distribution

We monitor the age distribution of staff to anticipate hiring demands. Although monitoring is essential at the departmental level, a good spread of ages at the University level is a measure of institutional stability. From the age distribution chart we can see that – as with faculty – we face a significant challenge managing retirements.

Figure 5.2.A



## 6. CO-OPERATIVE EDUCATION

From its inception in 1957, the University of Waterloo has committed to the model of co-operative education. From the early days when engineering was the only faculty with co-operative programs – in fact, 100 per cent of Engineering was and is still co-op – UW has continued to invest in co-operative education. In fall 2006, about 56 per cent of the full-time undergraduate student population registered in more than 100 co-operative education programs across six academic Faculties. The University of Waterloo maintains relationships with more than 3,500 employers, and has 3,500 to 4,500 students looking for employment each term. While not the first university to try the co-operative education model, UW is reputed to have the largest university-based program in the world.

In 2005, the University of Waterloo completed a comprehensive review of Co-operative Education and Career Services, resulting in several observations and recommendations. Many of the recommendations of the review have been implemented, most notably the appointment of Associate Deans with responsibility for co-operative education in each of the six Faculties; the formation of a Co-operative Education Council (CEC) with representation from students, the six Associate Deans mentioned above, and three senior staff from the Department of Co-operative Education and Career Services; and the introduction of required, for-credit Professional Development courses for co-op students in all Faculties. Plans for implementing the remaining recommendations are underway, and progress is tracked at the CEC.

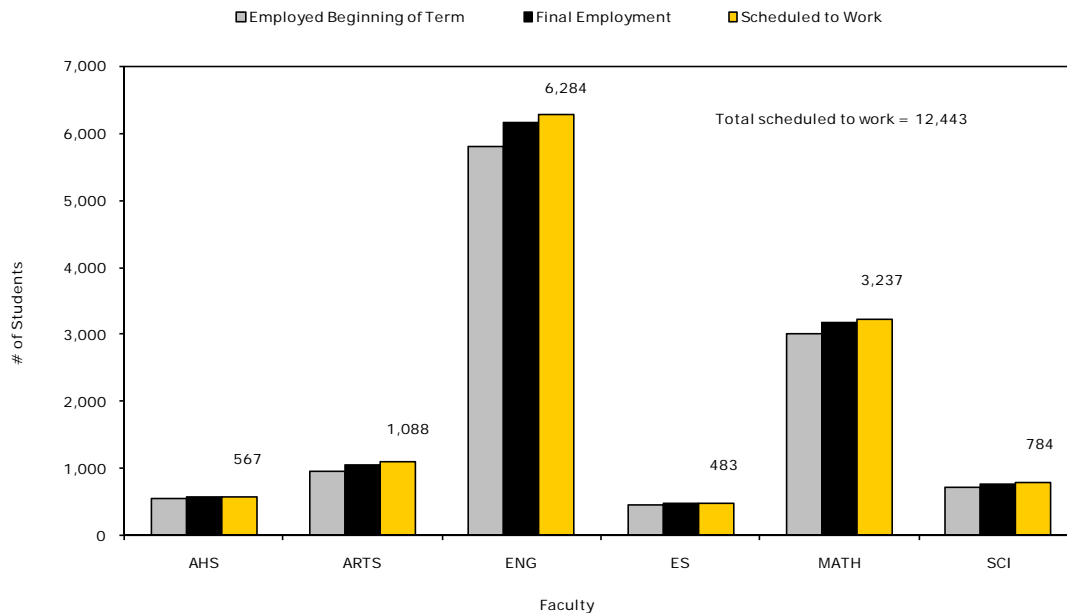
The Employment Process Review was completed in fall 2006. The review, conducted by faculty members from Management Science, covered all aspects of the core employment process, including but not limited to JobMine. One of the seven major recommendations of the review was to replace JobMine with “an improved and comprehensive information technology solution.” Development for the new system has begun with production targeted for spring 2009.

### 6.1. Employment Summary

We measure co-op employment to better understand how and when our students are employed throughout each term. Figure 6.1.A is a summary of the number of students scheduled to work in a term and the number employed at the beginning and at the middle of term, by Faculty.

Figure 6.1.A<sup>35</sup>

## Co-op Employment Summary 2006/07



This indicator gives us a sense of how well we are meeting the needs of our students by making sure they have jobs. Our co-op employment rate at the final date (eight weeks into the term) remains impressive at 98 per cent (96 per cent in 2005/06). Despite an improvement in the percent of students scheduled to work at the *beginning* of term, from 90 per cent in 2005/06 to 92 per cent in 2006/07, we recognize the need to improve job opportunities that begin at the start of term.

## 6.2. Earnings by Co-op Students

Co-operative work term income is an important measure for students, letting them know what to expect from the co-operative employment experience. In addition to a salary premium two years after graduation of approximately 12 per cent, students who study in the co-operative education system gain valuable work experience, and practical knowledge of the employment climate and culture. Most importantly, they gain personal and professional growth that will enhance their prospects for meaningful employment and their contribution to the workforce.

Figure 6.2.A shows total earnings of our co-op students in 2006/07 of \$129 million, an increase of \$5 million over the 2005/06 figure. Figure 6.2.B shows average work term earnings of our employed co-op students in 2006/07.

<sup>35</sup> Software Engineering is offered jointly by the Faculties of Engineering and Mathematics and enrolment is split evenly between these two Faculties. The number of students scheduled to work per Faculty is displayed.

Figure 6.2.A<sup>36</sup>

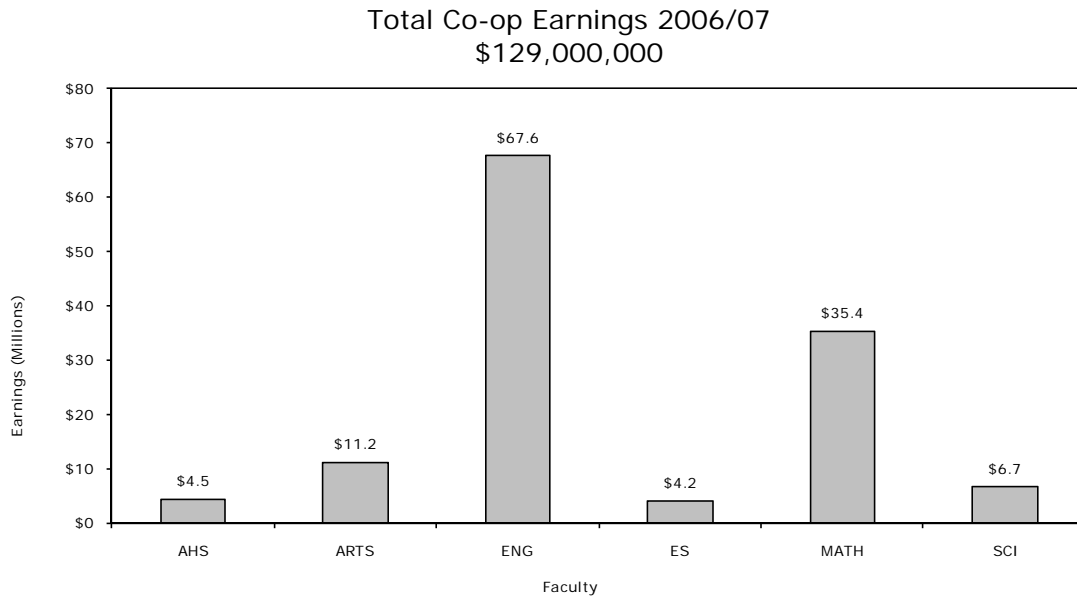
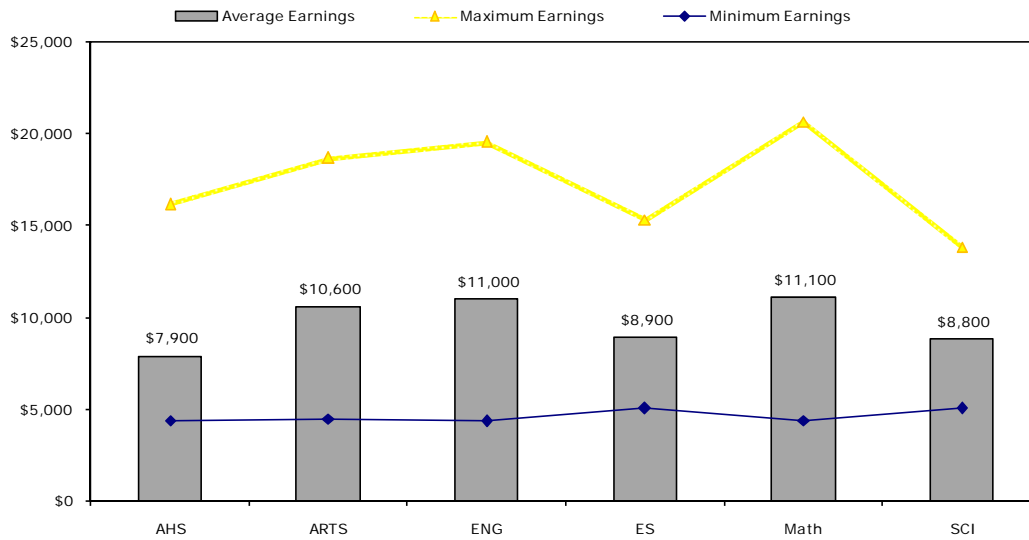


Figure 6.2.B

Average Co-op Earnings Per Work Term Per Employed Student 2006/07



<sup>36</sup> 2002 Waterloo study Co-operative Education: Greater Benefits, Greater Costs.

## 7. RESOURCES

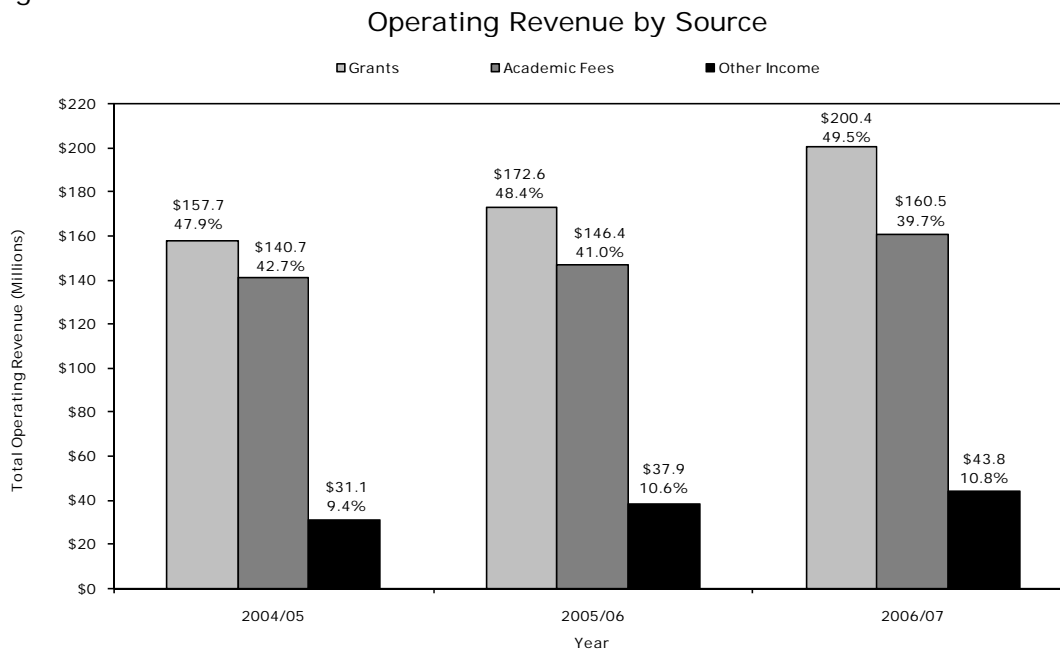
Financial stability and the flexibility to respond to new initiatives and opportunities are paramount to UW’s success. Over the last decade and a half, reduced per student government operating grants have resulted in higher student-faculty ratios. At the same time, students are paying more for their education. As a result, students and parents expect better programs and services, and a greater voice in decisions that affect them. The University of Waterloo continues to explore other revenue sources and partnership arrangements to ensure high quality and access to learning and research.

### 7.1. Operating Revenue by Source

The sources of the University’s operating revenue are presented in actual dollars and as percentages of the total. The two largest sources are grants—mainly Ministry of Training, Colleges and Universities (MTCU) operating grants—and tuition fees. These two comprise more than 90 per cent of the whole. Other income includes items such as external sales of goods and services (by academic and academic support units), investment income, and corporate income sources such as application fees.

Figure 7.1.A illustrates that government grants continue to be less than half of the University’s total funding and the majority of revenue comes from tuition fees and other income sources. Tuition, as a percentage of operating revenue, has risen dramatically in the past 10 years as government grants have not kept pace with inflationary pressures.

Figure 7.1.A





Scholarships and bursaries as a percent of operating expenses have increased dramatically over the past 10 years, from about 3 per cent in 1994/95 to almost 12 per cent in 2006/07 due, in most part, to UW's response to the increased financial demands placed on students.

Figure 7.1.B

Scholarships and Bursaries as % of Operating Expenses

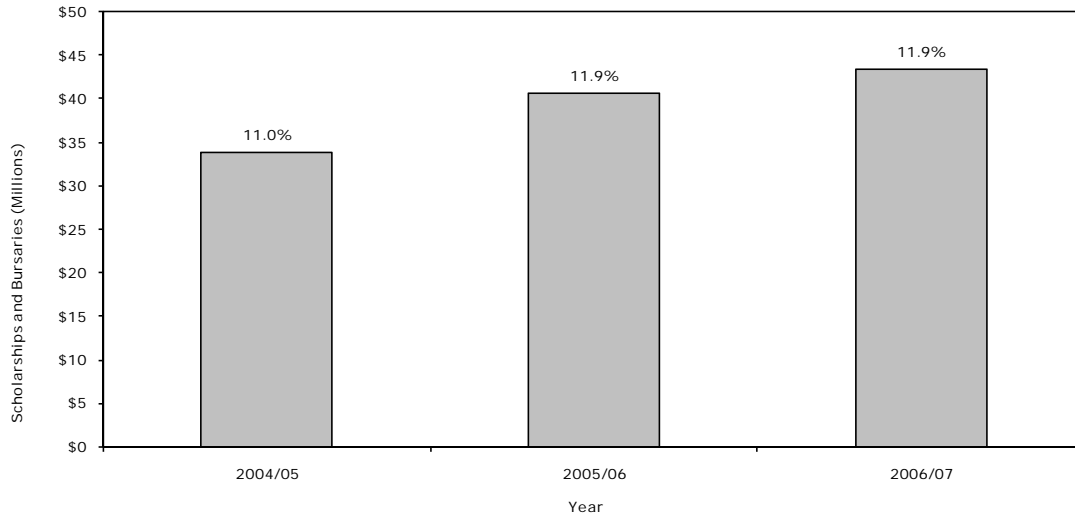
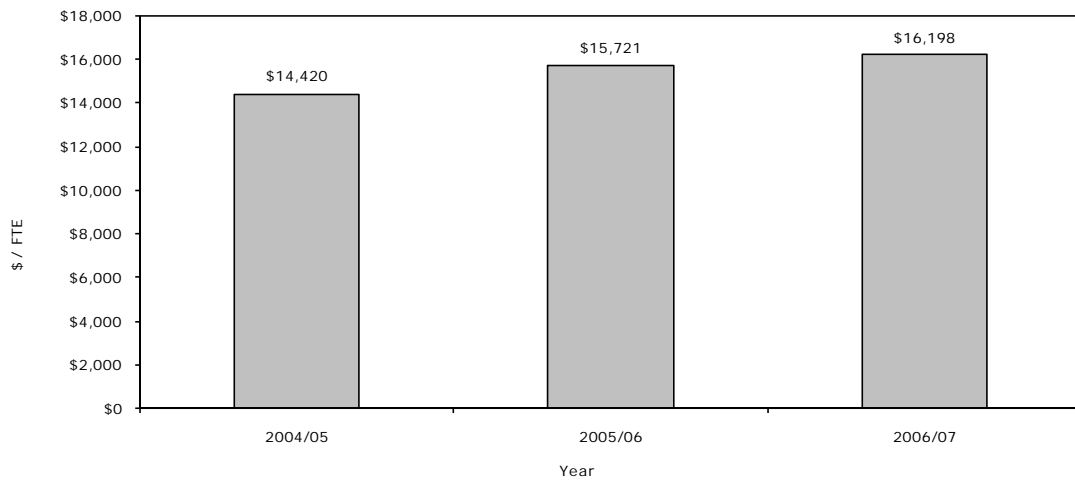


Figure 7.1.C

Operating Expenses per FTE Student  
(Excluding Federated and Affiliated Colleges)

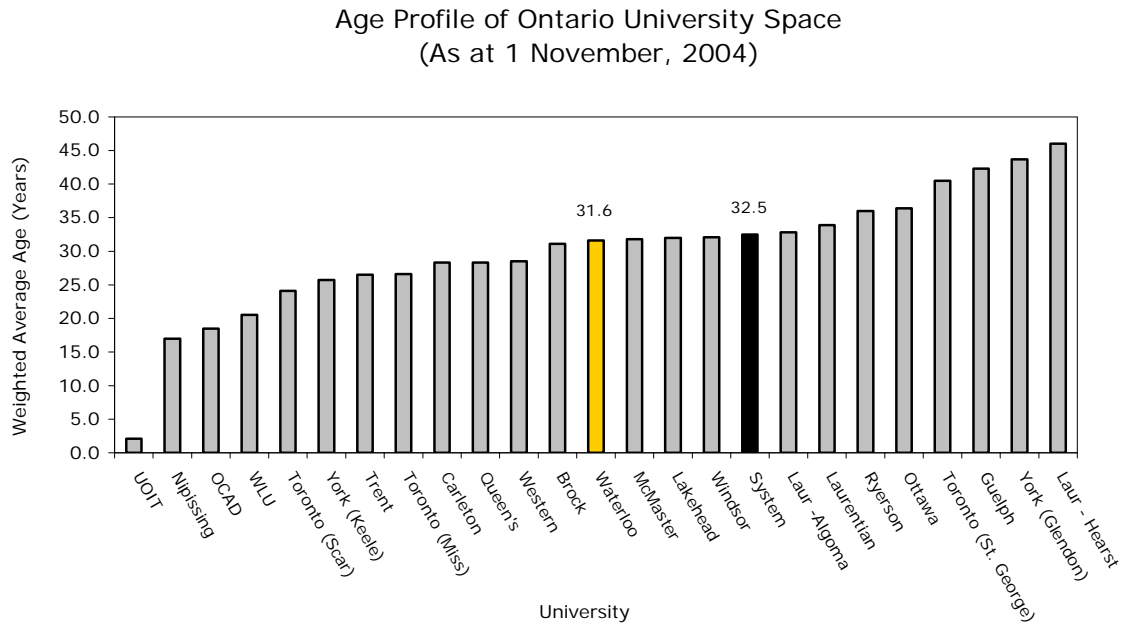


## 7.2. Age of Facilities Profile

Every three years, the Council of Ontario Universities (COU) gathers information to compute the average age of the province’s university facilities. The weighted average age of an institution<sup>37</sup> is a better measure of the age of physical facilities than the age of the campus taken by itself, since the weighted age includes recently added building space. When a university constructs a large new building, for example, the weighted average age of the campus will decline – that is, the campus will “grow younger” – in proportion to the ratio of the new space to the existing space.

Figure 7.2.A presents the weighted average ages of 23 Ontario universities. The University of Waterloo stands roughly in the middle of the pack. In 2004, our physical facilities had a weighted average age of 31.6, up from 30.7 in 2001.<sup>38</sup>

Figure 7.2.A<sup>39</sup>



## 7.3. Space Inventory to Formula

Every three years, the COU also generates a “space entitlement” for each Ontario university – that is, how much space it needs, based on space standards developed by COU and on the numbers of faculty, staff, and students, as well as research grants and other measures of activity at each university. This formula number is compared to the actual inventory of space and a ratio of “inventory to formula” is produced.

<sup>37</sup> Computed by multiplying the space in a building by the age of the building, summing these products for all buildings on campus and then dividing by the institutional space.

<sup>38</sup> Figures published in the 2005 University of Waterloo Performance Indicator report were based on a preliminary report from the Council of Ontario Universities.

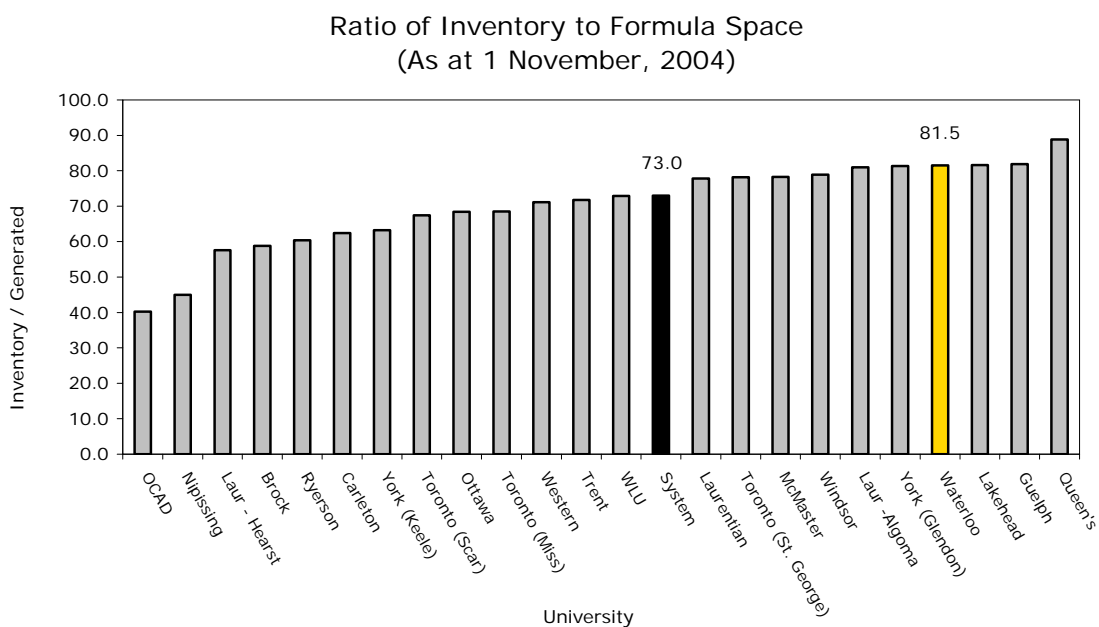
<sup>39</sup> Source: COU Inventory of Physical Facilities of Ontario Universities 2004-05, Age Profile of Ontario University Space.

If a university's inventory of space matches its formula space, then that university is said to have 100 per cent of the generated amount. If the percent is less than 100, then the university has less space than it needs, according to the formula.

Co-operative education programs allow for a more efficient use of the University of Waterloo's physical plant, by shifting enrolment from fall and winter terms to the spring term. At UW, average full-time enrolment is distributed over the three terms as follows: 17 per cent in spring, 44 per cent in fall, and 39 per cent in winter. A "non-co-op" institution's ideal enrolment is split 50/50 in fall and winter. Because the space formula measures only fall enrolment, our space entitlement generates only 44/50 or 88 per cent of a regular institution with the same annual enrolment.

As of November 2004, UW was slightly better off than the system as a whole: we had 81.5 per cent of the space we needed, compared to an average figure of 73 per cent. If we adjust our entitlement to account for the difference resulting from our co-operative education programs, UW's ratio of inventory to formula space drops from 81.5 per cent to 71.7 per cent, less than the system average.

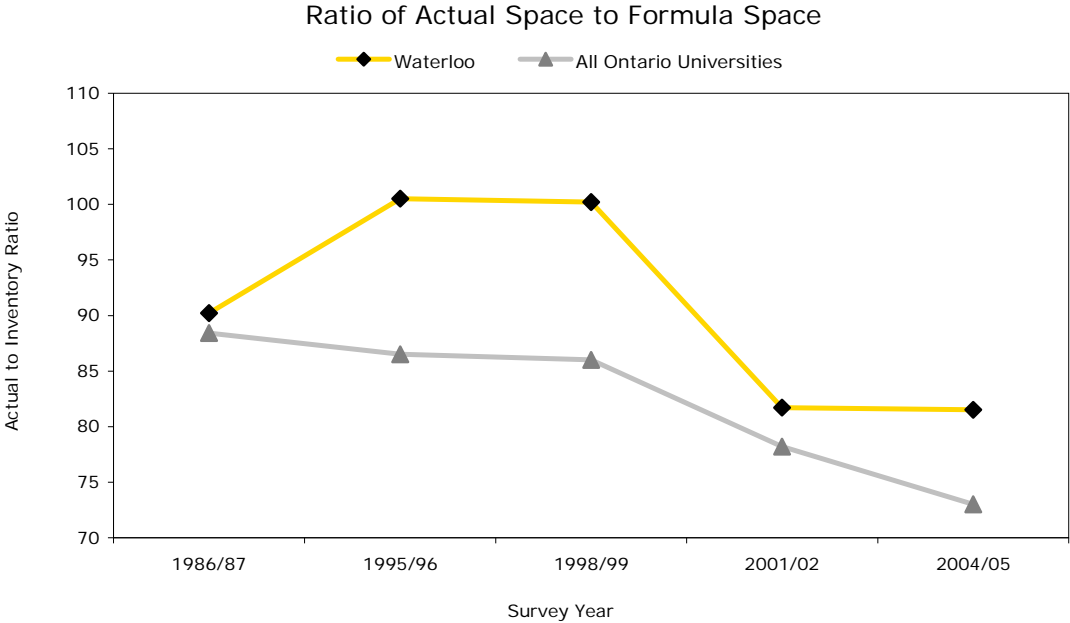
Figure 7.3.A<sup>40</sup>



Physical space to house students, locate classrooms, conduct research and accommodate staff is critical to the effective delivery of higher education. Between 1995 and 1999, UW had adequate space to conduct university business, according to the formula shown in the next chart. Despite Ontario's recent investments through SuperBuild and other funds, the ratio of actual space available has declined sharply, due in large part to the arrival of the double cohort students.

<sup>40</sup> Source: COU Inventory of Physical Facilities of Ontario Universities 2004-05 Total Space (1-15): Generated Space and Inventory 2004/05.

Figure 7.3.B<sup>41</sup>



<sup>41</sup> Table 37 - COU Inventory of Physical Facilities of Ontario Universities, various years.

## 8. FUNDRAISING

The University of Waterloo has responded to decreased government funding by reducing costs, implementing administrative efficiencies, and securing new sources of revenue. Despite significant cutbacks, we have found innovative ways to introduce new programs and initiatives, in part through Campaign Waterloo: Building a Talent Trust, the University's \$350 million fundraising effort.

### 8.1. Alumni Donations

Alumni donors play an important role in supporting our goals of excellence. To help us keep in touch we track the number of alumni with valid contact information, and the number of alumni donors. Both figures are cumulative five-year totals.

From these two figures we can calculate the percentage of alumni who make gifts to the University – approximately 19 per cent. This percentage may be seen as an indicator of how well the University served the alumni while they were students, the depth of their continuing affection for the University, and a measure of their support for higher education in general. Our success in earning and retaining the loyalty of alumni may be measured over time by monitoring this indicator.

Figure 8.1.A

Alumni Donations Statistics	
	2002-2006
# Alumni with valid contact information (cumulative 5-year total)	389,244
# Alumni Donors (cumulative 5-year total)	73,728
% Participation	18.94%
Includes faculty, staff and retirees who are also alumni, and includes both spouses in the case of joint gifts. Includes cash or gifts-in-kind donations; excludes pledge expectancies. Excludes honorary degree holders.	

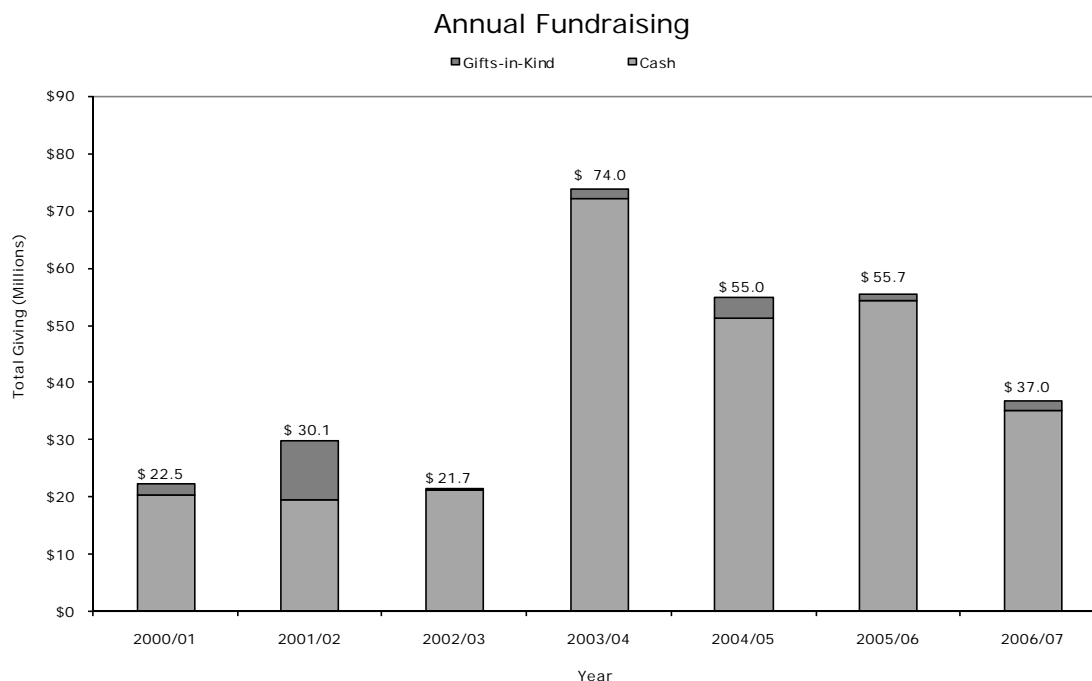
### 8.2. Annual Fundraising

A summary of funds raised from the private sector is shown, year-by-year, from 2000/01 to 2006/07. Income in millions of dollars is broken out by cash and gifts-in-kind. It includes gifts to the University and to the four federated and affiliated university colleges from all sources, including alumni, parents, students, friends, faculty, staff, retirees and organizations. This demonstrates a broad base of private support.

Annual fundraising achievements are used to measure overall performance of advancement activities across the entire University and are important indicators of how well we are doing to raise private sector gifts for the University. Results published annually in the Donor Report show donors how much was raised, how their funds were used, and the impact of their giving on UW programs, scholarships, buildings, and research. Combined with other analysis, annual fundraising achievements are tangible indications of support for UW by its alumni, faculty, staff, and friends.

Figure 8.2.A shows a rise in private-sector giving to the University from 2000 to 2007, with a dramatic leap in 2003/04 part of which can be accounted for by a single gift of \$32.8 million from Mike and Ophelia Lazaridis. In April 2005, Mike and Ophelia donated an additional \$17.2 million, bringing their individual giving to \$50.1 million. In 2005/06, UW received a gift of \$25 million from David Cheriton (MMath '74, PhD '78) establishing the David R. Cheriton Endowment for Excellence in Computer Science. In recognition of this distinguished gift, the school has been named in his honour.

Figure 8.2.A

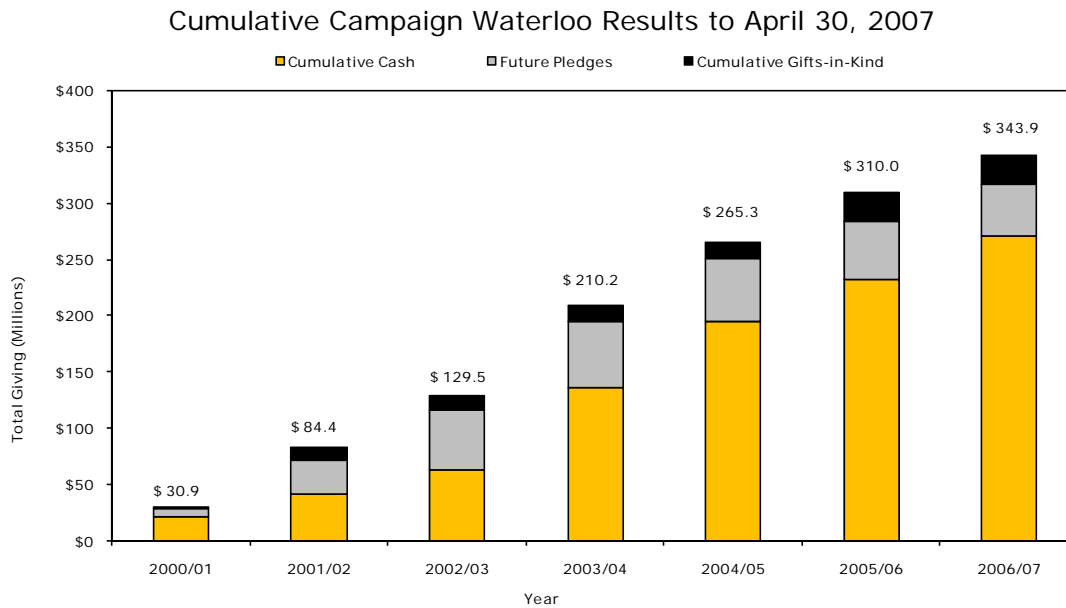


### 8.3. Cumulative Campaign Results

A good way to measure our fundraising progress is to show an annual cumulation, with results classified by cash, gifts-in-kind, and pledges. Campaign Waterloo officially began in May 2000 and will continue beyond 2007, the University's 50<sup>th</sup> anniversary year. The revised 2007 goal is to raise \$350 million, an increase from \$260 million.

Figure 8.3.A illustrates our cumulative fundraising achievements to April 2007, representing 98 per cent of the 2007 campaign goal. Funds raised are being used to support priority projects, including new buildings (\$80 million), chairs and professorships (\$58.1 million), the library (\$4.5 million), programs (\$113.7 million), and scholarships (\$53.3 million).

Figure 8.3.A



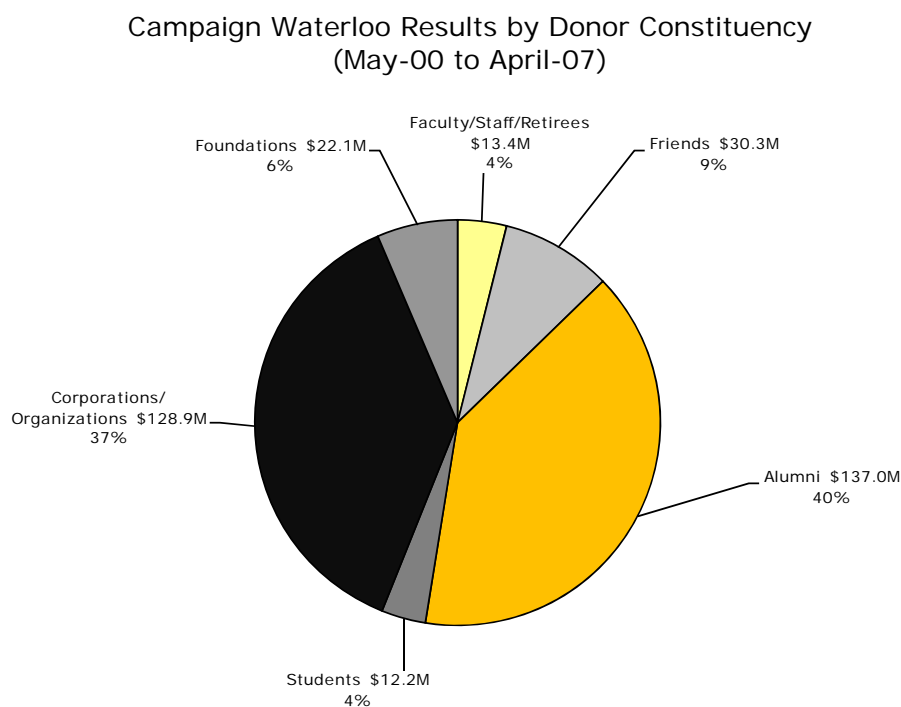
With income well ahead of schedule, we are continuing to raise funds and planning new and extended campaign priorities to keep the momentum of the campaign going beyond 2007.

## 8.4. Donor Constituency

It is important to know not just how successful we have been in raising funds, but who our donors are. Figure 8.4.A shows campaign results by donor source or constituency, cumulated from the beginning of Campaign Waterloo in May 2000 to April 2007.

This indicator shows trends in giving by various donor groups and will allow us, over time, to track the effectiveness of programs aimed at different constituencies. For example, more than half of all donations came from individuals – all with some connection to the University of Waterloo – and less than half from foundations, corporations, and organizations.

Figure 8.4.A



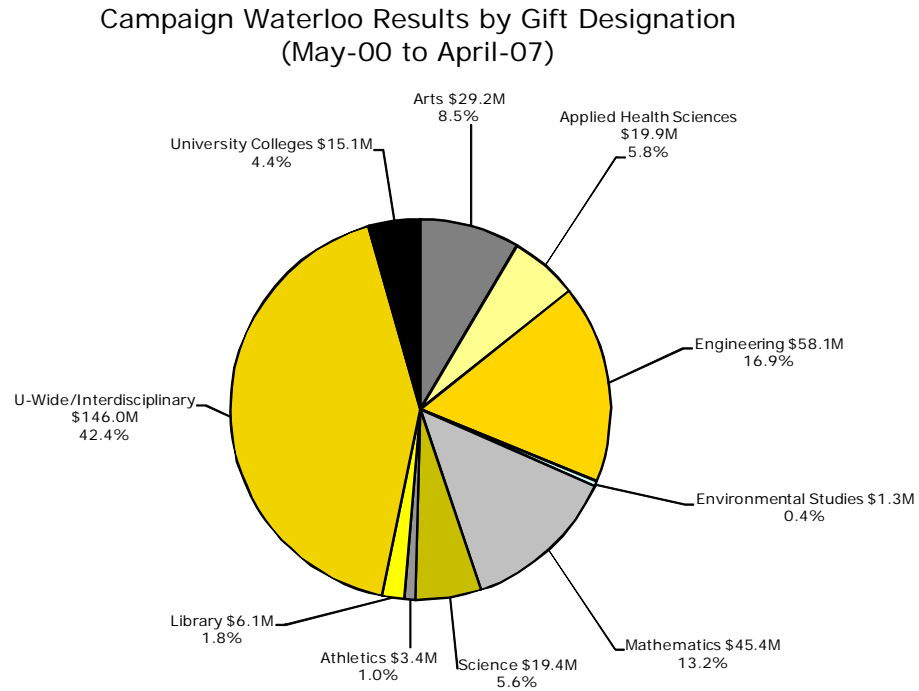
## 8.5. Gift Designation

Another way of measuring advancement is to show cumulative campaign fundraising results by the Faculty or unit that ultimately receives the funds. Most donors designate their gifts to benefit a specific Faculty, program, college, scholarship, or the like. Internally, this information gives volunteers, administrators and deans an indication of their fundraising progress. Externally, it shows donors where their contributions have made an impact.

Figure 8.5.A shows how funds raised through Campaign Waterloo between May 2000 and April 2007 have been directed according to the wishes of donors.



Figure 8.5.A



The “U-Wide/interdisciplinary” sector may include scholarships that are open to students in two or more disciplines, or centres or programs that span two or more Faculties, such as the Institute for Quantum Computing. Donations to schools have been included within their respective Faculties: for example, gifts to the School of Optometry are included in the Faculty of Science sector, and gifts to the School of Accountancy in the Faculty of Arts sector. Of note, in 2005/06, the School of Architecture moved from the Faculty of Environmental Studies to the Faculty of Engineering.

## 9. LIBRARY

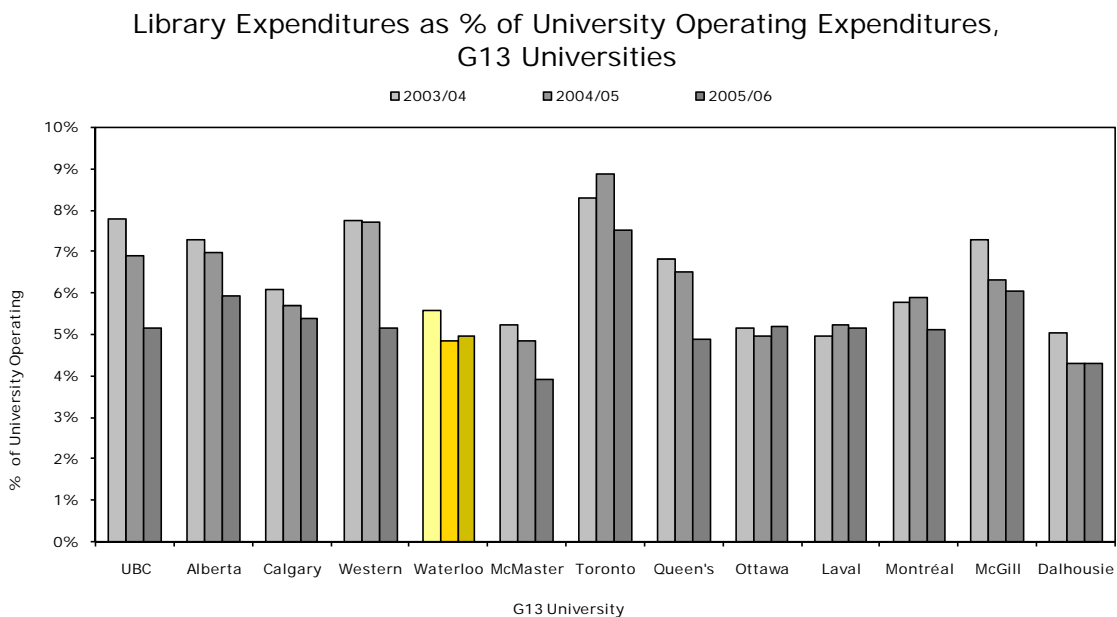
The Library’s goal is to rank among the top research libraries in Canada. We strengthened our information resources by taking advantage of opportunities through our active participation in the Canadian Research Knowledge Network (CRKN). Further, our partnership with 3M Canada allowed us to install a state of the art inventory and security system to support delivery of services and information resources. Our recent Library Satisfaction Survey confirmed that seizing these opportunities contributed to a high level of user satisfaction with the services we provide to our community.

### 9.1. Expenditures as Percentage of Operating Expenditures

One way of measuring the University’s commitment to maintaining library resources and services is to show the percentage of the University’s budget assigned to the library. By tracing this important indicator over several years we can assess how well we are faring in terms of support for library resources and services compared with other similar institutions, and whether there is a trend in the level of support.

Figure 9.1.A shows library expenditures as a percentage of the University operating budget for each of the G13 universities for the three latest fiscal years. UW’s library expenditures amounted to 5.6 per cent in 2003/04, placing it below the average of 6.4 per cent and ninth out of the thirteen. In 2004/05 the figure decreased to 4.8 per cent, placing UW twelfth. In 2005/06 we saw a small increase to 4.9 per cent and a placing of tenth among the G13 universities.

Figure 9.1.A<sup>42</sup>



<sup>42</sup> Source: Association of Universities and Colleges of Canada (AUCC).

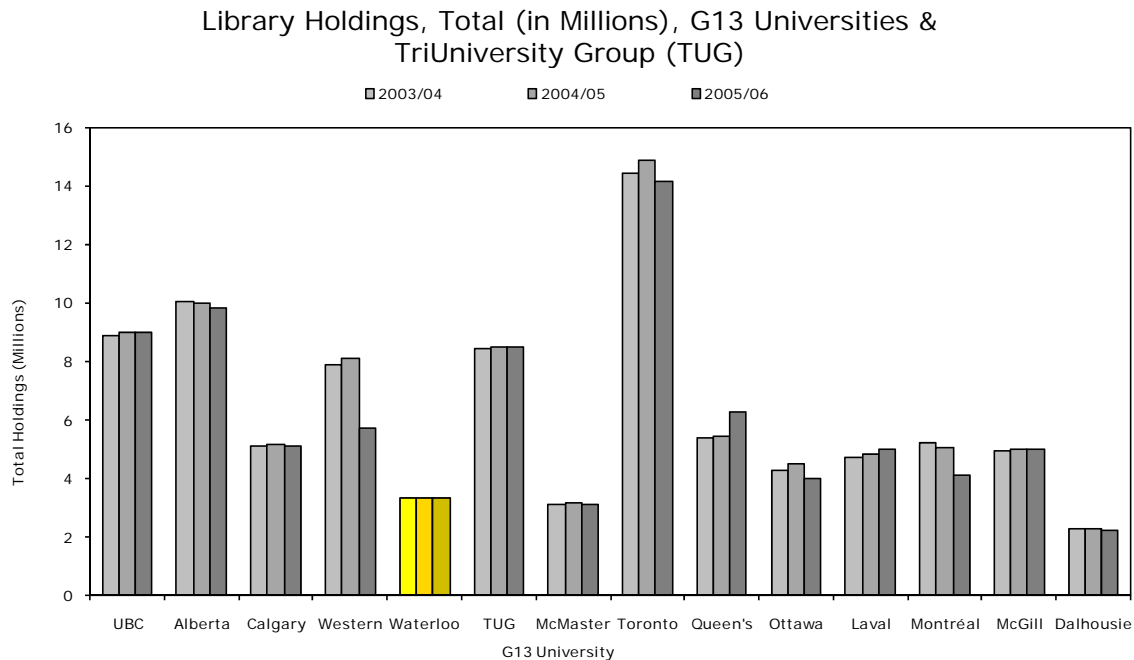
“Waterloo library expenditures” includes data for the libraries of UW’s federated university and affiliated colleges. The data for this chart come from the Association of Universities and Colleges of Canada (AUCC) which collects, on behalf of its members, the data used in the annual Maclean’s magazine survey.

## 9.2. Holdings: Print and Electronic

Strong university library collections are essential to support teaching, learning, and research. The size of the collection is sometimes seen as an indicator of how well we are supporting our core functions, as compared to other similar universities. Figure 9.2.B shows total library holdings for each of the G13 universities as well as the TriUniversity Group (TUG).

While UW ranks low in total holdings at eleventh out of thirteen, the holdings count of the TriUniversity Group shows the benefit of making the collections of our University of Guelph and Wilfrid Laurier University partners readily available to our users through TRELIS (the online catalogue of the combined collections of the TriUniversity Group of Libraries). When total TUG holdings are taken into account, the ranking is similar to the fourth placed G13 university.

Figure 9.2.A<sup>43</sup>



<sup>43</sup> Source: Association of Universities and Colleges of Canada (AUCC).

Figure 9.2.B shows the libraries’ holdings in terms of items per full-time equivalent student (FTE), which takes into account the level of demand. The University of Waterloo ranked twelfth among the G13 universities in 2004/05 and 2005/06.

Figure 9.2.B<sup>44</sup>

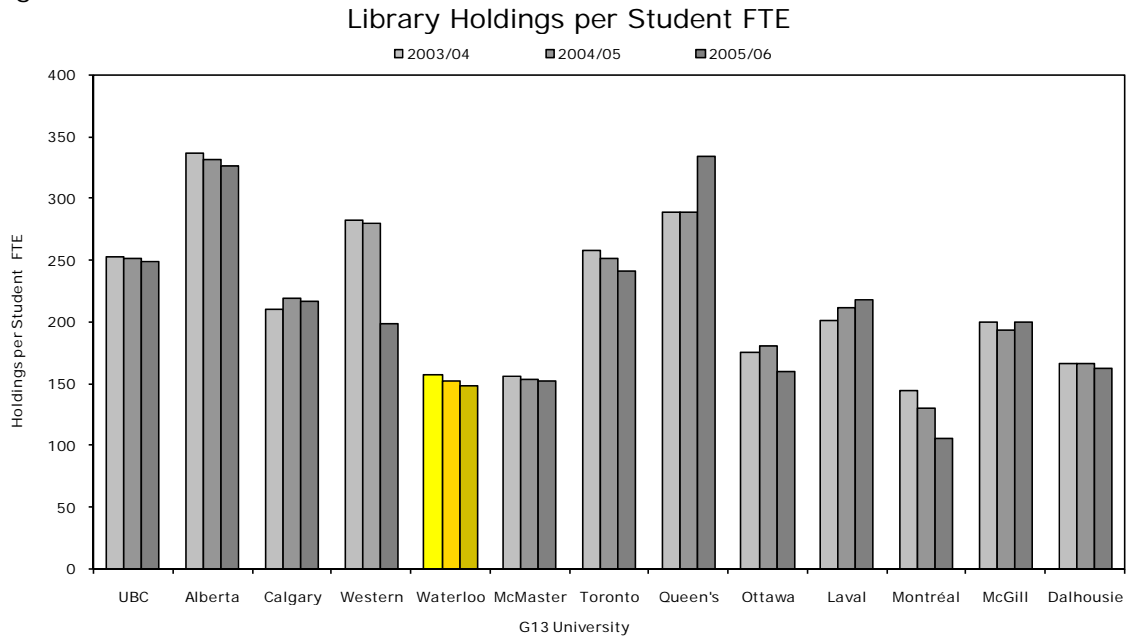


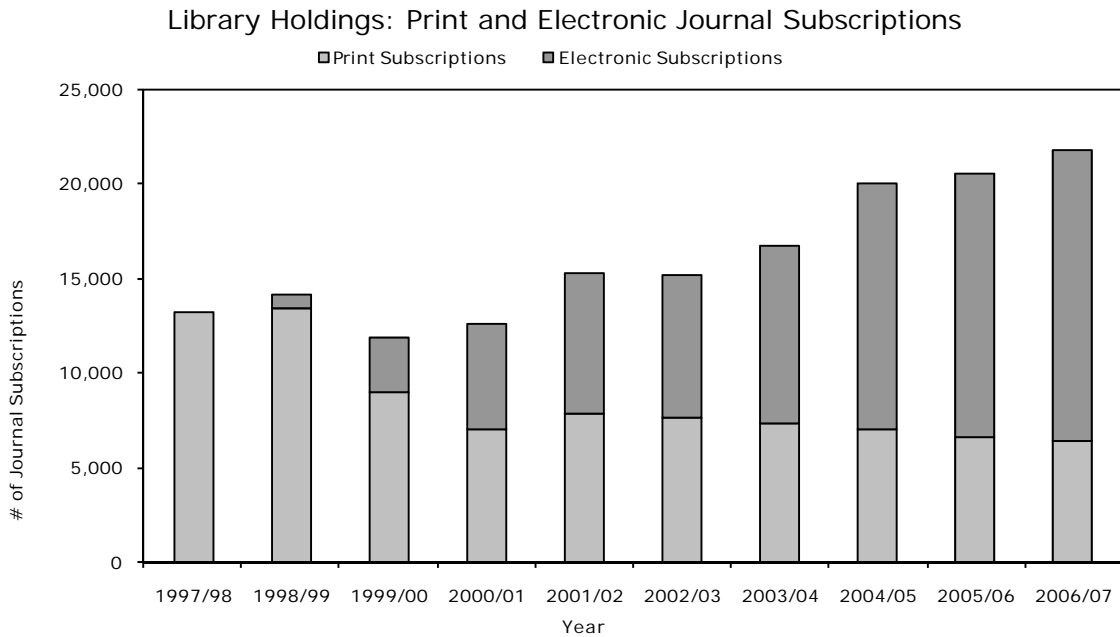
Figure 9.2.A and Figure 9.2.B include the holdings of the libraries of UW’s federated university and affiliated colleges. The counts include printed materials (monographs, bound journal volumes, government documents) and micro-materials, but not electronic, cartographic, or audio-visual materials.

The data in these charts do not take into account the significance of electronic resources, which are playing an increasingly important role at all universities. Electronic monograph holdings have grown from 5,747 titles in 2000/01 to 217,351 titles in 2006/07 and now represent over 12 per cent of the total monograph collection.

Figure 9.2.C shows that UW’s electronic journal holdings have also continued to grow substantially. The University of Waterloo subscribed to 21,706 journals in 2006/07, of which 15,370 were in electronic format.

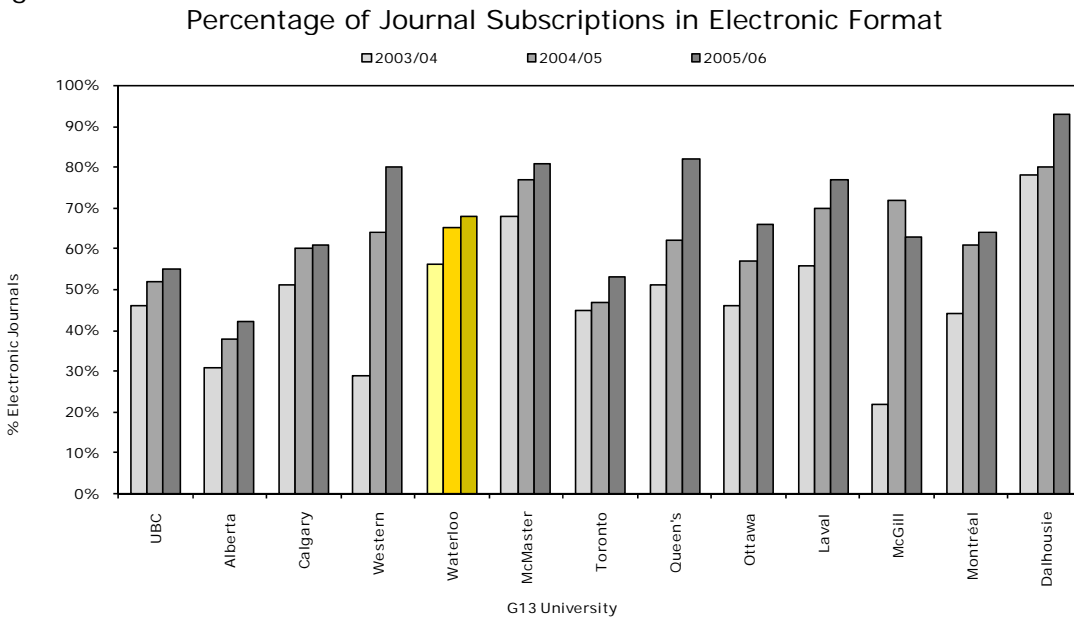
<sup>44</sup> Source: Association of Universities and Colleges of Canada (AUCC).

Figure 9.2.C



As Figure 9.2.D shows, while total journal subscriptions remain lower than at the other G13 University libraries, UW's strength in electronic journals placed us in third place in percentage of journal subscriptions in electronic format in 2003/04. In 2005/06 UW's ranking dropped to fifth position, with 68 per cent of journals received in electronic format.

Figure 9.2.D



## 10. CONCLUSION

The Performance Indicators Task Force and the Data Working Group will continue their efforts to shed more light on important activities of the University. In particular, we will continue to work with our provincial and national peers to define, collect and build data sets and indicators that will allow meaningful comparisons and benchmarking.

As we look to our sixth decade, UW has a clear goal to cultivate, nurture and promote global excellence in teaching, learning and research, ensuring academic and social relevance and adequate resources to support our endeavours.

Prepared by the Office of Institutional Analysis & Planning, with the oversight of the Task Force on Performance Indicators, and the support of the Data Working Group, this report will facilitate strategic institutional planning and public accountability. We are committed to the review and production of future reports.

University of Waterloo Performance Indicators Task Force, 2007

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