



Task Force on Long-Term Enrolment Strategy

Final Report

March 31, 2008

Introduction

This is the final report from the Task Force on Long Term-Enrolment, formed as part of the 'Towards 2030' long-term planning process at the University of Toronto. This is one of six Task Forces that have been asked by the President to examine what transformations need to take place by the year 2030 for the University of Toronto to achieve its aspirations of excellence at the highest levels.

Today, the University faces many challenges and constraints, particularly in resources. It is clear that if these constraints continue, little would change. Hence, rather than focusing on current challenges, the Task Force understood its mandate to be an exploration of what the University aspires to become and what is needed to realize these aspirations.

Mandate

As outlined in the Towards 2030 discussion document, the University of Toronto is at a 'critical juncture' in terms of long-term planning for the University's student enrolment. Our priority to provide a high quality educational experience, when considered in the light of large increases in forecasted demand for post-secondary education in the Greater Toronto Area (GTA), make it imperative that we formulate our long-term enrolment institutional goals so that upcoming planning decisions can be made.

Consideration of enrolment issues and strategies relates broadly to the other task forces, but particularly to the Task Forces on University Resources and Institutional Organization. It is clear that enrolment plans have to be consistent with resources and available funding. It is also clear that there is a consistent and strong desire that the U of T remain a three-campus university. As such, matters relating to planning of enrolment growth and academic programming at the University relate directly to the institutional organization of the university.

The Task Force focused on the specific items included in its scope, including considerations of:

- Target enrolment scenarios for each campus
- Mix and balance by campus
- Graduate and undergraduate balance
- Types of degrees
- Sources of students and recruitment strategies
- Breadth of disciplines across the institution

Overview of Task Force and Mandate

The membership of the Long-Term Enrolment Task Force included Brian Corman (Chair), Safwat Zaky (Vice-Chair), Don Dewees, Yannick Portebois, Diane Crocker, Mahadeo Sukhai, Saswati Deb, David Cook, Tim Reid, John Coleman, Helen Lasthiotakis (Secretary).

The working group met eleven times over the course of the winter and spring and reviewed data and documentation relating to the enrolment history of the university as prepared by members of the Committee and by the Office of Planning and Budget. The Task Force received the submissions that were sent in response to the President's call for general 2030 submissions. The Deans of all the University's academic divisions, as well as the Graduate Students' Union were invited to submit written statements to the Task Force regarding their perspective on long-term enrolment for their units.

Written submissions to the Task Force were received from the following

- Faculty of Applied Science and Engineering
- Faculty of Architecture, Landscape, and Design
- Faculty of Arts and Science, St. George Campus
- Ontario Institute for Studies in Education
- Faculty of Law
- Joseph L. Rotman Faculty of Management (Stepping UP plan)
- Faculties of Nursing, Dentistry and Pharmacy (Joint submission)
- Faculty of Music
- Faculty of Pharmacy
- Faculty of Physical Education and Health
- Faculty of Social Work
- University of Toronto at Mississauga
- Graduate Students' Union
- University of Toronto Library
- UofT Student Life Professionals Group

In addition, the Task Force met and conferred with the following senior academic administrators:

Derek Allen, Dean of Arts, Trinity College (representing the constituent and federated university principals)

Ian Orchard, Principal, UTM and Vice-President

Pekka Sinervo, Dean, Faculty of Arts and Science and Vice-Provost, First Entry Programs

Franco Vaccarino, Principal, UTSC and Vice-President

The Task Force completed research on U of T enrolments through the Office of Planning and Budget. The most appropriate comparator group for the University of Toronto for which we have data is Association of American Universities (AAU). The Task Force compared enrolment mix at UofT with those at AAU universities (Appendix 1).

Recent Enrolment Plans

The University's *A Framework for Expansion at the University of Toronto*¹, approved by Governance in 2000, provided the policy structure for the University's response to the opportunities for enrolment expansion presented by the double cohort. The *Framework* set out principles to guide the process of enrolment expansion, emphasizing the importance of improving the capacity of the University to advance its mission and to maintain its academic standards and the quality of its programs.

The *Framework* provided broad targets for undergraduate expansion at all three campuses, as well as second-entry programs and doctoral-stream programs. The University undertook a careful and integrated enrolment planning process across the three campuses and advocated to the government accordingly. Enrolment targets were developed, reviewed each year and reported to Governance through the Planning and Budget Committee.

The University's academic planning document, *Stepping UP*, introduced in 2005, envisioned a moderate reduction of undergraduate enrolment on the St. George campus following the double cohort and an increase in the proportion of graduate students. Such a rebalancing of enrolment is consistent with the objective of increasing the intensity and quality of research and enhancing the student experience at the University, and is a distinguishing feature of the University of Toronto among Canadian universities. It also brings enrolment patterns at the University closer to its peers among the top research-intensive universities internationally. Both objectives are retained in the recommendations of the Task Force as given later in this report.

The Provincial program for graduate expansion introduced in the budget of May 2005 presented another opportunity for expansion that was consistent with the University's objectives. A similar process was undertaken to prepare plans for graduate expansion. These plans culminated in the preparation of the document *A Framework for Graduate Expansion 2004-05 to 2009-10*, which was approved by Governing Council in December 2006.

Graduate expansion to 2007-08 increased the number of graduate students at the University by about 2100 over 2002-03, the base year defined by the Government for the program. The *Framework* anticipates continued expansion, possibly adding up to 2300 more students over the next five years. However, this additional expansion is likely to be limited by the availability of government funding.

Planning Guidelines

The Task Force re-affirmed that our mission should continue to emphasize teaching and research with the goal of being the best research-intensive university in Canada and one of the best internationally. A fundamental priority for the University should be to foster an environment that allows for a quality academic and co-curricular experience for all students. That priority applies to all programs at the University on all three campuses.

Based on the submissions received, meetings with University senior academic administrators, and research from the Office of Planning and Budget, the Task Force agrees on the following basic set of assumptions about the University context:

The demand for post-secondary education will continue to increase in Ontario, especially in the Greater Toronto Area. This is a result of the projected population growth and increase in participation rates. According to Government projections, over 40,000

¹ <http://www.provost.utoronto.ca/Assets/assets/gradfram.pdf>

additional undergraduate places in post-secondary institutions will be needed by 2015, with a corresponding increase in demand for graduate studies a few years later.

Enrolment plans must be consistent with resources and available funding. The recommendations of the Task Force assume that for each of the models proposed in the report adequate resources will be available to sustain and enhance quality.

The U of T will continue to offer a wide range of programs, while recognizing that we cannot cover every potential area of study. Program offerings will continue to be based on academic planning decisions and informed by resource considerations.

The University as a whole will be facing increasing competition for students. Our goals depend upon being able to maintain high and holistic admission standards that ensure excellent academic preparation and a well-rounded student population.

We will continue to strive to enhance our students' experiences while at the University. Our most recent university-wide academic planning process, *Stepping UP*, has placed enhancing the student experience at the top of our priority list. The Task Force endorses that priority.

Student life and co-curricular considerations form an important component of student experience. The Task Force received excellent submissions emphasizing the value of student life matters, and the Task Force strongly endorses careful planning in this area, particularly during times of change.

Enrolment Considerations

The character of a university is heavily influenced by its enrolment patterns. Enrolment planning should take into consideration the numbers of graduate and undergraduate students, professional and research graduate degrees, first and second entry programs, and so on. There are also non-academic considerations such as availability of residence, impact on the colleges, demand for graduates, etc.

Program breadth and disciplinary mix

- The University of Toronto has an impressive range of programs in a wide range of disciplines. The Task Force does not anticipate a significant change in this aspect of the University. Program mix should continue to respond to academic planning.
- The Task Force on University Organization is expected to recommend significant changes to the tri-campus structure, with increasing independence for each campus. This is likely to lead to programmatic differentiation among the campuses. This Task Force supports and encourages such differentiation.
- The current mix among sub-disciplines of arts and science on the three campuses is given in Appendix 2. There is a general desire to retain this mix. At the same time, the Task Force acknowledges that evolution of programs must be guided by academic planning considerations and that the resulting mix may be different on each campus.
- Some of the scenarios introduced later involve significant reductions in the number of undergraduate students. In such cases, a re-examination of the number of undergraduate programs offered may be needed.

Student Body

- Increasing emphasis on internationalization of the student experience is expected and encouraged. Students at the University of Toronto should have more opportunities to interact with students from other parts of the world. We should aim to increase the

proportion of international students at the University. We should also increase the opportunities for students to travel abroad and participate in exchange programs.

- International students have special needs. Additional support should be provided, particularly as the number of international students increases.
- As Canada's leading University, the University of Toronto should strive to attract top students from across Canada. Recruiting activities aimed at students in other provinces should be strengthened.
- There is benefit in increasing the proportion of residence students, particularly at UTM and UTSC. A larger proportion of students in residence is consistent with the objectives of attracting more students internationally and from across Canada. With appropriate planning, it could also be an important tool in enhancing the student experience.
- Increasing the percentage of graduate students would advance the research agenda of the University and provide opportunities for enhancing teaching and the undergraduate experience.
- The University should continue its emphasis on ensuring diversity in all its dimensions among the students.

Resource implications

Student mix and enrolment patterns in general have significant resource implications. All recommendations in this report assume that appropriate resources are available to support a very high quality of teaching and research at the University. This aspect is being examined in more detail by the Task Force on Resources.

- Under current funding arrangements, there is financial pressure to increase international undergraduate student enrolment. Despite the higher cost of education for international students, the University is able to set tuition fees to cover these costs. This is in sharp contrast with the woefully inadequate government funding coupled with tuition regulation for domestic students. Should domestic tuition become deregulated, this dynamic could change. However, the academic value of internationalization remains.
- The ratio of graduate to undergraduate students has significant financial implications. Per-student government funding is higher for graduate than for undergraduate students. However, the cost of instruction and supervision for graduate students is much higher and the need for financial support very significant. Hence, the mix should be assessed carefully for its overall financial impact.
- Similarly, the ratio of professional to research-stream graduate students has a meaningful impact on resources. Financial support for research stream students is, on average, more costly.
- The availability of scholarships and other sources of funding for graduate students outside the University's operating budget is critical in determining a student mix that is financially sustainable.
- An increase in the number of research-stream graduate students requires a proportionate increase in research funding.
- At present, the government and other research funding agencies do not provide sufficient funds to cover the full cost of research. Without a change in policy, an increase in the number of graduate students and the concomitant increase in research activity would lead to an increased draw on institutional resources and would result in a net negative impact on the University's budget.
- The University of Toronto is committed to maintaining accessibility to all its programs and for all qualified students, regardless of their financial circumstances. When tuition fees

increase the need for student aid increases at a faster rate. This must be accounted for in the overall financial picture.

- Space considerations limit the possibility of expansion on the St. George campus. In fact, achieving the quality envisaged in the scenarios presented in this report requires a reduction in the total student population. Some expansion is possible at UTM and UTSC, but significant capital investments would be needed to provide the space required.

Tri-Campus Considerations

The manner in which the University's three campuses will evolve and develop over the next twenty years will influence and be influenced by enrolment patterns. Tri-campus structural and administrative matters are being examined by the Task Force on University Organization. The Task Force on Enrolment assumes that the three campuses will have a higher degree of autonomy than at present and the ability to offer self-standing graduate programs, including PhD programs. At the same time, the unitary graduate program arrangement currently in place will continue in areas where it is judged to be beneficial.

- There is strong support for the U of T remaining a three-campus university, with increased levels of autonomy among campuses, rather than moving toward three independent universities.
- Most graduate students at the University of Toronto carry out their research and/or course work at the St. George campus. The number carrying out research and/or course work on the UTM and UTSC campuses is very small. However, many students on the St. George are supervised by professors with primary appointments at UTM or UTSC.
- Plans for new programs should be coordinated among the three campuses to avoid unnecessary duplication or inefficient use of resources.
- There is a strong desire at UTM and UTSC for increasing the number of graduate students performing research, taking courses and living on campus in some but not necessarily all disciplines. The Task Force supports this direction. It also assumes and recommends that the administrative structure for graduate studies continue to make it possible for a professor on one campus to supervise students on any other campus.
- The increase in graduate activity on the UTM and UTSC campuses may involve the movement to UTM and UTSC of some graduate activities that have traditionally been carried out on the St. George campus. Some new research-stream graduate programs may also be introduced. The Task Force sees no reason to limit graduate growth at UTM and UTSC. However, research-stream graduate programs, particularly PhD programs, often take a long time to develop and to grow in size. The rate of growth anticipated in some of the scenarios given later may be difficult to achieve in the 2030 time horizon.
- In addition to the expansion of doctoral-stream activity in specific disciplines, a majority of the growth in graduate programs at UTM and UTSC is expected to be in professional Masters programs and possibly in some new professional doctorate programs.

Enrolment Scenarios

This section presents several enrolment scenarios for each campus. These are followed by a discussion of some of the important implications for the character of each campus and the resources needed.

The University of Toronto is the flagship institution for post-secondary education in Ontario and in the country. The University aspires to offer programs that are among the very best offered by any institution around the world, public or private. At the same time, the future of Ontario and Canada is dependent on the availability of the high level of research and innovation that such an institution engenders and the best possible educational opportunities for students.

The Task Force is well aware of the high cost associated with the excellence that top international institutions represent, and that the University of Toronto requires very substantial increases in revenue to achieve these levels. None the less, we offer the scenarios presented below in the firm belief that they are worthy of serious consideration.

All the scenarios given below are based on an increase in the percentage of graduate students. In each case, an estimate is given for the resources needed to achieve the University's aspiration to reach the highest international standards. In all cases and on all three campuses, the resources needed are considerably higher than what is available at present.

A breakdown of current enrolment on each campus is given in Appendix 3. These enrolments are the starting points for the scenarios given below. It should be emphasized that the figures in the scenario tables are only intended to show an order of magnitude and a possible direction for change. Actual enrolments will have to respond to academic planning, changing circumstances, availability of resources and various other constraints. For the same reasons, no detailed breakdown by discipline or program is given in the scenarios. Programs and degrees are grouped in broad categories.

The projected increase in demand for post-secondary education in the GTA was discussed by the Task Force. According to the scenarios below, the University of Toronto would not be able to assist in meeting the increased demand by admitting more undergraduate students. An underlying assumption is that the University will work with the Government to assist in other ways, perhaps through expansion at other GTA universities and/or the creation of new institutions, to meet the growing undergraduate demand in the GTA.

The increase in demand for undergraduate positions will be accompanied by a similar increase in demand for post-graduate education. In fact, Ontario's and Canada's economies are increasingly dependent on innovation and the availability of highly qualified personnel in all fields. Hence, the demand for graduate education is likely to increase at even a faster rate than undergraduate demand. The University of Toronto is best positioned to play a leading role in meeting the demands for graduate education and in providing innovation and research at the highest levels.

St. George Campus

The Task Force strongly recommends that the University of Toronto move in the direction of increasing the percentage of graduate students on the St. George campus. This is also the consensus of the all submissions the Task Force received. Enrolment scenarios are presented below to illustrate how the character of the campus and the resources needed change with the percentage of graduate students.

The current student population is summarized in Table 1, together with the number of full-time faculty involved in teaching and research. The resources available to the University at present are used as a reference against which the resources needed for various scenarios will be assessed. Hence, the per-student cost of the present operation, as represented by our operating budget, is

taken as a baseline. A cost factor is provided for each of the proposed scenarios in order to illustrate the extent to which additional resources will be needed. It should be emphasized that these are only rough, order of magnitude estimates of the costs involved.

There are two significant challenges that the University faces at present — the high student-to-faculty ratio and the lack of adequate space. High quality teaching can occur in both large and small classes. However, the number of small classes at present is far fewer than it should be, limited by an insufficient number of faculty and appropriate small classrooms.

Table 1. Enrolments on the St. George Campus in 2007-08.

		Current		
		FTE	Program Mix	% of Total
Undergraduate				
	A&Sc	20,715	62%	
	Other first entry	5,400	16%	
	Professional	7,256	22%	
	Subtotal undergraduate	33,371	100%	74%
Graduate				
	PhD	5,023	43%	
	Masters	6,615		
	Subtotal graduate	11,638	100%	26%
Total, St. George		45,009		100%
Number of faculty		1,777		
Per-student cost factor		1.1		

Each of three scenarios presented below is intended to represent a campus that offers an excellent student experience and high quality of teaching and research, but for a different student mix. All scenarios are predicated on the assumption that the needed resources will become available. The total number of students is smaller than at present to ensure that the available space can accommodate the needs of students, faculty, classrooms and research laboratories.

The first scenario is shown in Table 2. Graduate students make up 30% of the student population, with a program mix that is about the same as at present. This scenario differs from the present state of the St. George Campus in two key aspects. First, the total number of students has been reduced from 45,000 to about 40,000. This is a result of space limitations and the need to provide space for small classrooms, research laboratories and faculty and staff offices.

The second difference is that the number of faculty has been increased substantially to reduce the student-to-faculty ratio from the present 24:1 to about 16:1. Reducing the student-to-faculty ratio makes it possible to reduce class size and increase student-faculty interaction. This scenario would put the University of Toronto on par with many of the top public universities in North America.

The increase in faculty numbers must be accompanied by a commensurate increase in staff and by improvements in all services. The estimated per-student cost is 80% higher than at present. These data have been communicated to the Task Force on Resources to inform their deliberations.

Table 2. St. George Campus — 30% Graduate

		2030		
		FTE	Program Mix	% of Total
Undergraduate				
	A&Sc	15,000	54%	
	Other first entry	5,300	19%	
	Professional	7,300	26%	
	Subtotal undergraduate	27,600	100%	70%
Graduate				
	PhD	5,500	46%	
	Masters	6,500	54%	
	Subtotal graduate	12,000	100%	30%
Total, St. George		39,600		100%
Number of faculty		2,500		
Per-student cost factor		1.8		

Next, consider a scenario representing the other extreme, with graduate students representing 50% of the student population on the St. George campus. This scenario is shown in Table 3. It represents a significant increase in research capacity that would rival top institutions anywhere, public or private.

Table 3. St. George Campus — 50% Graduate

		2030		
		FTE	Program Mix	% of Total
Undergraduate				
	A&Sc	7,000	39%	
	Other First entry	4,000	22%	
	Professional	7,000	39%	
	Subtotal, undergraduate	18,000	100%	50%
Graduate				
	PhD	9,000	50%	
	Masters	9,000	50%	
	Subtotal Graduate	18,000	100%	50%
Total, St. George		36,000		100%
Number of faculty		3,500		
Per-student cost factor		2.7		

The 50% scenario would change the character and operation of the University in fundamental ways. A university with such a large percentage of graduate students is viable only if it offers the highest possible quality in every aspect of its operation. It must be able to recruit top students and top faculty, as well as the operating and research funding that would sustain that level of activity. The resources needed are considerably higher than the levels normally possible at public institutions.

The increased volume of research inherent to this scenario requires a corresponding increase in space. For this reason, the total number of students has been reduced to 36,000. If it is deemed desirable to maintain the number of students at the current level of 45,000, an estimated increase in space on the order of 40% would be needed.

Based on the experience of other universities, faculty complement would need to increase significantly in order to achieve a student-to-faculty ratio in the neighbourhood of 10 to 1. Substantial increases would be needed in the number of administrative and support staff to provide the level of service expected under this scenario. The cost of supporting graduate students is also considerable. Costs per student for this scenario are almost three times the present costs, requiring revenue per student at a level comparable to that at top AAU member universities.

In the third scenario, shown in Table 4, graduate students constitute 40% of the total population on the St. George campus. Although there are fewer graduate students than in the 50% case, this scenario still represents a highly research-intensive university campus and shares many of the qualitative aspects of the 50% scenario.

Table 4. St. George Campus — 40% Graduate

		2030		
		FTE	Program Mix	% of Total
Undergraduate				
	A&Sc	11,000	49%	
	Other First entry	4,500	20%	
	Professional	7,000	31%	
	Subtotal, undergraduate	22,500	100%	60%
Graduate				
	PhD	7,000	47%	
	Masters	8,000	53%	
	Subtotal Graduate	15,000	100%	40%
Total, St. George		37,500		100%
Number of faculty		3,300		
Per-student cost factor		2.4		

University of Toronto at Mississauga/ University of Toronto at Scarborough

The comments in this section apply to both UTM and UTSC, but separate enrolment scenarios are presented for the two campuses.

The 2030 planning period is expected to present excellent opportunities for UTM and UTSC to grow and to enhance quality at both the graduate and undergraduate levels. The two campuses are well positioned to offer undergraduate programs of exceptional quality and innovative graduate programs that respond to the anticipated increase in demand for professional education.

Undergraduate Programs

The two campuses offer programs both in the traditional disciplines of arts and science and in unique and emerging inter-disciplinary studies, as in the areas of the environment and digital media. The demand for such programs is increasing, both by the students and by potential employers. This, combined with the projected growth in the GTA and the expected reduction in admissions at the St. George campus, means that the number of applicants to UTM and UTSC can be expected to rise steadily. Each campus will become a destination of choice for top students who are seeking excellent undergraduate programs.

There is interest at UTM for some increase in the undergraduate population. A somewhat higher increase is possible at UTSC. These constraints are reflected in the enrolment scenarios given below. It should be emphasized that capital needs to build the space required are considerable, but these have not been included in the estimated operating costs for various scenarios.

Graduate Programs

The Task Force discussed at length the extent to which graduate programs at the two campuses can be expected to grow. We assume that any administrative matters that limit the development of new programs will be resolved, such that graduate programs and student numbers would be driven primarily by academic planning considerations, demand for graduate programs, and the capacity for teaching and supervision.

It is clear that there is significant interest on each of the two campuses in introducing innovative doctoral-stream research programs, new professional masters and possibly some professional doctorate programs. Professional graduate degrees are increasingly becoming the degrees of practice. There is excellent potential for sharing of resources between upper year undergraduate and professional Masters programs. There is also the potential for innovative packaging to introduce five-year degrees. The rate of growth in these areas will be influenced by the marketplace and student demand.

Current enrolments at UTM and UTSC are summarized in Table 5. As noted earlier, most doctoral-stream students at the University of Toronto, including many of those supervised by professors at UTM and UTSC, have their research activity located at St. George. Hence, the numbers in Table 5 do not reflect the actual level of graduate supervision by faculty with primary appointments on the two campuses. In the future, these numbers are expected to increase substantially as UTM and UTSC expand existing tri-campus programs and develop stand-alone programs.

Table 5 shows that the present student-to-faculty ratios at UTM and UTSC are very high. The current per-student cost is estimated to be 80% at UTM and 70% at UTSC relative to the average across the University.

Table 5. Enrolments at UTM and UTSC in 2007-08.

		UTM			UTSC		
		FTE	Program Mix	% of Total	FTE	Program Mix	% of Total
Undergraduate		8,411		96%	8,377	8%	98%
Graduate							
	PhD	96	27%		66	43%	
	Masters	255	73%		88	57%	
	Subtotal Graduate	351	4%	4%	154	100%	2%
Total		8,761		100%	8,531		100%
Number of faculty		243			224		
Cost factor		0.8			0.7		

The scenarios presented for UTM and UTSC anticipate a substantial increase in the number of undergraduate students. Actual increases will be guided by academic planning and by space considerations. Graduate enrolments are more difficult to project as they involve more complex issues. The increase in the number of graduate students is limited by a variety of factors, including:

- Considerable effort and time is involved in introducing new professional graduate programs. For example, adding 500 professional Masters students would require adding a new program with 50 students every second year for the next 20 years. This is a challenging goal.
- Similarly, stand-alone research-stream degrees, particularly the PhD, take considerable time to establish and to attract students. The current levels of enrolment in the PhD programs on the St. George campus have been attained over a 70-year period.
- It is expected that faculty in some disciplines will continue to supervise graduate students on the St. George campus. Opportunities to move research activity from St. George to UTM and UTSC should be examined.
- These factors affect all campuses, but their effect on limiting the rate of growth is likely to be more pronounced at UTM and UTSC because the starting point is relatively low.

The first scenario for enrolments at UTM and UTSC is given in Table 6. It shows undergraduate FTE enrolment growing to 12,000 on each campus, with graduate enrolment rising to 10% of the student population. Although this graduate percentage may seem low, it already represents a three-fold increase at UTM and an 8-fold increase at UTSC. To maintain the high quality expected in all scenarios, faculty numbers need to increase to about 650, and costs pre student would double relative to present levels.

Table 6. UTM and UTSC, 10% Graduate Students

		UTM			UTSC		
		FTE	Program Mix	% of Total	FTE	Program Mix	% of Total
Undergraduate		12,000		90%	12,000		90%
Graduate							
	PhD	300	23%		300	23%	
	Masters	1,000	77%		1,000	77%	
	Subtotal Graduate	1,300	100%	10%	1,300	100%	10%
Total		13,300		100%	13,300		100%
Number of faculty		650			650		
Cost factor		1.4			1.4		

Both campuses indicated that under the right circumstances, total student population may go as high as 15,000 at UTM and possibly higher at UTSC. The scenario in Table 7 shows this possibility. Some of the opinions expressed during the Task Force discussions suggested that there is strong interest in more aggressive graduate expansion. Hence this scenario assumes that graduate students make up 14% of the total student population. The need for additional supervisory capacity relative to the 10% model means that a lower student-to-faculty ratio would be needed and a correspondingly higher cost per student.

Table 7. UTM and UTSC, 14% Graduate Students

		UTM			UTSC		
		FTE	Program Mix	% of Total	FTE	Program Mix	% of Total
Undergraduate		11,000		86%	14,000		86%
Graduate							
	PhD	300	17%		400	18%	
	Masters	1,500	83%		1,800	82%	
	Subtotal Graduate	1,800	100%	14%	2,200	100%	14%
Total		12,800		100%	16,200		100%
Number of faculty		700			850		
Cost factor		1.5			1.5		

An extreme case with 20% graduate students is shown in Table 8. Such a high ratio of graduate students would be difficult to achieve if there is a substantial increase in the number of undergraduate students. Hence, only modest undergraduate growth is shown in this scenario.

Table 8. UTM and UTSC, 20% Graduate Students

	UTM			UTSC		
	FTE	Program Mix	% of Total	FTE	Program Mix	% of Total
Undergraduate	10,000		80%	12,000		80%
Graduate						
PhD	500	20%		600	21%	
Masters	2,000	80%		2,200	79%	
Subtotal Graduate	2,500	100%	20%	2,800	100%	20%
Total	12,500		100%	14,800		100%
Number of faculty	700			850		
Cost factor	1.6			1.6		

Impact

A common requirement to all the scenarios for all campuses is the significant increase in the resources needed to achieve the quality level assumed. There are also implications to the balance of teaching and research and impact on the colleges. These and other issues are addressed below.

Resources

- A significant reduction in student-to-faculty ratio compared to the present is essential. Lower student-to-faculty ratios are needed to provide the supervisory capacity and to sustain the desired quality of education at the graduate and undergraduate levels.
- The Task Force does not envisage large increases in the number of teaching-stream faculty.
- The University should aim for quality enhancements in all aspects of its operation, including the quality of space, the availability and quality of student services, etc.
- The per-student funding required can only be achieved through meaningful increases in all sources of revenue, including:
 - *Operating grant funding from the provincial government:* A substantial increase in government funding would be more than justified by the return on investment that a university of the caliber envisaged would bring. A policy that recognizes the differential nature of post-secondary institutions would facilitate that investment.
 - *Tuition Fees:* The high levels of funding needed may also necessitate increases in tuition fees. Given the University's commitment to accessibility, any increase in tuition must be accompanied by an appropriate increase in student aid. Deregulation of tuition fees for institutions that are able to guarantee student accessibility would facilitate these proposed changes.
 - *Graduate Scholarships:* Scholarships for graduate students are an integral and essential component of funding for a research-intensive institution. They are needed both to attract top-quality students and to relieve pressure on the University's operating budget, which would otherwise have to provide financial support to a significant portion of the student population.

- Significant changes in student mix would require reconfiguration of existing space. Also, substantial capital investments would be needed at UTM and UTSC to provide expansion space.

Teaching and research

- The University should explore innovative approaches that make it possible to reduce class size, enhance the quality of undergraduate teaching and at the same time support a high level of research and scholarship. In particular, the Task Force wishes to draw attention to the University's *Statement of Institutional Purpose*, which includes: "The University is committed to ensuring that the teaching and counseling of undergraduates is a normal obligation of every member of faculty."

A key ingredient to success in achieving the desired balance is to provide meaningful support to professors. An excellent example is found at MIT. Faculty members collaborate in the delivery of lectures and the small-class "recitations" that follow. Considerable assistance is provided in all aspects of course preparation and delivery. As a result, in addition to MIT's stellar reputation in research, its undergraduate programs are among the best in the world.

- Consistent with the point above, increasing the percentage of graduate students makes it possible to mount a sufficient number of small-class tutorials to enhance students' understanding and engagement. Undergraduate students would also have many opportunities to participate in research.
- The varied sources of research funding that would be needed to support increased research activity mean that professors are likely to be highly engaged with industry, business, government and society at large. In turn, this provides an enriching experience to all students, graduate and undergraduate.

Students

- Attracting a large number of excellent graduate students is dependent on the availability of a large enough pool, which will require a significant increase in international graduate enrolment. This is also consistent with the desirability for internationalization, as discussed earlier.
- The demand for graduate education will undoubtedly differ among disciplines. Detailed planning will need to take that into account.
- The government's approach to operating grant funding and to tuition deregulation is likely to influence the balance between domestic and international students. The University must move to an appropriate mix of undergraduate and graduate students that not only achieves its academic objectives but also ensures financial sustainability.

Residence and Colleges

- The graduate-undergraduate and domestic-international mix will impact the quantity and type of residences needed. With the recommended increase in international students and students from across Canada, more students are likely to seek residence close-by. Careful planning is needed in this area.
- The services provided at present by the constituent and federated colleges are primarily focused on undergraduate students. With the increase in graduate population, colleges will need to attract and serve graduate students. Changes not only in the type of residence they offer but also in the programmatic aspects of their operation may be necessary.

Student Life

- Student life aspects differ for graduate and undergraduate students. Graduate students tend to be less involved in campus activities, and the activities they do participate in may be different. Careful attention should be paid to student life matters to ensure that both groups are well served with opportunities to develop soft skills while pursuing their research and scholarship.
- A large number of graduate students and post-doctoral fellows present excellent opportunities for mentoring of undergraduates. Appropriate arrangements in this regard could enhance the student experience significantly.

Recommendations

The University of Toronto must continue to strive to be one of the top research-intensive universities in the world. Planning should be guided by the need to offer very high quality in both teaching and research.

Given the growth the University has already undergone in recent years, it is difficult to conceive of a further dramatic increase in total enrolment. We are in the process of rising to the challenge of meeting graduate enrolment expansion in a timely manner. We should be strategic in terms of clearly aligning any further enrolment expansion with our mission and vision.

In view of the projected additional demand at both the undergraduate and graduate levels, we believe that the University of Toronto is best positioned to contribute to the province's overall needs by expanding its current plans for graduate education. The U of T cannot grow enough to meet the forecasted increased demand for undergraduate education.

Structure and Enrolment

- There is continued broad support for the three-campus system, with some modifications. It is assumed that current administrative concerns will be resolved.
- There is very little desire for a fourth University of Toronto campus. There is some capacity for undergraduate expansion at UTM and UTSC.
- There may be opportunities for expansion of articulated programs between the University and external institutions such as Toronto area Colleges of Applied Arts and Technology. There already exist joint programs at UTM and UTSC with Sheridan and Centennial respectively. In order to increase these types of programs, we would need to develop clear protocols to assist in the movement of students (and their program/degree requirements) between institutions.
- In order to meet demands for increased undergraduate post-secondary education in the GTA, the Task Force recommends that the University work collaboratively with government and other universities and colleges to create new institutions that best and most efficiently serve the needs and demands of the province.
- As the premier research university in the country, the UofT should focus expansion on graduate and professional programs. This allows for the continuation and strengthening of our educational and research missions and for targeted growth.
- Because of physical constraints and over-stretched resources, the St. George campus aims to reduce undergraduate enrolments in the Faculty of Arts and Science and to a lesser extent in the Faculty of Applied Science and Engineering, with the remaining divisions maintaining their current levels.
- UTM and UTSC should increase both undergraduate and graduate enrolments, probably with an emphasis on professional graduate programs and doctoral-stream programs in targeted areas.

- The St. George campus should increase the percentage of graduate students to the order of at least 30% and possibly as high as 50% if circumstances allow. This target is similar to the student mix at peer institutions in the US and internationally.

The Task Force emphasizes that we will need to monitor progress toward these strategic goals and be prepared to adjust targets and plans to maintain quality. We can expect the road over the next fifteen years to be just as bumpy and unpredictable as it has been in the past 15 years.

Resources

- A common and key component in all the scenarios presented in this report is the need to increase resources. Staff-student ratios must improve in order to provide a quality academic experience for students. This is needed to enable many more small classes than at present and to increase student-faculty interaction.
- Careful attention must be paid to space constraints to provide a sufficient number of small classrooms, research laboratories and space for the increased number of faculty and staff.
- Significant capital expenditures would be needed at UTM and UTSC to realize the scenarios presented in this report.
- Research funding and support for research infrastructure must increase in proportion to the increase in the graduate population.
- Students' life and co-curricular activities should receive increased attention. Administrative staff should be increased and all services should be improved, commensurate with the increase in faculty numbers.

Sources of Students and Recruitment Strategies

The quality of students and what they bring to the University sustain the overall standard of our programs and scholarship. As noted in *Stepping UP* the “quality of all of our students makes a tremendous difference to the quality of the educational experience of any individual student both in the classroom and outside the classroom. A university seeking to offer a first-rate undergraduate, professional or graduate education must necessarily recruit first-rate students if it is to achieve its goal.”²

- The proportion of international students should be increased overall. This is desirable at both the graduate and undergraduate levels.
- U of T should expand its presence as “Canada’s national University” at the undergraduate level and actively recruit more top students from outside the province.
- We should consider our recruitment processes and admission policies, with a view to adding criteria to our historic focus on high school grades. Our recruitment strategy should focus on maintaining and enhancing excellence and diversity of our student population. To the extent possible, admission criteria should be broadened to include positive attributes of a well-rounded student.

For example, it would be valuable to have in place a system for admitting students based on a ‘portfolio’ that demonstrates leadership ability, special skills in music, drama or athletics, community service and engagement, or other relevant activities. More comprehensive assessments of this kind are currently being employed in some divisions. A more wide-spread use would complement the University’s high academic admissions standards. In order fully to realize such criteria, the attributes of the best and brightest must be articulated by the University and its academic divisions and be considered in early admissions decisions where appropriate.

² Stepping UP Companion Paper 1, <http://www.provost.utoronto.ca/plans/framework/studentexperience.htm>

Concluding Remarks

The University of Toronto is Canada's leading research-intensive university, and it has achieved an enviable international reputation. It is now poised to move forward to count among the top few universities world-wide, public or private, with its two complementary goals of excellence in teaching and research. This report provides several enrolment scenarios that are consistent with these goals and highlights the resources and changes needed to achieve them.

Appendix 1

Enrolments at Member Universities of the American Association of Universities

University	Full Time Undergraduate	Full Time Graduate	Total	% Graduate
MIT	4,068	5,924	9,992	59%
California Institute of Technology	864	1,222	2,086	59%
Columbia U.-City of New York	8,543	10,524	19,067	55%
U. of Chicago	5,840	5,722	11,562	49%
Harvard U.	10,005	9,579	19,584	49%
Johns Hopkins U.	5,769	5,427	11,196	48%
Stanford U.	7,352	6,784	14,136	48%
Yale U.	6,515	4,714	11,229	42%
Rice U.	2,977	1,930	4,907	39%
Duke U.	7,986	5,016	13,002	39%
Carnegie Mellon U.	5,365	3,274	8,639	38%
Northwestern U.-Evanston/Chicago	10,067	5,697	15,764	36%
U. of Southern California	18,711	10,495	29,206	36%
U. of Pennsylvania	12,495	6,997	19,492	36%
Princeton U.	4,790	2,295	7,085	32%
U. of Rochester	5,006	2,368	7,374	32%
Washington U.-St. Louis	7,501	3,388	10,889	31%
Brandeis U.	3,280	1,447	4,727	31%
Vanderbilt U.	7,577	3,316	10,893	30%
Emory U.	8,081	3,334	11,415	29%
Georgia Inst of Tech-Main Campus	11,542	4,573	16,115	28%
Case Western Reserve U.	5,435	2,044	7,479	27%
U. of Michigan-Ann Arbor	27,155	10,165	37,320	27%
New York U.	22,903	8,178	31,081	26%
Cornell U.-Endowed Colleges	14,444	5,157	19,601	26%
U. of California-Los Angeles	26,407	9,013	35,420	25%
U. of California-Berkeley	24,164	7,892	32,056	25%
U. of Washington-Seattle	25,431	7,598	33,029	23%
U. of Maryland-College Park	23,239	6,593	29,832	22%
U. of Virginia-Main Campus	15,588	4,410	19,998	22%
U. of Texas-Austin	35,275	9,957	45,232	22%
U. of Pittsburgh-Main Campus	17,277	4,846	22,123	22%
Tulane U. of Louisiana	6,620	1,841	8,461	22%
Stony Brook U.	14,331	3,926	18,257	22%
Brown U.	6,107	1,647	7,754	21%
Syracuse U.	12,827	3,244	16,071	20%
U. of Illinois-Urbana/Champaign	31,389	7,860	39,249	20%
U. of North Carolina-Chapel Hill	18,570	4,341	22,911	19%
U. of Wisconsin-Madison	29,468	6,879	36,347	19%
U. of Florida	36,166	8,208	44,374	18%
SUNY-Buffalo	19,325	4,011	23,336	17%
U. of Toronto	50,611	10,422	61,033	17%
Catholic University	3,523	707	4,230	17%

University	Full Time Undergraduate	Full Time Graduate	Total	% Graduate
Texas A&M U.	34,078	6,576	40,654	16%
U. of California-San Diego	20,999	4,044	25,043	16%
U. of California-Davis	22,753	4,202	26,955	16%
Ohio State U.-Main Campus	38,174	7,013	45,187	16%
U. of Minnesota-Twin Cities	30,512	5,537	36,049	15%
U. of Arizona	25,832	4,672	30,504	15%
U. of California-Irvine	20,498	3,655	24,153	15%
Michigan State U.	34,159	5,666	39,825	14%
Purdue U.-Main Campus	31,085	4,894	35,979	14%
Indiana U.-Bloomington	29,147	4,560	33,707	14%
U. of Oregon	15,513	2,387	17,900	13%
U. of California-Santa Barbara	17,709	2,722	20,431	13%
Penn State U.-Main Campus	35,368	5,134	40,502	13%
U. of Nebraska-Lincoln	16,500	2,309	18,809	12%
U. of Iowa	20,292	2,833	23,125	12%
Rutgers U.-New Brunswick	24,978	3,454	28,432	12%
Iowa State U.	19,593	2,587	22,180	12%
U. of Missouri-Columbia	21,309	2,801	24,110	12%
U. of Kansas-Main Campus	19,026	2,282	21,308	11%
U. of Colorado-Boulder	24,431	1,455	25,886	6%

Appendix 2 Enrolment Mix in Arts and Science 2007-08

Year 1 Full Time Enrolment in Arts and Science

A&Sc (St. George)	
Arts	3,010
Commerce/ Business Administration	1,276
Science	1,886
Subtotal	6,172
U of T Mississauga	
Arts	1,334
Commerce/ Business Administration	760
Fine & Applied Arts	45
Science	924
CTEP	23
Subtotal	3,086
U of T Scarborough	
Arts	925
Commerce/ Business Administration	940
Science	1,003
CTEP	14
Subtotal	2,882
Total	
Arts	5,269
Commerce/ Business Administration	2,976
Fine & Applied Arts	45
Science	3,813
CTEP	37
Grand Total	12,140

Appendix 3 Enrolment Summary 2007-08

	Domestic	Intl	Total	% Intl
UNDERGRADUATE:				
St. George, A&S	18,404	2,313	20,718	11%
Arts & Humanities			7,961	
Social Sciences			6,093	
Math. Physical and Life Sciences			6,664	
UTM	7,795	617	8,411	7%
Arts & Humanities			3,254	
Social Sciences			3,136	
Math. Physical and Life Sciences			2,022	
UTSC	7,710	671	8,381	8%
Arts & Humanities			1,638	
Social Sciences			4,463	
Math. Physical and Life Sciences			2,280	
Undergraduate Arts & Science	33,909	3,601	37,509	10%
Applied Science	3,826	502	4,328	12%
PE&H	519	8	527	2%
Music	439	15	454	3%
TYP	89	6	95	6%
Undergraduate - Other first entry	4,873	531	5,404	10%

	Domestic	Intl	Total	% Intl
Medicine - Postgraduate	1,602	782	2,384	33%
Dentistry	328	8	336	2%
Law	555	39	594	7%
Medicine - MD	847	3	850	0%
Medicine - Radiation Sciences	404	2	406	0%
OISE/UT excl. CTEP	1,245	5	1,250	0%
Nursing	307	6	313	1.9%
Pharmacy - BSCP	962	4	966	0%
Pharmacy - PharmD & Residents	56	1	57	2%
WDW Certificates	70	0	70	0%
Undergraduate Professional	6,376	850	7,156	12%
Total Undergraduate	45,158	4,981	50,070	10%
GRADUATE:				
PMAS - St. George MBA	601	117	718	16%
PMAS - St. George excl. MBA	3,016	193	3,209	6%
PMAS - UTM MMPA	86	23	109	21%
PMAS - UTM excl. MMPA	93	6	99	6%
PMAS - UTSC	49	5	54	10%
Professional Masters total	3,844	344	4,188	8%
Doctoral Stream Masters	2,431	394	2,825	14%
Doctoral Stream PHD	4,203	974	5,177	19%
Total Graduate	10,478	1,712	12,191	14%
OVERALL PROGRAM MIX:				
Undergraduate	45,158	4,981	50,070	10%
Professional Masters	3,844	344	4,188	8%
Doctoral Stream Masters	2,431	394	2,825	14%
Doctoral Stream PHD	4,203	974	5,177	19%
Total UofT	55,637	6,693	62,260	11%