

Inventory of Physical Facilities of Ontario Universities

2013-14

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MAY 2015

COUNCIL OF
ONTARIO UNIVERSITIES

CONSEIL DES
UNIVERSITÉS DE L'ONTARIO

Inventory of Physical Facilities of Ontario Universities 2013-14

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COU Inventory of Physical Facilities of Ontario Universities 2013-14¹

EXECUTIVE SUMMARY

With increasing emphasis on accountability, universities are expected to ensure that their use of resources, including physical facilities, is efficient and that appropriate information on utilization is available to the government and the wider public. In addition, the current financial situation in Ontario would indicate that there will not be a significant increase in capital funds available to build new buildings in the near future. Universities, therefore, need to use their existing space more efficiently. Explaining how university space is being used is an ongoing responsibility of the Committee on Space Standards and Reporting.

The federal Government and the Ontario Government provided a significant investment in 2009 in new buildings and renewal through the Knowledge Infrastructure Program (KIP). Under KIP, Ontario universities received \$488 million in federal funding and \$607 million in provincial funding. This report captures the impact of these investments. No new major capital funding programs have been confirmed since KIP. In 2011, the province launched the Putting Students First plan to provide long term capital funding to help universities build more state-of-the-art learning spaces and renew campus infrastructure. In 2013, the Ministry of Training, Colleges and Universities (MTCU) announced a Major Capacity Expansion (MCE) project to support enrolment growth; in May 2015, the province announced that they will support a new York University – Markham Centre campus in partnership with Seneca College.

More than 30 years after they first appeared, the original *Building Blocks*² publications are still requested by universities, government departments and planners in North America and abroad. The COU space formula retains its usefulness and credibility, in large part because it undergoes regular review and updating so that the results in the report show, as accurately as possible, the current space use in Ontario universities' campuses.

This report contains changes to the space factors for a number of space categories; therefore the percentage of actual inventory to generated space³ for these categories and the sector total should not be compared to previous years. It is important to note that this change reflects the efficiencies in space that the universities have achieved over recent years. In fact, with the change in standards, generated space has been reduced by 408,000 net assignable square metres (NASM) or approximately 10% of the total space. The sector can therefore claim that it would avoid significant costs from not building space to the old standard - about \$4 billion at a typical construction cost of \$10,000 / NASM.

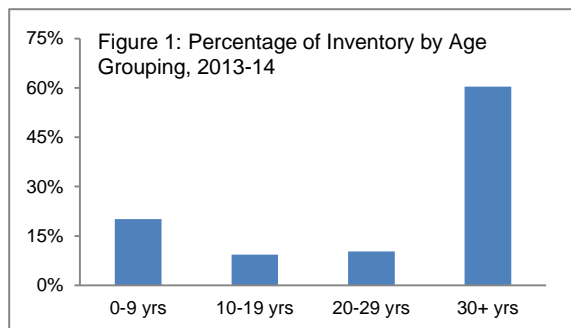
1 The COU Inventory of Physical Facilities of Ontario Universities triennial report has been produced since 1978. The report tracks changes in university facilities over time and compares the actual space to space that is required (generated space). This report deals with the quantity of space only and does not report on the quality of space.

2 *Building Blocks* was published in the 1970s and provides a detailed examination of each space category in terms of the data collected, the input measures used and the rationale for the space factors that have been adopted.

3 The COU Committee on Space Standards and Reporting developed COU space guidelines in 1971, and has maintained and updated them since then. COU space guidelines are a systematic, analytical approach to evaluate the utilization of existing physical resources and to forecast future requirements. The standards, which are based on a number of variables that go beyond space metrics to include issues such as enrolment, are respected benchmarks in Ontario's university and government sectors. For example, the formula for calculating classroom space includes the average university classroom station size, the room utilization standard and station utilization standard. Each of these components are reviewed on a regular basis to take into account changes in teaching pedagogies.

Universities are operating at 78.8% of the space they should have, according to the 2013-14 COU space standards.

Graduate expansion initiated under the Reaching Higher plan in 2005 continues to place additional pressure on space. Graduate students require more space than undergraduates because of their research, office and library space needs. Graduate students in Ontario universities have increased from 11% (2004-05) to over 13% (2013-14) of the total enrolment. Since graduate enrolment growth will continue until universities reach their targets for graduate expansion⁴, the pressure on space will also grow.

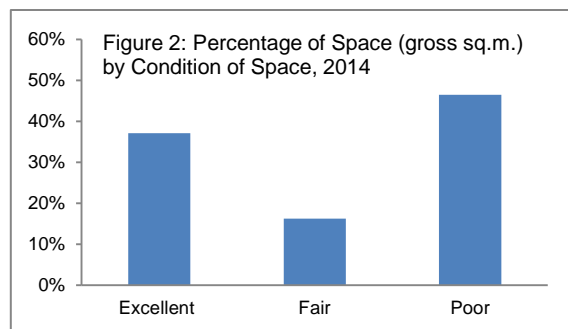


Buildings at Ontario universities are on average 34.7 years old, and over 60% of the total inventory is over 30 years old. Universities' facilities are at a point where an infusion of capital / renewal funding is required to update systems (for example, electrical, HVAC). Because, the learning and research needs of today are far different than they were over three decades ago, the infrastructure built then does not always meet the requirements of delivering today's programs.

Buildings that have been built recently make more efficient use of space through the provision of smaller offices and more efficient teaching and research labs.

The provincial government announced in April 2014 that funding for facilities renewal will increase beginning in 2015-16 to address deferred maintenance in the sector. The plan includes a phasing in of additional renewal funding annually growing to a total investment of \$100 million by 2019-20 to colleges and universities.

In addition to publishing this report, COU also publishes the *Facilities Condition Assessment Program (FCAP)* report, which examines the quality of space. The 2014 FCAP report shows that almost 50% of the total space in Ontario universities is classified as in 'poor' condition, when measured by the Facilities Condition Index (FCI). This indicator of the state of campus facilities is on average at about 0.10, which is just on the threshold for buildings in poor condition.



There are additional pressures on space emanating from the Accessibility for Ontarians with Disabilities Act (AODA) to make Ontario accessible for people with disabilities, both learning and physical, by 2025. Legislation on the accessibility standard dealing with the built environment, in particular, amendments to the Ontario Building Code has been recently approved as of January 1, 2015. These amendments will apply to new construction and planned renovation only. Universities will therefore now be required to consider access for persons with disabilities in any future capital projects.

⁴ In 2011 the Ontario government announced, as a component of the *Putting Students First* plan for postsecondary education, an additional allocation of 6,000 graduate spaces. The target date for the full expansion of graduate spaces is 2017-18.

Section 1

OVERVIEW OF THE 2013-14 INVENTORY OF PHYSICAL FACILITIES OF ONTARIO UNIVERSITIES REPORT

OVERVIEW OF THE 2013-14 INVENTORY OF PHYSICAL FACILITIES OF ONTARIO UNIVERSITIES REPORT

This report presents results of the latest in a series of triennial surveys conducted by the Council of Ontario Universities to monitor existing university space inventory and changes in space requirements, as determined by the *COU Building Blocks* space formula.

For those unfamiliar with the terminology used in the report, please see Appendix D: Definitions.

CHANGES MADE TO THE 2013-14 INVENTORY OF PHYSICAL FACILITIES OF ONTARIO UNIVERSITIES REPORT

With changing pedagogies, increasing demands for space, high enrolments and no major capital programs announced since KIP in 2009, the Putting Students First plan in 2011, and the Major Capacity Expansion (MCE) project in 2013, universities have had to be more efficient in how they use and manage their existing space. The Committee, in their continual review, agreed to make the following changes to ensure that the results show the current space use in Ontario university campuses:

The results show that the %I/G (actual inventory/generated inventory) for these categories increased from 2010-11. It is important to note that this does not mean that the shortfall in space is being resolved, but is an acknowledgement that universities are using space more efficiently.

Classrooms

The space factor was changed from 1.23 to 1.11 to reflect the increased hours and therefore the utilization of classroom facilities. The formula used to calculate this space factor is outlined in Appendix A (pages 74, 75). The percentage of seats that are occupied when a room is in use changed from 65% to 70%. The Committee assumed that seats are occupied 70% of the time during the day and 30% during the night (this reflects the fact that a number of Ontario universities conduct evening classes).

Office Space (Academic and Administrative)

The space factor was changed from 13 NASM for FTE Faculty, Research Appointments and Non-Academic Staff) to 12 NASM. The space factor has been reduced to account for the fact that new offices are being constructed in the range of 10-11 NASM. 12 NASM is used to take into account older buildings which have larger office space.

In previous years, 15% of the total FTE faculty count was added to the total faculty count to account for office space occupied by visiting scholars and emeriti professors. Most universities reassign office space for faculty on sabbatical. The Committee recommended that this be deleted.

Graduate Students' Office Space

The space factor was changed from 4 NASM per graduate student to 3 NASM. Based on current design principles, graduate students can be housed in approximately 3 NASM through the use of more efficient systems furniture. In addition, there are an increasing number of graduate students who are enrolled in course based programs and do not require office space.

Student and Central Services

The space factor was changed from 2 NASM/FTE student to 1.5 to better align the standard with current space use at universities. The following table shows that the actual NASM/FTE student has been declining.

	Food Service (7)	Bookstore (8)	AV TV (11)	Central Services (12)	Health Services (13)	Student Activity (14)	Assembly Exhibition (15)	NASM/FTE Student
1998	0.44	0.16	0.05	0.22	0.03	0.42	0.23	1.6
2001	0.40	0.14	0.04	0.13	0.03	0.38	0.22	1.3
2004	0.34	0.11	0.04	0.10	0.03	0.35	0.19	1.2
2007	0.32	0.10	0.03	0.11	0.03	0.33	0.17	1.1
2010	0.31	0.09	*	0.14	0.03	0.30	0.17	1.0
2013	0.29	0.09	*	0.13	0.03	0.30	0.18	1.0

* Commencing in 2010, Category 11 was included in Category 12. For more details please see Appendix F, page 111.

In summary, the following table shows the change in the space factor and the resulting change in %I/G for the space types described above:

Type of Space	2010-11 report		2013-14 report	
	Space Factor	% I/G	Space Factor	% I/G
Classrooms	1.23 NASM/FTE student	73.7%	1.11 NASM/FTE student	82.7%
Academic Offices*	13 NASM/office	81.5%	12 NASM/office	99.6%
Administrative Offices**	13 NASM/office	100.2%	12 NASM/office	109.0%
Graduate Student Offices	4 NASM/FTE graduate student	54.1%	3 NASM/FTE graduate student	75.2%
Student and Central Services	2 NASM/FTE student	51.4%	1.5 NASM/FTE student	67.3%
Total Formula space (categories 1-15)	Not applicable	70.4%	Not applicable	78.8%

*The elimination of the FTE faculty supplement in 2013-14 resulted in a decrease of the generated space figure for academic offices. This change, plus the reduction in the space factor from 13 NASM/office to 12 NASM/office, results in a higher %I/G figure compared to 2010-11.

** Includes administrative office space plus office service space (conference rooms, photocopy rooms, reception and storage areas).

The above changes reflect the fact that universities have had to allocate space more efficiently in our current financial situation. The fact that the %I/G figure increased over 2010-11 does not mean that universities obtained more space, but that they are using what they have more efficiently.

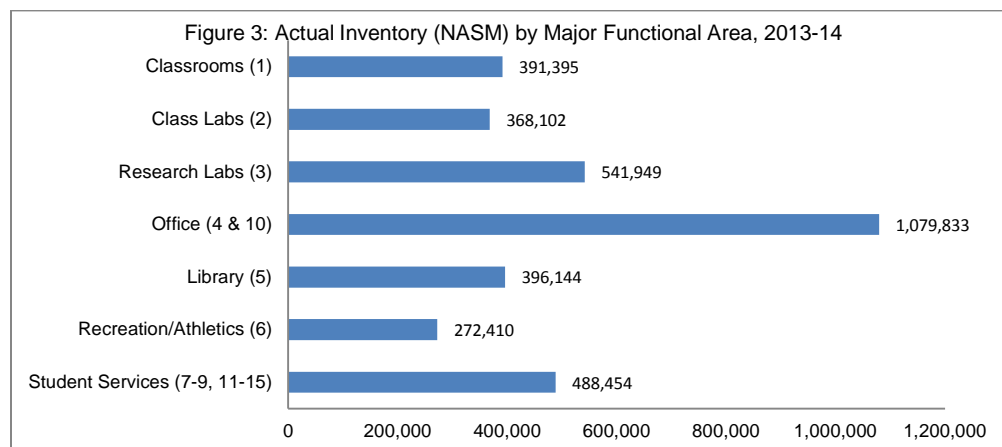
The enrolment counts at Ryerson University and the University of Guelph do not agree with MTCU counts.

The 4,000 students at Guelph-Humber are reported to MTCU, but are not included in this report as they use Humber College space, not Guelph campus space.

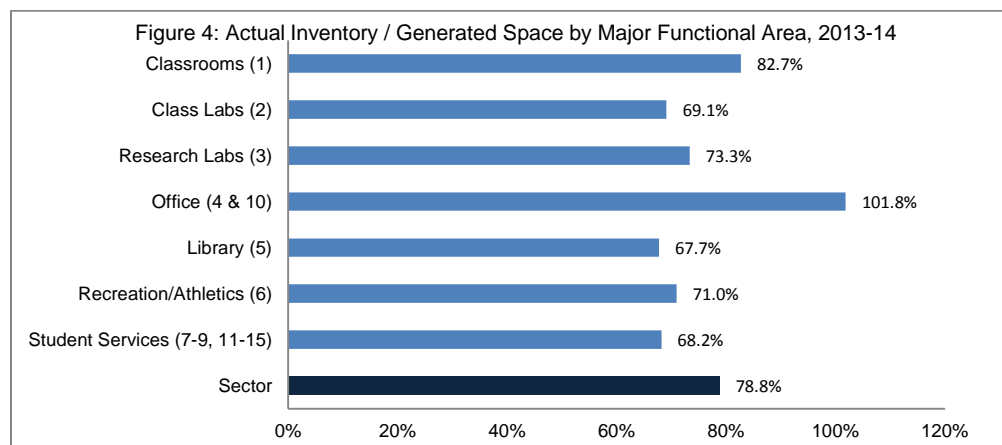
Ryerson reports year 1 & year 2 collaborative nursing enrolment to MTCU, but not in this report as these students do not attend classes on the Ryerson campus. Ryerson also reports the imputed FFTE enrolment count for continuing education non-credit students in the report, but it is not reported to MTCU.

Space Inventory

Figure 3 shows the actual inventory (NASM) by major functional area. Office space occupies the greatest amount of space followed by Research Labs and Student Services.

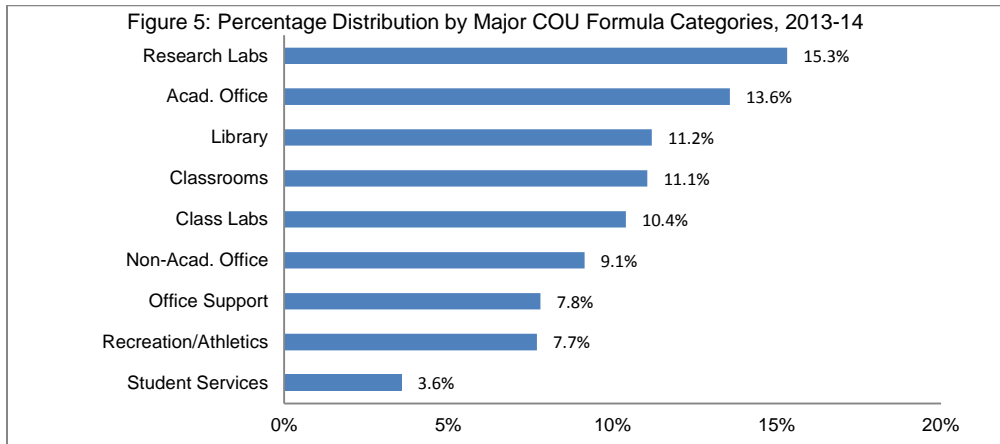


The Actual Inventory / Generated space varies widely by major functional area, as seen in Figure 4. Overall, the sector has 78.8% of the space it should have according to COU standards. The Library, Student Services and Class Labs functional areas are all functioning with less than 70% of the space they should have.

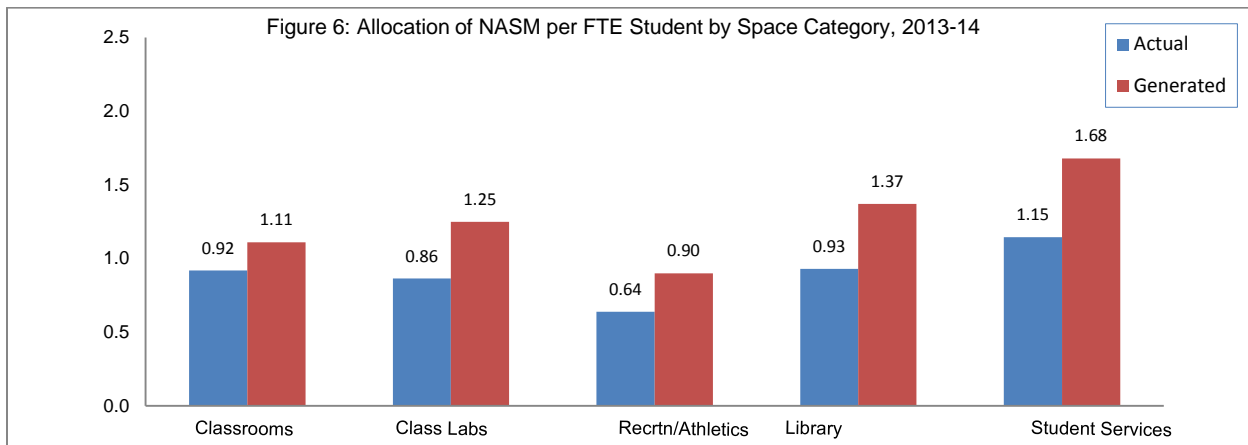


The diversity of university activity is reflected in Figure 5 which shows the percentage distribution of inventory by major COU formula categories (1-15). Formula space is defined as usable or assignable space for which space standards could normally be developed. The formula categories provide for the full range of functions and services needed in a contemporary university.

The first 5 categories (research labs, academic offices, library, classrooms and class labs) refer to primary academic facilities and account for over 60% of the total formula space. Assembly/Exhibition, Plant Maintenance, Central Services, Bookstore/Merchandising and Health Services (not shown) account for a total of 8% of the total formula space.



The allocation of NASM (both actual and generated) per FTE student by space category is shown on Figure 6. Student Services allocate the most space per student; Recreation & Athletic space allocate the least space per FTE student.



Research Space

More research space may be required, especially with the increase in graduate enrolment, increase in faculty, and required accommodation for the increased number of Canada Research Chairs and their support staff. Funding for some new research space was provided through the Canada Foundation for Innovation (CFI) and/or OIT, and through increased institutional funding. Some institutions built significant research space through the CFI program.

Accessibility

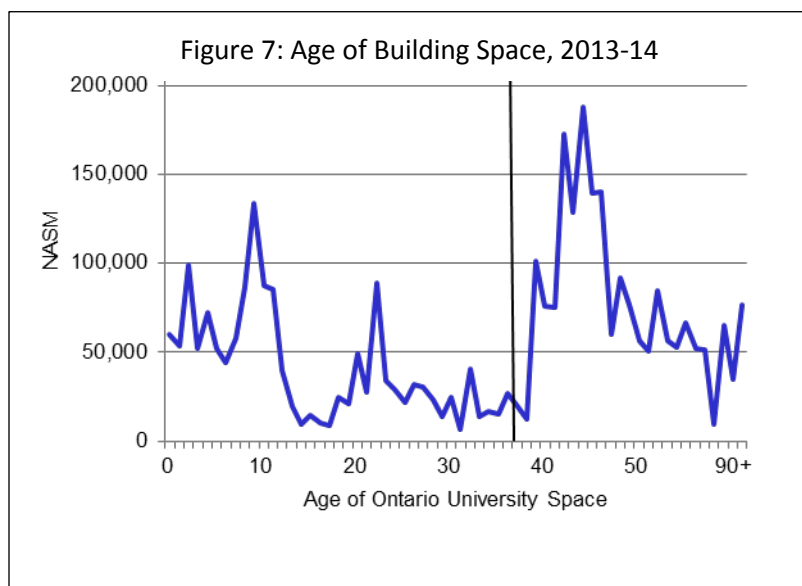
The Accessibility for Ontarians with Disabilities Act was passed into law in 2005 with the goal of making Ontario accessible for people with disabilities, both learning and physical disabilities, by 2025. Under this law, the province was required to establish five accessibility standards. The fifth standard, the built environment, has been divided into two components; (1) the design of public spaces (has been approved as regulation), and (2) the amendments to the Ontario Building Code (currently in draft form). When approved, these amendments will apply to new construction and planned renovation only. Universities must now consider access to persons with disabilities in any future capital projects. Building code amendments were changed effective January 1, 2015.

Universities are in the process of conducting audits to determine the capital costs involved in meeting this requirement.

Age of Building Space

The weighted average age is 34.7 years. Over 60% of the total space is over 30 years old, the age when it is generally recognized that major building components need to be renewed.

Figure 7 shows the NASMs by age of the space. Two peaks are noted; the first one about 10-15 years ago represents the significant capital infusion due to SuperBuild; the second one is 40-45 years ago when a number of universities were established.



For more details, please see Tables 1 and 3.

Facilities Condition Assessment Program

In 1999, Ontario universities collaboratively purchased a software package developed by Vanderweil Facilities Advisors (VFA), a database application for facility management. By moving to a common software program, the university community is in a position to provide useful system-wide analysis of deferred maintenance liabilities and the effects of added investment by the province and institutions.

The 2014 report, released January 2015, shows that overall FCI (facilities condition index) system average is 0.11 (an FCI of 0.10 or higher represents buildings in poor condition), up slightly from the 2012 report (FCI was 0.10). Between 2012 and 2014, the Current Replacement Value (CRV) of universities' physical infrastructure increased by 6% and the costs of deferred maintenance (DM) increased by 9.8%. Although the deferred maintenance figure has grown significantly, there was not an appreciable increase in the FCI because there has been a significant expansion in university facilities, which has resulted in an increase in the CRV.

The following table, which shows the percentage distribution of building space by condition of the building according to the 2014 Facilities Condition Assessment Program report, shows that half of the building space at Ontario universities is in poor condition.

	Percentage of Building Space...		
	In Excellent Condition	In Fair Condition	In Poor Condition
Algoma	32.5%	0.0%	67.5%
Brock	30.1%	3.8%	66.1%
Carleton	8.0%	11.9%	80.0%
Guelph	29.3%	6.6%	64.1%
Lakehead	16.3%	4.3%	79.3%
Laurentian	42.1%	18.1%	39.9%
McMaster	24.3%	3.3%	72.3%
Nipissing	82.4%	11.5%	6.1%
OCAD U	91.4%	0.0%	8.6%
UOIT	100.0%	0.0%	0.0%
Ottawa	53.2%	4.8%	42.0%
Queen's	27.9%	8.3%	63.8%
Ryerson	44.6%	30.8%	24.6%
Toronto	22.7%	16.3%	61.0%
Trent	34.1%	9.1%	56.8%
Waterloo	37.2%	38.3%	24.5%
Western	49.0%	11.1%	40.0%
WLU	31.4%	20.2%	48.3%
Windsor	30.2%	11.2%	58.7%
York	57.4%	11.7%	30.9%
TOTAL	36.8%	13.3%	49.8%
Based on deferred maintenance and adaptation/renewal renovations deficiencies. Excludes residences and infrastructure. University of Toronto includes St. George, Scarborough and Mississauga campuses as well as Victoria, Trinity and St. Michael's College. Waterloo and Western Universities include their affiliates York University includes Keele and Glendon campuses.			

Section 2

HISTORICAL TRENDS

This section provides a historical analysis of Ontario universities' space.

Space Inventory

Total inventory and enrolment increased by approximately 7% between 2010-11 and 2013-14. Office space (both administrative and academic) and classrooms increased by almost 8% while research labs increased by 11%.

	2007-08	2010-11	2013-14	% Change 2010-11 to 2013-14
FTE Enrolment ⁵	363,872	399,124	426,392	6.8%
FTE Faculty	18,774	19,813	20,338	2.6%
Inventory	3,119,792	3,299,895	3,538,287	7.2%
Classrooms	342,013	362,011	391,395	8.1%
Class Labs	350,201	350,482	368,102	5.0%
Research Labs	461,727	488,284	541,949	11.0%
Academic Office	676,235	747,041	807,733	8.1%
Administrative Office	230,935	250,843	272,100	8.5%
Library Facilities...	374,720	384,044	396,144	3.2%
Recreation/Athletics	231,927	251,246	272,410	8.4%
Student & Central Services	398,351	410,609	430,646	4.9%

The following table compares the % Actual Inventory / Generated Space (%I/G) figure by space category. Office space (both academic and administrative) is at approximately 100%, while other categories such as Library Facilities and Student & Central service space are approximately 67%.

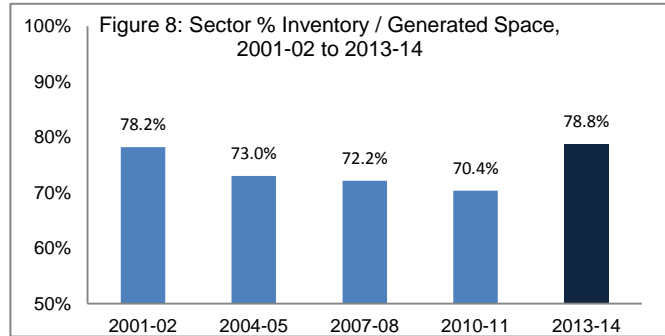
	2007-08	2010-11	2013-14
Classrooms	76.4	73.7	82.7 ²
Class Labs	64.7	66.5	69.1
Research Labs	74.7	68.8	73.3
Academic Office	83.3	81.5	99.6 ²
Administrative Office	98.4	100.2	109.0 ²
Library Facilities...	70.6	68.4	67.7
Recreation/Athletics	68.1	69.9 ¹	71.0
Maintenance Shops	77.0	76.1	75.4
Student & Central Services	54.7	51.4	67.3 ²
TOTAL	72.2	70.4	78.8 ²

1 In 2010-11, the space subsidy for small universities was removed.

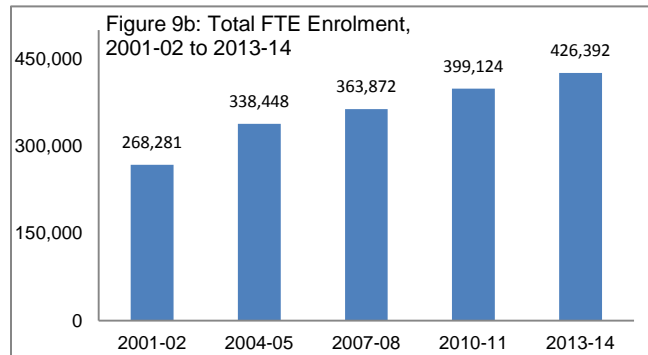
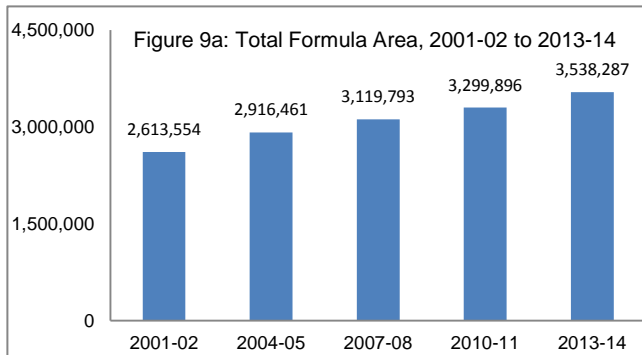
2 In 2013-14, the space factor changed for Student and Central Services, Classrooms and Offices (Administrative and Academic). Note that the increase in the %I/G figures for these categories reflect a change in the space factors only.

⁵ See Appendix D Students (FTE) for the definition of FTE enrolment.

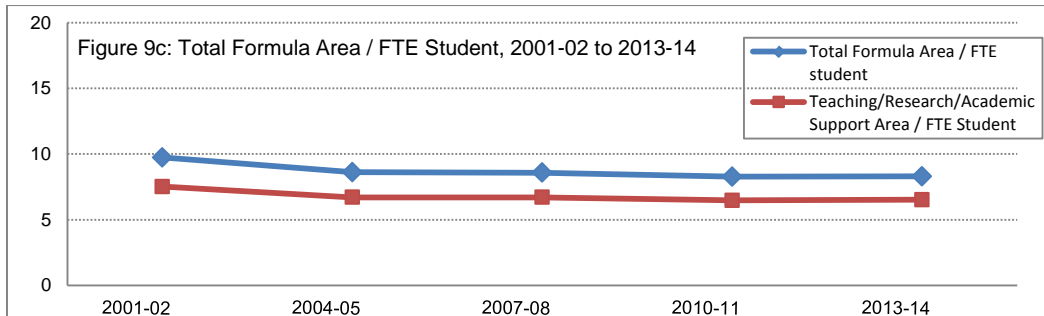
Figure 8 shows the sector percentage inventory / generated inventory figure from 2001-12 to 2013-14. Note that the sector totals have been steadily declining since 2001-02. If no changes were made to the space factors in 2013-14, the figure for 2013-14 would be very similar to the 2010-11 figure.



The following table/graphs shows the trend in total Formula Areas (NASM)/FTE students and broken down further by Teaching/Research/Academic Support Areas. The figures show that the total formula area and enrolment has been increasing since 2001-02.



The space per FTE student for both total formula areas and teaching/research/academic support areas have declined since 2001-02, but have remained relatively level between 2010-11 and 2013-14.

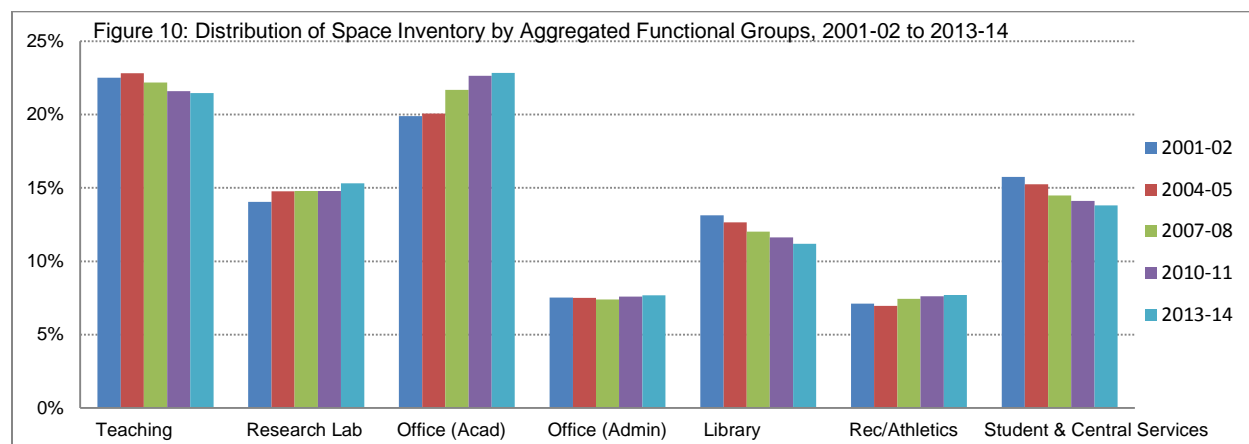


	2001-02	2004-05	2007-08	2010-11	2013-14
Total Formula Area	2,613,554	2,916,461	3,119,793	3,299,896	3,538,287
FTE Students	268,281	338,448	363,872	399,124	426,392
Total Formula Area (NASM) / FTE students	9.7	8.6	8.6	8.3	8.3
Teaching/Research/Academic Support Areas (NASM) / FTE students	7.5	6.7	6.7	6.5	6.5

For more detail, see Table A, page 14.

Figure 10 (and the accompanying table) reflects the actual space inventory from 2001 to 2013 in aggregated major functional groups.

The percentage of space, relative to the other groups, is increasing for academic office, and declining for teaching facilities, library and student & central services.



	2001-02	2004-05	2007-08	2010-11	2013-14
Teaching Facilities (1,2)	22.5%	22.8%	22.2%	21.6%	21.5%
Research Lab Facilities (3)	14.1%	14.8%	14.8%	14.8%	15.3%
Office (Academic) (4)	19.9%	20.1%	21.7%	22.6%	22.8%
Office (Administration) (10)	7.5%	7.5%	7.4%	7.6%	7.7%
Library (5)	13.1%	12.6%	12.0%	11.6%	11.2%
Recreation/Athletics (6)	7.1%	7.0%	7.4%	7.6%	7.7%
Student & Central Services (7-9, 11-15)	15.7%	15.2%	14.5%	14.1%	13.8%

The tables on the following pages show historical trends in space from 2001-02 to 2013-14.

Table A

ACTUAL SPACE: Total Actual Space Inventory by COU Space Categories, 2001-02 to 2013-14

Cat. # Space Category	2001-02	2004-05	2007-08	2010-11	2013-14	% Change 2010-11 to 2013-14
FORMULA AREAS (NASM)						
(A) Teaching/Research/Academic Support						
1. Classroom Facilities	265,015	324,465	342,013	362,011	391,395	8.1
2. Class Labs	323,384	340,900	350,201	350,482	368,105	5.0
3. Research Labs	367,422	430,612	461,727	488,284	541,952	11.0
4. Acad. Office & Related	519,890	585,085	676,235	747,041	807,733	8.1
5. Campus Study Space & Library Facilities	343,363	368,804	374,720	384,044	396,144	3.2
10. Admin. Office & Related	196,723	219,055	230,935	250,843	272,100	8.5
(B) Other Space						
6. Recreation/Athletic Space	186,153	202,931	231,927	251,246	272,410	8.4
7-9, Student and Central Services* 11-15	411,604	444,609	452,035	465,944	488,454	4.8
Subtotal - Formula Areas	2,613,554	2,916,461	3,119,793	3,299,896	3,538,292	7.2
16. Non-Assignable (SM)	1,714,576	2,099,122	2,372,324	2,533,549	2,669,094	5.4
NON-FORMULA AREAS (NASM)						
17. Residential Space	964,840	1,154,665	1,243,783	1,288,264	1,284,890	(0.3)
18. Animal Space	10,324	9,366	12,395	21,340	22,956	7.6
19. Other	157,215	101,526	196,593	161,010	188,961	17.4
20. Health Sci. Clinical Facilities	80,440	79,549	77,863	79,632	75,209	(5.6)
Subtotal - Non-Formula Areas	1,212,818	1,345,105	1,530,635	1,550,246	1,572,016	1.4
Total	5,540,949	6,360,688	7,022,751	7,383,690	7,779,403	5.4

- Overall, Ontario universities' occupied approximately 7.8 million NASMs in 2013-14. Total space has increased 5.4% between 2010-11 and 2013-14, and 40% since 2001-02.
- Teaching/Research/Academic support space accounts for 78% of the formula space and Other space accounts for the remaining 22% of the formula space.
- Laboratory (undergraduate, graduate & faculty) space accounts for 32% of the total teaching/research/academic space.

*Includes Food Services, Bookstore & Merchandise facilities, Audio-Visual Television facilities, Central Services, Health Service facilities, Student Activity space, Assembly/Exhibition facilities and Plant Maintenance.

Please refer to Appendix F for changes made over time. Caution should be taken when making comparison over time.

Table B

ACTUAL SPACE: Percentage Distribution of Total Actual Space Inventory by All COU Space Categories, 2001-02 to 2013-14

Cat. #	Space Category	2001-02	2004-05	2007-08	2010-11	2013-14
FORMULA AREAS (NASM)						
(A) Teaching/Research/Academic Support						
1.	Classroom Facilities	4.8%	5.1%	4.9%	4.9%	5.0%
2.	Class Labs	5.8%	5.4%	5.0%	4.7%	4.7%
3.	Research Labs	6.6%	6.8%	6.6%	6.6%	7.0%
4.	Acad. Office & Related	9.4%	9.2%	9.6%	10.1%	10.4%
5.	Campus Study Space & Library Facilities	6.2%	5.8%	5.3%	5.2%	5.1%
10.	Admin. Office & Related	3.6%	3.4%	3.3%	3.4%	3.5%
(B) Other Space						
6.	Recreation/Athletic Space	3.4%	3.2%	3.3%	3.4%	3.5%
7-9, 11-15	Student and Central Services*	7.4%	7.0%	6.4%	6.3%	6.3%
Subtotal - Formula Areas		47.2%	45.9%	44.4%	44.7%	45.5%
16. Non-Assignable (SM)		30.9%	33.0%	33.8%	34.3%	34.3%
NON-FORMULA AREAS (NASM)						
17.	Residential Space	17.4%	18.2%	17.7%	17.4%	16.5%
18.	Animal Space	0.2%	0.1%	0.2%	0.3%	0.3%
19.	Other	2.8%	1.6%	2.8%	2.2%	2.4%
20.	Health Sci. Clinical Facilities	1.5%	1.3%	1.1%	1.1%	1.0%
Subtotal - Non-Formula Areas		21.9%	21.1%	21.8%	21.0%	20.2%
Total		100.0%	100.0%	100.0%	100.0%	100.0%

- Formula space (space funded by MTCU) accounts for 45% (3.5 million NASM) of the total space.
- Non-formula space (space not funded by MTCU) accounts for 20% (1.57 million NASM) of the total space.
- Non-assignable space (space that is necessary for the support of buildings), (see Category 16, page 97 for more details) accounts for 34% (2.7 million NASM) of the total space.
- The percentage of space allocated to non-assignable space has increased from 31% to 34% between 2001-02 and 2013-14.

*Includes Food Services, Bookstore & Merchandise facilities, Audio-Visual Television facilities, Central Services, Health Service facilities, Student Activity space, Assembly/Exhibition facilities and Plant Maintenance.

Please refer to Appendix F for changes made over time. Caution should be taken when making comparison over time.

Table C

ACTUAL SPACE: Percentage Distribution of Total Actual Space Inventory by Only the COU Formula Space Categories, 2001-02 to 2013-14

Cat. #	Space Category	2001-02	2004-05	2007-08	2010-11	2013-14
FORMULA AREAS (NASM)						
(A) Teaching/Research/Academic Support						
1.	Classroom Facilities	10.1%	11.1%	11.0%	11.0%	11.1%
2.	Class Labs	12.4%	11.7%	11.2%	10.6%	10.4%
3.	Research Labs	14.1%	14.8%	14.8%	14.8%	15.3%
4.	Acad. Office & Related	19.9%	20.1%	21.7%	22.6%	22.8%
5.	Campus Study Space & Library Facilities	13.1%	12.6%	12.0%	11.6%	11.2%
10.	Admin. Office & Related	7.5%	7.5%	7.4%	7.6%	7.7%
Total - Teaching/Research/Academic Support		77.1%	77.8%	78.1%	78.3%	78.5%
(B) Other Space						
6.	Recreation/Athletic Space	7.1%	7.0%	7.4%	7.6%	7.7%
7-9, 11-15	Student and Central Services*	15.7%	15.2%	14.5%	14.1%	13.8%
Total - Other Space		22.9%	22.2%	21.9%	21.7%	21.5%

- Classroom facilities occupy approximately 11% of the total formula area space, and have remained almost unchanged since 2004-05.
- Student and Central Services space has been steadily losing space in favour of other space categories; in 2001-02 16% of the total formula space was allocated to this category – by 2013-14 it declined to 14%.
- Campus Study Space & Library Facilities has been steadily losing space also; this is a result of major restructuring of library space over the past few years with more library materials stored in compact storage areas rather than traditional shelving units.

*Includes Food Services, Bookstore & Merchandise facilities, Audio-Visual Television facilities, Central Services, Health Service facilities, Student Activity space, Assembly/Exhibition facilities and Plant Maintenance.

Please refer to Appendix F for changes made over time. Caution should be taken when making comparison over time.

Table D

GENERATED SPACE: Percentage Distribution of Generated Space (NASM) by COU Formula Space Classification, 2001-02 to 2013-14

Cat #	Space Classification	2001-02	2004-05	2007-08	2010-11	2013-14
FORMULA AREAS (NASM)						
(A) Teaching/Research/Academic Support						
1.	Classroom Facilities	9.9%	10.4%	10.4%	10.5%	10.5%
2.	Class Labs	12.2%	12.5%	12.5%	11.2%	11.9%
3.	Research Labs	13.6%	13.9%	14.3%	15.1%	16.5%
4.	Academic Office & Related	18.1%	17.4%	18.8%	19.6%	18.1%
5.	Campus Study Space & Library Facilities	16.0%	13.7%	12.3%	12.0%	13.0%
10.	Administrative Office & Related	4.8%	5.3%	5.4%	5.3%	5.6%
Total - Teaching/Research/Academic Support		74.5%	73.4%	73.7%	73.8%	75.5%
(B) Other Space						
6.	Recreation/Athletics	7.7%	8.0%	7.9%	7.7%	8.5%
7-9, 11-15	Student and Central Services*	17.8%	18.5%	18.5%	18.6%	16.0%
Total - Other Space		25.5%	26.6%	26.3%	26.2%	24.5%

NOTE: The vertical line notes that starting in 2013-14 changes were made to the space factors in some areas, making comparisons with previous years not advisable.

*Includes Food Services, Bookstore & Merchandise facilities, Audio-Visual Television facilities, Central Services, Health Service facilities, Student Activity space, Assembly/Exhibition facilities and Plant Maintenance.

Please refer to Appendix F for changes made over time. Caution should be taken when making comparison over time.

Table E

ACTUAL Inventory / GENERATED Space (NASM) by COU Formula Space Classification, 2001-02 to 2013-14

Cat. #	Space Classification	2001-02	2004-05	2007-08	2010-11	2013-14
FORMULA AREAS (NASM)						
(A) Teaching/Research/Academic Support						
1	Classroom Facilities	80.3%	77.9%	76.4%	73.7%	82.7%
2	Class Labs	79.2%	68.0%	64.7%	66.5%	69.1%
3	Research Labs	80.8%	77.3%	74.7%	68.8%	73.3%
4	Academic Office & Related	86.1%	84.0%	83.3%	81.5%	99.6%
5	Campus Study Space & Library Facilities	64.2%	67.2%	70.6%	68.4%	67.7%
10	Administrative Office & Related	123.9%	103.1%	98.4%	100.2%	109.0%
Total - Teaching/Research/Academic Support		80.9%	77.4%	76.5%	74.7%	81.9%
(B) Other Space						
6	Recreation/Athletics	72.6%	63.1%	68.1%	69.9%	71.0%
7-9, 11-15	Student and Central Services*	69.3%	60.0%	56.7%	53.5%	68.2%
Total - Other Space		70.3%	60.9%	60.1%	58.3%	69.2%
Total - Formula Areas		78.2%	73.0%	72.2%	70.4%	78.8%

NOTE: Highlighted cells in 2013-14 represent categories where the space factors have changed, making comparisons with previous years not advisable.

*Includes Food Services, Bookstore & Merchandise facilities, Audio-Visual Television facilities, Central Services, Health Service facilities, Student Activity space, Assembly/Exhibition facilities and Plant Maintenance.

Please refer to Appendix F for changes made to space categorizations, definitions and space factors over time. Caution should be taken when making comparison over time.

Table F

Historical Summary of Statistics, 2001-02 to 2013-14

	2001-02	2004-05	2007-08	2010-11	2013-14
% Undergraduate FTE Enrolment per Total FTE Enrolment	88.58	89.05	87.48	86.87	86.41
% Graduate FTE Enrolment per Total FTE Enrolment	11.42	10.95	12.52	13.13	13.59
WSCH ¹ per Undergraduate FTE Enrolment	3.09	2.95	3.11	2.79	2.60
Classroom NASM ² per FTE Student	0.99	0.96	0.94	0.91	0.92
Graduate Office NASM per FTE Graduate Student	2.39	2.22	2.12	2.16	2.26
Administrative Office NASM per FTE Non-Academic Office Staff	20.93	20.11	19.19	19.54	19.62
Campus Study Space and Library Facilities NASM per FTE Student	1.28	1.09	1.03	0.96	0.93
Recreation/Athletics NASM per FTE Student	0.69	0.60	0.64	0.63	0.64
Student & Central Services NASM per FTE Student	1.34	1.16	1.09	1.03	1.01
Total NASM per FTE Student (categories 1-15)	9.74	8.62	8.57	8.27	8.30

¹ WSCH = Weekly Student Contact Hours

² NASM = Net Assignable Square Metres

- Due to the government initiative to expand graduate enrolment, the percentage of enrolment in graduate programs has increased from 11.4% in 2001-02 to 13.6% in 2013-14.
- Student contact hours per undergraduate FTE student have declined from 3.1 in 2001-02 to 2.5 in 2013-14.
- Campus study space and library facilities NASM per FTE student declined from 1.3 in 2001-02 to 0.93 in 2013-14.

Graduate Enrolment Expansion

Since 2005, the Ontario government has been committed to substantially increase graduate enrolment⁶.

Graduate FTE enrolment increased by 56% (20,866 FTEs) between 2004-05 and 2013-14. Most of the increase took place in Group E (increased by 10,000 FTEs) which is, for the most part, social science and humanities programs.

As graduate enrolment continues to grow, additional pressure will be placed on the existing space to accommodate the increase in students.

By Program Group *	2004-05	2013-14	% Distribution 2004-05	% Distribution 2013-14	% Change 2004-05 to 2013-14	Space per graduate student (sq.m.)
Group A	7,187	8,864	19.4%	15.3%	23.3%	28.8
Group B	4,487	7,719	12.1%	13.3%	72.0%	21.3
Group C	3,137	5,120	8.5%	8.8%	63.2%	16.3
Group D	4,280	6,544	11.5%	11.3%	52.9%	11.3
Group E	17,634	27,640	47.6%	47.7%	56.7%	6.8
TOTAL **	37,071	57,937	100.0%	100.0%	56.3%	13.8

*Examples of disciplines included in each group (Group A (Health Professions, Physical Science), Group B (Engineering), Group C (Visual Arts, Anthropology), Group D (Physical Education, Computer Science), Group E (Humanities, Social Sciences))

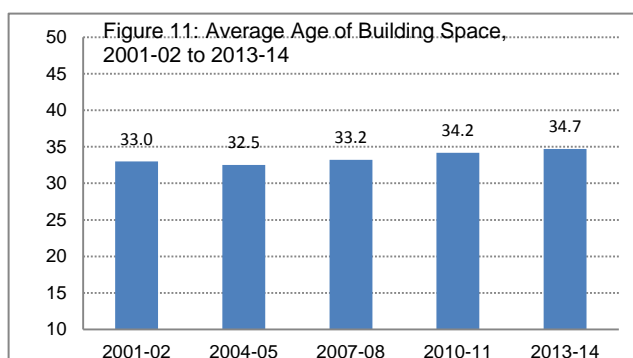
** Includes enrolment for which no group is assigned.

According to COU standards, each graduate student generates between 6.8 and 28.8 NASMs (classrooms, lab space, graduate offices, office support, and library) depending on the program, compared to 1.8 NASMs (classrooms, library) for undergraduate students. Graduate classes are normally held in smaller classrooms and/or seminar rooms, not lecture theatres. Also, the student-faculty ratio is typically lower for graduate students than undergraduate students, which means that increasing graduate enrolment would require increasing the faculty complement.

Age of Building Space

The average age of building space has increased by approximately 3 years since 2001-12, mainly due to various capital funding programs over the years.

The increase in the average age of buildings increased by only 0.5 years between 2010-11 and 2013-14; this is mainly due to the federal government's Knowledge Infrastructure Program and the Ontario government's Strategic Capital Infrastructure program in 2009. However, the average age of buildings in the sector is still over the age where major renovations are required.



⁶ In 2011 the Ontario government announced, as a component of the *Putting Students First* plan, an additional allocation of 6,000 graduate spaces above the Reaching Higher end state. The target date for the full expansion of graduate spaces is 2017-18.

Section 3

INSTITUTIONAL TABLES

(as a result of the 2013-14 survey)

In interpreting the data from smaller and specialized institutions, it should be noted that the Building Blocks formula was developed for institutions having a full range of university programs and functions. The application of all 15 categories to a very small or special purpose institution may not be appropriate, so results must be interpreted carefully.

The same considerations apply in the formula for analysis at the departmental level within an institution.

Université de Hearst and NOSM (Northern Ontario School of Medicine) are reported as separate institutions, but due to the size and specialty of the institution (in particular NOSM), Hearst and NOSM will not be included in the total counts.

Table 1

Inventory of University Space, November 1, 2013

Institution	Categories 1-15 (NASM)	Category 16 (SM)	Categories 17-20 (NASM)	Scheduled for Demolition	Rentals	Gross Square Metres	Gross Sq. Metres / NASM (1-15, 17-20)
Algoma	13,089.56	8,005.83	11,940.66	0.00	412.92	33,274.22	1.33
Brock	98,229.25	67,660.22	46,816.52	0.00	691.38	241,685.00	1.67
Carleton	178,431.14	148,215.62	68,781.26	0.00	0.00	448,021.22	1.81
Guelph	233,983.51	157,924.83	140,815.77	0.00	0.00	618,227.48	1.65
Lakehead	80,358.90	48,632.56	39,051.20	0.00	1,745.60	197,542.40	1.65
Laurentian	73,931.54	40,635.47	53,780.60	0.00	4,013.00	181,933.61	1.42
Laurentian (Hear)	5,053.98	2,038.65	2,007.90	0.00	622.82	NR	NA
McMaster	233,172.43	151,204.34	125,845.78	0.00	0.00	579,094.69	1.61
Nipissing	25,314.66	14,184.77	35,896.58	0.00	0.00	75,396.01	1.23
NOSM	8,360.80	4,346.80	0.00	0.00	0.00	15,248.30	1.82
OCAD U	25,192.21	13,212.29	9,086.38	0.00	1,581.25	57,080.40	1.67
UOIT	51,406.95	32,340.10	4,948.92	0.00	11,007.95	137,877.08	2.45
Ottawa	241,528.92	203,661.47	83,287.70	0.00	7,895.72	594,246.32	1.83
Queen's	235,171.54	227,602.03	106,011.92	0.00	11,033.31	704,630.48	2.07
Ryerson	164,953.85	43,845.49	21,580.64	0.00	9,359.87	350,667.52	1.88
Toronto (St. Grge)	559,535.34	445,389.25	171,813.58	2,515.19	5,393.03	1,372,305.97	1.88
Toronto (Miss)	62,493.00	66,060.62	34,862.22	6,490.35	0.00	185,551.86	1.91
Toronto (Scar)	55,216.04	41,232.09	16,489.55	0.00	0.00	129,989.40	1.81
Trent	55,590.55	37,082.67	20,158.88	0.00	0.00	132,770.41	1.75
Waterloo	275,027.53	205,613.43	144,229.67	0.00	1,154.69	745,196.31	1.78
Western	336,222.64	247,661.78	187,042.12	0.00	0.00	869,960.45	1.66
WLU	95,213.73	60,770.05	103,851.34	59.48	3,404.97	315,047.20	1.58
Windsor	129,126.59	77,902.15	28,396.96	0.00	808.76	285,470.50	1.81
York (Keele)	251,033.02	306,482.64	108,125.08	0.00	6,942.95	771,893.31	2.15
York (Glen)	18,639.14	14,991.65	7,464.39	0.00	0.00	46,866.95	1.80
TOTAL	3,506,276.81	2,666,696.79	1,572,285.63	9,065.02	66,068.22	9,089,977.09	1.81

The inventory NASM figures for categories 1-15, 16 and 17-20 may not necessarily agree at some institutions with the inventory figures reported on Table 2.

Table 2

Distribution of Actual Inventory by Major Space Category and Institution, 2013-14

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(12)
	Classroom Facilities	Lab Undergrad	Lab Grad & Faculty	Acad Office & Related	Lib Facilities & Campus Study Space	Recreation/ Athletic Space	Food Service	Bookstore & Merch Facilities	Plant Mainten- ance	Admin Office & Related	Central Services
Algoma	1,770	1,350	281	1,028	1,200	3,410	350	269	278	1,637	407
Brock	10,479	9,098	11,442	18,305	10,235	10,932	4,970	2,204	2,167	9,821	2,170
Carleton	17,405	19,927	17,776	35,111	23,371	24,819	7,377	1,671	2,062	13,783	3,980
Guelph	16,474	28,808	58,577	46,593	15,288	20,127	8,677	1,662	6,967	16,263	5,427
Lakehead	9,723	12,173	7,392	10,697	8,804	10,556	4,390	714	1,136	6,127	2,991
Laurentian	9,790	7,184	7,459	13,991	8,212	9,961	3,256	731	2,142	5,469	1,430
Laurentian (Hear)	920	201	0	732	887	0	412	17	103	371	382
McMaster	24,651	17,917	59,900	57,959	26,976	16,664	8,212	2,805	3,326	16,950	3,377
Nipissing	6,161	4,463	1,498	3,775	3,482	5,337	1,102	51	0	3,030	704
NOSM	988	849	1,538	1,597	724	0	0	0	0	2,306	75
OCAD U	2,230	10,374	1,724	3,881	1,547	0	60	647	226	2,586	621
UOIT	7,596	6,293	7,656	7,518	3,738	8,294	1,132	0	137	5,411	1,516
Ottawa	26,425	19,479	35,529	62,306	32,874	15,432	5,118	1,702	3,988	20,196	3,081
Queen's	20,684	23,549	38,991	63,733	28,798	20,334	10,616	3,086	2,389	16,607	783
Ryerson	19,896	31,702	13,625	31,017	13,337	14,983	4,390	1,052	2,625	16,772	2,200
Toronto (St.Grige)	57,530	41,854	100,950	155,607	86,072	26,004	14,125	3,580	8,907	25,576	4,157
Toronto (Miss)	11,077	7,260	7,451	9,312	6,163	6,935	4,076	457	653	4,742	925
Toronto (Scar)	6,692	5,461	6,748	9,025	6,219	4,398	2,965	594	2,422	5,488	1,510
Trent	8,099	4,684	7,824	10,744	7,161	3,954	3,116	487	383	5,698	641
Waterloo	28,326	29,189	52,573	72,917	19,319	12,934	10,036	2,934	7,215	19,679	5,065
Western	38,346	31,466	58,519	80,239	33,529	19,254	13,600	4,225	3,232	26,580	4,306
WLU	12,990	6,954	5,541	18,539	11,665	11,776	3,078	1,579	1,587	12,457	2,709
Windsor	15,238	18,696	15,680	24,357	17,084	10,925	4,146	2,384	1,464	9,587	1,491
York (Keele)	34,179	28,241	23,119	64,673	27,473	12,461	8,892	3,789	4,058	23,884	3,458
York (Glen)	3,726	933	160	4,079	1,988	2,919	890	357	340	1,079	199
TOTAL	391,395	368,105	541,952	807,733	396,144	272,410	124,987	36,995	57,807	272,100	53,605

Table 2 (cont'd)

Distribution of Actual Inventory by Major Space Category and Institution, 2013-14

	Health Service Facilities (13)	Student Activity Space (14)	Assembly, Exhibition Facilities (15)	Subtotal Formula Areas (1 to 15)	Residential Space (17)	Animal Space (18)	Other (19)	Health Sci Clinical Facilities (20)	Subtotal Non-Formula (17 to 20)	Non-Assignable (16)	Total (1 to 20)
Algoma	0	723	309	13,010	9,130	114	2,753	0	11,997	8,005	33,012
Brock	354	2,236	3,818	98,229	44,460	141	1,741	474	46,817	67,660	212,706
Carleton	825	3,475	6,850	178,431	62,110	387	6,284	0	68,781	148,216	395,429
Guelph	1,229	4,577	3,315	233,984	111,876	7,272	14,030	7,638	140,816	157,925	532,724
Lakehead	258	2,976	2,421	80,359	37,271	0	1,780	0	39,051	48,633	168,043
Laurentian	357	3,095	849	73,926	44,393	334	9,000	42	53,769	40,639	168,335
Laurentian (Hear)	0	191	839	5,054	286	0	1,722	0	2,008	2,039	9,101
McMaster	608	4,289	3,508	247,143	60,217	1,665	5,148	58,816	125,846	151,377	524,365
Nipissing	119	867	0	30,589	35,896	0	0	0	35,896	15,829	82,314
NOSM	0	284	0	8,361	0	0	0	0	0	4,347	12,708
OCAD U	150	467	679	25,192	0	0	9,086	0	9,086	13,212	47,491
UOIT	0	1,533	583	51,407	0	0	4,949	0	4,949	32,340	88,696
Ottawa	2,320	8,325	4,753	241,529	64,072	1,853	17,362	0	83,288	203,661	528,478
Queen's	1,155	10,596	6,103	247,425	88,748	2,426	11,859	2,665	105,697	242,134	595,256
Ryerson	133	8,929	4,292	164,954	16,712	0	4,869	0	21,581	43,845	230,380
Toronto (St.Grge)	1,578	21,268	12,328	559,535	124,497	4,023	43,294	0	171,814	445,389	1,176,738
Toronto (Miss)	316	2,051	1,076	62,493	32,615	0	2,247	0	34,862	66,061	163,416
Toronto (Scar)	246	2,654	793	55,216	15,861	0	628	0	16,490	41,232	112,938
Trent	124	2,677	0	55,591	16,327	973	2,859	0	20,159	37,083	112,832
Waterloo	1,960	9,509	3,373	275,028	139,303	0	3,233	1,693	144,230	205,610	624,868
Western	1,038	13,755	8,134	336,223	172,667	3,767	6,984	3,624	187,042	247,662	770,927
WLU	311	4,607	3,910	97,702	77,441	0	26,411	0	103,851	60,770	262,323
Windsor	327	4,688	1,341	127,407	26,216	0	1,925	256	28,397	77,902	233,706
York (Keele)	267	11,511	4,861	250,866	97,334	0	10,792	0	108,125	292,531	651,522
York (Glen)	0	1,004	965	18,639	7,459	0	5	0	7,464	14,992	41,095
TOTAL	13,675	126,285	75,099	3,538,292	1,284,890	22,956	188,961	75,209	1,572,016	2,669,094	7,779,403

Table 2A

Percent Distribution of Actual Inventory by Major Formula Space Category and Institution, 2013-14

	Library														
	Classroom Facilities (1)	Lab Undergrd (2)	Lab Grad & Faculty (3)	Lab Office & Related (4)	Acad Facilities & Campus Study (5)	Recreat/ Athletic Space (6)	Food Service (7)	Bookstore & Merch Facilities (8)	Plant Mainten- ance (9)	Admin Office & Related (10)	Central Services (12)	Health Service Facilities (13)	Student Activity & Space (14)	Assembly Facilities (15)	Formula Areas (1 to 15)
Algonia	13.6%	10.4%	-	7.9%	9.2%	26.2%	2.7%	2.1%	2.1%	12.6%	3.1%	0.0%	5.6%	2.4%	100.0%
Brock	10.7%	9.3%	11.6%	18.6%	10.4%	11.1%	5.1%	2.2%	2.2%	10.0%	2.2%	0.4%	2.3%	3.9%	100.0%
Carleton	9.8%	11.2%	10.0%	19.7%	13.1%	13.9%	4.1%	0.9%	1.2%	7.7%	2.2%	0.5%	1.9%	3.8%	100.0%
Guelph	7.0%	12.3%	25.0%	19.9%	6.5%	8.6%	3.7%	0.7%	3.0%	7.0%	2.3%	0.5%	2.0%	1.4%	100.0%
Lakehead	12.1%	15.1%	9.2%	13.3%	11.0%	13.1%	5.5%	0.9%	1.4%	7.6%	3.7%	0.3%	3.7%	3.0%	100.0%
Laurentian	13.2%	9.7%	10.1%	18.9%	11.1%	13.5%	4.4%	1.0%	2.9%	7.4%	1.9%	0.5%	4.2%	1.1%	100.0%
Laurentian (Hear)	18.2%	4.0%	-	14.5%	17.5%	0.0%	8.1%	0.3%	2.0%	7.3%	7.6%	-	3.8%	16.6%	100.0%
McMaster	10.0%	7.2%	24.2%	23.5%	10.9%	6.7%	3.3%	1.1%	1.3%	6.9%	1.4%	0.2%	1.7%	1.4%	100.0%
Nipissing	20.1%	14.6%	4.9%	12.3%	11.4%	17.4%	3.6%	0.2%	-	9.9%	2.3%	-	2.8%	-	100.0%
NOSM	11.8%	10.2%	18.4%	19.1%	8.7%	-	-	-	-	27.6%	0.9%	-	3.4%	-	100.0%
OCAD U	8.9%	41.2%	6.8%	15.4%	6.1%	-	0.2%	2.6%	0.9%	10.3%	2.5%	0.6%	1.9%	2.7%	100.0%
UOIT	14.8%	12.2%	14.9%	14.6%	7.3%	16.1%	2.2%	0.0%	-	10.5%	2.9%	0.0%	3.0%	1.1%	100.0%
Ottawa	10.9%	8.1%	14.7%	25.8%	13.6%	6.4%	2.1%	0.7%	1.7%	8.4%	1.3%	1.0%	3.4%	2.0%	100.0%
Queen's	8.4%	9.5%	15.8%	25.8%	11.6%	8.2%	4.3%	1.2%	1.0%	6.7%	0.3%	0.5%	4.3%	2.5%	100.0%
Ryerson	12.1%	19.2%	8.3%	18.8%	8.1%	9.1%	2.7%	0.6%	1.6%	10.2%	1.3%	0.1%	5.4%	2.6%	100.0%
Toronto (St.Grge)	10.3%	7.5%	18.0%	27.8%	15.4%	4.6%	2.5%	0.6%	1.6%	4.6%	0.7%	0.3%	3.8%	2.2%	100.0%
Toronto (Miss)	17.7%	11.6%	11.9%	14.9%	9.9%	11.1%	6.5%	0.7%	1.0%	7.6%	1.5%	0.5%	3.3%	1.7%	100.0%
Toronto (Scar)	12.1%	9.9%	12.2%	16.3%	11.3%	8.0%	5.4%	1.1%	4.4%	9.9%	2.7%	0.4%	4.8%	1.4%	100.0%
Trent	14.6%	8.4%	14.1%	19.3%	12.9%	7.1%	5.6%	0.9%	0.7%	10.2%	1.2%	0.2%	4.8%	-	100.0%
Waterloo	10.3%	10.6%	19.1%	26.5%	7.0%	4.7%	3.6%	1.1%	2.6%	7.2%	1.8%	0.7%	3.5%	1.2%	100.0%
Western	11.4%	9.4%	17.4%	23.9%	10.0%	5.7%	4.0%	1.3%	1.0%	7.9%	1.3%	0.3%	4.1%	2.4%	100.0%
WLU	13.3%	7.1%	5.7%	19.0%	11.9%	12.1%	3.2%	1.6%	1.6%	12.8%	2.8%	0.3%	4.7%	4.0%	100.0%
Windsor	12.0%	14.7%	12.3%	19.1%	13.4%	8.6%	3.3%	1.9%	1.1%	7.5%	1.2%	0.3%	3.7%	1.1%	100.0%
York (Keele)	13.6%	11.3%	9.2%	25.8%	11.0%	5.0%	3.5%	1.5%	1.6%	9.5%	1.4%	0.1%	4.6%	1.9%	100.0%
York (Glen)	20.0%	5.0%	0.9%	21.9%	10.7%	15.7%	4.8%	1.9%	1.8%	5.8%	1.1%	-	5.4%	5.2%	100.0%
TOTAL	11.1%	10.4%	15.3%	22.8%	11.2%	7.7%	3.5%	1.0%	1.6%	7.7%	1.5%	0.4%	3.6%	2.1%	100.0%
AVERAGE	12.7%	11.6%	12.8%	19.3%	10.8%	10.1%	3.9%	1.1%	1.8%	9.3%	2.1%	0.4%	3.7%	3.0%	3.0%

Table 2B

Percent Distribution of Actual Inventory by Major Space Category and Institution, 2013-14

	Formula (1 to 15)	Non-Formula		Non-Formula (17 to 20)	Non-Assignable (16)	Total (1 to 20)
		Residential Space (17)	Other Space (18-20)			
Algoma	39.4%	27.7%	8.7%	36.3%	24.2%	100%
Brock	46.2%	20.9%	1.1%	22.0%	31.8%	100%
Carleton	45.1%	15.7%	1.7%	17.4%	37.5%	100%
Guelph	43.9%	21.0%	5.4%	26.4%	29.6%	100%
Lakehead	47.8%	22.2%	1.1%	23.2%	28.9%	100%
Laurentian	43.9%	26.4%	5.6%	31.9%	24.1%	100%
Laurentian (Hear)	55.5%	3.1%	18.9%	22.1%	22.4%	100%
McMaster	47.1%	11.5%	12.5%	24.0%	28.9%	100%
Nipissing	37.2%	43.6%	0.0%	43.6%	19.2%	100%
NOSM	65.8%	-	0.0%	-	34.2%	100%
OCAD U	53.0%	-	19.1%	19.1%	27.8%	100%
UOIT	58.0%	-	5.6%	5.6%	36.5%	100%
Ottawa	45.7%	12.1%	3.6%	15.8%	38.5%	100%
Queen's	41.6%	14.9%	2.8%	17.8%	40.7%	100%
Ryerson	71.6%	7.3%	2.1%	9.4%	19.0%	100%
Toronto (St.Grge)	47.5%	10.6%	4.0%	14.6%	37.8%	100%
Toronto (Miss)	38.2%	20.0%	1.4%	21.3%	40.4%	100%
Toronto (Scar)	48.9%	14.0%	0.6%	14.6%	36.5%	100%
Trent	49.3%	14.5%	3.4%	17.9%	32.9%	100%
Waterloo	44.0%	22.3%	0.8%	23.1%	32.9%	100%
Western	43.6%	22.4%	1.9%	24.3%	32.1%	100%
WLU	37.2%	29.5%	10.1%	39.6%	23.2%	100%
Windsor	54.5%	11.2%	0.9%	12.2%	33.3%	100%
York (Keele)	38.5%	14.9%	1.7%	16.6%	44.9%	100%
York (Glen)	45.4%	18.2%	0.0%	18.2%	36.5%	100%
TOTAL	45.5%	16.5%	3.7%	20.2%	34.3%	100%
AVERAGE	47.6%	18.4%	4.5%	21.5%	31.8%	

Table 3

Age Profile of Ontario University Space
(as of 1 November, 2013) *

Institution	0-9 Years (NASM)	10-19 Years (NASM)	20-29 Years (NASM)	30-39 Years (NASM)	40-49 Years (NASM)	50+ Years (NASM)	Total (NASM)	Weighted Average Age
Algoma	4,344	0	5,710	0	514	2,109	12,677	29.0
Brock	14,772	14,292	8,121	6,426	47,922	6,006	97,538	31.9
Carleton	45,404	19,067	25,161	3,018	63,397	22,384	178,431	28.9
Guelph	39,395	5,478	23,342	23,226	74,546	67,997	233,984	44.4
Lakehead	9,350	7,717	6,321	1,389	29,707	24,129	78,613	40.8
Laurentian	5,865	0	13,104	247	46,804	7,655	73,676	42.3
Laurentian (Hear)**	871	0	0	0	0	3,560	4,431	44.4
McMaster	48,568	36,608	13,087	10,512	80,474	43,923	233,172	32.1
Nipissing	9,286	10,402	0	0	5,627	0	25,315	15.9
NOSM	5,318	1,877	1,165	0	0	0	8,361	10.3
OCAD U	8,872	1,693	5,401	2,640	0	5,006	23,611	26.9
UCIT	36,404	2,002	0	0	598	1,395	40,399	10.2
Ottawa	32,026	26,677	13,138	34,980	66,019	60,792	233,633	38.9
Queen's	46,403	43,228	13,938	21,498	79,946	28,737	233,751	30.6
Ryerson	41,709	4,193	18,838	17,373	22,645	50,835	155,594	37.0
Toronto (St. Grge)	51,285	43,998	43,578	96,857	118,030	200,905	554,653	45.5
Toronto (Miss)	28,321	2,723	1,859	0	29,129	460	62,493	24.0
Toronto (Scar)	25,196	0	103	9,461	20,456	0	55,216	25.8
Trent	12,078	4,295	11,786	9,131	16,903	1,398	55,591	21.4
Waterloo	54,840	11,159	19,170	11,869	128,147	48,688	273,873	34.7
Western	80,169	35,697	70,943	15,225	103,442	30,746	336,223	27.4
WLU	26,220	18,156	10,014	4,103	19,597	13,719	91,809	25.4
Windsor	17,945	9,598	12,789	13,256	53,095	20,871	127,554	35.2
York (Keele)	50,981	20,957	37,241	535	134,377	0	244,090	30.5
York (Glen)	0	0	344	0	3,962	14,333	18,639	50.6
TOTAL	695,621	319,818	355,156	281,746	1,145,339	655,645	3,453,326	34.7
% Distribution	20.1%	9.3%	10.3%	8.2%	33.2%	19.0%	100.0%	

* Categories 1-15 only, excluding Rentals.

This table shows that the average age of Ontario university buildings is over 30 years, the age when it is generally recognized that major building components need to be renewed. The guidelines for reporting of building age in the COU space survey specify that major renovations which substantially renew a building should be reflected in the age reported, but there are some concerns that adjustments are not always done consistently.

Table 3A

% Distribution Age Profile of Ontario University Space
(as of 1 November, 2013) *

Institution	0-9 Years (NASM)	10-19 Years (NASM)	20-29 Years (NASM)	30-39 Years (NASM)	40-49 Years (NASM)	50+ Years (NASM)
Algoma	34.3%	-	45.0%	-	4.1%	16.6%
Brock	15.1%	14.7%	8.3%	6.6%	49.1%	6.2%
Carleton	25.4%	10.7%	14.1%	1.7%	35.5%	12.5%
Guelph	16.8%	2.3%	10.0%	9.9%	31.9%	29.1%
Lakehead	11.9%	9.8%	8.0%	1.8%	37.8%	30.7%
Laurentian	8.0%	0.0%	17.8%	0.3%	63.5%	10.4%
Laurentian (Hear)	19.7%	-	-	-	-	80.3%
McMaster	20.8%	15.7%	5.6%	4.5%	34.5%	18.8%
Nipissing	36.7%	41.1%	-	-	22.2%	-
NOSM	63.6%	22.5%	13.9%	-	-	-
OCAD	37.6%	7.2%	22.9%	11.2%	-	21.2%
UOIT	90.1%	5.0%	-	-	1.5%	3.5%
Ottawa	13.7%	11.4%	5.6%	15.0%	28.3%	26.0%
Queen's	19.9%	18.5%	6.0%	9.2%	34.2%	12.3%
Ryerson	26.8%	2.7%	12.1%	11.2%	14.6%	32.7%
Toronto (St. Grge)	9.2%	7.9%	7.9%	17.5%	21.3%	36.2%
Toronto (Miss)	45.3%	4.4%	3.0%	-	46.6%	0.7%
Toronto (Scar)	45.6%	-	0.2%	17.1%	37.0%	-
Trent	21.7%	7.7%	21.2%	16.4%	30.4%	2.5%
Waterloo	20.0%	4.1%	7.0%	4.3%	46.8%	17.8%
Western	23.8%	10.6%	21.1%	4.5%	30.8%	9.1%
WLU	28.6%	19.8%	10.9%	4.5%	21.3%	14.9%
Windsor	14.1%	7.5%	10.0%	10.4%	41.6%	16.4%
York (Keele)	20.9%	8.6%	15.3%	0.2%	55.1%	-
York (Glen)	-	-	1.8%	-	21.3%	76.9%
TOTAL	20.1%	9.3%	10.3%	8.2%	33.2%	19.0%

* Categories 1-15 only, excluding Rentals.

This table shows that the average age of Ontario university buildings is over 30 years, the age when it is generally recognized that major building components need to be renewed. The guidelines for reporting of building age in the COU space survey specify that major renovations which substantially renew a building should be reflected in the age reported, but there are some concerns that adjustments

Table 4
Institutional Space Requirements As Measured By COU Space Standards, 2013-14

SYSTEM SUMMARY

	Input Measure	Space Factor	Generated Space	Inventory	% I/G	2010-11 % I/G
TEACHING/RESEARCH/ACADEMIC SUPPORT						
CLASSROOMS (1)						
Total FTE Students	426,392.3	1.11	473,295.4	391,395.0	82.7	73.7
CLASS LABS (2)						
Lab Contact Hours W	126,255.5	0.8	101,004.4	59,115.4		
Lab Contact Hours X	514,161.7	0.6	308,497.0	229,917.4		
Lab Contact Hours Y	137,795.2	0.5	68,897.6	34,438.0		
Lab Contact Hours Z	180,711.8	0.3	54,213.5	40,062.8		
Unclassified	3,260.5			4,568.7		
Total Class Lab	962,184.7		532,612.6	368,102.4	69.1	66.5
RESEARCH LABS (3)						
Research Disciplines A	8,736.9	45.0	393,159.1	287,872.6		
Research Disciplines B	6,230.0	30.0	186,901.4	120,918.7		
Research Disciplines C	4,025.7	20.0	80,513.3	50,095.4		
Research Disciplines D	5,235.4	10.0	52,354.4	33,671.7		
Research Disciplines E	25,995.1	1.0	25,995.1	26,871.4		
Unclassified	974.3			22,518.8		
Total Research	51,197.4		738,923.3	541,948.6	73.3	68.8
OFFICE - ACADEMIC (4)						
Total FTE Faculty	20,338.0	12.0	244,055.9	302,462.1	123.9	85.5
Research Appointments	7,235.6	12.0	86,827.0	47,006.0	54.1	48.4
Total FTE Grads	57,937.1	3.0	173,811.3	130,649.3	75.2	54.1
Total FTE Non-Acd Staff	11,988.4	12.0	143,860.6	150,001.5	104.3	103.3
Office Service	648,554.7	0.25	162,138.7	177,614.1	109.5	87.6
Total Academic Office			810,693.4	807,733.0	99.6	81.5
OFFICE - ADMINISTRATIVE (10)						
Total FTE Non-Acd Staff	13,869.8	12.0	166,437.1	173,639.1	104.3	96.2
Office Service	166,437.1	0.5	83,218.6	98,460.8	118.3	108.1
Total Admin. Office			249,655.7	272,099.9	109.0	100.2
Total Office - Academic & Administrative			1,060,349.1	1,079,832.9	101.8	85.5
LIBRARY FACILITIES & CAMPUS STUDY SPACE (5)						
Study (Total FTE Students)	426,392.3	0.6	255,835.4	156,441.4	61.1	56.9
Traditional Static Shelving Space	31,239,774.4	0.005	156,198.9	n/a		
Mobile Compact Shelving	4,923,161.5	0.004	19,692.6	n/a		
Super High Density	10,318,425.5	0.0035	36,114.5	n/a		
Total Stack	46,481,361.4		212,006.0	166,011.0	78.3	79.4
Library Support	467,841.4	0.25	116,960.3	73,692.1	63.0	72.1
Total Library Facilities & Campus Study Space			584,801.7	396,144.5	67.7	68.4
SUB-TOTAL: TEACHING/RESEARCH/ACAD SUPPORT			3,389,982.03	2,777,423.30	81.9	74.7
OTHER SPACE						
RECREATION / ATHLETICS (6)						
Total FTE Students	426,392.3	0.9	383,753.0	272,409.9	71.0	69.9
MAINTENANCE SHOPS (9)						
Total NASM Inv. (exc. 16.0)	5,110,308.2	0.015	76,654.6	57,807.3	75.4	76.1
STUDENT AND CENTRAL SERVICES (7, 8, 11-15)						
Total FTE Students	426,392.3	1.5	639,588.4	430,646.4	67.3	51.4
SUB-TOTAL: OTHER SPACE			1,099,996.06	760,863.51	69.2	58.3
TOTAL FORMULA AREAS			4,489,978.08	3,538,286.81	78.8	70.4

The cells shaded in blue reflect the changes made to the space factors in the various categories. Caution should be taken when making comparisons with 2010-11 data.

Numbers in brackets refer to COU Space Classification Scheme (See Appendix A)

Table 5
Institutional Space Requirements As Measured By COU Space Standards, 2013-14

ALGOMA

	Input Measure	Space Factor	Generated Space	Inventory	% I / G	System Average	2010-11 % I / G
TEACHING/RESEARCH/ACADEMIC SUPPORT							
CLASSROOMS							
Total FTE Students	1,275.20	1.11	1,415.47	1,769.87	125.0	82.7	93.4
CLASS LABS							
Lab Contact Hours W	0.00	0.8	0.00	0.00			
Lab Contact Hours X	1,548.00	0.6	928.80	303.10			
Lab Contact Hours Y	144.00	0.5	72.00	7.30			
Lab Contact Hours Z	246.00	0.3	73.80	452.53			
Unclassified	0.00			587.30			
Total Class Lab	1,938.00		1,074.60	1,350.23	125.6	69.1	90.8
RESEARCH LABS							
Research Disciplines A	6.40	45.0	288.00	280.90			
Research Disciplines B	7.80	30.0	234.00	0.00			
Research Disciplines C	0.20	20.0	4.00	0.00			
Research Disciplines D	17.40	10.0	174.00	0.00			
Research Disciplines E	75.20	1.0	75.20	0.00			
Unclassified	5.60			0.00			
Total Research	112.60		775.20	280.90	36.2	73.3	n/a
OFFICE - ACADEMIC							
Total FTE Faculty	112.60	12.0	1,351.20	730.50	54.1	123.9	57.9
Research Appointments	3.00	12.0	36.00	97.10	269.7		
Total FTE Grads	0.00	3.0	0.00	8.40	n/a	75.2	n/a
Total FTE Non-Acd Staff	4.00	12.0	48.00	0.00	0.0	104.3	0.0
Office Service	1,435.20	0.25	358.80	191.73	53.4	109.5	20.9
Total Academic Office			1,794.00	1,027.73	57.3	99.6	32.6
OFFICE - ADMINISTRATIVE							
Total FTE Non-Acd Staff	65.00	12.0	780.00	1,109.98	142.3	104.3	124.8
Office Service	780.00	0.5	390.00	526.71	135.1	118.3	109.4
Total Admin. Office			1,170.00	1,636.69	139.9	109.0	119.7
Total Office - Academic & Administrative			2,964.00	2,664.42	89.9	101.8	59.8
LIBRARY FACILITIES & CAMPUS STUDY SPACE							
Study (Total FTE Students)	1,275.20	0.6	765.12	600.70	78.5	61.1	53.3
Traditional Static Shelving Space	134,114.17	0.005	670.57				
Mobile Compact Shelving	0.00	0.004	0.00				
Super High Density	0.00	0.0035	0.00				
Total Stack	134,114.17		670.57	428.80	63.9	78.3	111.1
Library Support	1,435.69	0.25	358.92	170.40	47.5	63.0	46.4
Total Library Facilities & Campus Study Space			1,794.61	1,199.90	66.9	67.7	78.1
SUB-TOTAL: TEACHING/RESEARCH/ACAD SUPPORT			8,023.89	7,265.32	90.5	81.9	67.7
OTHER SPACE							
RECREATION / ATHLETICS							
Total FTE Students	1,275.20	0.9	1,147.68	3,409.60	297.1	71.0	413.2
MAINTENANCE SHOPS							
Total NASM Inv. (exc. 16.0)	25,006.96	0.015	375.10	277.70	74.0	75.4	92.1
STUDENT AND CENTRAL SERVICES							
Total FTE Students	1,275.20	1.5	1,912.80	2,057.29	107.6	67.3	105.6
SUB-TOTAL: OTHER SPACE			3,435.58	5,744.59	167.2	69.2	189.9
TOTAL FORMULA AREAS			11,459.47	13,009.91	113.5	78.8	103.0

The cells shaded in blue reflect the changes made to the space factors in the various categories. Caution should be taken when making comparisons with 2010-11 data.

Table 6
Institutional Space Requirements As Measured By COU Space Standards, 2013-14

BROCK

	Input Measure	Space Factor	Generated Space	Inventory	% I/G	System Average	2010-11 % I/G
TEACHING/RESEARCH/ACADEMIC SUPPORT							
CLASSROOMS							
Total FTE Students	15,885.22	1.11	17,632.59	10,479.00	59.4	82.7	57.4
CLASS LABS							
Lab Contact Hours W	0.00	0.8	0.00	0.00			
Lab Contact Hours X	21,821.00	0.6	13,092.60	6,113.49			
Lab Contact Hours Y	10,203.50	0.5	5,101.75	1,245.59			
Lab Contact Hours Z	16,230.00	0.3	4,869.00	1,738.91			
Unclassified	0.00			0.00			
Total Class Lab	48,254.50		23,063.35	9,097.99	39.4	69.1	30.7
RESEARCH LABS							
Research Disciplines A	184.44	45.0	8,299.80	8,806.93			
Research Disciplines B	201.31	30.0	6,039.15	1,450.40			
Research Disciplines C	15.36	20.0	307.20	196.58			
Research Disciplines D	109.10	10.0	1,090.95	293.10			
Research Disciplines E	1,063.37	1.0	1,063.37	694.55			
Unclassified	0.00			0.00			
Total Research	1,573.57		16,800.47	11,441.56	68.1	73.3	50.2
OFFICE - ACADEMIC							
Total FTE Faculty	859.75	12.0	10,317.00	8,458.26	82.0	123.9	67.2
Research Appointments	82.57	12.0	990.84	639.82	64.6		51.6
Total FTE Grads	1,351.30	3.0	4,053.90	2,971.41	73.3	75.2	40.5
Total FTE Non-Acd Staff	242.95	12.0	2,915.40	2,396.71	82.2	104.3	74.4
Office Service	18,277.14	0.25	4,569.29	3,838.84	84.0	109.5	52.1
Total Academic Office			22,846.43	18,305.04	80.1	99.6	60.6
OFFICE - ADMINISTRATIVE							
Total FTE Non-Acd Staff	523.98	12.0	6,287.76	6,324.84	100.6	104.3	104.4
Office Service	6,287.76	0.5	3,143.88	3,496.13	111.2	118.3	118.1
Total Admin. Office			9,431.64	9,820.97	104.1	109.0	109.0
Total Office - Academic & Administrative			32,278.07	28,126.01	87.1	101.8	72.5
LIBRARY FACILITIES & CAMPUS STUDY SPACE							
Study (Total FTE Students)	15,885.22	0.6	9,531.13	4,556.72	47.8	61.1	37.2
Traditional Static Shelving Space	721,300.58	0.005	3,606.50				
Mobile Compact Shelving	165,619.91	0.004	662.48				
Super High Density	0.00	0.0035	0.00				
Total Stack	886,920.48		4,268.98	3,254.76	76.2	78.3	75.2
Library Support	13,800.11	0.25	3,450.03	2,423.47	70.2	63.0	80.3
Total Library Facilities & Campus Study Space			17,250.14	10,234.95	59.3	67.7	55.6
SUB-TOTAL: TEACHING/RESEARCH/ACAD SUPPORT			107,024.62	69,379.51	64.8	81.9	54.7
OTHER SPACE							
RECREATION / ATHLETICS							
Total FTE Students	15,885.22	0.9	14,296.70	10,931.62	76.5	71.0	82.1
MAINTENANCE SHOPS							
Total NASM Inv. (exc. 16.0)	145,045.77	0.015	2,175.69	2,167.43	99.6	75.4	105.4
STUDENT AND CENTRAL SERVICES							
Total FTE Students	15,885.22	1.5	23,827.83	15,750.69	66.1	67.3	51.7
SUB-TOTAL: OTHER SPACE			40,300.21	28,849.74	71.6	69.2	63.1
TOTAL FORMULA AREAS			147,324.83	98,229.25	66.7	78.8	57.1

The cells shaded in blue reflect the changes made to the space factors in the various categories. Caution should be taken when making comparisons with 2010-11 data.

Table 7
Institutional Space Requirements As Measured By COU Space Standards, 2013-14

CARLETON

	Input Measure	Space Factor	Generated Space	Inventory	% I/G	System Average	2010-11 % I/G
TEACHING/RESEARCH/ACADEMIC SUPPORT							
CLASSROOMS							
Total FTE Students	23,519.17	1.11	26,106.28	17,405.41	66.7	82.7	59.1
CLASS LABS							
Lab Contact Hours W	12,841.00	0.8	10,272.80	6,370.28			
Lab Contact Hours X	24,039.00	0.6	14,423.40	11,085.47			
Lab Contact Hours Y	3,331.00	0.5	1,665.50	582.64			
Lab Contact Hours Z	26,123.00	0.3	7,836.90	1,888.30			
Unclassified	0.00			0.00			
Total Class Lab	66,334.00		34,198.60	19,926.69	58.3	69.1	59.2
RESEARCH LABS							
Research Disciplines A	242.44	45.0	10,909.80	7,633.49			
Research Disciplines B	349.87	30.0	10,496.10	5,522.88			
Research Disciplines C	209.40	20.0	4,188.00	1,267.69			
Research Disciplines D	226.23	10.0	2,262.30	1,908.36			
Research Disciplines E	1,463.93	1.0	1,463.93	1,443.48			
Unclassified	0.00			0.00			
Total Research	2,491.87		29,320.13	17,775.90	60.6	73.3	61.4
OFFICE - ACADEMIC							
Total FTE Faculty	859.27	12.0	10,311.24	14,491.72	140.5	123.9	108.8
Research Appointments	47.00	12.0	564.00	1,626.78	288.4		
Total FTE Grads	3,218.20	3.0	9,654.60	6,133.11	63.5	75.2	40.4
Total FTE Non-Acd Staff	264.26	12.0	3,171.12	3,732.28	117.7	104.3	106.3
Office Service	23,700.96	0.25	5,925.24	9,127.41	154.0	109.5	93.7
Total Academic Office			29,626.20	35,111.30	118.5	99.6	82.7
OFFICE - ADMINISTRATIVE							
Total FTE Non-Acd Staff	754.44	12.0	9,053.28	6,250.58	69.0	104.3	71.0
Office Service	9,053.28	0.5	4,526.64	7,532.37	166.4	118.3	142.1
Total Admin. Office			13,579.92	13,782.95	101.5	109.0	94.7
Total Office - Academic & Administrative			43,206.12	48,894.25	113.2	101.8	85.9
LIBRARY FACILITIES & CAMPUS STUDY SPACE							
Study (Total FTE Students)	23,519.17	0.6	14,111.50	10,685.71	75.7	61.1	24.3
Traditional Static Shelving Space	992,882.39	0.005	4,964.41				
Mobile Compact Shelving	267,728.09	0.004	1,070.91				
Super High Density	541,926.26	0.0035	1,896.74				
Total Stack	1,802,536.74		7,932.07	8,482.17	106.9	78.3	104.1
Library Support	22,043.57	0.25	5,510.89	4,203.27	76.3	63.0	104.5
Total Library Facilities & Campus Study Space			27,554.46	23,371.15	84.8	67.7	65.5
SUB-TOTAL: TEACHING/RESEARCH/ACAD SUPPORT			160,385.60	127,373.40	79.4	81.9	69.0
OTHER SPACE							
RECREATION / ATHLETICS							
Total FTE Students	23,519.17	0.9	21,167.26	24,818.72	117.3	71.0	111.8
MAINTENANCE SHOPS							
Total NASM Inv. (exc. 16.0)	247,212.64	0.015	3,708.19	2,061.72	55.6	75.4	50.2
STUDENT AND CENTRAL SERVICES							
Total FTE Students	23,519.17	1.5	35,278.76	24,177.54	68.5	67.3	45.7
SUB-TOTAL: OTHER SPACE			60,154.21	51,057.98	84.9	69.2	65.5
TOTAL FORMULA AREAS			220,539.80	178,431.38	80.9	78.8	68.0

The cells shaded in blue reflect the changes made to the space factors in the various categories. Caution should be taken when making comparisons with 2010-11 data.

Table 8
Institutional Space Requirements As Measured By COU Space Standards, 2013-14

GUELPH

	Input Measure	Space Factor	Generated Space	Inventory	% I/G	System Average	2010-11 % I/G
TEACHING/RESEARCH/ACADEMIC SUPPORT							
CLASSROOMS							
Total FTE Students	20,934.78	1.11	23,237.61	16,473.69	70.9	82.7	62.5
CLASS LABS							
Lab Contact Hours W	29,109.00	0.8	23,287.20	10,792.27			
Lab Contact Hours X	37,327.00	0.6	22,396.20	14,652.47			
Lab Contact Hours Y	10,064.00	0.5	5,032.00	1,699.49			
Lab Contact Hours Z	8,590.00	0.3	2,577.00	1,664.18			
Unclassified	0.00			0.00			
Total Class Lab	85,090.00		53,292.40	28,808.41	54.1	69.1	53.3
RESEARCH LABS							
Research Disciplines A	985.38	45.0	44,342.10	50,884.86			
Research Disciplines B	89.79	30.0	2,693.70	873.52			
Research Disciplines C	133.32	20.0	2,666.30	3,240.93			
Research Disciplines D	442.74	10.0	4,427.35	3,234.30			
Research Disciplines E	592.05	1.0	592.05	343.33			
Unclassified	1.23			0.00			
Total Research	2,244.50		54,721.50	58,576.94	107.0	73.3	104.2
OFFICE - ACADEMIC							
Total FTE Faculty	884.67	12.0	10,616.04	13,855.80	130.5	123.9	91.2
Research Appointments	459.95	12.0	5,519.40	3,003.28	54.4		
Total FTE Grads	2,402.50	3.0	7,207.50	8,801.00	122.1	75.2	88.5
Total FTE Non-Acd Staff	609.71	12.0	7,316.52	8,776.73	120.0	104.3	119.4
Office Service	30,659.46	0.25	7,664.87	12,156.02	158.6	109.5	128.8
Total Academic Office			38,324.33	46,592.83	121.6	99.6	103.0
OFFICE - ADMINISTRATIVE							
Total FTE Non-Acd Staff	716.50	12.0	8,598.00	10,236.39	119.1	104.3	99.8
Office Service	8,598.00	0.5	4,299.00	6,027.08	140.2	118.3	134.4
Total Admin. Office			12,897.00	16,263.47	126.1	109.0	111.3
Total Office - Academic & Administrative			51,221.33	62,856.30	122.7	101.8	104.9
LIBRARY FACILITIES & CAMPUS STUDY SPACE							
Study (Total FTE Students)	20,934.78	0.6	12,560.87	5,556.02	44.2	61.1	77.6
Traditional Static Shelving Space	1,168,938.80	0.005	5,844.69				
Mobile Compact Shelving	233,306.02	0.004	933.22				
Super High Density	531,162.65	0.0035	1,859.07				
Total Stack	1,933,407.47		8,636.99	7,110.40	82.3	78.3	80.1
Library Support	21,197.86	0.25	5,299.46	2,621.92	49.5	63.0	63.5
Total Library Facilities & Campus Study Space			26,497.32	15,288.34	57.7	67.7	75.6
SUB-TOTAL: TEACHING/RESEARCH/ACAD SUPPORT			208,970.15	182,003.68	87.1	81.9	84.0
OTHER SPACE							
RECREATION / ATHLETICS							
Total FTE Students	20,934.78	0.9	18,841.30	20,126.59	106.8	71.0	85.2
MAINTENANCE SHOPS							
Total NASM Inv. (exc. 16.0)	374,799.28	0.015	5,621.99	6,967.10	123.9	75.4	104.5
STUDENT AND CENTRAL SERVICES							
Total FTE Students	20,934.78	1.5	31,402.17	24,886.14	79.2	67.3	50.9
SUB-TOTAL: OTHER SPACE			55,865.46	51,979.83	93.0	69.2	65.2
TOTAL FORMULA AREAS			264,835.61	233,983.51	88.4	78.8	79.7

The cells shaded in blue reflect the changes made to the space factors in the various categories. Caution should be taken when making comparisons with 2010-11 data.

Table 9
Institutional Space Requirements As Measured By COU Space Standards, 2013-14

LAKEHEAD

	Input Measure	Space Factor	Generated Space	Inventory	% I / G	System Average	2010-11 % I / G
TEACHING/RESEARCH/ACADEMIC SUPPORT							
CLASSROOMS							
Total FTE Students	7,551.75	1.11	8,382.45	9,723.30	116.0	82.7	95.6
CLASS LABS							
Lab Contact Hours W	7,815.50	0.8	6,252.40	2,704.40			
Lab Contact Hours X	11,499.06	0.6	6,899.44	5,714.80			
Lab Contact Hours Y	5,231.85	0.5	2,615.92	2,686.00			
Lab Contact Hours Z	6,902.95	0.3	2,070.89	965.00			
Unclassified	264.50			102.70			
Total Class Lab	31,713.86		17,838.64	12,172.90	68.2	69.1	86.0
RESEARCH LABS							
Research Disciplines A	100.09	45.0	4,504.05	2,475.40			
Research Disciplines B	132.13	30.0	3,963.90	1,960.30			
Research Disciplines C	68.37	20.0	1,367.40	1,082.50			
Research Disciplines D	92.03	10.0	920.30	156.30			
Research Disciplines E	414.96	1.0	414.96	233.70			
Unclassified	27.70			1,483.80			
Total Research	835.28		11,170.61	7,392.00	66.2	73.3	64.1
OFFICE - ACADEMIC							
Total FTE Faculty	416.75	12.0	5,001.00	5,513.90	110.3	123.9	90.6
Research Appointments	124.33	12.0	1,491.94	1,138.50	76.3		
Total FTE Grads	794.00	3.0	2,382.00	1,318.60	55.4	75.2	50.4
Total FTE Non-Acd Staff	143.41	12.0	1,720.92	1,421.00	82.6	104.3	101.4
Office Service	10,595.86	0.25	2,648.96	1,305.00	49.3	109.5	41.4
Total Academic Office			13,244.82	10,697.00	80.8	99.6	74.8
OFFICE - ADMINISTRATIVE							
Total FTE Non-Acd Staff	369.03	12.0	4,428.36	3,885.90	87.8	104.3	71.2
Office Service	4,428.36	0.5	2,214.18	2,241.20	101.2	118.3	79.0
Total Admin. Office			6,642.54	6,127.10	92.2	109.0	73.8
Total Office - Academic & Administrative			19,887.36	16,824.10	84.6	101.8	74.5
LIBRARY FACILITIES & CAMPUS STUDY SPACE							
Study (Total FTE Students)	7,551.75	0.6	4,531.05	2,945.50	65.0	61.1	55.4
Traditional Static Shelving Space	766,175.78	0.005	3,830.88				
Mobile Compact Shelving	0.00	0.004	0.00				
Super High Density	0.00	0.0035	0.00				
Total Stack	766,175.78		3,830.88	3,515.40	91.8	78.3	78.5
Library Support	8,361.93	0.25	2,090.48	2,342.90	112.1	63.0	136.2
Total Library Facilities & Campus Study Space			10,452.41	8,803.80	84.2	67.7	80.1
SUB-TOTAL: TEACHING/RESEARCH/ACAD SUPPORT			67,731.47	54,916.10	81.1	81.9	79.1
OTHER SPACE							
RECREATION / ATHLETICS							
Total FTE Students	7,551.75	0.9	6,796.58	10,556.40	155.3	71.0	150.3
MAINTENANCE SHOPS							
Total NASM Inv. (exc. 16.0)	119,410.05	0.015	1,791.15	1,135.60	63.4	75.4	72.8
STUDENT AND CENTRAL SERVICES							
Total FTE Students	7,551.75	1.5	11,327.63	13,750.80	121.4	67.3	82.8
SUB-TOTAL: OTHER SPACE			19,915.36	25,442.80	127.8	69.2	101.6
TOTAL FORMULA AREAS			87,646.83	80,358.90	91.7	78.8	85.0

The cells shaded in blue reflect the changes made to the space factors in the various categories. Caution should be taken when making comparisons with 2010-11 data.

Table 10
Institutional Space Requirements As Measured By COU Space Standards, 2013-14

LAURENTIAN

	Input Measure	Space Factor	Generated Space	Inventory	% I / G	System Average	2010-11 % I / G
TEACHING/RESEARCH/ACADEMIC SUPPORT							
CLASSROOMS							
Total FTE Students	7,284.08	1.11	8,085.33	9,789.76	121.1	82.7	98.0
CLASS LABS							
Lab Contact Hours W	932.00	0.8	745.60	1,054.35			
Lab Contact Hours X	6,723.00	0.6	4,033.80	3,488.07			
Lab Contact Hours Y	1,182.00	0.5	591.00	878.11			
Lab Contact Hours Z	528.00	0.3	158.40	890.03			
Unclassified	0.00			873.88			
Total Class Lab	9,365.00		5,528.80	7,184.44	129.9	69.1	135.6
RESEARCH LABS							
Research Disciplines A	174.17	45.0	7,837.74	5,476.00			
Research Disciplines B	110.93	30.0	3,328.00	1,089.00			
Research Disciplines C	15.34	20.0	306.80	278.00			
Research Disciplines D	82.33	10.0	823.26	286.00			
Research Disciplines E	529.52	1.0	529.52	331.00			
Unclassified	0.00			0.00			
Total Research	912.29		12,825.31	7,460.00	58.2	73.3	61.7
OFFICE - ACADEMIC							
Total FTE Faculty	611.45	12.0	7,337.40	7,662.52	104.4	123.9	92.5
Research Appointments	66.34	12.0	796.08	961.13	120.7		
Total FTE Grads	576.50	3.0	1,729.50	1,057.35	61.1	75.2	36.3
Total FTE Non-Acd Staff	120.34	12.0	1,444.08	1,908.35	132.1	104.3	56.6
Office Service	11,307.06	0.25	2,826.77	2,401.90	85.0	109.5	45.2
Total Academic Office			14,133.83	13,991.25	99.0	99.6	72.4
OFFICE - ADMINISTRATIVE							
Total FTE Non-Acd Staff	225.89	12.0	2,710.68	3,804.44	140.4	104.3	126.5
Office Service	2,710.68	0.5	1,355.34	1,665.00	122.8	118.3	94.7
Total Admin. Office			4,066.02	5,469.44	134.5	109.0	115.9
Total Office - Academic & Administrative			18,199.85	19,460.69	106.9	101.8	80.6
LIBRARY FACILITIES & CAMPUS STUDY SPACE							
Study (Total FTE Students)	7,284.08	0.6	4,370.45	2,724.13	62.3	61.1	74.5
Traditional Static Shelving Space	784,444.13	0.005	3,922.22				
Mobile Compact Shelving	14,500.00	0.004	58.00				
Super High Density	0.00	0.0035	0.00				
Total Stack	798,944.13		3,980.22	4,206.36	105.7	78.3	164.7
Library Support	8,350.67	0.25	2,087.67	1,281.49	61.4	63.0	81.4
Total Library Facilities & Campus Study Space			10,438.34	8,211.98	78.7	67.7	102.0
SUB-TOTAL: TEACHING/RESEARCH/ACAD SUPPORT			55,077.62	52,106.87	94.6	81.9	87.7
OTHER SPACE							
RECREATION / ATHLETICS							
Total FTE Students	7,284.08	0.9	6,555.67	9,960.99	151.9	71.0	149.2
MAINTENANCE SHOPS							
Total NASM Inv. (exc. 16.0)	127,695.54	0.015	1,915.43	2,141.60	111.8	75.4	135.2
STUDENT AND CENTRAL SERVICES							
Total FTE Students	7,284.08	1.5	10,926.12	9,717.41	88.9	67.3	78.4
SUB-TOTAL: OTHER SPACE			19,397.23	21,820.00	112.5	69.2	103.1
TOTAL FORMULA AREAS			74,474.84	73,926.87	99.3	78.8	92.1

The cells shaded in blue reflect the changes made to the space factors in the various categories. Caution should be taken when making comparisons with 2010-11 data.

Table 11
Institutional Space Requirements As Measured By COU Space Standards, 2013-14

HEARST

	Input Measure	Space Factor	Generated Space	Inventory	% I / G	System Average	2010-11 % I / G
TEACHING/RESEARCH/ACADEMIC SUPPORT							
CLASSROOMS							
Total FTE Students	82.40	1.11	91.46	920.19	1006.1	82.7	787.7
CLASS LABS							
Lab Contact Hours W	0.00	0.8	0.00	0.00			
Lab Contact Hours X	0.00	0.6	0.00	0.00			
Lab Contact Hours Y	0.00	0.5	0.00	0.00			
Lab Contact Hours Z	24.00	0.3	7.20	9.30			
Unclassified	0.00			191.74			
Total Class Lab	24.00		7.20	201.04	2792.2	69.1	107.2
RESEARCH LABS							
Research Disciplines A	0.00	45.0	0.00	0.00			
Research Disciplines B	0.00	30.0	0.00	0.00			
Research Disciplines C	0.00	20.0	0.00	0.00			
Research Disciplines D	0.00	10.0	0.00	0.00			
Research Disciplines E	0.00	1.0	0.00	0.00			
Unclassified	1.00			0.00			
Total Research	1.00		0.00	0.00	n/a	73.3	n/a
OFFICE - ACADEMIC							
Total FTE Faculty	1.00	12.0	12.00	486.99	4058.3	123.9	154.2
Research Appointments	0.00	12.0	0.00	29.82			
Total FTE Grads	0.00	3.0	0.00	0.00	n/a	75.2	n/a
Total FTE Non-Acd Staff	3.00	12.0	36.00	59.55	165.4	104.3	0.0
Office Service	48.00	0.25	12.00	155.24	1293.7	109.5	165.1
Total Academic Office			60.00	731.60	1219.3	99.6	132.2
OFFICE - ADMINISTRATIVE							
Total FTE Non-Acd Staff	14.20	12.0	170.40	216.93	127.3	104.3	131.8
Office Service	170.40	0.5	85.20	153.94	180.7	118.3	177.1
Total Admin. Office			255.60	370.87	145.1	109.0	146.9
Total Office - Academic & Administrative			315.60	1,102.47	349.3	101.8	135.6
LIBRARY FACILITIES & CAMPUS STUDY SPACE							
Study (Total FTE Students)	82.40	0.6	49.44	127.74	258.4	61.1	176.5
Traditional Static Shelving Space	68,775.07	0.005	343.88				
Mobile Compact Shelving	1,872.00	0.004	7.49				
Super High Density	0.00	0.0035	0.00				
Total Stack	70,647.07		351.36	690.45	196.5	78.3	21.5
Library Support	400.80	0.25	100.20	68.47	68.3	63.0	23.4
Total Library Facilities & Campus Study Space			501.00	886.66	177.0	67.7	26.1
SUB-TOTAL: TEACHING/RESEARCH/ACAD SUPPORT			915.27	3,110.36	339.8	81.9	82.5
OTHER SPACE							
RECREATION / ATHLETICS							
Total FTE Students	82.40	0.9	74.16	0.00	0.0	71.0	735.9
MAINTENANCE SHOPS							
Total NASM Inv. (exc. 16.0)	7,061.87	0.015	105.93	102.66	96.9	75.4	210.4
STUDENT AND CENTRAL SERVICES							
Total FTE Students	82.40	1.5	123.60	1,840.96	1489.4	67.3	658.5
SUB-TOTAL: OTHER SPACE			303.69	1,943.62	640.0	69.2	553.7
TOTAL FORMULA AREAS			1,218.96	5,053.98	414.6	78.8	124.4

The cells shaded in blue reflect the changes made to the space factors in the various categories. Caution should be taken when making comparisons with 2010-11 data.

Table 12
Institutional Space Requirements As Measured By COU Space Standards, 2013-14

McMASTER

	Input Measure	Space Factor	Generated Space	Inventory	% I/G	System Average	2010-11 % I/G
TEACHING/RESEARCH/ACADEMIC SUPPORT							
CLASSROOMS							
Total FTE Students	26,352.90	1.11	29,251.72	24,650.56	84.3	82.7	84.8
CLASS LABS							
Lab Contact Hours W	12,575.50	0.8	10,060.40	3,408.24			
Lab Contact Hours X	27,236.00	0.6	16,341.60	12,611.97			
Lab Contact Hours Y	2,854.50	0.5	1,427.25	848.47			
Lab Contact Hours Z	18,332.50	0.3	5,499.75	1,046.01			
Unclassified	396.00			0.00			
Total Class Lab	61,394.50		33,329.00	17,914.69	53.8	69.1	58.1
RESEARCH LABS							
Research Disciplines A	1,127.44	45.0	50,734.71	28,117.54			
Research Disciplines B	586.51	30.0	17,595.16	12,061.43			
Research Disciplines C	196.61	20.0	3,932.23	4,367.61			
Research Disciplines D	91.22	10.0	912.24	890.44			
Research Disciplines E	1,143.47	1.0	1,143.47	797.52			
Unclassified	0.00			13,662.05			
Total Research	3,145.25		74,317.81	59,896.59	80.6	73.3	61.9
OFFICE - ACADEMIC							
Total FTE Faculty	1,146.90	12.0	13,762.80	16,398.45	119.2	123.9	76.4
Research Appointments	1,178.73	12.0	14,144.80	7,300.03	51.6		
Total FTE Grads	3,664.80	3.0	10,994.40	9,326.62	84.8	75.2	64.0
Total FTE Non-Acd Staff	794.18	12.0	9,530.17	12,961.75	136.0	104.3	138.0
Office Service	48,432.17	0.25	12,108.04	11,971.90	98.9	109.5	85.0
Total Academic Office			60,540.21	57,958.74	95.7	99.6	84.5
OFFICE - ADMINISTRATIVE							
Total FTE Non-Acd Staff	747.59	12.0	8,971.08	12,099.86	134.9	104.3	100.9
Office Service	8,971.08	0.5	4,485.54	4,849.82	108.1	118.3	77.2
Total Admin. Office			13,456.61	16,949.68	126.0	109.0	93.0
Total Office - Academic & Administrative			73,996.82	74,908.42	101.2	101.8	86.2
LIBRARY FACILITIES & CAMPUS STUDY SPACE							
Study (Total FTE Students)	26,352.90	0.6	15,811.74	10,152.69	64.2	61.1	67.8
Traditional Static Shelving Space	1,117,754.67	0.005	5,588.77				
Mobile Compact Shelving	538,757.08	0.004	2,155.03				
Super High Density	189,674.94	0.0035	663.86				
Total Stack	1,846,186.70		8,407.66	13,054.24	155.3	78.3	100.3
Library Support	24,219.40	0.25	6,054.85	3,768.68	62.2	63.0	56.8
Total Library Facilities & Campus Study Space			30,274.25	26,975.61	89.1	67.7	77.1
SUB-TOTAL: TEACHING/RESEARCH/ACAD SUPPORT			241,169.61	204,345.87	84.7	81.9	74.3
OTHER SPACE							
RECREATION / ATHLETICS							
Total FTE Students	26,352.90	0.9	23,717.61	16,664.25	70.3	71.0	74.1
MAINTENANCE SHOPS							
Total NASM Inv. (exc. 16.0)	372,988.34	0.015	5,594.83	3,326.00	59.4	75.4	57.1
STUDENT AND CENTRAL SERVICES							
Total FTE Students	26,352.90	1.5	39,529.35	22,800.32	57.7	67.3	46.2
SUB-TOTAL: OTHER SPACE			68,841.79	42,790.56	62.2	69.2	55.0
TOTAL FORMULA AREAS			310,011.39	247,136.43	79.7	78.8	69.8

The cells shaded in blue reflect the changes made to the space factors in the various categories. Caution should be taken when making comparisons with 2010-11 data.

Table 13
Institutional Space Requirements As Measured By COU Space Standards, 2013-14

NIPISSING

	Input Measure	Space Factor	Generated Space	Inventory	% I/G	System Average	2010-11 % I/G
TEACHING/RESEARCH/ACADEMIC SUPPORT							
CLASSROOMS							
Total FTE Students	4,712.40	1.11	5,230.76	6,160.93	117.8	82.7	88.7
CLASS LABS							
Lab Contact Hours W	0.00	0.8	0.00	0.00			
Lab Contact Hours X	3,133.00	0.6	1,879.80	900.95			
Lab Contact Hours Y	19,054.00	0.5	9,527.00	3,203.85			
Lab Contact Hours Z	3,589.00	0.3	1,076.70	358.00			
Unclassified	0.00			0.00			
Total Class Lab	25,776.00		12,483.50	4,462.80	35.7	69.1	27.4
RESEARCH LABS							
Research Disciplines A	23.80	45.0	1,071.00	551.96			
Research Disciplines B	12.80	30.0	384.00	415.50			
Research Disciplines C	9.10	20.0	182.00	199.39			
Research Disciplines D	40.80	10.0	408.00	110.80			
Research Disciplines E	257.35	1.0	257.35	220.48			
Unclassified	0.00			0.00			
Total Research	343.85		2,302.35	1,498.13	65.1	73.3	91.2
OFFICE - ACADEMIC							
Total FTE Faculty	286.30	12.0	3,435.60	3,196.40	93.0	123.9	88.0
Research Appointments	8.00	12.0	96.00	151.98	158.3		
Total FTE Grads	171.80	3.0	515.40	134.07	26.0	75.2	24.3
Total FTE Non-Acd Staff	286.30	12.0	3,435.60	281.00	8.2	104.3	28.2
Office Service	7,482.60	0.25	1,870.65	11.39	0.6	109.5	0.9
Total Academic Office			9,353.25	3,774.84	40.4	99.6	55.8
OFFICE - ADMINISTRATIVE							
Total FTE Non-Acd Staff	307.00	12.0	3,684.00	2,285.08	62.0	104.3	143.3
Office Service	3,684.00	0.5	1,842.00	745.01	40.4	118.3	83.1
Total Admin. Office			5,526.00	3,030.09	54.8	109.0	123.2
Total Office - Academic & Administrative			14,879.25	6,804.93	45.7	101.8	71.2
LIBRARY FACILITIES & CAMPUS STUDY SPACE							
Study (Total FTE Students)	4,712.40	0.6	2,827.44	1,392.50	49.2	61.1	5.0
Traditional Static Shelving Space	189,470.31	0.005	947.35				
Mobile Compact Shelving	15,536.47	0.004	62.15				
Super High Density	1,508.00	0.0035	5.28				
Total Stack	206,514.78		1,014.78	1,645.00	162.1	78.3	129.6
Library Support	3,842.22	0.25	960.55	444.00	46.2	63.0	46.8
Total Library Facilities & Campus Study Space			4,802.77	3,481.50	72.5	67.7	41.8
SUB-TOTAL: TEACHING/RESEARCH/ACAD SUPPORT			39,698.63	22,408.29	56.4	81.9	54.0
OTHER SPACE							
RECREATION / ATHLETICS							
Total FTE Students	4,712.40	0.9	4,241.16	5,337.30	125.8	71.0	59.1
MAINTENANCE SHOPS							
Total NASM Inv. (exc. 16.0)	66,485.35	0.015	997.28	0.00	0.0	75.4	0.0
STUDENT AND CENTRAL SERVICES							
Total FTE Students	4,712.40	1.5	7,068.60	2,843.37	40.2	67.3	32.6
SUB-TOTAL: OTHER SPACE			12,307.04	8,180.67	66.5	69.2	38.4
TOTAL FORMULA AREAS			52,005.67	30,588.96	58.8	78.8	49.3

The cells shaded in blue reflect the changes made to the space factors in the various categories. Caution should be taken when making comparisons with 2010-11 data.

Table 14
Institutional Space Requirements As Measured By COU Space Standards, 2013-14

NORTHERN ONTARIO SCHOOL OF MEDICINE (NOSM)

	Input Measure	Space Factor	Generated Space	Inventory	% I / G	System Average	2010-11 % I / G
TEACHING/RESEARCH/ACADEMIC SUPPORT							
CLASSROOMS							
Total FTE Students	128.00	1.11	142.08	987.90	695.3	82.7	838.3
CLASS LABS							
Lab Contact Hours W	0.00	0.8	0.00	0.00			
Lab Contact Hours X	384.00	0.6	230.40	848.70			
Lab Contact Hours Y	0.00	0.5	0.00	0.00			
Lab Contact Hours Z	0.00	0.3	0.00	0.00			
Unclassified	0.00			0.00			
Total Class Lab	384.00		230.40	848.70	368.4	69.1	237.3
RESEARCH LABS							
Research Disciplines A	28.00	45.0	1,260.00	1,538.20			
Research Disciplines B	0.00	30.0	0.00	0.00			
Research Disciplines C	0.00	20.0	0.00	0.00			
Research Disciplines D	0.00	10.0	0.00	0.00			
Research Disciplines E	0.00	1.0	0.00	0.00			
Unclassified	0.00			0.00			
Total Research	28.00		1,260.00	1,538.20	122.1	73.3	79.2
OFFICE - ACADEMIC							
Total FTE Faculty	26.00	12.0	312.00	694.60	222.6	123.9	65.6
Research Appointments	4.00	12.0	48.00	0.00	0.0		
Total FTE Grads	0.00	3.0	0.00	0.00		75.2	
Total FTE Non-Acd Staff	203.00	12.0	2,436.00	815.10	33.5	104.3	42.5
Office Service	2,796.00	0.25	699.00	87.30	12.5	109.5	11.4
Total Academic Office			3,495.00	1,597.00	45.7	99.6	39.3
OFFICE - ADMINISTRATIVE							
Total FTE Non-Acd Staff	37.00	12.0	444.00	1,418.20	319.4	104.3	353.2
Office Service	444.00	0.5	222.00	887.40	399.7	118.3	548.5
Total Admin. Office			666.00	2,305.60	346.2	109.0	418.3
Total Office - Academic & Administrative			4,161.00	3,902.60	93.8	101.8	98.9
LIBRARY FACILITIES & CAMPUS STUDY SPACE							
Study (Total FTE Students)	128.00	0.6	76.80	120.10	156.4	61.1	274.4
Traditional Static Shelving Space	7,869.41	0.005	39.35				
Mobile Compact Shelving	0.00	0.004	0.00				
Super High Density	0.00	0.0035	0.00				
Total Stack	7,869.41		39.35	449.30	1141.9	78.3	1091.6
Library Support	116.15	0.25	29.04	155.00	533.8	63.0	503.4
Total Library Facilities & Campus Study Space			145.18	724.40	499.0	67.7	578.2
SUB-TOTAL: TEACHING/RESEARCH/ACAD SUPPORT			5,938.66	8,001.80	134.7	81.9	121.6
OTHER SPACE							
RECREATION / ATHLETICS							
Total FTE Students	128.00	0.9	115.20	0.00	0.0	71.0	0.0
MAINTENANCE SHOPS							
Total NASM Inv. (exc. 16.0)	8,360.80	0.015	125.41	0.00	0.0	75.4	0.0
STUDENT AND CENTRAL SERVICES							
Total FTE Students	128.00	1.5	192.00	359.00	187.0	67.3	131.9
SUB-TOTAL: OTHER SPACE			432.61	359.00	83.0	69.2	65.3
TOTAL FORMULA AREAS			6,371.28	8,360.80	131.2	78.8	118.1

The cells shaded in blue reflect the changes made to the space factors in the various categories. Caution should be taken when making comparisons with 2010-11 data.

Table 15
Institutional Space Requirements As Measured By COU Space Standards, 2013-14

OCAD U

	Input Measure	Space Factor	Generated Space	Inventory	% I / G	System Average	2010-11 % I / G
TEACHING/RESEARCH/ACADEMIC SUPPORT							
CLASSROOMS							
Total FTE Students	3,902.30	1.11	4,331.55	2,230.42	51.5	82.7	39.7
CLASS LABS							
Lab Contact Hours W	0.00	0.8	0.00	0.00			
Lab Contact Hours X	40,931.50	0.6	24,558.90	10,373.51			
Lab Contact Hours Y	0.00	0.5	0.00	0.00			
Lab Contact Hours Z	10,530.50	0.3	3,159.15	0.00			
Unclassified	0.00			0.00			
Total Class Lab	51,462.00		27,718.05	10,373.51	37.4	69.1	34.7
RESEARCH LABS							
Research Disciplines A	0.00	45.0	0.00	0.00			
Research Disciplines B	0.00	30.0	0.00	0.00			
Research Disciplines C	86.34	20.0	1,726.80	0.00			
Research Disciplines D	0.00	10.0	0.00	0.00			
Research Disciplines E	266.50	1.0	266.50	1,723.56			
Unclassified	0.00			0.00			
Total Research	352.84		1,993.30	1,723.56	86.5	73.3	47.1
OFFICE - ACADEMIC							
Total FTE Faculty	256.88	12.0	3,082.56	1,325.94	43.0	123.9	49.6
Research Appointments	4.62	12.0	55.44	500.88	903.5		
Total FTE Grads	187.30	3.0	561.90	738.84	131.5	75.2	152.1
Total FTE Non-Acd Staff	30.00	12.0	360.00	744.91	206.9	104.3	71.0
Office Service	4,059.90	0.25	1,014.98	570.28	56.2	109.5	29.4
Total Academic Office			5,074.88	3,880.85	76.5	99.6	54.0
OFFICE - ADMINISTRATIVE							
Total FTE Non-Acd Staff	218.00	12.0	2,616.00	1,984.95	75.9	104.3	94.5
Office Service	2,616.00	0.5	1,308.00	601.54	46.0	118.3	49.8
Total Admin. Office			3,924.00	2,586.49	65.9	109.0	79.6
Total Office - Academic & Administrative			8,998.88	6,467.34	71.9	101.8	62.6
LIBRARY FACILITIES & CAMPUS STUDY SPACE							
Study (Total FTE Students)	3,902.30	0.6	2,341.38	659.14	28.2	61.1	27.4
Traditional Static Shelving Space	148,167.28	0.005	740.84				
Mobile Compact Shelving	12,912.89	0.004	51.65				
Super High Density	0.00	0.0035	0.00				
Total Stack	161,080.17		792.49	450.83	56.9	78.3	55.0
Library Support	3,133.87	0.25	783.47	436.92	55.8	63.0	40.4
Total Library Facilities & Campus Study Space			3,917.33	1,546.89	39.5	67.7	35.6
SUB-TOTAL: TEACHING/RESEARCH/ACAD SUPPORT			46,959.11	22,341.72	47.6	81.9	40.8
OTHER SPACE							
RECREATION / ATHLETICS							
Total FTE Students	3,902.30	0.9	3,512.07	0.00	0.0	71.0	0.0
MAINTENANCE SHOPS							
Total NASM Inv. (exc. 16.0)	34,278.58	0.015	514.18	226.12	44.0	75.4	34.5
STUDENT AND CENTRAL SERVICES							
Total FTE Students	3,902.30	1.5	5,853.45	2,624.36	44.8	67.3	45.8
SUB-TOTAL: OTHER SPACE			9,879.70	2,850.48	28.9	69.2	31.7
TOTAL FORMULA AREAS			56,838.81	25,192.20	44.3	78.8	39.1

The cells shaded in blue reflect the changes made to the space factors in the various categories. Caution should be taken when making comparisons with 2010-11 data.

Table 16
Institutional Space Requirements As Measured By COU Space Standards, 2013-14

UNIVERSITY OF ONTARIO INSTITUTE OF TECHNOLOGY

	Input Measure	Space Factor	Generated Space	Inventory	% I / G	System Average	2010-11 % I / G
TEACHING/RESEARCH/ACADEMIC SUPPORT							
CLASSROOMS							
Total FTE Students	8,168.76	1.11	9,067.32	7,595.71	83.8	82.7	84.0
CLASS LABS							
Lab Contact Hours W	7,256.50	0.8	5,805.20	2,531.79			
Lab Contact Hours X	5,355.50	0.6	3,213.30	2,400.94			
Lab Contact Hours Y	54.00	0.5	27.00	111.06			
Lab Contact Hours Z	5,710.75	0.3	1,713.23	1,243.04			
Unclassified	0.00			6.08			
Total Class Lab	18,376.75		10,758.73	6,292.91	58.5	69.1	52.1
RESEARCH LABS							
Research Disciplines A	102.20	45.0	4,599.00	1,269.61			
Research Disciplines B	95.20	30.0	2,856.00	1,995.77			
Research Disciplines C	72.05	20.0	1,441.00	1,550.26			
Research Disciplines D	9.00	10.0	90.00	0.00			
Research Disciplines E	219.40	1.0	219.40	1,302.77			
Unclassified	0.00			1,537.68			
Total Research	497.85		9,205.40	7,656.09	83.2	73.3	31.0
OFFICE - ACADEMIC							
Total FTE Faculty	266.00	12.0	3,192.00	4,403.72	138.0	123.9	69.2
Research Appointments	28.63	12.0	343.56	90.36	26.3		
Total FTE Grads	440.40	3.0	1,321.20	1,206.78	91.3	75.2	43.8
Total FTE Non-Acd Staff	114.99	12.0	1,379.88	924.83	67.0	104.3	50.2
Office Service	6,236.64	0.25	1,559.16	891.84	57.2	109.5	36.2
Total Academic Office			7,795.80	7,517.53	96.4	99.6	56.0
OFFICE - ADMINISTRATIVE							
Total FTE Non-Acd Staff	348.25	12.0	4,179.00	3,562.76	85.3	104.3	69.3
Office Service	4,179.00	0.5	2,089.50	1,847.94	88.4	118.3	110.6
Total Admin. Office			6,268.50	5,410.70	86.3	109.0	83.1
Total Office - Academic & Administrative			14,064.30	12,928.23	91.9	101.8	65.5
LIBRARY FACILITIES & CAMPUS STUDY SPACE							
Study (Total FTE Students)	8,168.76	0.6	4,901.26	1,768.08	36.1	61.1	38.3
Traditional Static Shelving Space	76,307.16	0.005	381.54				
Mobile Compact Shelving	0.00	0.004	0.00				
Super High Density	0.00	0.0035	0.00				
Total Stack	76,307.16		381.54	718.60	188.3	78.3	117.8
Library Support	5,282.79	0.25	1,320.70	1,251.72	94.8	63.0	81.2
Total Library Facilities & Campus Study Space			6,603.49	3,738.40	56.6	67.7	57.3
SUB-TOTAL: TEACHING/RESEARCH/ACAD SUPPORT			49,699.24	38,211.34	76.9	81.9	57.6
OTHER SPACE							
RECREATION / ATHLETICS							
Total FTE Students	8,168.76	0.9	7,351.88	8,294.49	112.8	71.0	114.8
MAINTENANCE SHOPS							
Total NASM Inv. (exc. 16.0)	56,355.87	0.015	845.34	136.53	16.2	75.4	n/a
STUDENT AND CENTRAL SERVICES							
Total FTE Students	8,168.76	1.5	12,253.14	4,764.59	38.9	67.3	26.4
SUB-TOTAL: OTHER SPACE			20,450.36	13,195.61	64.5	69.2	52.2
TOTAL FORMULA AREAS			70,149.60	51,406.95	73.3	78.8	56.0

The cells shaded in blue reflect the changes made to the space factors in the various categories. Caution should be taken when making comparisons with 2010-11 data.

Table 17
Institutional Space Requirements As Measured By COU Space Standards, 2013-14

OTTAWA

	Input Measure	Space Factor	Generated Space	Inventory	% I / G	System Average	2010-11 % I / G
TEACHING/RESEARCH/ACADEMIC SUPPORT							
CLASSROOMS							
Total FTE Students	36,152.00	1.11	40,128.72	26,425.45	65.9	82.7	60.1
CLASS LABS							
Lab Contact Hours W	4,622.00	0.8	3,697.60	3,488.91			
Lab Contact Hours X	32,479.00	0.6	19,487.40	11,897.36			
Lab Contact Hours Y	10,584.50	0.5	5,292.25	1,542.51			
Lab Contact Hours Z	6,596.50	0.3	1,978.95	2,528.19			
Unclassified	0.00			21.91			
Total Class Lab	54,282.00		30,456.20	19,478.88	64.0	69.1	67.5
RESEARCH LABS							
Research Disciplines A	654.03	45.0	29,431.35	18,178.13			
Research Disciplines B	472.14	30.0	14,164.20	5,373.17			
Research Disciplines C	712.03	20.0	14,240.60	4,562.27			
Research Disciplines D	258.19	10.0	2,581.90	3,258.58			
Research Disciplines E	2,630.04	1.0	2,630.04	2,621.73			
Unclassified	76.82			1,534.75			
Total Research	4,803.25		63,048.09	35,528.61	56.4	73.3	66.6
OFFICE - ACADEMIC							
Total FTE Faculty	1,735.45	12.0	20,825.40	22,803.46	109.5	123.9	80.6
Research Appointments	208.40	12.0	2,500.80	3,346.58	133.8		
Total FTE Grads	5,927.00	3.0	17,781.00	10,875.59	61.2	75.2	39.3
Total FTE Non-Acd Staff	1,083.31	12.0	12,999.72	13,577.24	104.4	104.3	100.8
Office Service	54,106.92	0.25	13,526.73	11,702.67	86.5	109.5	69.2
Total Academic Office			67,633.65	62,305.54	92.1	99.6	71.6
OFFICE - ADMINISTRATIVE							
Total FTE Non-Acd Staff	1,133.57	12.0	13,602.84	13,894.52	102.1	104.3	100.0
Office Service	13,602.84	0.5	6,801.42	6,301.59	92.7	118.3	72.6
Total Admin. Office			20,404.26	20,196.11	99.0	109.0	90.9
Total Office - Academic & Administrative			88,037.91	82,501.65	93.7	101.8	75.7
LIBRARY FACILITIES & CAMPUS STUDY SPACE							
Study (Total FTE Students)	36,152.00	0.6	21,691.20	15,357.94	70.8	61.1	46.9
Traditional Static Shelving Space	2,892,771.59	0.005	14,463.86				
Mobile Compact Shelving	13,630.00	0.004	54.52				
Super High Density	1,066,867.81	0.0035	3,734.04				
Total Stack	3,973,269.40		18,252.42	12,652.42	69.3	78.3	83.7
Library Support	39,943.62	0.25	9,985.90	4,863.79	48.7	63.0	70.9
Total Library Facilities & Campus Study Space			49,929.52	32,874.15	65.8	67.7	64.3
SUB-TOTAL: TEACHING/RESEARCH/ACAD SUPPORT			271,600.44	196,808.74	72.5	81.9	68.8
OTHER SPACE							
RECREATION / ATHLETICS							
Total FTE Students	36,152.00	0.9	32,536.80	15,431.89	47.4	71.0	50.1
MAINTENANCE SHOPS							
Total NASM Inv. (exc. 16.0)	324,816.71	0.015	4,872.25	3,988.22	81.9	75.4	85.3
STUDENT AND CENTRAL SERVICES							
Total FTE Students	36,152.00	1.5	54,228.00	25,300.15	46.7	67.3	37.3
SUB-TOTAL: OTHER SPACE			91,637.05	44,720.26	48.8	69.2	43.2
TOTAL FORMULA AREAS			363,237.49	241,529.00	66.5	78.8	61.8

The cells shaded in blue reflect the changes made to the space factors in the various categories. Caution should be taken when making comparisons with 2010-11 data.

Table 18
Institutional Space Requirements As Measured By COU Space Standards, 2013-14

QUEEN'S

	Input Measure	Space Factor	Generated Space	Inventory	% I / G	System Average	2010-11 % I / G
TEACHING/RESEARCH/ACADEMIC SUPPORT							
CLASSROOMS							
Total FTE Students	22,106.80	1.11	24,538.55	20,683.88	84.3	82.7	70.7
CLASS LABS							
Lab Contact Hours W	15,025.00	0.8	12,020.00	5,199.51			
Lab Contact Hours X	41,832.00	0.6	25,099.20	14,559.38			
Lab Contact Hours Y	9,233.50	0.5	4,616.75	3,016.27			
Lab Contact Hours Z	3,461.00	0.3	1,038.30	774.17			
Unclassified	0.00			0.00			
Total Class Lab	69,551.50		42,774.25	23,549.33	55.1	69.1	56.4
RESEARCH LABS							
Research Disciplines A	635.38	45.0	28,591.88	20,695.81			
Research Disciplines B	317.04	30.0	9,511.20	11,544.84			
Research Disciplines C	163.28	20.0	3,265.50	3,642.75			
Research Disciplines D	489.87	10.0	4,898.70	2,845.02			
Research Disciplines E	1,650.85	1.0	1,650.85	262.71			
Unclassified	0.00			0.00			
Total Research	3,256.41		47,918.12	38,991.13	81.4	73.3	80.4
OFFICE - ACADEMIC							
Total FTE Faculty	1,008.90	12.0	12,106.80	19,381.45	160.1	123.9	89.4
Research Appointments	624.52	12.0	7,494.24	5,004.94	66.8		
Total FTE Grads	3,933.30	3.0	11,799.90	10,320.95	87.5	75.2	68.3
Total FTE Non-Acd Staff	634.73	12.0	7,616.76	13,914.97	182.7	104.3	191.6
Office Service	39,017.70	0.25	9,754.43	15,111.02	154.9	109.5	116.8
Total Academic Office			48,772.13	63,733.33	130.7	99.6	102.2
OFFICE - ADMINISTRATIVE							
Total FTE Non-Acd Staff	861.73	12.0	10,340.76	10,163.33	98.3	104.3	91.4
Office Service	10,340.76	0.5	5,170.38	6,444.08	124.6	118.3	115.2
Total Admin. Office			15,511.14	16,607.41	107.1	109.0	99.3
Total Office - Academic & Administrative			64,283.27	80,340.74	125.0	101.8	101.6
LIBRARY FACILITIES & CAMPUS STUDY SPACE							
Study (Total FTE Students)	22,106.80	0.6	13,264.08	10,249.46	77.3	61.1	83.5
Traditional Static Shelving Space	3,880,376.42	0.005	19,401.88				
Mobile Compact Shelving	208,233.64	0.004	832.93				
Super High Density	0.00	0.0035	0.00				
Total Stack	4,088,610.06		20,234.82	13,897.20	68.7	78.3	68.1
Library Support	33,498.90	0.25	8,374.72	4,651.15	55.5	63.0	71.2
Total Library Facilities & Campus Study Space			41,873.62	28,797.81	68.8	67.7	73.5
SUB-TOTAL: TEACHING/RESEARCH/ACAD SUPPORT			221,387.80	192,362.89	86.9	81.9	80.8
OTHER SPACE							
RECREATION / ATHLETICS							
Total FTE Students	22,106.80	0.9	19,896.12	20,333.90	102.2	71.0	94.9
MAINTENANCE SHOPS							
Total NASM Inv. (exc. 16.0)	353,121.96	0.015	5,296.83	2,388.91	45.1	75.4	46.6
STUDENT AND CENTRAL SERVICES							
Total FTE Students	22,106.80	1.5	33,160.20	32,338.96	97.5	67.3	78.1
SUB-TOTAL: OTHER SPACE			58,353.15	55,061.77	94.4	69.2	80.4
TOTAL FORMULA AREAS			279,740.95	247,424.66	88.4	78.8	80.7

The cells shaded in blue reflect the changes made to the space factors in the various categories. Caution should be taken when making comparisons with 2010-11 data.

Table 19
Institutional Space Requirements As Measured By COU Space Standards, 2013-14

RYERSON

	Input Measure	Space Factor	Generated Space	Inventory	% I / G	System Average	2010-11 % I / G
TEACHING/RESEARCH/ACADEMIC SUPPORT							
CLASSROOMS							
Total FTE Students	31,463.46	1.11	34,924.44	19,895.67	57.0	82.7	57.8
CLASS LABS							
Lab Contact Hours W	8,385.00	0.8	6,708.00	6,097.89			
Lab Contact Hours X	44,188.00	0.6	26,512.80	18,491.37			
Lab Contact Hours Y	5,292.00	0.5	2,646.00	2,198.32			
Lab Contact Hours Z	35,752.00	0.3	10,725.60	4,914.45			
Unclassified	0.00			0.00			
Total Class Lab	93,617.00		46,592.40	31,702.03	68.0	69.1	71.1
RESEARCH LABS							
Research Disciplines A	148.46	45.0	6,680.70	2,672.58			
Research Disciplines B	330.57	30.0	9,917.10	6,256.35			
Research Disciplines C	216.64	20.0	4,332.80	2,017.48			
Research Disciplines D	340.74	10.0	3,407.40	707.60			
Research Disciplines E	1,248.36	1.0	1,248.36	1,971.21			
Unclassified	0.00			0.00			
Total Research	2,284.77		25,586.36	13,625.22	53.3	73.3	54.4
OFFICE - ACADEMIC							
Total FTE Faculty	1,200.27	12.0	14,403.24	16,208.79	112.5	123.9	80.1
Research Appointments	252.00	12.0	3,024.00	645.75	21.4		
Total FTE Grads	2,100.00	3.0	6,300.00	1,877.24	29.8	75.2	21.3
Total FTE Non-Acd Staff	612.90	12.0	7,354.80	4,296.04	58.4	104.3	52.5
Office Service	31,082.04	0.25	7,770.51	7,989.56	102.8	109.5	77.4
Total Academic Office			38,852.55	31,017.38	79.8	99.6	63.8
OFFICE - ADMINISTRATIVE							
Total FTE Non-Acd Staff	1,067.00	12.0	12,804.00	10,980.46	85.8	104.3	78.7
Office Service	12,804.00	0.5	6,402.00	5,791.99	90.5	118.3	98.4
Total Admin. Office			19,206.00	16,772.45	87.3	109.0	85.3
Total Office - Academic & Administrative			58,058.55	47,789.83	82.3	101.8	70.1
LIBRARY FACILITIES & CAMPUS STUDY SPACE							
Study (Total FTE Students)	31,463.46	0.6	18,878.07	7,673.16	40.6	61.1	44.9
Traditional Static Shelving Space	0.00	0.005	0.00				
Mobile Compact Shelving	0.00	0.004	0.00				
Super High Density	521,363.12	0.0035	1,824.77				
Total Stack	521,363.12		1,824.77	3,234.71	177.3	78.3	98.2
Library Support	20,702.84	0.25	5,175.71	2,429.09	46.9	63.0	58.7
Total Library Facilities & Campus Study Space			25,878.56	13,336.96	51.5	67.7	55.3
SUB-TOTAL: TEACHING/RESEARCH/ACAD SUPPORT			191,040.30	126,349.71	66.1	81.9	64.2
OTHER SPACE							
RECREATION / ATHLETICS							
Total FTE Students	31,463.46	0.9	28,317.11	14,983.12	52.9	71.0	26.4
MAINTENANCE SHOPS							
Total NASM Inv. (exc. 16.0)	186,534.49	0.015	2,798.02	2,624.92	93.8	75.4	79.8
STUDENT AND CENTRAL SERVICES							
Total FTE Students	31,463.46	1.5	47,195.18	20,996.20	44.5	67.3	36.8
SUB-TOTAL: OTHER SPACE			78,310.31	38,604.24	49.3	69.2	35.0
TOTAL FORMULA AREAS			269,350.61	164,953.94	61.2	78.8	55.3

The cells shaded in blue reflect the changes made to the space factors in the various categories. Caution should be taken when making comparisons with 2010-11 data.

Table 20
Institutional Space Requirements As Measured By COU Space Standards, 2013-14

TORONTO (ST. GEORGE)

	Input Measure	Space Factor	Generated Space	Inventory	% I / G	System Average	2010-11 % I / G
TEACHING/RESEARCH/ACADEMIC SUPPORT							
CLASSROOMS							
Total FTE Students	50,792.32	1.11	56,379.48	57,530.23	102.0	82.7	94.5
CLASS LABS							
Lab Contact Hours W	10,709.46	0.8	8,567.57	5,666.30			
Lab Contact Hours X	37,218.33	0.6	22,331.00	32,134.93			
Lab Contact Hours Y	1,898.57	0.5	949.29	1,410.24			
Lab Contact Hours Z	1,444.27	0.3	433.28	2,642.32			
Unclassified	0.00			0.00			
Total Class Lab	51,270.63		32,281.13	41,853.79	129.7	69.1	113.6
RESEARCH LABS							
Research Disciplines A	1,686.80	45.0	75,905.78	53,843.54			
Research Disciplines B	1,409.76	30.0	42,292.80	26,313.41			
Research Disciplines C	522.06	20.0	10,441.20	7,163.83			
Research Disciplines D	955.72	10.0	9,557.20	5,848.88			
Research Disciplines E	5,093.33	1.0	5,093.33	5,566.13			
Unclassified	422.27			2,214.48			
Total Research	10,089.94		143,290.31	100,950.27	70.5	73.3	69.6
OFFICE - ACADEMIC							
Total FTE Faculty	2,442.20	12.0	29,306.40	50,084.96	170.9	123.9	99.1
Research Appointments	1,749.84	12.0	20,998.08	10,693.77	50.9		
Total FTE Grads	14,402.30	3.0	43,206.90	24,351.19	56.4	75.2	44.9
Total FTE Non-Acd Staff	2,802.52	12.0	33,630.24	33,277.56	99.0	104.3	93.9
Office Service	127,141.62	0.25	31,785.41	37,199.73	117.0	109.5	97.9
Total Academic Office			158,927.03	155,607.21	97.9	99.6	82.2
OFFICE - ADMINISTRATIVE							
Total FTE Non-Acd Staff	1,126.87	12.0	13,522.44	17,083.85	126.3	104.3	88.1
Office Service	13,522.44	0.5	6,761.22	8,491.72	125.6	118.3	88.9
Total Admin. Office			20,283.66	25,575.57	126.1	109.0	88.4
Total Office - Academic & Administrative			179,210.69	181,182.78	101.1	101.8	82.9
LIBRARY FACILITIES & CAMPUS STUDY SPACE							
Study (Total FTE Students)	50,792.32	0.6	30,475.39	32,058.63	105.2	61.1	113.0
Traditional Static Shelving Space	8,901,327.46	0.005	44,506.64				
Mobile Compact Shelving	1,671,193.64	0.004	6,684.77				
Super High Density	2,573,752.91	0.0035	9,008.14				
Total Stack	13,146,274.00		60,199.55	36,927.92	61.3	78.3	69.8
Library Support	90,674.94	0.25	22,668.73	17,085.70	75.4	63.0	82.0
Total Library Facilities & Campus Study Space			113,343.67	86,072.25	75.9	67.7	83.9
SUB-TOTAL: TEACHING/RESEARCH/ACAD SUPPORT			524,505.27	467,589.32	89.1	81.9	83.2
OTHER SPACE							
RECREATION / ATHLETICS							
Total FTE Students	50,792.32	0.9	45,713.09	26,004.31	56.9	71.0	61.4
MAINTENANCE SHOPS							
Total NASM Inv. (exc. 16.0)	731,348.92	0.015	10,970.23	8,907.29	81.2	75.4	87.2
STUDENT AND CENTRAL SERVICES							
Total FTE Students	50,792.32	1.5	76,188.48	57,034.42	74.9	67.3	58.3
SUB-TOTAL: OTHER SPACE			132,871.80	91,946.02	69.2	69.2	61.3
TOTAL FORMULA AREAS			657,377.07	559,535.34	85.1	78.8	78.5

The cells shaded in blue reflect the changes made to the space factors in the various categories. Caution should be taken when making comparisons with 2010-11 data.

Table 21
Institutional Space Requirements As Measured By COU Space Standards, 2013-14

TORONTO (MISSISSAUGA)

	Input Measure	Space Factor	Generated Space	Inventory	% I / G	System Average	2010-11 % I / G
TEACHING/RESEARCH/ACADEMIC SUPPORT							
CLASSROOMS							
Total FTE Students	11,023.90	1.11	12,236.53	11,076.70	90.5	82.7	51.7
CLASS LABS							
Lab Contact Hours W	0.00	0.8	0.00	0.00			
Lab Contact Hours X	8,393.00	0.6	5,035.80	5,266.66			
Lab Contact Hours Y	4,374.00	0.5	2,187.00	1,103.16			
Lab Contact Hours Z	1,708.00	0.3	512.40	890.62			
Unclassified	0.00			0.00			
Total Class Lab	14,475.00		7,735.20	7,260.44	93.9	69.1	94.1
RESEARCH LABS							
Research Disciplines A	172.29	45.0	7,753.05	5,936.28			
Research Disciplines B	0.00	30.0	0.00	0.00			
Research Disciplines C	69.88	20.0	1,397.60	1,091.10			
Research Disciplines D	29.64	10.0	296.40	273.30			
Research Disciplines E	220.07	1.0	220.07	150.05			
Unclassified	154.00			0.00			
Total Research	645.88		9,667.12	7,450.73	77.1	73.3	74.3
OFFICE - ACADEMIC							
Total FTE Faculty	348.93	12.0	4,187.16	4,866.23	116.2	123.9	88.0
Research Appointments	69.70	12.0	836.40	295.88	35.4		
Total FTE Grads	529.90	3.0	1,589.70	1,755.13	110.4	75.2	84.0
Total FTE Non-Acd Staff	102.51	12.0	1,230.12	1,326.94	107.9	104.3	89.8
Office Service	7,843.38	0.25	1,960.85	1,067.76	54.5	109.5	40.0
Total Academic Office			9,804.23	9,311.94	95.0	99.6	77.9
OFFICE - ADMINISTRATIVE							
Total FTE Non-Acd Staff	240.41	12.0	2,884.92	3,149.40	109.2	104.3	93.1
Office Service	2,884.92	0.5	1,442.46	1,592.82	110.4	118.3	103.5
Total Admin. Office			4,327.38	4,742.22	109.6	109.0	96.6
Total Office - Academic & Administrative			14,131.61	14,054.16	99.5	101.8	83.2
LIBRARY FACILITIES & CAMPUS STUDY SPACE							
Study (Total FTE Students)	11,023.90	0.6	6,614.34	3,454.81	52.2	61.1	56.1
Traditional Static Shelving Space	0.00	0.005	0.00				
Mobile Compact Shelving	492,785.64	0.004	1,971.14				
Super High Density	1,622.00	0.0035	5.68				
Total Stack	494,407.64		1,976.82	1,762.31	89.1	78.3	85.0
Library Support	8,591.16	0.25	2,147.79	946.13	44.1	63.0	48.3
Total Library Facilities & Campus Study Space			10,738.95	6,163.25	57.4	67.7	60.7
SUB-TOTAL: TEACHING/RESEARCH/ACAD SUPPORT			54,509.40	46,005.28	84.4	81.9	71.9
OTHER SPACE							
RECREATION / ATHLETICS							
Total FTE Students	11,023.90	0.9	9,921.51	6,935.39	69.9	71.0	80.2
MAINTENANCE SHOPS							
Total NASM Inv. (exc. 16.0)	97,355.62	0.015	1,460.33	652.93	44.7	75.4	47.8
STUDENT AND CENTRAL SERVICES							
Total FTE Students	11,023.90	1.5	16,535.85	8,899.80	53.8	67.3	44.3
SUB-TOTAL: OTHER SPACE			27,917.69	16,488.12	59.1	69.2	55.1
TOTAL FORMULA AREAS			82,427.10	62,493.40	75.8	78.8	65.9

The cells shaded in blue reflect the changes made to the space factors in the various categories. Caution should be taken when making comparisons with 2010-11 data.

Table 22
Institutional Space Requirements As Measured By COU Space Standards, 2013-14

TORONTO (SCARBOROUGH)

	Input Measure	Space Factor	Generated Space	Inventory	% I / G	System Average	2010-11 % I / G
TEACHING/RESEARCH/ACADEMIC SUPPORT							
CLASSROOMS							
Total FTE Students	9,894.40	1.11	10,982.78	6,692.49	60.9	82.7	49.8
CLASS LABS							
Lab Contact Hours W	0.00	0.8	0.00	0.00			
Lab Contact Hours X	9,991.00	0.6	5,994.60	4,525.78			
Lab Contact Hours Y	0.00	0.5	0.00	342.29			
Lab Contact Hours Z	361.00	0.3	108.30	592.50			
Unclassified	0.00			0.00			
Total Class Lab	10,352.00		6,102.90	5,460.57	89.5	69.1	94.0
RESEARCH LABS							
Research Disciplines A	161.69	45.0	7,276.05	5,039.47			
Research Disciplines B	47.49	30.0	1,424.70	1,214.94			
Research Disciplines C	25.02	20.0	500.40	143.38			
Research Disciplines D	18.71	10.0	187.10	0.00			
Research Disciplines E	223.02	1.0	223.02	349.77			
Unclassified	0.00			0.00			
Total Research	475.93		9,611.27	6,747.56	70.2	73.3	71.4
OFFICE - ACADEMIC							
Total FTE Faculty	342.23	12.0	4,106.76	4,873.77	118.7	123.9	74.9
Research Appointments	52.00	12.0	624.00	236.26	37.9		
Total FTE Grads	216.40	3.0	649.20	1,432.71	220.7	75.2	176.8
Total FTE Non-Acd Staff	68.00	12.0	816.00	936.89	114.8	104.3	63.1
Office Service	6,195.96	0.25	1,548.99	1,545.50	99.8	109.5	49.9
Total Academic Office			7,744.95	9,025.13	116.5	99.6	76.7
OFFICE - ADMINISTRATIVE							
Total FTE Non-Acd Staff	309.00	12.0	3,708.00	3,634.00	98.0	104.3	95.6
Office Service	3,708.00	0.5	1,854.00	1,854.12	100.0	118.3	95.6
Total Admin. Office			5,562.00	5,488.12	98.7	109.0	95.6
Total Office - Academic & Administrative			13,306.95	14,513.25	109.1	101.8	82.9
LIBRARY FACILITIES & CAMPUS STUDY SPACE							
Study (Total FTE Students)	9,894.40	0.6	5,936.64	3,851.31	64.9	61.1	61.7
Traditional Static Shelving Space	324,788.54	0.005	1,623.94				
Mobile Compact Shelving	2,275.00	0.004	9.10				
Super High Density	14,566.00	0.0035	50.98				
Total Stack	341,629.54		1,684.02	1,664.79	98.9	78.3	98.6
Library Support	7,620.66	0.25	1,905.17	702.57	36.9	63.0	37.3
Total Library Facilities & Campus Study Space			9,525.83	6,218.67	65.3	67.7	64.0
SUB-TOTAL: TEACHING/RESEARCH/ACAD SUPPORT			49,529.73	39,632.54	80.0	81.9	70.9
OTHER SPACE							
RECREATION / ATHLETICS							
Total FTE Students	9,894.40	0.9	8,904.96	4,398.21	49.4	71.0	55.5
MAINTENANCE SHOPS							
Total NASM Inv. (exc. 16.0)	71,705.59	0.015	1,075.58	2,422.17	225.2	75.4	174.6
STUDENT AND CENTRAL SERVICES							
Total FTE Students	9,894.40	1.5	14,841.60	8,763.12	59.0	67.3	43.2
SUB-TOTAL: OTHER SPACE			24,822.14	15,583.50	62.8	69.2	51.6
TOTAL FORMULA AREAS			74,351.88	55,216.04	74.3	78.8	64.0

The cells shaded in blue reflect the changes made to the space factors in the various categories. Caution should be taken when making comparisons with 2010-11 data.

Table 23
Institutional Space Requirements As Measured By COU Space Standards, 2013-14

TRENT

	Input Measure	Space Factor	Generated Space	Inventory	% I / G	System Average	2010-11 % I / G
TEACHING/RESEARCH/ACADEMIC SUPPORT							
CLASSROOMS							
Total FTE Students	7,139.70	1.11	7,925.07	8,099.04	102.2	82.7	95.3
CLASS LABS							
Lab Contact Hours W	0.00	0.8	0.00	0.00			
Lab Contact Hours X	6,010.00	0.6	3,606.00	2,265.60			
Lab Contact Hours Y	4,101.00	0.5	2,050.50	1,601.61			
Lab Contact Hours Z	780.00	0.3	234.00	478.13			
Unclassified	0.00			338.55			
Total Class Lab	10,891.00		5,890.50	4,683.89	79.5	69.1	64.5
RESEARCH LABS							
Research Disciplines A	44.00	45.0	1,980.00	4,892.72			
Research Disciplines B	34.30	30.0	1,029.00	689.61			
Research Disciplines C	25.45	20.0	509.00	569.46			
Research Disciplines D	136.05	10.0	1,360.50	1,578.73			
Research Disciplines E	335.15	1.0	335.15	93.08			
Unclassified	0.00			0.00			
Total Research	574.95		5,213.65	7,823.60	150.1	73.3	154.2
OFFICE - ACADEMIC							
Total FTE Faculty	350.00	12.0	4,200.00	5,221.09	124.3	123.9	184.6
Research Appointments	40.00	12.0	480.00	445.92	92.9		
Total FTE Grads	435.90	3.0	1,307.70	1,972.44	150.8	75.2	117.3
Total FTE Non-Acd Staff	43.00	12.0	516.00	1,527.71	296.1	104.3	288.9
Office Service	6,503.70	0.25	1,625.93	1,576.89	97.0	109.5	113.7
Total Academic Office			8,129.63	10,744.05	132.2	99.6	162.1
OFFICE - ADMINISTRATIVE							
Total FTE Non-Acd Staff	310.00	12.0	3,720.00	4,205.19	113.0	104.3	105.5
Office Service	3,720.00	0.5	1,860.00	1,492.38	80.2	118.3	64.1
Total Admin. Office			5,580.00	5,697.57	102.1	109.0	91.7
Total Office - Academic & Administrative			13,709.63	16,441.62	119.9	101.8	128.4
LIBRARY FACILITIES & CAMPUS STUDY SPACE							
Study (Total FTE Students)	7,139.70	0.6	4,283.82	764.53	17.8	61.1	16.3
Traditional Static Shelving Space	717,226.71	0.005	3,586.13				
Mobile Compact Shelving	0.00	0.004	0.00				
Super High Density	0.00	0.0035	0.00				
Total Stack	717,226.71		3,586.13	5,299.91	147.8	78.3	137.7
Library Support	7,869.95	0.25	1,967.49	1,096.19	55.7	63.0	59.5
Total Library Facilities & Campus Study Space			9,837.44	7,160.63	72.8	67.7	71.9
SUB-TOTAL: TEACHING/RESEARCH/ACAD SUPPORT			42,576.28	44,208.78	103.8	81.9	102.5
OTHER SPACE							
RECREATION / ATHLETICS							
Total FTE Students	7,139.70	0.9	6,425.73	3,953.86	61.5	71.0	63.6
MAINTENANCE SHOPS							
Total NASM Inv. (exc. 16.0)	75,749.43	0.015	1,136.24	383.23	33.7	75.4	76.2
STUDENT AND CENTRAL SERVICES							
Total FTE Students	7,139.70	1.5	10,709.55	7,044.68	65.8	67.3	50.1
SUB-TOTAL: OTHER SPACE			18,271.52	11,381.77	62.3	69.2	55.4
TOTAL FORMULA AREAS			60,847.81	55,590.55	91.4	78.8	86.6

The cells shaded in blue reflect the changes made to the space factors in the various categories. Caution should be taken when making comparisons with 2010-11 data.

Table 24
Institutional Space Requirements As Measured By COU Space Standards, 2013-14

WATERLOO

	Input Measure	Space Factor	Generated Space	Inventory	% I / G	System Average	2010-11 % I / G
TEACHING/RESEARCH/ACADEMIC SUPPORT							
CLASSROOMS							
Total FTE Students	29,843.52	1.11	33,126.31	28,325.78	85.5	82.7	74.5
CLASS LABS							
Lab Contact Hours W	8,528.61	0.8	6,822.89	5,305.55			
Lab Contact Hours X	37,744.54	0.6	22,646.72	19,381.66			
Lab Contact Hours Y	3,949.38	0.5	1,974.69	1,840.54			
Lab Contact Hours Z	4,709.19	0.3	1,412.76	2,661.16			
Unclassified	0.00			0.00			
Total Class Lab	54,931.72		32,857.06	29,188.91	88.8	69.1	72.6
RESEARCH LABS							
Research Disciplines A	506.28	45.0	22,782.60	15,770.08			
Research Disciplines B	787.41	30.0	23,622.15	17,858.47			
Research Disciplines C	575.14	20.0	11,502.70	13,037.49			
Research Disciplines D	696.70	10.0	6,967.00	3,734.11			
Research Disciplines E	1,247.74	1.0	1,247.74	2,172.48			
Unclassified	0.00			0.00			
Total Research	3,813.26		66,122.19	52,572.63	79.5	73.3	66.9
OFFICE - ACADEMIC							
Total FTE Faculty	1,455.69	12.0	17,468.28	24,130.68	138.1	123.9	89.8
Research Appointments	451.60	12.0	5,419.20	5,007.99	92.4		
Total FTE Grads	4,362.10	3.0	13,086.30	16,813.58	128.5	75.2	96.0
Total FTE Non-Acd Staff	908.17	12.0	10,898.04	12,244.21	112.4	104.3	100.3
Office Service	46,871.82	0.25	11,717.96	14,720.46	125.6	109.5	83.2
Total Academic Office			58,589.78	72,916.92	124.5	99.6	91.7
OFFICE - ADMINISTRATIVE							
Total FTE Non-Acd Staff	1,247.60	12.0	14,971.20	12,826.69	85.7	104.3	68.1
Office Service	14,971.20	0.5	7,485.60	6,852.26	91.5	118.3	80.8
Total Admin. Office			22,456.80	19,678.95	87.6	109.0	72.3
Total Office - Academic & Administrative			81,046.58	92,595.87	114.3	101.8	86.5
LIBRARY FACILITIES & CAMPUS STUDY SPACE							
Study (Total FTE Students)	29,843.52	0.6	17,906.11	7,517.35	42.0	61.1	42.4
Traditional Static Shelving Space	1,578,134.70	0.005	7,890.67				
Mobile Compact Shelving	180,108.41	0.004	720.43				
Super High Density	603,640.60	0.0035	2,112.74				
Total Stack	2,361,883.71		10,723.85	8,049.52	75.1	78.3	74.6
Library Support	28,629.96	0.25	7,157.49	3,751.95	52.4	63.0	56.1
Total Library Facilities & Campus Study Space			35,787.45	19,318.82	54.0	67.7	55.4
SUB-TOTAL: TEACHING/RESEARCH/ACAD SUPPORT			248,939.58	222,002.01	89.2	81.9	74.0
OTHER SPACE							
RECREATION / ATHLETICS							
Total FTE Students	29,843.52	0.9	26,859.17	12,933.53	48.2	71.0	52.5
MAINTENANCE SHOPS							
Total NASM Inv. (exc. 16.0)	419,257.25	0.015	6,288.86	7,214.90	114.7	75.4	101.9
STUDENT AND CENTRAL SERVICES							
Total FTE Students	29,843.52	1.5	44,765.28	32,877.13	73.4	67.3	58.1
SUB-TOTAL: OTHER SPACE			77,913.31	53,025.56	68.1	69.2	59.9
TOTAL FORMULA AREAS			326,852.88	275,027.57	84.1	78.8	70.5

The cells shaded in blue reflect the changes made to the space factors in the various categories. Caution should be taken when making comparisons with 2010-11 data.

Table 25
Institutional Space Requirements As Measured By COU Space Standards, 2013-14

WESTERN

	Input Measure	Space Factor	Generated Space	Inventory	% I / G	System Average	2010-11 % I / G
TEACHING/RESEARCH/ACADEMIC SUPPORT							
CLASSROOMS							
Total FTE Students	34,547.50	1.11	38,347.73	38,345.73	100.0	82.7	89.2
CLASS LABS							
Lab Contact Hours W	5,771.00	0.8	4,616.80	1,815.13			
Lab Contact Hours X	56,195.00	0.6	33,717.00	21,858.00			
Lab Contact Hours Y	19,681.00	0.5	9,840.50	4,556.13			
Lab Contact Hours Z	9,608.00	0.3	2,882.40	3,236.60			
Unclassified	0.00			0.00			
Total Class Lab	91,255.00		51,056.70	31,465.85	61.6	69.1	69.3
RESEARCH LABS							
Research Disciplines A	1,200.34	45.0	54,015.08	33,387.36			
Research Disciplines B	575.66	30.0	17,269.65	18,666.99			
Research Disciplines C	335.37	20.0	6,707.30	2,262.58			
Research Disciplines D	527.77	10.0	5,277.70	3,319.89			
Research Disciplines E	2,223.95	1.0	2,223.95	882.46			
Unclassified	0.00			0.00			
Total Research	4,863.08		85,493.68	58,519.27	68.4	73.3	65.0
OFFICE - ACADEMIC							
Total FTE Faculty	1,962.00	12.0	23,544.00	28,335.00	120.3	123.9	62.8
Research Appointments	1,446.85	12.0	17,362.20	1,712.90	9.9		
Total FTE Grads	5,255.30	3.0	15,765.90	15,622.46	99.1	75.2	71.6
Total FTE Non-Acd Staff	1,301.50	12.0	15,618.00	14,741.57	94.4	104.3	113.7
Office Service	72,290.10	0.25	18,072.53	19,826.64	109.7	109.5	102.9
Total Academic Office			90,362.63	80,238.57	88.8	99.6	79.4
OFFICE - ADMINISTRATIVE							
Total FTE Non-Acd Staff	1,227.90	12.0	14,734.80	14,352.10	97.4	104.3	99.1
Office Service	14,734.80	0.5	7,367.40	12,228.13	166.0	118.3	160.8
Total Admin. Office			22,102.20	26,580.23	120.3	109.0	119.7
Total Office - Academic & Administrative			112,464.83	106,818.80	95.0	101.8	86.5
LIBRARY FACILITIES & CAMPUS STUDY SPACE							
Study (Total FTE Students)	34,547.50	0.6	20,728.50	11,184.39	54.0	61.1	42.4
Traditional Static Shelving Space	1,900,587.11	0.005	9,502.94				
Mobile Compact Shelving	428,204.18	0.004	1,712.82				
Super High Density	1,580,433.82	0.0035	5,531.52				
Total Stack	3,909,225.11		16,747.27	13,666.28	81.6	78.3	73.0
Library Support	37,475.77	0.25	9,368.94	8,678.24	92.6	63.0	103.8
Total Library Facilities & Campus Study Space			46,844.71	33,528.91	71.6	67.7	67.2
SUB-TOTAL: TEACHING/RESEARCH/ACAD SUPPORT			334,207.64	268,678.56	80.4	81.9	76.4
OTHER SPACE							
RECREATION / ATHLETICS							
Total FTE Students	34,547.50	0.9	31,092.75	19,254.06	61.9	71.0	75.8
MAINTENANCE SHOPS							
Total NASM Inv. (exc. 16.0)	523,264.74	0.015	7,848.97	3,232.45	41.2	75.4	46.2
STUDENT AND CENTRAL SERVICES							
Total FTE Students	34,547.50	1.5	51,821.25	45,057.55	86.9	67.3	58.4
SUB-TOTAL: OTHER SPACE			90,762.97	67,544.06	74.4	69.2	62.5
TOTAL FORMULA AREAS			424,970.61	336,222.62	79.1	78.8	73.2

The cells shaded in blue reflect the changes made to the space factors in the various categories. Caution should be taken when making comparisons with 2010-11 data.

Table 26
Institutional Space Requirements As Measured By COU Space Standards, 2013-14

WILFRID LAURIER

	Input Measure	Space Factor	Generated Space	Inventory	% I / G	System Average	2010-11 % I / G
TEACHING/RESEARCH/ACADEMIC SUPPORT							
CLASSROOMS							
Total FTE Students	16,402.90	1.11	18,207.22	12,990.48	71.3	82.7	65.2
CLASS LABS							
Lab Contact Hours W	0.00	0.8	0.00	0.00			
Lab Contact Hours X	10,868.00	0.6	6,520.80	2,884.99			
Lab Contact Hours Y	5,712.50	0.5	2,856.25	1,643.54			
Lab Contact Hours Z	4,191.00	0.3	1,257.30	2,425.12			
Unclassified	0.00			0.00			
Total Class Lab	20,771.50		10,634.35	6,953.65	65.4	69.1	48.2
RESEARCH LABS							
Research Disciplines A	83.00	45.0	3,735.00	1,497.97			
Research Disciplines B	90.65	30.0	2,719.50	420.14			
Research Disciplines C	89.40	20.0	1,788.00	1,188.80			
Research Disciplines D	6.50	10.0	65.00	436.14			
Research Disciplines E	778.85	1.0	778.85	1,997.50			
Unclassified	107.45			0.00			
Total Research	1,155.85		9,086.35	5,540.55	61.0	73.3	56.6
OFFICE - ACADEMIC							
Total FTE Faculty	583.00	12.0	6,996.00	9,734.57	139.1	123.9	130.1
Research Appointments	81.00	12.0	972.00	396.78	40.8		
Total FTE Grads	1,111.70	3.0	3,335.10	1,195.25	35.8	75.2	6.3
Total FTE Non-Acd Staff	341.00	12.0	4,092.00	3,220.95	78.7	104.3	57.2
Office Service	15,395.10	0.25	3,848.78	3,991.44	103.7	109.5	76.5
Total Academic Office			19,243.88	18,538.99	96.3	99.6	81.4
OFFICE - ADMINISTRATIVE							
Total FTE Non-Acd Staff	534.00	12.0	6,408.00	7,598.51	118.6	104.3	187.5
Office Service	6,408.00	0.5	3,204.00	4,858.82	151.6	118.3	247.3
Total Admin. Office			9,612.00	12,457.33	129.6	109.0	207.4
Total Office - Academic & Administrative			28,855.88	30,996.32	107.4	101.8	112.0
LIBRARY FACILITIES & CAMPUS STUDY SPACE							
Study (Total FTE Students)	16,402.90	0.6	9,841.74	4,499.47	45.7	61.1	39.1
Traditional Static Shelving Space	724,440.96	0.005	3,622.20				
Mobile Compact Shelving	0.00	0.004	0.00				
Super High Density	205,782.39	0.0035	720.24				
Total Stack	930,223.34		4,342.44	5,036.81	116.0	78.3	72.8
Library Support	14,184.18	0.25	3,546.05	2,128.57	60.0	63.0	52.7
Total Library Facilities & Campus Study Space			17,730.23	11,664.85	65.8	67.7	53.1
SUB-TOTAL: TEACHING/RESEARCH/ACAD SUPPORT			84,514.02	68,145.85	80.6	81.9	71.7
OTHER SPACE							
RECREATION / ATHLETICS							
Total FTE Students	16,402.90	0.9	14,762.61	11,776.26	79.8	71.0	77.1
MAINTENANCE SHOPS							
Total NASM Inv. (exc. 16.0)	201,553.32	0.015	3,023.30	1,587.21	52.5	75.4	66.0
STUDENT AND CENTRAL SERVICES							
Total FTE Students	16,402.90	1.5	24,604.35	16,192.51	65.8	67.3	52.6
SUB-TOTAL: OTHER SPACE			42,390.26	29,555.98	69.7	69.2	60.5
TOTAL FORMULA AREAS			126,904.28	97,701.83	77.0	78.8	67.8

The cells shaded in blue reflect the changes made to the space factors in the various categories. Caution should be taken when making comparisons with 2010-11 data.

Table 27
Institutional Space Requirements As Measured By COU Space Standards, 2013-14

WINDSOR

	Input Measure	Space Factor	Generated Space	Inventory	% I / G	System Average	2010-11 % I / G
TEACHING/RESEARCH/ACADEMIC SUPPORT							
CLASSROOMS							
Total FTE Students	14,388.40	1.11	15,971.12	15,238.26	95.4	82.7	77.7
CLASS LABS							
Lab Contact Hours W	2,684.95	0.8	2,147.96	4,680.81			
Lab Contact Hours X	13,233.25	0.6	7,939.95	10,259.72			
Lab Contact Hours Y	5,741.40	0.5	2,870.70	1,333.47			
Lab Contact Hours Z	3,802.17	0.3	1,140.65	2,301.92			
Unclassified	0.00			120.40			
Total Class Lab	25,461.77		14,099.26	18,696.32	132.6	69.1	107.6
RESEARCH LABS							
Research Disciplines A	185.01	45.0	8,325.38	8,642.98			
Research Disciplines B	327.84	30.0	9,835.25	4,676.50			
Research Disciplines C	204.92	20.0	4,098.33	1,028.57			
Research Disciplines D	109.21	10.0	1,092.08	945.63			
Research Disciplines E	1,004.53	1.0	1,004.53	386.48			
Unclassified	0.00			0.00			
Total Research	1,831.50		24,355.57	15,680.16	64.4	73.3	67.5
OFFICE - ACADEMIC							
Total FTE Faculty	628.55	12.0	7,542.60	11,887.55	157.6	123.9	89.7
Research Appointments	161.50	12.0	1,938.00	485.75	25.1		
Total FTE Grads	2,326.40	3.0	6,979.20	4,983.25	71.4	75.2	41.5
Total FTE Non-Acd Staff	346.00	12.0	4,152.00	3,255.00	78.4	104.3	94.4
Office Service	20,611.80	0.25	5,152.95	3,744.98	72.7	109.5	56.3
Total Academic Office			25,764.75	24,356.53	94.5	99.6	72.3
OFFICE - ADMINISTRATIVE							
Total FTE Non-Acd Staff	434.00	12.0	5,208.00	6,708.09	128.8	104.3	114.5
Office Service	5,208.00	0.5	2,604.00	2,879.21	110.6	118.3	91.2
Total Admin. Office			7,812.00	9,587.30	122.7	109.0	106.7
Total Office - Academic & Administrative			33,576.75	33,943.83	101.1	101.8	80.2
LIBRARY FACILITIES & CAMPUS STUDY SPACE							
Study (Total FTE Students)	14,388.40	0.6	8,633.04	6,906.16	80.0	61.1	83.0
Traditional Static Shelving Space	1,433,514.23	0.005	7,167.57				
Mobile Compact Shelving	144,941.16	0.004	579.76				
Super High Density	0.00	0.0035	0.00				
Total Stack	1,578,455.40		7,747.34	7,437.58	96.0	78.3	83.7
Library Support	16,380.38	0.25	4,095.09	2,739.82	66.9	63.0	64.2
Total Library Facilities & Campus Study Space			20,475.47	17,083.56	83.4	67.7	79.5
SUB-TOTAL: TEACHING/RESEARCH/ACAD SUPPORT			108,478.17	100,642.13	92.8	81.9	80.9
OTHER SPACE							
RECREATION / ATHLETICS							
Total FTE Students	14,388.40	0.9	12,949.56	10,924.64	84.4	71.0	89.1
MAINTENANCE SHOPS							
Total NASM Inv. (exc. 16.0)	155,804.34	0.015	2,337.07	1,463.77	62.6	75.4	69.5
STUDENT AND CENTRAL SERVICES							
Total FTE Students	14,388.40	1.5	21,582.60	14,376.84	66.6	67.3	61.6
SUB-TOTAL: OTHER SPACE			36,869.23	26,765.25	72.6	69.2	70.1
TOTAL FORMULA AREAS			145,347.40	127,407.38	87.7	78.8	78.0

The cells shaded in blue reflect the changes made to the space factors in the various categories. Caution should be taken when making comparisons with 2010-11 data.

Table 28
Institutional Space Requirements As Measured By COU Space Standards, 2013-14

YORK (KEELE)

	Input Measure	Space Factor	Generated Space	Inventory	% I / G	System Average	2010-11 % I / G
TEACHING/RESEARCH/ACADEMIC SUPPORT							
CLASSROOMS							
Total FTE Students	40,647.00	1.11	45,118.17	34,178.57	75.8	82.7	66.7
CLASS LABS							
Lab Contact Hours W	0.00	0.8	0.00	0.00			
Lab Contact Hours X	36,012.50	0.6	21,607.50	17,898.46			
Lab Contact Hours Y	15,108.50	0.5	7,554.25	2,587.44			
Lab Contact Hours Z	10,021.00	0.3	3,006.30	5,739.85			
Unclassified	2,600.00			2,015.32			
Total Class Lab	63,742.00		32,168.05	28,241.07	87.8	69.1	71.2
RESEARCH LABS							
Research Disciplines A	285.24	45.0	12,836.02	10,280.79			
Research Disciplines B	238.86	30.0	7,165.85	2,469.34			
Research Disciplines C	280.41	20.0	5,608.14	1,204.73			
Research Disciplines D	555.50	10.0	5,555.04	3,844.48			
Research Disciplines E	3,036.34	1.0	3,036.34	3,233.93			
Unclassified	165.04			2,086.05			
Total Research	4,561.40		34,201.39	23,119.32	67.6	73.3	55.7
OFFICE - ACADEMIC							
Total FTE Faculty	2,322.60	12.0	27,871.20	24,957.62	89.5	123.9	79.2
Research Appointments	91.00	12.0	1,092.00	3,062.88	280.5		
Total FTE Grads	4,386.60	3.0	13,159.80	7,753.37	58.9	75.2	38.6
Total FTE Non-Acd Staff	871.10	12.0	10,453.20	12,887.05	123.3	104.3	121.7
Office Service	52,576.20	0.25	13,144.05	16,011.70	121.8	109.5	103.8
Total Academic Office			65,720.25	64,672.62	98.4	99.6	80.7
OFFICE - ADMINISTRATIVE							
Total FTE Non-Acd Staff	1,026.40	12.0	12,316.80	15,085.85	122.5	104.3	118.7
Office Service	12,316.80	0.5	6,158.40	8,798.13	142.9	118.3	124.1
Total Admin. Office			18,475.20	23,883.98	129.3	109.0	120.5
Total Office - Academic & Administrative			84,195.45	88,556.60	105.2	101.8	88.3
LIBRARY FACILITIES & CAMPUS STUDY SPACE							
Study (Total FTE Students)	40,647.00	0.6	24,388.20	10,992.74	45.1	61.1	36.2
Traditional Static Shelving Space	2,400,829.45	0.005	12,004.15				
Mobile Compact Shelving	531,557.35	0.004	2,126.23				
Super High Density	2,486,125.00	0.0035	8,701.44				
Total Stack	5,418,511.81		22,831.81	11,324.57	49.6	78.3	70.0
Library Support	47,220.01	0.25	11,805.00	5,156.16	43.7	63.0	48.7
Total Library Facilities & Campus Study Space			59,025.02	27,473.47	46.5	67.7	48.3
SUB-TOTAL: TEACHING/RESEARCH/ACAD SUPPORT			254,708.08	201,569.03	79.1	81.9	70.2
OTHER SPACE							
RECREATION / ATHLETICS							
Total FTE Students	40,647.00	0.9	36,582.30	12,461.40	34.1	71.0	33.4
MAINTENANCE SHOPS							
Total NASM Inv. (exc. 16.0)	358,991.27	0.015	5,384.87	4,058.39	75.4	75.4	75.7
STUDENT AND CENTRAL SERVICES							
Total FTE Students	40,647.00	1.5	60,970.50	32,777.37	53.8	67.3	39.5
SUB-TOTAL: OTHER SPACE			102,937.67	49,297.16	47.9	69.2	39.2
TOTAL FORMULA AREAS			357,645.75	250,866.19	70.1	78.8	60.3

The cells shaded in blue reflect the changes made to the space factors in the various categories. Caution should be taken when making comparisons with 2010-11 data.

Table 29
Institutional Space Requirements As Measured By COU Space Standards, 2013-14

YORK (GLENDON)

	Input Measure	Space Factor	Generated Space	Inventory	% I / G	System Average	2010-11 % I / G
TEACHING/RESEARCH/ACADEMIC SUPPORT							
CLASSROOMS							
Total FTE Students	2,193.40	1.11	2,434.67	3,725.98	153.0	82.7	89.7
CLASS LABS							
Lab Contact Hours W	0.00	0.8	0.00	0.00			
Lab Contact Hours X	0.00	0.6	0.00	0.00			
Lab Contact Hours Y	0.00	0.5	0.00	0.00			
Lab Contact Hours Z	1,471.00	0.3	441.30	622.47			
Unclassified	0.00			310.85			
Total Class Lab	1,471.00		441.30	933.32	211.5	69.1	76.2
RESEARCH LABS							
Research Disciplines A	0.00	45.0	0.00	0.00			
Research Disciplines B	12.00	30.0	360.00	66.19			
Research Disciplines C	0.00	20.0	0.00	0.00			
Research Disciplines D	0.00	10.0	0.00	0.00			
Research Disciplines E	277.10	1.0	277.10	93.46			
Unclassified	13.20			0.00			
Total Research	302.30		637.10	159.65	25.1	73.3	26.6
OFFICE - ACADEMIC							
Total FTE Faculty	230.60	12.0	2,767.20	2,758.11	99.7	123.9	85.5
Research Appointments	0.00	12.0	0.00	130.90	na		
Total FTE Grads	143.40	3.0	430.20	0.00	0.0	75.2	0.0
Total FTE Non-Acd Staff	57.50	12.0	690.00	773.20	112.1	104.3	97.3
Office Service	3,887.40	0.25	971.85	416.89	42.9	109.5	46.7
Total Academic Office			4,859.25	4,079.10	83.9	99.6	73.1
OFFICE - ADMINISTRATIVE							
Total FTE Non-Acd Staff	24.40	12.0	292.80	777.23	265.4	104.3	180.0
Office Service	292.80	0.5	146.40	301.37	205.9	118.3	148.1
Total Admin. Office			439.20	1,078.60	245.6	109.0	169.4
Total Office - Academic & Administrative			5,298.45	5,157.70	97.3	101.8	82.3
LIBRARY FACILITIES & CAMPUS STUDY SPACE							
Study (Total FTE Students)	2,193.40	0.6	1,316.04	642.40	48.8	61.1	35.0
Traditional Static Shelving Space	309,577.48	0.005	1,547.89				
Mobile Compact Shelving	0.00	0.004	0.00				
Super High Density	0.00	0.0035	0.00				
Total Stack	309,577.48		1,547.89	1,050.67	67.9	78.3	80.1
Library Support	2,863.93	0.25	715.98	294.48	41.1	63.0	53.5
Total Library Facilities & Campus Study Space			3,579.91	1,987.55	55.5	67.7	57.0
SUB-TOTAL: TEACHING/RESEARCH/ACAD SUPPORT			12,391.43	11,964.20	96.6	81.9	74.5
OTHER SPACE							
RECREATION / ATHLETICS							
Total FTE Students	2,193.40	0.9	1,974.06	2,919.34	147.9	71.0	153.7
MAINTENANCE SHOPS							
Total NASM Inv. (exc. 16.0)	26,103.53	0.015	391.55	340.41	86.9	75.4	97.3
STUDENT AND CENTRAL SERVICES							
Total FTE Students	2,193.40	1.5	3,290.10	3,415.19	103.8	67.3	70.2
SUB-TOTAL: OTHER SPACE			5,655.71	6,674.94	118.0	69.2	96.2
TOTAL FORMULA AREAS			18,047.15	18,639.14	103.3	78.8	82.1

The cells shaded in blue reflect the changes made to the space factors in the various categories. Caution should be taken when making comparisons with 2010-11 data.

Section 4

SUMMARY TABLES

Table 30

Teaching/Research/Academic Support Space (1,2,3,4,5,10): Generated Space and Inventory, 2013-14

	Generated Space	Inventory NASM	% I/G	2010.11 I/G
Algoma	8,023.9	7,265.3	90.5	67.7
Brock	107,024.6	69,379.5	64.8	54.7
Carleton	160,385.6	127,373.4	79.4	69.0
Guelph	208,970.2	182,003.7	87.1	84.0
Lakehead	67,731.5	54,916.1	81.1	79.1
Laurentian	55,077.6	52,106.9	94.6	87.7
McMaster	241,169.6	204,345.9	84.7	74.3
Nipissing	39,698.6	22,408.3	56.4	54.0
OCAD U	46,959.1	22,341.7	47.6	40.8
UOIT	49,699.2	38,211.3	76.9	57.6
Ottawa	271,600.4	196,808.7	72.5	68.8
Queen's	221,387.8	192,362.9	86.9	80.8
Ryerson	191,040.3	126,349.7	66.1	64.2
Toronto (St. Grge)	524,505.3	467,589.3	89.1	83.2
Toronto (Miss)	54,509.4	46,005.3	84.4	71.9
Toronto (Scar)	49,529.7	39,632.5	80.0	70.9
Trent	42,576.3	44,208.8	103.8	102.5
Waterloo	248,939.6	222,002.0	89.2	74.0
Western	334,207.6	268,678.6	80.4	76.4
Wilfrid Laurier	84,514.0	68,145.9	80.6	71.7
Windsor	108,478.2	100,642.1	92.8	80.9
York (Keele)	254,708.1	201,569.0	79.1	70.2
York (Glen)	12,391.4	11,964.2	96.6	74.5
Subtotal	3,383,128.1	2,766,311.1	81.8	74.6
Hearst	915.3	3,110.4	339.8	82.5
NOSM	5,938.7	8,001.8	134.7	121.6
Total	3,389,982.0	2,777,423.3	81.9	74.7

Changes made to the space factors in various categories affect the total teaching/research/acad support row. Caution should be taken when making comparisons with 2010-11 data.

A comparison of the Total Generated Space and existing Inventory in Research/Teaching and Academic support categories.

Table 31

Student Experience / Other Space (6,7,8,9,11,12,13,14,15): Generated Space and Inventory,
2013-14

	Generated Space	Inventory NASM	% I/G	2010-11 I/G
Algoma	3,435.6	5,744.6	167.2	189.9
Brock	40,300.2	28,849.7	71.6	63.1
Carleton	60,154.2	51,058.0	84.9	65.5
Guelph	55,865.5	51,979.8	93.0	65.2
Lakehead	19,915.4	25,442.8	127.8	101.6
Laurentian	19,397.2	21,820.0	112.5	103.1
McMaster	68,841.8	42,790.6	62.2	55.0
Nipissing	12,307.0	8,180.7	66.5	38.4
OCAD U	9,879.7	2,850.5	28.9	31.7
UOIT	20,450.4	13,195.6	64.5	52.2
Ottawa	91,637.1	44,720.3	48.8	43.2
Queen's	58,353.1	55,061.8	94.4	80.4
Ryerson	78,310.3	38,604.2	49.3	35.0
Toronto (St. Grge)	132,871.8	91,946.0	69.2	61.3
Toronto (Miss)	27,917.7	16,488.1	59.1	55.1
Toronto (Scar)	24,822.1	15,583.5	62.8	51.6
Trent	18,271.5	11,381.8	62.3	55.4
Waterloo	77,913.3	53,025.6	68.1	59.9
Western	90,763.0	67,544.1	74.4	62.5
Wilfrid Laurier	42,390.3	29,556.0	69.7	60.5
Windsor	36,869.2	26,765.3	72.6	70.1
York (Keele)	102,937.7	49,297.2	47.9	39.2
York (Glen)	5,655.7	6,674.9	118.0	96.2
Subtotal	1,099,259.8	758,560.9	69.0	58.3
Hearst	303.7	1,943.6	640.0	553.7
NOSM	432.6	359.0	83.0	65.3
Total	1,099,996.1	760,863.5	69.2	58.3

Changes made to the space factors in various categories affect the total student experience/other space row. Caution should be taken when making comparisons with 2010-11 data.

A comparison of the Total Generated Space and existing Inventory in Research/Teaching and Academic support categories.

Table 32

Classroom Facilities (1): Generated Space and Inventory, 2013-14

	FTE Students	Generated Space	Inventory NASM	Inventory/ FTE Student	% I/G	2010-11 % I/G
Algoma	1,275.2	1,415	1,770	1.39	125.0	93.4
Brock	15,885.2	17,633	10,479	0.66	59.4	57.4
Carleton	23,519.2	26,106	17,405	0.74	66.7	59.1
Guelph	20,934.8	23,238	16,474	0.79	70.9	62.5
Lakehead	7,551.8	8,382	9,723	1.29	116.0	95.6
Laurentian	7,284.1	8,085	9,790	1.34	121.1	98.0
McMaster	26,352.9	29,252	24,651	0.94	84.3	84.8
Nipissing	4,712.4	5,231	6,161	1.31	117.8	88.7
OCAD U	3,902.3	4,332	2,230	0.57	51.5	39.7
UOIT	8,168.8	9,067	7,596	0.93	83.8	84.0
Ottawa	36,152.0	40,129	26,425	0.73	65.9	60.1
Queen's	22,106.8	24,539	20,684	0.94	84.3	70.7
Ryerson	31,463.5	34,924	19,896	0.63	57.0	57.8
Toronto (St. Grge)	50,792.3	56,379	57,530	1.13	102.0	94.5
Toronto (Miss)	11,023.9	12,237	11,077	1.00	90.5	51.7
Toronto (Scar)	9,894.4	10,983	6,692	0.68	60.9	49.8
Trent	7,139.7	7,925	8,099	1.13	102.2	95.3
Waterloo	29,843.5	33,126	28,326	0.95	85.5	74.5
Western	34,547.5	38,348	38,346	1.11	100.0	89.2
Wilfrid Laurier	16,402.9	18,207	12,990	0.79	71.3	65.2
Windsor	14,388.4	15,971	15,238	1.06	95.4	77.7
York (Keele)	40,647.0	45,118	34,179	0.84	75.8	66.7
York (Glen)	2,193.4	2,435	3,726	1.70	153.0	89.7
SUBTOTAL	426,181.9	473,062	389,487	0.91	82.3	73.5
Hearst	82.4	91	920	11.17	1006.1	787.7
NOSM	128.0	142	988	7.72	695.3	838.3
TOTAL	426,392.3	473,295	391,395	0.92	82.7	73.7

The space factor for classrooms has been changed and therefore caution should be taken when making comparisons with the 2010-11 data, especially the generated space and %I/G figures (highlighted).

Input Measure: Total FTE Students (as defined in Appendix D).

Space Factor: 1.11 NASM (in 2010-11 the space factor was 1.23)

System Average: 0.92
(Actual Classroom inventory divided by Total FTE Students.)

Table 33

Class Lab Space (2): Generated Space and Inventory, 2013-14

	Class Lab Hours	Generated Space	Inventory NASM	% I/G	2010-11 % I/G
Algoma	1,938.0	1,075	1,350	125.6	90.8
Brock	48,254.5	23,063	9,098	39.4	30.7
Carleton	66,334.0	34,199	19,927	58.3	59.2
Guelph	85,090.0	53,292	28,808	54.1	53.3
Lakehead	31,713.9	17,839	12,173	68.2	86.0
Laurentian	9,365.0	5,529	7,184	129.9	135.6
McMaster	61,394.5	33,329	17,915	53.8	58.1
Nipissing	25,776.0	12,484	4,463	35.7	27.4
OCAD U	51,462.0	27,718	10,374	37.4	34.7
UOIT	18,376.8	10,759	6,293	58.5	52.1
Ottawa	54,282.0	30,456	19,479	64.0	67.5
Queen's	69,551.5	42,774	23,549	55.1	56.4
Ryerson	93,617.0	46,592	31,702	68.0	71.1
Toronto (St. Grge)	51,270.6	32,281	41,854	129.7	113.6
Toronto (Miss)	14,475.0	7,735	7,260	93.9	94.1
Toronto (Scar)	10,352.0	6,103	5,461	89.5	94.0
Trent	10,891.0	5,891	4,684	79.5	64.5
Waterloo	54,931.7	32,857	29,189	88.8	72.6
Western	91,255.0	51,057	31,466	61.6	69.3
Wilfrid Laurier	20,771.5	10,634	6,954	65.4	48.2
Windsor	25,461.8	14,099	18,696	132.6	107.6
York (Keele)	63,742.0	32,168	28,241	87.8	71.2
York (Glen)	1,471.0	441	933	211.5	76.2
SUBTOTAL	961,776.7	532,375	367,053	68.9	66.4
Hearst	24.0	7	201	2792.2	107.2
NOSM	384.0	230	849	368.4	237.3
TOTAL	962,184.7	532,613	368,102	69.1	66.5

Note: The Inventory NASM figures do not necessarily agree with the Lab-Undergraduate figures on Table 2, at some institutions. Only Class Labs that are associated with Groups W to Z are included in this table.

Input Measure: Total Laboratory Weekly Student Contact Hours (as defined in Appendix D) for programs in Groups W, X, Y, and Z (as defined in Appendix E)

	<u>System Average</u>	<u>Space Factor</u>
Group W:	0.47	0.80
Group X:	0.45	0.60
Group Y:	0.25	0.50
Group Z:	0.22	0.30

Table 34

Lab - Research Facilities (3): Generated Space and Inventory, 2013-14

	Research Staff	Generated Space	Inventory NASM	Inventory/ Research Staff	% I/G	2010-11 % I/G
Algoma	112.6	775	281	2.5	36.2	n/a
Brock	1,573.6	16,800	11,442	7.3	68.1	50.2
Carleton	2,491.9	29,320	17,776	7.1	60.6	61.4
Guelph	2,244.5	54,722	58,577	26.1	107.0	104.2
Lakehead	835.3	11,171	7,392	8.8	66.2	64.1
Laurentian	912.3	12,825	7,460	8.2	58.2	61.7
McMaster	3,145.3	74,318	59,897	19.0	80.6	61.9
Nipissing	343.9	2,302	1,498	4.4	65.1	91.2
OCAD U	352.8	1,993	1,724	4.9	86.5	47.1
UOIT	497.9	9,205	7,656	15.4	83.2	31.0
Ottawa	4,803.3	63,048	35,529	7.4	56.4	66.6
Queen's	3,256.4	47,918	38,991	12.0	81.4	80.4
Ryerson	2,284.8	25,586	13,625	6.0	53.3	54.4
Toronto (St. Grge)	10,089.9	143,290	100,950	10.0	70.5	69.6
Toronto (Miss)	645.9	9,667	7,451	11.5	77.1	74.3
Toronto (Scar)	475.9	9,611	6,748	14.2	70.2	71.4
Trent	575.0	5,214	7,824	13.6	150.1	154.2
Waterloo	3,813.3	66,122	52,573	13.8	79.5	66.9
Western	4,863.1	85,494	58,519	12.0	68.4	65.0
Wilfrid Laurier	1,155.9	9,086	5,541	4.8	61.0	56.6
Windsor	1,831.5	24,356	15,680	8.6	64.4	67.5
York (Keele)	4,561.4	34,201	23,119	5.1	67.6	55.7
York (Glen)	302.3	637	160	0.5	25.1	26.6
SUBTOTAL	51,168.4	737,663	540,410	10.6	73.3	68.8
Hearst	1.0	0	0	0.0	n/a	n/a
NOSM	28.0	1,260	1,538	54.9	122.1	79.2
TOTAL	51,197.4	738,923	541,949	10.6	73.3	68.8

Note: The Inventory NASM figures do not necessarily agree with the Lab-Grad & Faculty figures on Table 2, at some institutions. Only Research Labs that are associated with Groups A to E are included in this table.

Input Measure: Research Staff is calculated by summing the total of FTE Faculty plus one-half Graduate Students plus one-half Other Research Appointments in Research Disciplines (as defined in Appendix B).

	System Average	Space Factor
Group A:	32.9	45
Group B:	19.4	30
Group C:	12.4	20
Group D:	6.4	10
Group E:	1.0	1

Table 35

Academic Departmental Office Space and Related Space (4):
Generated Space and Inventory, 2013-14

	FTE Faculty	Generated Space	Inventory NASM	% I/G	2010-11 % I/G
Algoma	112.6	1,794	1,028	57.3	32.6
Brock	859.8	22,846	18,305	80.1	60.6
Carleton	859.3	29,626	35,111	118.5	82.7
Guelph	884.7	38,324	46,593	121.6	103.0
Lakehead	416.8	13,245	10,697	80.8	74.8
Laurentian	611.5	14,134	13,991	99.0	72.4
McMaster	1,146.9	60,540	57,959	95.7	84.5
Nipissing	286.3	9,353	3,775	40.4	55.8
OCAD U	256.9	5,075	3,881	76.5	54.0
UOIT	266.0	7,796	7,518	96.4	56.0
Ottawa	1,735.5	67,634	62,306	92.1	71.6
Queen's	1,008.9	48,772	63,733	130.7	102.2
Ryerson	1,200.3	38,853	31,017	79.8	63.8
Toronto (St. Grge)	2,442.2	158,927	155,607	97.9	82.2
Toronto (Miss)	348.9	9,804	9,312	95.0	77.9
Toronto (Scar)	342.2	7,745	9,025	116.5	76.7
Trent	350.0	8,130	10,744	132.2	162.1
Waterloo	1,455.7	58,590	72,917	124.5	91.7
Western	1,962.0	90,363	80,239	88.8	79.4
Wilfrid Laurier	583.0	19,244	18,539	96.3	81.4
Windsor	628.6	25,765	24,357	94.5	72.3
York (Keele)	2,322.6	65,720	64,673	98.4	80.7
York (Glen)	230.6	4,859	4,079	83.9	73.1
SUBTOTAL	20,311.0	807,138	805,404	99.8	81.6
Hearst	1.0	60	732	1219.3	132.2
NOSM	26.0	3,495	1,597	45.7	39.3
TOTAL	20,338.0	810,693	807,733	99.6	81.5

The space factor for office space has been changed and therefore caution should be taken when making comparisons with the 2010-11 data, especially the generated space and %I/G figures (highlighted).

Input Measure: Total FTE Faculty (as defined in Appendix D), total Other Research Appointments, total FTE Non-Academic Staff requiring offices, and total FTE Graduate Students.

Space Factor: 12 NASM per FTE Faculty, Other Research Appointments and FTE Non-Academic Staff, 3 NASM per FTE Graduate Student, plus 25% allowance for office support space.
(In 2010-11 the space factor for FTE faculty, other research appointment and FTE non-academic staff was 13 NASM; and 4 NASM per FTE graduate student.)

Table 35A

Graduate Student Office Space (4.3):
Generated Space and Inventory, 2013-14

	Graduate Students	Generated Space	Inventory NASM	Inventory/ FTE Graduate Student	% I/G	2010-11 % I/G
Algoma			not applicable			
Brock	1,351.3	4,054	2,971	2.2	73.3	40.5
Carleton	3,218.2	9,655	6,133	1.9	63.5	40.4
Guelph	2,402.5	7,208	8,801	3.7	122.1	88.5
Lakehead	794.0	2,382	1,319	1.7	55.4	50.4
Laurentian	576.5	1,730	1,057	1.8	61.1	36.3
McMaster	3,664.8	10,994	9,327	2.5	84.8	64.0
Nipissing	171.8	515	134	0.8	26.0	24.3
OCAD U	187.3	562	739	3.9	131.5	152.1
UOIT	440.4	1,321	1,207	2.7	91.3	43.8
Ottawa	5,927.0	17,781	10,876	1.8	61.2	39.3
Queen's	3,933.3	11,800	10,321	2.6	87.5	68.3
Ryerson	2,100.0	6,300	1,877	0.9	29.8	21.3
Toronto (St. Grge)	14,402.3	43,207	24,351	1.7	56.4	44.9
Toronto (Miss)	529.9	1,590	1,755	3.3	110.4	84.0
Toronto (Scar)	216.4	649	1,433	6.6	220.7	176.8
Trent	435.9	1,308	1,972	4.5	150.8	117.3
Waterloo	4,362.1	13,086	16,814	3.9	128.5	96.0
Western	5,255.3	15,766	15,622	3.0	99.1	71.6
Wilfrid Laurier	1,111.7	3,335	1,195	1.1	35.8	6.3
Windsor	2,326.4	6,979	4,983	2.1	71.4	41.5
York (Keele)	4,386.6	13,160	7,753	1.8	58.9	38.6
York (Glen)	143.4	430	0	0.0	n/a	n/a
SUBTOTAL	57,937.1	173,811	130,641	2.3	75.2	54.1
Hearst			not applicable			
NOSM			not applicable			
TOTAL	57,937.1	173,811	130,641	2.3	75.2	54.1

The space factor for graduate office space has been changed and therefore caution should be taken when making comparisons with the 2010-11 data, especially the generated space and %I/G figures (highlighted).

Input Measure: Total FTE Graduate Students.

Space Factor: 3 NASM (in 2010-11 the space factor was 4 NASM)

System Average: 2.25 NASM per Graduate Student.

(Actual Space for Graduate Students (including service space) divided by Total Graduate Students.)

Table 36

Administrative Office Space (10): Generated Space and Inventory, 2013-14

	FTE Non-Acad. Office Staff	Space Generated	Inventory NASM	Inventory/ Office Staff	% I/G	2010-11 % I/G
Algoma	65.0	1,170	1,637	25.2	139.9	119.7
Brock	524.0	9,432	9,821	18.7	104.1	109.0
Carleton	754.4	13,580	13,783	18.3	101.5	94.7
Guelph	716.5	12,897	16,263	22.7	126.1	111.3
Lakehead	369.0	6,643	6,127	16.6	92.2	73.8
Laurentian	225.9	4,066	5,469	24.2	134.5	115.9
McMaster	747.6	13,457	16,950	22.7	126.0	93.0
Nipissing	307.0	5,526	3,030	9.9	54.8	123.2
OCAD U	218.0	3,924	2,586	11.9	65.9	79.6
UOIT	348.3	6,269	5,411	15.5	86.3	83.1
Ottawa	1,133.6	20,404	20,196	17.8	99.0	90.9
Queen's	861.7	15,511	16,607	19.3	107.1	99.3
Ryerson	1,067.0	19,206	16,772	15.7	87.3	85.3
Toronto (St. Grge)	1,126.9	20,284	25,576	22.7	126.1	88.4
Toronto (Miss)	240.4	4,327	4,742	19.7	109.6	96.6
Toronto (Scar)	309.0	5,562	5,488	17.8	98.7	95.6
Trent	310.0	5,580	5,698	18.4	102.1	91.7
Waterloo	1,247.6	22,457	19,679	15.8	87.6	72.3
Western	1,227.9	22,102	26,580	21.6	120.3	119.7
Wilfrid Laurier	534.0	9,612	12,457	23.3	129.6	207.4
Windsor	434.0	7,812	9,587	22.1	122.7	106.7
York (Keele)	1,026.4	18,475	23,884	23.3	129.3	120.5
York (Glen)	24.4	439	1,079	44.2	245.6	169.4
SUBTOTAL	13,818.6	248,734	269,423	19.5	108.3	99.3
Hearst	14.2	256	371	26.1	145.1	146.9
NOSM	37.0	666	2,306	62.3	346.2	418.3
TOTAL	13,869.8	249,656	272,100	19.6	109.0	100.2

The space factor for office space has been changed and therefore caution should be taken when making comparisons with the 2010-11 data, especially the generated space and %I/G figures (highlighted).

Input Measure: Total FTE Non-Academic Office Staff requiring offices.

Space Factor: 12 NASM for FTE Non-Academic Office Staff (in 2010-11 the space factor was 13 NASM), plus 50% allowance for office support space.

System Average: 19.6 NASM per Non-Academic Office Staff.
(Total Actual Non-Academic Office Staff Space (including service space) divided by Non-Academic Staff.)

Table 37

Library Facilities & Campus Study Space (5.1 to 5.5): Generated Space and Inventory, 2013-14

	FTE Students	Generated Space	Inventory NASM	Inventory / FTE Student	% I/G	2010-11 % I/G
Algoma	1,275.2	1,795	1,200	0.9	66.9	78.1
Brock	15,885.2	17,250	10,235	0.6	59.3	55.6
Carleton	23,519.2	27,554	23,371	1.0	84.8	65.5
Guelph	20,934.8	26,497	15,288	0.7	57.7	75.6
Lakehead	7,551.8	10,452	8,804	1.2	84.2	80.1
Laurentian	7,284.1	10,438	8,212	1.1	78.7	102.0
McMaster	26,352.9	30,274	26,976	1.0	89.1	77.1
Nipissing	4,712.4	4,803	3,482	0.7	72.5	41.8
OCAD U	3,902.3	3,917	1,547	0.4	39.5	35.6
UOIT	8,168.8	6,603	3,738	0.5	56.6	57.3
Ottawa	36,152.0	49,930	32,874	0.9	65.8	64.3
Queen's	22,106.8	41,874	28,798	1.3	68.8	73.5
Ryerson	31,463.5	25,879	13,337	0.4	51.5	55.3
Toronto (St. Grge)	50,792.3	113,344	86,072	1.7	75.9	83.9
Toronto (Miss)	11,023.9	10,739	6,163	0.6	57.4	60.7
Toronto (Scar)	9,894.4	9,526	6,219	0.6	65.3	64.0
Trent	7,139.7	9,837	7,161	1.0	72.8	71.9
Waterloo	29,843.5	35,787	19,319	0.6	54.0	55.4
Western	34,547.5	46,845	33,529	1.0	71.6	67.2
Wilfrid Laurier	16,402.9	17,730	11,665	0.7	65.8	53.1
Windsor	14,388.4	20,475	17,084	1.2	83.4	79.5
York (Keele)	40,647.0	59,025	27,473	0.7	46.5	48.3
York (Glen)	2,193.4	3,580	1,988	0.9	55.5	57.0
SUBTOTAL	426,181.9	584,156	394,533	0.9	67.5	68.3
Hearst	82.4	501	887	10.8	177.0	26.1
NOSM	128.0	145	724	5.7	499.0	578.2
TOTAL	426,392.3	584,802	396,144	0.9	67.7	68.4

Input Measure: Total FTE Students and Total Equivalent Volumes.

Space Factor: 0.6 NASM for FTE Students, from 0.0035 NASM to 0.005 NASM for Equivalent Volumes, plus 25% allowance for service space.

System Average: 0.93 NASM per FTE Student.
(Stack space for total volumes, study space for FTE students, and service space for the number of volumes and students) divided by Total FTE Students.

Table 37A

Campus Study Space (5.4 and 5.5): Generated Space and Inventory, 2013-14

	FTE Students	Generated Space	Inventory NASM	Inventory / FTE Students	% I/G	2010-11 % I/G
Algoma	1,275.2	765	601	0.47	78.5	53.3
Brock	15,885.2	9,531	4,557	0.29	47.8	37.2
Carleton	23,519.2	14,112	10,686	0.45	75.7	24.3
Guelph	20,934.8	12,561	5,556	0.27	44.2	77.6
Lakehead	7,551.8	4,531	2,946	0.39	65.0	55.4
Laurentian	7,284.1	4,370	2,724	0.37	62.3	74.5
McMaster	26,352.9	15,812	10,153	0.39	64.2	67.8
Nipissing	4,712.4	2,827	1,393	0.30	49.2	5.0
OCAD U	3,902.3	2,341	659	0.17	28.2	27.4
UOIT	8,168.8	4,901	1,768	0.22	36.1	38.3
Ottawa	36,152.0	21,691	15,358	0.42	70.8	46.9
Queen's	22,106.8	13,264	10,249	0.46	77.3	83.5
Ryerson	31,463.5	18,878	7,673	0.24	40.6	44.9
Toronto (St. Grge)	50,792.3	30,475	32,059	0.63	105.2	113.0
Toronto (Miss)	11,023.9	6,614	3,455	0.31	52.2	56.1
Toronto (Scar)	9,894.4	5,937	3,851	0.39	64.9	61.7
Trent	7,139.7	4,284	765	0.11	17.8	16.3
Waterloo	29,843.5	17,906	7,517	0.25	42.0	42.4
Western	34,547.5	20,729	11,184	0.32	54.0	42.4
Wilfrid Laurier	16,402.9	9,842	4,499	0.27	45.7	39.1
Windsor	14,388.4	8,633	6,906	0.48	80.0	83.0
York (Keele)	40,647.0	24,388	10,993	0.27	45.1	36.2
York (Glen)	2,193.4	1,316	642	0.29	48.8	35.0
SUBTOTAL	426,181.9	255,709	156,194	0.37	61.1	56.9
Hearst	82.4	49	128	1.55	258.4	176.5
NOSM	128.0	77	120	0.94	156.4	274.4
TOTAL	426,392.3	255,835	156,441	0.37	61.1	56.9

Input Measure: Total FTE Students and Total Equivalent Volumes.

Space Factor: 0.6 NASM for FTE Students, from 0.0035 NASM to 0.005 NASM for Equivalent Volumes, plus 25% allowance for service space.

System Average: 0.37 NASM per FTE Student.
(study space for FTE students, computing space, and service space for the number of students) divided by Total FTE Students.)

Table 37B

Campus Study Space (5.4 and 5.5): Within the library and outside the library, 2013-14

	Study Space within the Library (5.4)	Study Space outside the Library (5.5)	Total Study Space	% of Study Space within the Library	% of Study Space outside the Library
Algoma	600.7	0.0	600.7	100.0%	0.0%
Brock	1,343.6	3,213.2	4,556.7	29.5%	70.5%
Carleton	7,288.8	3,397.0	10,685.7	68.2%	31.8%
Guelph	5,483.5	72.6	5,556.0	98.7%	1.3%
Lakehead	1,242.8	1,702.7	2,945.5	42.2%	57.8%
Laurentian	2,578.3	145.8	2,724.1	94.6%	5.4%
McMaster	6,135.1	4,017.6	10,152.7	60.4%	39.6%
Nipissing	1,298.5	94.0	1,392.5	93.2%	6.8%
OCAD U	605.0	54.1	659.1	91.8%	8.2%
UOIT	1,491.0	277.1	1,768.1	84.3%	15.7%
Ottawa	9,213.3	6,144.7	15,357.9	60.0%	40.0%
Queen's	6,784.5	3,465.0	10,249.5	66.2%	33.8%
Ryerson	4,008.3	3,664.8	7,673.2	52.2%	47.8%
Toronto (St. Grge)	24,933.3	7,125.3	32,058.6	77.8%	22.2%
Toronto (Miss)	2,808.2	646.6	3,454.8	81.3%	18.7%
Toronto (Scar)	1,406.7	2,444.7	3,851.3	36.5%	63.5%
Trent	331.3	433.2	764.5	43.3%	56.7%
Waterloo	4,332.9	3,184.5	7,517.4	57.6%	42.4%
Western	9,797.4	1,387.0	11,184.4	87.6%	12.4%
Wilfrid Laurier	2,292.6	2,206.9	4,499.5	51.0%	49.0%
Windsor	5,841.2	1,065.0	6,906.2	84.6%	15.4%
York (Keele)	6,983.1	4,009.6	10,992.7	63.5%	36.5%
York (Glen)	503.7	138.7	642.4	78.4%	21.6%
SUBTOTAL	107,303.7	48,889.9	156,193.5	68.7%	31.3%
Hearst	127.7	0.0	127.7	100.0%	0.0%
NOSM	0.0	120.1	120.1	0.0%	100.0%
TOTAL	107,431.4	49,010.0	156,441.4	68.7%	31.3%

Table 38

Recreation / Athletics Space (6): Generated Space and Inventory, 2013-14

	FTE Students	Generated Space	Inventory NASM	Inventory / FTE Students	% /G	2010-11 % /G
Algoma	1,275.2	1,148	3,410	2.7	297.1	413.2
Brock	15,885.2	14,297	10,932	0.7	76.5	82.1
Carleton	23,519.2	21,167	24,819	1.1	117.3	111.8
Guelph	20,934.8	18,841	20,127	1.0	106.8	85.2
Lakehead	7,551.8	6,797	10,556	1.4	155.3	150.3
Laurentian	7,284.1	6,556	9,961	1.4	151.9	149.2
McMaster	26,352.9	23,718	16,664	0.6	70.3	74.1
Nipissing	4,712.4	4,241	5,337	1.1	125.8	59.1
OCAD U	3,902.3	3,512		not applicable		
UOIT	8,168.8	7,352	8,294	1.0	112.8	114.8
Ottawa	36,152.0	32,537	15,432	0.4	47.4	50.1
Queen's	22,106.8	19,896	20,334	0.9	102.2	94.9
Ryerson	31,463.5	28,317	14,983	0.5	52.9	26.4
Toronto (St. Grge)	50,792.3	45,713	26,004	0.5	56.9	61.4
Toronto (Miss)	11,023.9	9,922	6,935	0.6	69.9	80.2
Toronto (Scar)	9,894.4	8,905	4,398	0.4	49.4	55.5
Trent	7,139.7	6,426	3,954	0.6	61.5	63.6
Waterloo	29,843.5	26,859	12,934	0.4	48.2	52.5
Western	34,547.5	31,093	19,254	0.6	61.9	75.8
Wilfrid Laurier	16,402.9	14,763	11,776	0.7	79.8	77.1
Windsor	14,388.4	12,950	10,925	0.8	84.4	89.1
York (Keele)	40,647.0	36,582	12,461	0.3	34.1	33.4
York (Glen)	2,193.4	1,974	2,919	1.3	147.9	153.7
SUBTOTAL	426,181.9	383,564	272,410	0.6	71.0	70.0
Hearst	82.4	74	0	0.0	0.0	735.9
NOSM	128.0	115		not applicable		n/a
TOTAL	426,392.3	383,753	272,410	0.6	71.0	69.9

Input Measure: Total FTE Students (as defined in Appendix D).

Space Factor: 0.9 NASM

System Average: 0.64 NASM per FTE Student.
(Total Actual Physical Education/Athletics space divided by Total FTE students.).

Table 39

Maintenance Space (9): Generated Space and Inventory, 2013-14

	NASM Inventory	Generated Space	Inventory NASM	% IG	2010-11 % I/G
Algoma	25,007.0	375	278	74.0	92.1
Brock	145,045.8	2,176	2,167	99.6	105.4
Carleton	247,212.6	3,708	2,062	55.6	50.2
Guelph	374,799.3	5,622	6,967	123.9	104.5
Lakehead	119,410.1	1,791	1,136	63.4	72.8
Laurentian	127,695.5	1,915	2,142	111.8	135.2
McMaster	372,988.3	5,595	3,326	59.4	57.1
Nipissing	66,485.4	997	not applicable		
OCAD U	34,278.6	514	226	44.0	34.5
UOIT	56,355.9	845	137	16.2	n/a
Ottawa	324,816.7	4,872	3,988	81.9	85.3
Queen's	353,122.0	5,297	2,389	45.1	46.6
Ryerson	186,534.5	2,798	2,625	93.8	79.8
Toronto (St. Grge)	731,348.9	10,970	8,907	81.2	87.2
Toronto (Miss)	97,355.6	1,460	653	44.7	47.8
Toronto (Scar)	71,705.6	1,076	2,422	225.2	174.6
Trent	75,749.4	1,136	383	33.7	76.2
Waterloo	419,257.3	6,289	7,215	114.7	101.9
Western	523,264.7	7,849	3,232	41.2	46.2
Wilfrid Laurier	201,553.3	3,023	1,587	52.5	66.0
Windsor	155,804.3	2,337	1,464	62.6	69.5
York (Keele)	358,991.3	5,385	4,058	75.4	75.7
York (Glen)	26,103.5	392	340	86.9	97.3
SUBTOTAL	5,094,885.5	76,423	57,705	75.5	76.2
Hearst	7,061.9	106	103	96.9	210.4
NOSM	8,360.8	125	not applicable		n/a
TOTAL	5,110,308.2	76,655	57,807	75.4	76.1

Input Measure: Total NASM Inventory (excluding 16.0 Non-Assignable).

Space Factor: 0.015 NASM

System Average: 0.011 NASM
(Total Actual Maintenance space divided by Total NASM Inventory.)

Table 40

Student and Central Services Space (7-8, 11-15): Generated Space and Inventory, 2013-14

	FTE Students	Generated Space	Inventory NASM	Inventory / FTE Students	% I/G	2010-11 % I/G
Algoma	1,275.2	1,913	2,057	1.6	107.6	105.6
Brock	15,885.2	23,828	15,751	1.0	66.1	51.7
Carleton	23,519.2	35,279	24,178	1.0	68.5	45.7
Guelph	20,934.8	31,402	24,886	1.2	79.2	50.9
Lakehead	7,551.8	11,328	13,751	1.8	121.4	82.8
Laurentian	7,284.1	10,926	9,717	1.3	88.9	78.4
McMaster	26,352.9	39,529	22,800	0.9	57.7	46.2
Nipissing	4,712.4	7,069	2,843	0.6	40.2	32.6
OCAD U	3,902.3	5,853	2,624	0.7	44.8	45.8
UOIT	8,168.8	12,253	4,765	0.6	38.9	26.4
Ottawa	36,152.0	54,228	25,300	0.7	46.7	37.3
Queen's	22,106.8	33,160	32,339	1.5	97.5	78.1
Ryerson	31,463.5	47,195	20,996	0.7	44.5	36.8
Toronto (St. Grge)	50,792.3	76,188	57,034	1.1	74.9	58.3
Toronto (Miss)	11,023.9	16,536	8,900	0.8	53.8	44.3
Toronto (Scar)	9,894.4	14,842	8,763	0.9	59.0	43.2
Trent	7,139.7	10,710	7,045	1.0	65.8	50.1
Waterloo	29,843.5	44,765	32,877	1.1	73.4	58.1
Western	34,547.5	51,821	45,058	1.3	86.9	58.4
Wilfrid Laurier	16,402.9	24,604	16,193	1.0	65.8	52.6
Windsor	14,388.4	21,583	14,377	1.0	66.6	61.6
York (Keele)	40,647.0	60,971	32,777	0.8	53.8	39.5
York (Glen)	2,193.4	3,290	3,415	1.6	103.8	70.2
SUBTOTAL	426,181.9	639,273	428,446	1.0	67.0	51.4
Hearst	82.4	124	1,841	22.3	1489.4	658.5
NOSM	128.0	192	359	2.8	187.0	131.9
TOTAL	426,392.3	639,588	430,646	1.0	67.3	51.4

The space factor for student & central services space has been changed and therefore caution should be taken when making comparisons with the 2010-11 data, especially the generated space and %I/G figures (highlighted).

Input Measure: Total FTE Students (as defined in Appendix D).

Space Factor: 1.5 NASM (in 2010-11 the space factor was 2.0 NASM)

System Average: 1.01 NASM per FTE Student.

(A rounded total of recommended space factor ranges for the actual individual student central services categories divided by Total FTE Students.)

Table 41

Total Space (1-15): Generated Space and Inventory, 2013-14

	FTE Students	Generated Space	Generated per FTE	Inventory NASM	Inventory per FTE	% I/G	2010-11 I/G
Algoma	1,275.2	11,459.5	9.0	13,010	10.2	113.5	103.0
Brock	15,885.2	147,324.8	9.3	98,229	6.2	66.7	57.1
Carleton	23,519.2	220,539.8	9.4	178,431	7.6	80.9	68.0
Guelph	20,934.8	264,835.6	12.7	233,984	11.2	88.4	79.7
Lakehead	7,551.8	87,646.8	11.6	80,359	10.6	91.7	85.0
Laurentian	7,284.1	74,474.8	10.2	73,927	10.1	99.3	92.1
McMaster	26,352.9	310,011.4	11.8	247,136	9.4	79.7	69.8
Nipissing	4,712.4	52,005.7	11.0	30,589	6.5	58.8	49.3
OCAD U	3,902.3	56,838.8	14.6	25,192	6.5	44.3	39.1
UOIT	8,168.8	70,149.6	8.6	51,407	6.3	73.3	56.0
Ottawa	36,152.0	363,237.5	10.0	241,529	6.7	66.5	61.8
Queen's	22,106.8	279,741.0	12.7	247,425	11.2	88.4	80.7
Ryerson	31,463.5	269,350.6	8.6	164,954	5.2	61.2	55.3
Toronto (St. Grge)	50,792.3	657,377.1	12.9	559,535	11.0	85.1	78.5
Toronto (Miss)	11,023.9	82,427.1	7.5	62,493	5.7	75.8	65.9
Toronto (Scar)	9,894.4	74,351.9	7.5	55,216	5.6	74.3	64.0
Trent	7,139.7	60,847.8	8.5	55,591	7.8	91.4	86.6
Waterloo	29,843.5	326,852.9	11.0	275,028	9.2	84.1	70.5
Western	34,547.5	424,970.6	12.3	336,223	9.7	79.1	73.2
Wilfrid Laurier	16,402.9	126,904.3	7.7	97,702	6.0	77.0	67.8
Windsor	14,388.4	145,347.4	10.1	127,407	8.9	87.7	78.0
York (Keele)	40,647.0	357,645.7	8.8	250,866	6.2	70.1	60.3
York (Glen)	2,193.4	18,047.1	8.2	18,639	8.5	103.3	82.1
SUBTOTAL	426,181.9	4,482,387.9	10.5	3,524,872	8.3	78.6	70.3
Hearst	82.4	1,219.0	14.8	5,054	61.3	414.6	124.4
NOSM	128.0	6,371.3	49.8	8,361	65.3	131.2	118.1
TOTAL	426,392.3	4,489,978.1	10.5	3,538,287	8.3	78.8	70.4

The space factor for a number of space categories have been changed and therefore caution should be taken when making comparisons with the 2010-11 data, especially the generated space and %I/G figures (highlighted).

A comparison of the Total Generated Space and existing Inventory in categories 1 through 15 per FTE Student.

Section 5

APPENDICES

- Appendix A: Space Classification Scheme, Formula and Measures
- Appendix B: COU Space Standards
- Appendix C: List of Input Measures
- Appendix D: Definitions
- Appendix E: Program Classification Scheme
- Appendix F: Calendar of Pertinent Information / Publications
- Appendix G: Historical information
- Appendix H: Committee Membership and Contact Information

Appendix A: Space Classification Scheme, Formula and Measures

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Category 1: CLASSROOM FACILITIES

Definition

A room primarily used for scheduled teaching purposes which does not require special equipment of a kind that makes the room unsuitable for classroom instruction (i.e., laboratory benches) and rooms directly serving such facilities.

Subcategories

1.1 Tiered Classrooms

Tiered or sloped-floored lecture theatres, lecture rooms, lecture demonstration rooms, and classrooms.

1.2 Non-Tiered Classrooms

Flat-floored lecture rooms, classrooms, seminar rooms, and tutorial rooms.

1.3 Classroom Service Space

Examination rooms, projection rooms, preparation rooms, closets, storage rooms, and other related areas.

NOTE: Do not prorate classroom space to create phantom space. Phantom space is included in the total classroom space. In other words, the 'whole room counts'.

Formula

The formula for generating classroom facilities including service space is as follows:

$$\# \text{ of FTE Students } \times 1.11 * \text{NASM}$$

(*in 2010-11 the figure was 1.23 NASM)

(The FTE count is consistent with the numbers reported in the USER submission as of November 1, unless otherwise stated on page 6)).

Formula Assumptions

The amount of classroom space required by an institution is roughly proportional to the number of students it has. Hence the input measure for this category is the number of full-time equivalent students.

To be more specific, the demand for space is proportional to the number of courses those students enrol in, multiplied by the number of hours per week of scheduled instruction that each course requires for academic credit. The unit of measurement is usually referred to as a weekly student contact hour (WSCH), that is, contact with an instructor in a classroom environment. The amount of space required to accommodate one classroom WSCH is derived from three separate variables. These are:

A (Area) = 1.7 sq. m.

Average university classroom station size

The area (A) required for a single seat or desk, expressed in square metres. This value varies according to the type of furniture used. An average value was chosen to represent a mix of classroom types and a provision for classroom service space.

H = 30 to 34 hours per week

Room utilization standard for a room Monday – Friday, during a 57 hour week

The number of hours per week (H) that a classroom is expected to be used for scheduled instruction. This range represents a minimum utilization standard which will vary by room type, use, and program.

The number of hours is 45 to 57 hours per week to include 4 three-hour evening sessions per week.

S = 0.70* (i.e., 70% seats occupied when the room is used)

Station utilization standard when the room is used.

The percentage of seats that are occupied (S) when the room is in use.

The product of the room utilization standard (H) and station weight (S) should produce a combined utilization co-efficient of 22.1. Therefore, H could be 30 and S could be 74%, or H could be 34 and S could be 65%. The classroom space formula is:

$$\text{NASM} / \text{WSCH (weekly student contact hour)} = A / (H \times S)$$

Assuming that the average weekly student contact hours is 16 hours (non-laboratory), that the A (area) value is 1.7, and that the H and S values are 34 and 0.70* respectively, the space formula is 1.23 sq. m..

$$\frac{\text{NASM} / \text{FTE Student}}{1.23} = \frac{1.7}{34 \times .70^*} \times 16 \text{ hours} = 1.11^* \text{ NASM}$$

**In 2010-11 it was assumed that 65% of the seats would be occupied when the room is used. This changed the space factor from 1.23 to 1.11 NASM.*

Comments

While the total amount of classroom space generated using the COU space factor is considered adequate, mismatches between class section size and the size of available classrooms are problems on many campuses.

Category 2: LABORATORY – UNDERGRADUATE

Definition

A room used for instruction of undergraduate students that requires special purpose equipment or is so arranged that use is restricted to a particular field of study; and rooms directly serving these facilities. Activities in these facilities would include student participation, experimentation, observation or practice in a field of study.

Subcategories

2.1 *Scheduled Class Laboratory Space*

Teaching laboratories, special subject rooms, computer labs, instructional shops, drafting, art, dance and music studios, music practice rooms, language laboratories, and athletic facilities primarily used for instruction, and other specially designed rooms largely used for scheduled instruction, such as dental, rehabilitation, and psychology clinics.

2.2 *Unscheduled Class Laboratory Space*

This subcategory may be optionally used to classify general workrooms, studios, and other special-purpose facilities generally used for informal or irregularly scheduled instruction, or for practice.

2.3 *Laboratory (Instructional) Support*

Preparation rooms, balance rooms, laboratory storage rooms, demonstration rooms, animal areas, greenhouses, dark rooms, etc. directly serving the laboratory facilities.

Formula

The formula for generating undergraduate teaching facilities (including service space) is a four-part formula with a different space factor for each of four academic program groupings:

$$\begin{array}{l} \text{Laboratory space} \\ \text{for specific group} \\ (W, X, Y, Z) \end{array} = \begin{array}{l} \text{WSLabCH} \\ \text{for group} \end{array} \times \begin{array}{l} \text{Space factor} \\ \text{for group} \\ (0.8, 0.6, 0.5, 0.3) \end{array}$$

WSLabCH (i.e. **W**eekly **S**tudent **L**aboratory **C**ontact **H**ours) is the input measure for this category. They are computed as the product of the course enrolment and the hours of scheduled instruction in a laboratory (lab or practical hour) received by each student enrolled during a typical academic week.

See Appendix D for a more detailed definition of 'Laboratory Weekly Student Contact Hour'.

Formula Assumptions

The instructional laboratory formula is based on the following assumptions:

- It is recognized that there are differences in space requirements between disciplines; consequently four space standards, dependent upon discipline groups (denoted W, X, Y, Z) are used.

Examples of disciplines: Group W: Agriculture, Engineering, Veterinary Medicine
 Group X: Chemistry, Fine Arts, Geology
 Group Y: Anthropology, Geography, Psychology
 Group Z: Commerce, Mathematics, Sociology

See Appendix E for a more detailed list of disciplines by group.

- Station areas associated with the groups W, X, Y and Z (see table below) were derived over time from data reported by the universities in the Ontario system together with standards used in other jurisdictions. The space factors are based on bench areas and facility needs for the different disciplines. They include an allowance for preparation and storage space requirements.
- Space guidelines for teaching laboratories include a room utilization of 18 hours per week and 75% seat occupancy when in use. The relationship between the variables is described in the following table:

Group	Station Area (NASM) (incl. Service Space outside of the lab)	Utilization Rate Hours x Seat Util.	Space Factor NASM/ WSLabCH
W	10.80	18 x 0.75 = 13.5	0.8
X	8.10	18 x 0.75 = 13.5	0.6
Y	6.75	18 x 0.75 = 13.5	0.5
Z	4.05	18 x 0.75 = 13.5	0.3

$$\text{NASM per WSLabCH} = \frac{\text{Area per Station}}{\text{Scheduled Hours per Week}} \times \text{Seat Utilization}$$

Comments

The university timetable should be the primary source for deriving WSLabCH, augmented if needed by information in the university calendar.

There is unscheduled activity by groups or individuals for study or experimentation related to course work and assignments used for scheduled teaching and in other specially designed labs. However, **this unscheduled use of labs is to be excluded from the contact hour count** when determining laboratory facilities entitlement. It is assumed that the use of scheduled contact hours combined with an 18-hour room utilization rate will generate enough space to adequately accommodate these activities in the unscheduled hours.

For class labs that meet in multiple-use facilities, for example, in theatres used for both drama instruction and general university assembly, it may be necessary to prorate.

Category 3: RESEARCH LABORATORY SPACE (Graduate & Faculty)

Definition

A room used for laboratory applications, research or training in research methodology which **requires special-purpose equipment** for staff or graduate student experimentation or observation and preparation, service and other rooms directly serving these facilities.

Subcategories

3.1 *Research Laboratory Space*

Faculty, graduate, and general research facilities.

3.2 *Laboratory (graduate and faculty) Support Space*

Rooms directly serving one or more research facilities that directly provide the necessary support to the research functions such as balance rooms, coat rooms, storage areas, dark rooms, workshops, animal areas, and greenhouses.

Formula

The formula for generating research laboratory facilities (including service space) is a five-part formula with a different space factor for each of five academic program groupings:

$$\begin{array}{l} \text{Research space} \\ \text{for specific group} \\ \text{(A, B, C, D, E)} \end{array} = \text{Count} \times \begin{array}{l} \text{Space Factor} \\ \text{for group} \\ \text{(45, 30, 20, 10, 1)} \end{array}$$

where COUNT = # FTE Faculty + (50% # post doctoral fellows) + (50% # FTE research associates) + (50% # FTE graduate students)

Formula Assumptions

The research laboratory formula is based on the following assumptions:

- It is recognized that there are differences in space requirements between disciplines; consequently, five space standards (denoted A, B, C, D, and E) are used.

Examples of disciplines:

Group A	Health Professions, Physical Sciences, Agriculture & Biological Sciences
Group B	Engineering
Group C	Visual Arts, Anthropology, Household Science
Group D	Physical Education, Computer Science
Group E	Social Sciences, Humanities, Education, Applied Arts

See Appendix E for a more detailed list of programs by group.

- Station areas (i.e. space factors) associated with the groups A, B, C, D, and E were derived over time from data reported by the universities in the Ontario system together with standards from other jurisdictions.
- The formula assumes a direct relationship, which is consistent throughout all disciplines within an academic grouping, between the numbers of faculty, other researchers and graduate students associated with a department and the amount of research being done by that department.

Comments

Some universities have large research facilities that are used by other universities or non-university researchers. In the reporting of the inventory, this space is pro-rated, with the portion used for non-institutional purposes classified in Category 19.

Category 4: ACADEMIC DEPARTMENTAL OFFICES AND RELATED SPACE

Definition

A room usually assigned to one or more individuals on a permanent basis, containing office-type equipment and used by faculty, departmental administrative and support staff, and students, or a room directly serving these facilities. Also included are general purpose offices and project rooms used for the conducting of research may have previously been reported in Category 3.

Subcategories

4.1 *Academic Offices*

Single or multiple-occupancy offices for all academic appointments and academics with administrative appointments within a department or faculty, with rank up to and including department chairs, deans, vice deans and associate deans. Also includes offices for visiting professors, lecturers, emeriti professors, sessional staff, etc..

4.2 *Research office/project space*

Space allocated by the department to principal investigators to accommodate their research support staff (**includes post-doctoral fellows, research associates, non academic staff, professional academic staff and technicians requiring offices who support the research of a faculty member as principal investigator**). Includes offices and office support space for research activities paid from restricted funds. Excludes offices allocated to graduate students and to upper year undergraduate students who perform the work of graduate students that are included in Category 4.3.

4.3 *Graduate Student Offices*

Single or multiple-occupancy rooms allocated by the department to graduate students for study and research, and to graduate and undergraduate students in their capacity as tutors, teaching or research assistants.

4.4 *Departmental administrative and support staff offices*

Office space used by non-research administrative and support staff, including demonstrators, technicians, other administrative staff, other professional staff, and clerical support staff to academic departments. Includes offices for departmental administrative and support staff paid from operating funds.

4.5 *Office support space*

Rooms directly serving office space in this category (both research and academic support space) such as conference rooms, computer rooms not for student study, special reference libraries, file rooms, vaults, photocopy rooms, waiting and reception areas, interview rooms, storage areas, private toilets, lunchrooms, and private departmental lounges.

NOTE: See Appendix D for details on reporting phantom space in open concept offices.

Formula

The formula for generating academic departmental office facilities has five components:

Faculty

FTE Faculty x 12* sq m.

Research Appointments

(# PDFs + FTE Research Associates + FTE Research Funded Support Staff) x 12* sq. m.

Non-Academic Departmental Support Staff

FTE Non-Academic Staff, paid from operating funds, requiring offices x 12* sq. m.

Graduate Students

FTE Graduate Students x 3** sq. m.

Office Support Space

25% of the total space generated for faculty, administrative staff and graduate students

**In 2010-11 the space factor for faculty, research appointments and non-academic departmental support staff was 13 sq. m.*

***In 2010-11 the space factor for graduate students was 4 sq. m.*

Formula Assumptions

The office facilities formula is based on the following assumptions:

- In recognition of the disparity between the FTE faculty count of an institution and the requirement to provide some office accommodation to other academics who would not be fully represented by the FTE count (cross-appointments, part-time appointments, professors emeriti, status only appointments, visiting scholars, stipend staff, faculty on sabbaticals who remain on campus, etc.), the FTE faculty input measure is supplemented by 15%.
- Commencing with the 2007 report, the counts for FTE Research Associates, Post Doctoral Fellows and FTE Research Funded Support Staff requiring office type work space have been included as a separate Input Measure for Category 4.2.
- Although 10-11 NASM is the accepted planning standard for a typical single office, a space factor of 12 NASM is used in the formula. This is to recognize existing office configurations, especially in older university buildings, where the average office size is larger. Further, it is recognized that deans and chairs are usually allocated larger offices than the average. The COU standard of 12 NASMs is not necessarily the institutional standard.
- The standard for non-academic staff offices is based on the same average office size used for academic staff. Although the layout of the spaces may be different, it is assumed that the requirement for space is the same. Library staff and staff of ancillary units are excluded from the

FTE count as their office/work space is inventoried in other categories.

- The graduate student office standard is based on the assumption that all graduate students generate office type space. This is in addition to the space they generate in the research laboratory category and the library facilities & campus study space category.
- The requirement for office support space is directly related to the number of faculty, staff and graduate students in an institution.
- That 25% of the total entitlement for office facilities represents an average across all departments.
- The space generated under the formula is to accommodate a wide range of activities from photocopiers and file storage to conference rooms, departmental lounges, and resource rooms.

Comments

Many older buildings in the Ontario system have been built with larger offices than the standard. For these institutions, the total amount of space inventoried, when measured against the space generated by the formula, may appear adequate but there will be too few office units.

Library office space is not included in this category. It is often difficult to distinguish what area is strictly office space and what area is library service for referencing, cataloguing and distributing books. The library service space formula covers this requirement.

Non-academic office space is calculated based on the FTE of non-academic staff as the institutional ratios of non-academic staff to faculty (and students) are quite variable.

FTE faculty and student data are readily collectible and verifiable but there is no equivalent data base for non-academic staff.

Due to a lack of office space at individual institutions, the ability to provide offices for graduate students is a matter of institutional policy; in some cases only doctoral students or teaching assistants are assigned office space.

Further economies of scale can be achieved in open concept offices.

Category 5: LIBRARY FACILITIES & CAMPUS STUDY SPACE

Definition

A room or group of rooms used for the acquisition, processing, storage, circulation, administration and management of books, periodicals, manuscripts and other media of published information under the administration of the university library system and rooms directly serving these facilities.

See Appendix D for the definition of circulation space within libraries.

Also included are rooms or groups of rooms used for study whether or not under the administration of the university library system.

Subcategories

5.1 *Library Collection Space under the Jurisdiction of the University Library System*

Stack and storage areas for books, archives, maps, documents, records, tapes, slides, micromaterials, periodicals, electronic volumes, and music scores.

5.2 *Library / Office space under the Jurisdiction of the University Library System*

Office and related areas for library administration, library support staff (including those who provide reference services) and systems technical support space.

5.3 *Library Support space under the Jurisdiction of the University Library System*

Catalogue area, circulation desk, processing areas, bookbinding and repair areas, acquisition, cataloguing work areas and service space.

5.4 *Study Space under the Jurisdiction of the University Library System*

Reading rooms, study carrels, open-stack reading rooms and study areas available to the general university population and located within the university's library system.

5.5 *Study Space not under the Jurisdiction of the University Library System*

Include rooms available for students for study. Also included are reading rooms, study carrels, open computing space, open-stack reading rooms, group rooms and study areas located in academic departments or other non-library departments.

See Appendix D for details on reporting phantom space in library stack areas.

NOTE: Dedicated classrooms or space located in the library that isn't directly related to library function or media storage areas may be under the jurisdiction of the University Library System, but are counted for space purposes in various other categories.

Equivalent Volumes

An equivalent volume represents one bound volume. Other library materials are converted into bound volumes. Materials are given in terms of 160 bound volumes, since 160 bound volumes represents a standard stack – a single faced section with dimensions approximately 7.5 feet high, with six (6) or seven (7) shelves, 3 feet wide.

Material	Items	Units	Equivalency
Monograph Volumes – excluding Reference	160	# volumes	160
Reference	90	# volumes	160
Documents and Technical Reports	830	# reports	160
Archival Materials	6.4	linear metres	160
Serial Volumes - bound	100	paper copy	160
Serial Volumes – unbound	120	paper copy	160
OR Serial Volumes – bound and unbound	110	paper copy	160
Maps	500	# sheets	160
Microfilm	320	# reels	160
Microfiche	70,000	# items	160
Audio-Visual Holdings	400	# titles	160
Slides	6,450	# slides	160
Printed Music	350	# scores	160

The volume equivalencies and categories of library material were reviewed and updated by the Ontario Council of University Libraries (OCUL) in September, 2007. The categories are similar to that reported to OCUL.

The formula for Category 5 calculates space entitlement for three major functional areas in library and study facilities; (1) collection space, (2) study space within the library system and outside the library system, and (3) library support areas.

Formula: Study Space (Categories 5.4 and 5.5)

The formula for generating study space is:

$$0.6 \text{ NASM / FTE student}$$

Formula Assumptions

The formula is based on the following assumptions:

- The formula assumes a study space size of 2 NASM or 2.4 NASM and enough space to accommodate 25% to 30% of the population ($2 \times .3 = 0.6 \text{ NASM/FTE student}$ or $2.4 \times .25 = 0.6 \text{ NASM/FTE student}$).
- Formula assumption is based on 2 NASM or 2.4 NASM per station regardless of the type of space. It is assumed that 0.6 NASM per FTE student will allow approximately 1/3 of the student population to be housed at any one time.
- Study space includes space physically located within the library system and space that is located elsewhere on the university campus (excluding residences).
- The assumption of accommodating 25% to 30% of the student population is an average figure. It is expected that commuter universities will need to accommodate a higher percentage of the student population in study space at any one time, compared to a residential university.
- Please note that this is only a benchmark; the percentage of students accommodated and the study space size will vary by university.

Formula: Library Collection Space (Category 5.1)

The formula for generating space for library collections is as follows:

0.005 NASM per equivalent volume for traditional static shelving

0.004 NASM per equivalent volume for mobile compact storage

0.0035 NASM per equivalent volume for offsite/onsite high density storage (if applicable)

Formula Assumptions

The collection space formula is based on the following assumption:

- The formula assumes that 160 bound volumes can be shelved on a standard stack unit, leaving **15%** of the shelf space for sorting books when they are returned to the shelves. A standard stack is 2.28 m. high, 0.91 m. wide, 0.25 m. deep, and has 6 or 7 shelves. In Volume 6 of *Building Blocks*, it was determined that a standard stack unit occupied approximately 0.75 NASM, allowing approximately 1.1 m. for an aisle space. Therefore, one (1) volume would require 0.0047 NASM or 0.005 NASM.

Formula: Library Support Areas (Categories 5.2 and 5.3)

The formula for generating space for library support office and work space is as follows:

Area generated for Stack and Study space x 25%

Formula Assumption

The library support formula is based on the following assumption:

- The size of the collection and number of users are the two most significant factors affecting the area required for support space. The standard for support space has been based, therefore, on a fixed percentage of collection size and user population.

Comments

The volume equivalencies were revised in 2007 by the Ontario Council of University Libraries (OCUL) and the COU Committee on Space Standards & Reporting.

It is recognized that some efficiencies can be achieved through the use of compact storage, but this is not a universal solution for design, structural or functional reasons.

Stack space may appear to exceed the standards if service space and non-assignable space such as phantom fire corridors are not reported as defined.

Graduate students also generate space in the office and research laboratory categories.

The increasing demand and provision of computer space and rooms as well as decentralized study space must be recognized within the need for overall library study space at institutions.

Space allocation decisions vary among universities. Trade-offs between stack and study space are an increasingly large part of library space management decision-making as services and resources are adjusted to meet the changing needs and demands of library customers.

Category 6: RECREATION / ATHLETIC SPACE

Definition

All indoor areas used by students, staff, or the public for athletic activities, either for recreational or competitive purposes, and rooms directly serving these facilities.

Subcategories

6.1 Athletic Activity Areas

Gymnasia, dance studios, swimming pools, basketball, handball and squash courts, combative rooms, ice rinks, indoor tracks, indoor rifle and archery ranges, and activity areas including those within field houses.

6.2 Athletic Seating Areas

All permanent seating and observation areas in gymnasia, swimming pools, field houses, ice rinks, and other indoor activity areas.

6.3 Athletic Service Space

All ancillary areas directly serving the above such as locker rooms, shower rooms, washrooms, coaches' rooms, equipment supply rooms, and rooms serving athletic facilities.

Formula

0.9 NASM / FTE student

Formula Assumptions

The recreation/athletic space formula is based on the following assumptions:

- The space factor for recreation and athletic facilities assumes that the FTE student population is the primary user.
- The actual factor is derived from institutional averages.

Comments

Assessing the adequacy of athletics and recreation space is a complex matter. Institutions are quite diverse in the match between generated space and inventories. Requirements for athletic and recreation space vary according to an institution's commitment to inter-university athletics, the recreational interests of its students, the proportion of students in residence, the availability of other facilities in the community, and the mix of extracurricular activities with academic programs in Physical Education and related disciplines.

There may be errors in the reporting of athletics inventory that is primarily for community or academic program use. The definitions are clarified so that any specialized space used exclusively or almost exclusively for academic programs is reported in the class lab category.

Category 9: PLANT MAINTENANCE

Definition

Space associated with the operation and maintenance of university buildings, grounds, vehicles and other elements of the physical plant.

Subcategory

9.1 Plant Maintenance

Shops and storage areas for carpentry, plumbing, painting, electrical and other trades, lunch, locker and change rooms for maintenance and custodial staff, garages for maintenance vehicles and all grounds equipment, greenhouses and related areas, and garages for storage and repair of vehicles and boats.

Formula

1.5% x Physical Plant Net Assignable Area *

* which is the sum of NASM categories 1-15 and 17-20

Category 10: CENTRAL ADMINISTRATIVE OFFICE AND RELATED SPACE

Definition

A room usually assigned to one or more individuals on a permanent basis containing office-type equipment and used by central administrative and support staff in non-academic departments/faculties/divisions, or a room directly serving these facilities.

Subcategories

10.1 Office Areas

Single or multiple-occupancy rooms for executives and administrative staff.

10.2 Office Support Space

Rooms directly serving office space in this category such as conference rooms, special reference libraries, file rooms, vaults, photocopy rooms, computer rooms for administrative use, waiting and reception areas, interview rooms, storage areas, private toilets, lunch rooms and private departmental lounges.

See Appendix D for details on reporting phantom space in an open concept office space.

Formula

The formula for generating central administrative office facilities has two components:

Offices: # FTE Non-Academic Staff requiring offices x 12* sq. m.

Office Support Space: 50% of the total space generated for the Non-Academic Staff

**In 2010-11 the space factor for administrative offices was 13 sq. m.*

Formula Assumptions

- The requirement for office support space is directly related to the number of non-academic staff requiring offices.
- 50% of the total entitlement for office facilities represents an average across all departments.
- The space generated under the formula is to accommodate a wide range of activities from photocopiers and file storage to conference rooms, departmental lounges and resource rooms.

Categories 7, 8, 12, 13, 14, 15: STUDENT AND CENTRAL SERVICES

Definition

Food services, bookstore and other merchandising facilities, audiovisual / television facilities, central services, health service facilities, common use and study activity space, and assembly & exhibition facilities have been combined into **Student and Central Services** for the purpose of calculating space entitlement. This allows an institution to trade off a need for facilities in one area with those in a related category.

Formula

$$\text{FTE students} \times 1.5^* \text{ NASM}$$

**In 2010-11, the space factor for student and central services was 2.0 NASM per FTE student.*

The following range of values is suggested for each category, which reflect the use of space in the Ontario universities:

Category #	Category Name	NASM / FTE student
7	Food Service	0.50 to 0.70
8	Bookstore and Other Merchandising Facilities	0.10 to 0.20
12	Central Services (includes AV TV facilities that were reported in Category 11)	0.15 to 0.40
13	Health Service Facilities	0.03 to 0.05
14	Student Activity Space	0.50 to 0.70
15	Assembly and Exhibition Facilities	0.15 to 0.40

Category 7: FOOD SERVICE

Definition

A room or group of rooms used for preparing or eating food or which directly serve these facilities including central facilities located in residences and faculty clubs, whether operated by the university or an external company.

Subcategories

7.1 Food Facilities

Dining rooms, cafeterias, snack bars, coffee shops, restaurants, vending machine and other refreshment areas primarily used for food service.

7.2 Food Facilities Service

Kitchen, servery, all food preparation areas, dishwashing areas, refrigeration and freezer rooms, kitchen storage rooms, receiving areas, refuse areas, and staff lunch, locker and private washrooms.

Category 8: BOOKSTORE AND OTHER MERCHANDISING FACILITIES

Definition

A room or group of rooms used to sell products or services, exclusively or primarily for the university population, and rooms directly serving these facilities.

Subcategory

8.1 Bookstore / Merchandising

For example: bookstores, Canada Post office, banks, travel agencies, other stores and associated service space operated by the university or commercial enterprise renting space from the university. Includes staff offices in support of these functions.

Category 12: CENTRAL SERVICES (including Audio-Visual Television Facilities – formerly Category 11)

Definition

A room or group of rooms used to provide campus-wide services (including the production, distribution and storage of non-print instructional media) for both academic and non-academic sections of the university, and rooms directly serving these facilities.

Subcategories

12.1 Computing Facilities

Central data processing facilities, computer rooms, technical service and repair areas and their support spaces.

12.2 Other Central Services

Central and regional printing and duplicating shops, central receiving areas, central stores, university mail rooms, laundry and drying rooms located in a central laundry, and technical service and repair areas.

Also included in this category are radio, TV, sound, photography, and graphic studios, film and tape libraries, control rooms, storage rooms, recording rooms, repair and servicing work rooms, dark rooms, preparation rooms, and similar related areas, which were previously reported in Category 11.

Category 13: HEALTH SERVICE FACILITIES

Definition

A room or group of rooms intended to supply health services primarily to the general university population, and rooms directly serving these physical and wellness services facilities.

Subcategory

13.1 Health Service Facilities

Infirmaries, first aid rooms, physiotherapy rooms, doctors' offices / examining rooms, their support areas, offices and related areas within health service facilities, and first-aid rooms located elsewhere and used for the general university.

Category 14: COMMON USE & STUDENT ACTIVITY SPACE

Definition

A room or group of rooms accessible to the general university population intended for recreation, rest or relaxation, or rooms directly serving these facilities.

Subcategories

14.1 Student Offices and Support Space

Offices and support space for student government, publications, and clubs.

14.2 Recreational Facilities and Service

Bowling alleys, pool and billiard rooms, cinemas, television rooms, chess rooms, video games rooms, card playing areas, music-listening areas, hobby rooms, storage and equipment issue rooms and pubs.

14.3 Lounge and Service Space

All general lounge space and kitchenettes, whether for students, faculty, or administrative staff, lounges in residences if available to non-residents, and lounges in faculty clubs, including related service space.

Category 15: ASSEMBLY AND EXHIBITION FACILITIES

Definition

A room or group of rooms intended to serve the general university population and to be used for dramatic, musical, or devotional activities or for exhibition purposes, and rooms directly serving these facilities.

Subcategories

15.1 Assembly Facilities

Theatres, auditoria, concert halls, chapels, and convocation halls and ancillary areas such as checkrooms, coat rooms, ticket booths, concession booths, dressing rooms, projection rooms, storage and control rooms.

15.2 Exhibition Facilities

Museums, art galleries, other exhibition areas, greenhouses used for display only and supporting areas.

Category 16: NET NON-ASSIGNABLE SPACE

Definition

A room or area that is not available for assignment to the occupants of a building but which is necessary for the general occupation or mechanical support of one or a number of buildings.

Subcategories

16.1 Central Utility Plant

All boiler rooms, refrigeration plant, electrical transformer stations, cooling towers, compressing stations, water treatment facilities, recycling facilities, hazardous waste storage, incinerator, distribution systems, service tunnels and their support areas serving more than one building or the entire campus.

16.2 Other Non-Assignable Areas

Areas used or occupied by janitorial staff (janitors' closets), mechanical and electrical spaces, and incinerator serving one building, and public washrooms.

Circulation spaces required to provide general access within a building (i.e. corridors, stairwells, elevators) to a single room or work area (including their integral support areas) e.g. circulation space is required to provide general access such as fire corridors in office landscaped areas, escape routes in warehousing areas or large congested machine shops, or routes necessary to provide physical access to some subdivision or block of space. Loading docks and service tunnels not assigned to a specific department.

16.3 Inactive Unassignable

Spaces which would require long lead time and extensive work to make them available for occupancy such as those left unfinished at the time of construction or those undergoing major repairs or renovations, i.e. large areas of the building being out of service for many months.

16.4 Parking Structures

This space includes underground parking areas and parking structures that have a roof.

Category 17: RESIDENTIAL SPACE

Definition

A room or rooms used to accommodate one or more individuals and the ancillary areas in direct support of such rooms.

Subcategories

17.1 Residence Living Space

Single or multiple-occupancy bedrooms, apartments or other residential units (corridor).

17.2 Residence Service Space

Laundry rooms, recreational areas, music rooms, games rooms, locker rooms, lounges only available to occupants of that residence, tuck shops, washrooms in residential suites, and administrative offices in direct support of residential facilities.

Category 18: ANIMAL SPACE

Definition

Centralized animal facilities (including long term holdings) in overall support of teaching or research and not normally integrated with or under the control of academic departments.

Subcategories

18.1 Specialized Central Areas

Rearing, conditioning, and holding facilities before animals are ready or required for teaching and research purposes as well as facilities for long-term holding and care of animals following surgical or other investigative treatment, located either on or off campus.

18.2 Farm-Type Areas

Barn structures, feed storage, and field service areas.

Category 19: OTHER UNIVERSITY FACILITIES

Definition

Any room or area not included in Categories 1 through 18.

Subcategories

19.1 *Day Care Facilities*

19.2 *Rifle Ranges and Other Space in Support of Military Training*

19.3 *Merchandising Facilities Not Exclusively or Primarily Serving the University Population*

19.4 *Demonstration Schools and Other Instructional Institutions for Non-University Students*

19.5 *Inactive Assignable Space*

Spaces which are deemed to be available for immediate occupancy but which have not yet been assigned to individuals or groups.

19.6 *Non-Institutional Agencies Occupying University Space*

19.7 *Instructional Service Activities to the External Community*

Includes schools of continuing studies for non-academic credit.

Category 20: HEALTH SCIENCE CLINICAL FACILITIES

Definition

Space owned or operated by the university that is used in direct support of teaching and research related to clinical instruction, i.e. the clinical disciplines of Medicine and Veterinary Medicine.

To be included:

1. Health care areas, such as patient bedrooms and bathrooms, nurses' stations, surgery, treatment rooms, waiting rooms and service and supply areas;
2. All space in support of clinical instruction, research and service;
3. Space where the corresponding input measures are not included in Categories 1–15 of the space formula and for which capital funding responsibility is assumed to be that of the Ministry of Health.

See Appendix D for details on clinical facilities.

COU SPACE FORMULA

Category #	Space Category	Group	Space Factor	Input Measure
1	Classroom Facilities		1.11* NASM	FTE Students
2	Laboratory – Instructional	W X Y Z	0.8 NASM 0.6 NASM 0.5 NASM 0.3 NASM	Weekly Student Laboratory Contact Hours
3	Laboratory - Graduate & Faculty	A B C D E	45 NASM 30 NASM 20 NASM 10 NASM 1 NASM	FTE Faculty + 0.5 FTE Other Research Appointments (Post Doctoral Fellows and FTE Research Associates) + 0.5 FTE Graduates
4	Office - Academic		12* NASM 12* NASM 12* NASM 3* NASM	FTE Faculty PDFs + FTE Research Associates + FTE Research Funded Support Staff (requiring office type work space) FTE Departmental Non-Academic Staff, paid from operating fund (requiring offices) FTE Graduate Students
		Office Service	25% of the total space generated for faculty, non-academic staff and graduate students	
10	Central Administrative Offices		12* NASM	FTE Non-Academic Staff (requiring offices)
		Office Service	50% x total generated for FTE non-academic staff (for admin offices).	

Category #	Space Category	Group	Space Factor	Input Measure
5	Library Facilities & Campus Study Space	Stack	0.005 NASM	Traditional static shelving
			0.004 NASM	Mobile compact storage
		0.0035 NASM	Offsite/onsite high density storage	
		Study	0.6 NASM	FTE students
		Support	25% of stack and study	
6	Recreation / Athletic Space		0.9 NASM	FTE students
9	Plant Maintenance		0.015 x Total NASM Inventory	

STUDENT & CENTRAL SERVICES		1.5* NASM	FTE Student
7	Food Service	0.5 to 0.7 NASM	FTE Student
8	Bookstore and Other Merch. Facilities	0.1 to 0.2 NASM	FTE Student
12	Central Services (includes AV TV)	0.15 to 0.40 NASM	FTE Student
13	Health Service Facilities	0.03 to 0.05 NASM	FTE Student
14	Common Use and Student Activity Space	0.5 to 0.7 NASM	FTE Student
15	Assembly and Exhibition	0.15 to 0.4 NASM	FTE Student

**The space factors were changed starting in 2013-14. For an explanation of why the changes were made, please see page xx.*

INPUT MEASURES

Space Category	Input Measure
1 Classroom Facilities	FTE Students
2 Laboratory - Instructional	Scheduled Laboratory Weekly Student Contact Hours
3 Laboratory - Graduate and Faculty	FTE Faculty Other Research Appointments(Post Doctoral Fellows and FTE Research Associates) FTE Graduate Students
4 Academic Departmental Offices	FTE Faculty FTE Graduate Students FTE Non-Academic Office Staff requiring offices, paid from Operating funds FTE Research Support Staff requiring offices, paid from Research funds Other Research Appointments (Post Doctoral Fellows and FTE Research Associates)
5 Library Facilities & Campus Study Space	Library Collections (Equivalent Volumes) FTE Students
6 Recreation / Athletic Space	FTE Students
7 Food Service	FTE Students
8 Bookstore & Other Merchandising Facilities	FTE Students
9 Plant Maintenance	Total Net Assignable Inventory (Categories 1-15 and 17-20)
10 Administrative Offices	FTE Non-Academic Office Staff
12 Central Services	FTE Students
13 Health Service Facilities	FTE Students
14 Common Use & Student Activity Space	FTE Students
15 Assembly and Exhibition Facilities	FTE Students

DEFINITIONS

Building Blocks

Series of seven COU publications that were published between 1972 and 1988. These publications led to the development of the current COU space standards.

See Appendix F for a list of the publications.

Circulation Area

Circulation area is that which is required for physical access to some subdivision of space – whether or not enclosed partitions.

Single rooms or work areas, plus integral support areas which serve a single purpose, (for example, a block of book stacks) should not include any spaces within them as Circulation Area.

Clinical Facilities (reported in Category 20)

The inventory of universities with programs in health sciences may include spaces which are used as hospitals or may house clinical staff usually located in hospitals.

Category 20 is space that is used in direct support of instruction, research and service for clinical health science disciplines that is, related to clinical instruction in the clinical disciplines of Medicine and Veterinary Medicine. This will include all areas used for patient care, such as patient bedrooms and bathrooms, nurses' stations, surgery, treatment rooms, waiting rooms, and service and supply areas.

The space inventory should relate only to clinical space owned and operated by the university.

Double Cohort

In the academic year 1998-99 the provincial government announced the elimination of Grade 13, resulting in two cohorts (double cohort) of secondary school students (graduates of the old five-year and new four-year curriculum) both seeking university admission at the same time, with a peak effect on university enrolments between 2001-02 and 2004-05.

Faculty (FTE)

The university's faculty count is to include all persons, up to and including department heads or chairs, holding an academic appointment and involved in teaching, who receive remuneration via the university from all salary funding sources.

The university designates each member of the faculty as full-time or part-time based on appointment.

Formula Space

Usable or assignable space for which space standards could normally be developed. The formula categories provide for the full range of functions and services needed in a contemporary university. There are 15 categories of formula space: classroom, undergraduate laboratory, research laboratory, academic offices, library, athletic, food services, bookstore, plant maintenance, administrative offices, AV/TV, central services, health services, student activity space and assembly space.

Generated Space

Generated space is the space the institution should have, based on the product of the input measure and the COU space factor for each space category.

Gross Area

Gross area is defined as the sum of the floor areas included within the outside faces of exterior walls for all stories, or areas, which have floor surfaces.

Input Measure

Input Measures are used in the calculation of space requirements for the first 15 of the categories, for which quantitative space factors have been determined.

Input Measures include: student enrolment, faculty, research appointments, and non-academic staff full-time equivalent positions, laboratory contact hours, and equivalent volumes in the library calculations.

Inventory / Generated (I/G)

The ratio of actual inventory (I) and the inventory generated (G) by COU space factors.

Laboratory Weekly Student Contact Hour

The total weekly student contact hours of laboratory instruction offered by a university as part of a program of studies leading to a degree or diploma. The contact hours are computed as the product of the course enrolment and the hours of **scheduled instruction** received by each enrolled student during a typical academic week in a 'laboratory' setting.

Laboratory instruction pertains to activity facilitated by demonstration or experimentation requiring additional equipment not ordinarily available in classrooms.

A contact hour is the time that the instructor of the course is supervising a formal laboratory session in a specialized teaching facility. Make up hours, or project time over and above formal instruction time are not counted (for example, studio or musical practice where no instruction is given).

Library Collections (Equivalent Volumes)

The library materials identified in the university library catalogue and contained in the table in Appendix A: Category 5 are to be included at the stated volume equivalency rate.

Equivalent volumes

An equivalent volume represents one bound volume. Other library materials are converted into bound volumes. Materials are given in terms of 160 bound volumes since 160 bound volumes represents a standard stack – a single faced section with dimensions approximately 7.5 feet high, with six or seven shelves, 3 feet wide.

See Appendix A (Category 5: Library Facilities & Campus Study Space) for details of volume equivalencies.

Net Assignable Square Metres (NASM)

The amount of area or net assignable square metres (NASM) is the amount of area, which can be used by the occupants of the building.

NASM is the sum of all areas on all floors of a building assigned to, or available for assignment to, an occupant, including every type of space functionally usable by an occupant (except Custodial, Circulation and Mechanical area).

Net assignable space is counted for Categories 1-20, excluding Category 16.

Non-Academic Office Staff (FTE) and Research Funded Support Staff (FTE)

The full-time equivalent of all filled established positions for **administrative, professional and management staff** with appointments of at least three months' duration as of 1 October. This will include staff working in offices in the following areas: research funded support staff (category 4.2), operating funded non-academic staff (category 4.4), library staff (category 5) and central administrative staff (category 10.1). Staff of ancillary operations, are excluded. Technicians requiring offices are included in category 4.2 if paid from research funding and in category 4.4 if paid from operating funds. If technicians are lab based and do not require office space they should be excluded.

Non-Assignable Space

A room or area that is not available for assignment to the occupants of a building, but that is necessary for the general occupation or mechanical support of one or a number of buildings. Non-assignable space includes central utility plant, circulation space, janitorial, mechanical and electrical spaces, public washrooms, parking structures and inactive unassignable space. This space is counted on Category 16.

See Appendix A: 16.0 Non-Assignable Space for a more detailed definition.

Non-Formula Space

These are highly specialized facilities generally of a unique nature. There are four (4) categories of non-formula space, which are reported under categories 17 through 20. They are: residence, animal space, other facilities and health science clinical facilities.

Ontario Ministry

Ontario Ministry refers to the Ontario Ministry responsible for postsecondary education. Until February 1993, it was called Ministry of Colleges and Universities; from February 1993 until July 1999 it was called Ministry of Education and Training, and from July 1999 to present it is called Ministry of Training, Colleges and Universities.

Other Research Appointments (FTE)

Generators of research who are not regular faculty as defined in FTE Faculty, but who have similar research space requirements. This category includes post-doctoral fellows at any salary, and research associates who have equivalent-to-faculty research appointments. The annualized salary paid to a research associate via the university (irrespective of funding source) is normally equal to or higher than an academic appointment. The count date should be 1 October, or another date that accurately reflects demand during the Fall session. Since researchers who are at the university for a short time will normally not require separate space, the count should be limited to appointments of at least three months' duration.

This input measure is for staff appointed who "generate" research, who are originating and directing their own research, or are co-investigators. The staff who are hired to assist in their research are then accommodated with the space generated and are also counted separately under Research Funded Staff.

Phantom Space

Phantom space is defined as the division of space within an open area where means of egress must be clearly established as corridor space rather than net assignable (NASM). Such space is usually generated due to code requirements to provide an unobstructed passage through an open area.

Examples of phantom space are:

1. Library stack area: The space occupied by book stacks and the aisles serving the stacks. However, if an aisle exists, whose purpose is to provide a path through the room rather than access to the stacks, then this aisle is to be considered a corridor (Category 16) even though there are no actual walls

bounding this corridor.

2. Open concept office: A large open office suite is divided by system furniture into individual work cubicles. To accurately describe the use of the large office suite it is necessary to recognize the office cubicles (Category 10 or 4) and the circulation space which permits movement through the suite but is not part of any specific function in the suite (Category 16).

Rae Review

"The government has identified "Strong People, Strong Economy" as one of the three key priority areas in which it is committed to achieving significant results for Ontario. An excellent postsecondary education system, which provides opportunity for the people of Ontario and has a secure future, is essential for a competitive and prosperous society. In recognition of this, the government announced a review of the design and funding of postsecondary education in the Ontario Budget 2004."

"Premier McGuinty appointed the Honourable Bob Rae as Advisor to the Premier and the Minister of Training, Colleges and Universities. With the support of a seven-member Advisory Panel, Mr. Rae was asked to advise on strategies to improve higher education...."

Space (Actual)

This refers to the inventory of space reported by each institution.

Space Factor

A space factor is a multiplier resulting from the interaction of standards used for a particular type of space.

Space Formula / Standards

A space standard is a common measurement that may be used to establish a goal for utilization, or allocation of space.

Students (FTE)

(1) FTE Undergraduate Students

The definitions for student enrolment currently contained in the MTCU Operating Formula Manual will govern the input measures as they pertain to students. Thus, the FTE student count will be consistent with the numbers reported to the Ministry as of November 1.

(2) FTE Graduate Students

See definition for FTE Undergraduate Students.

Institutions Included

Federated and affiliated institutions (both Arts & Science and Theological) are included as of November 1, 1992.

The number of FTE students reported will be the sum of

1. eligible plus ineligible fall term FFTE undergraduate students x 2;
2. eligible plus ineligible GFTE graduate full-time equivalent) graduate students.

SuperBuild

In the 1999 provincial budget, the government announced the creation of SuperBuild, the largest capital investment in Ontario's postsecondary sector in more than 30 years, to help colleges and universities construct new academic buildings and upgrade existing teaching facilities to accommodate the growing number of students.

COU space standards make use of program or discipline groups in the generation of instructional labs and research space.

Code	Program/Discipline	Category 2 Group W - Z	Category 3 Group A - E
0.00	ARTS & SCIENCE		E
1.00	EDUCATION		
1.18	Elementary/Secondary Teacher Training	Y	E
1.23	Higher Education, Postsecondary Teacher Training	Y	E
1.36	Kindergarten, Pre-School Teacher Training	Y	E
1.38	Non-Teaching Fields	Y	E
1.39	Physical Education	Y	D
1.40	Kinesiology, Human Kinetics & Kinanthropology (Arts)	Y	D
1.40	Kinesiology, Human Kinetics & Kinanthropology (Science)	Y	C
1.41	Recreation	Y	E
1.99	Other, not elsewhere specified	Y	E
2.00	FINE AND APPLIED ARTS		
2.03	Fine Art	X	D
2.03	Visual Arts / Art Conservation		C
2.05	Music	X	E
2.08	Other Performing Arts	X	E
2.14	Applied Arts (eg. Industrial Design, Design)	X	E
2.99	Other, not elsewhere specified	X	E
3.00	HUMANITIES AND RELATED		
3.03	Classics, Classical and Dead Languages	Z	E
3.05	English Language and/or Literature	Z	E
3.06	French Language and/or Literature	Z	E
3.09	History	Z	E
3.10	Journalism	Z	E
3.11	Languages and/or Literatures, Other	Z	E
3.12	Library Science	Z	E
3.13	Other Records Science	Z	D
3.14	Linguistics	Z	E
3.17	Other Mass Communication Studies	Z	E
3.21	Philosophy	Z	E
3.24	Religious Studies	Z	E
3.25	Theological Studies	Z	E
3.27	Translation and Interpretation	Z	E
3.99	Other, not elsewhere specified	Z	E

Code	Program/Discipline	Category 2 Group W - Z	Category 3 Group A - E
4.00	SOCIAL SCIENCES AND RELATED		
4.03	Anthropology	Y	C
4.06	Archaeology	Y	D
4.08	Canadian Studies	Z	E
4.09	Area Studies, Other	Z	E
4.12	Commerce, Management, Business Administration	Z	E
4.13	Criminology	Z	E
4.14	Specialized Administration Studies	Z	E
4.15	Demography	Y	D
4.27	Economics	Z	E
4.30	Geography	Y	D
4.30	Physical Geography	Y	C
4.30	Human Geography	Y	D
4.33	Law and Jurisprudence	Z	E
4.40	Environmental Studies - Human	Y	E
4.40	Environmental Science – Physical	Y	D
4.43	Political Science	Z	E
4.46	Psychology	Y	B
4.47	Secretarial Studies	Z	E
4.49	Social Work and Social Welfare	Z	E
4.52	Sociology	Z	E
4.55	Military Studies	Z	E
4.57	Other Social Services	Z	E
4.99	Other, not elsewhere specified	Z	E
5.00	AGRICULTURAL AND BIOLOGICAL SCIENCES		
5.03	Agriculture (Animal, Plant, Soil Science)	W	A
5.06	Biochemistry	X	A
5.09	Biology	X	A
5.12	Biophysics	X	A
5.15	Botany	X	A
5.16	Fisheries and Wildlife Management	X	A
5.18	Household Science and Related (Food Sci & Nutrition)	Y	C
5.21	Veterinary Medicine	W	A
5.22	Veterinary Sciences	W	A
5.23	Veterinary Medicine Specialties	W	A
5.24	Zoology	X	A
5.99	Other, not elsewhere specified	X	A

** Changes to category groupings in bold.

Code	Program/Discipline	Category 2 Group W - Z	Category 3 Group A - E
6.00	ENGINEERING AND APPLIED SCIENCES		
6.03	Architecture	X	E
6.05	Aeronautical and Aerospace Engineering	W	B
6.06	Chemical Engineering	W	B
6.07	Civil Engineering	W	B
6.08	Design, Systems Engineering	X	D
6.09	Electrical Engineering	X	C
6.10	Industrial Engineering	W	B
6.11	Mining Engineering	W	A
6.12	Mechanical Engineering	W	B
6.13	Metallurgical Engineering	W	B
6.14	Other Engineering	W	C
6.15	Engineering Science	X	B
6.16	Engineering General	W	B
6.20	Forestry	X	B
6.22	Landscape Architecture	X	E
6.99	Other, not elsewhere specified	W	B
7.00	HEALTH PROFESSIONS AND OCCUPATIONS		
7.03	Dentistry (Professional)	X	A
7.04	Dental Specialties	X	A
7.05	Medicine (Professional)	X	A
7.06	Basic Medical Sciences (Anatomy, Biochemistry, Physiology, Genetics, Biophysics, etc.)	X	A
7.08	Medical Specialties	X	A
7.10	Paraclinical Sci (Microbiology, Immunology, Pathology)*	X	A
7.12	Surgical Specialties	X	A
7.15	Nursing	Z	E
7.18	Optometry	X	A
7.21	Pharmacy	X	B
7.24	Epidemiology and Public Health	X	D
7.27	Rehabilitation Medicine		
	- Audio-Speech Therapy, Commun Disorders	X	B
	- Occ., Rehab, Physical Therapy, App Health Sci.	X	D
7.36	Medical Technology	X	B
7.99	Other, not elsewhere specified	X	A
8.00	MATHEMATICS AND PHYSICAL SCIENCES		
8.06	Computer Science	Z	D
8.12	Mathematics	Z	E
8.15	Chemistry	X	A
8.18	Geology and Related	X	A
8.21	Metallurgy, Materials Science	W	B
8.24	Meteorology	X	A
8.27	Oceanography and Water Studies	X	A
8.30	Physics (e.g. Astronomy, Aerospace Sciences)	X	A
8.99	Other, not elsewhere specified	X	A

* Do not report input measures and corresponding inventory if in support of teaching and research related to clinical instruction. See category 20. Exclude "Z" formula space.

The following list includes major changes made to the space inventory definitions and space factors since 1991. For a list of major changes made prior to 1991, please refer to the Inventory of Physical Facilities of Ontario Universities 2010-11 report.

- Jan. 1991 **Published: Inventory of Physical Facilities of Ontario Universities, 1989-90 (#91-1)**
- 1992 **Published: COU Building Blocks-Users Guide (first edition)**
- 1992-93 Changes made starting with the 1992-93 report:
- Federated and affiliated colleges are included, in response to the Ontario Ministry's funding requirements. Data on space and activities at all of these institutions are now fully integrated into the reports of their constituent universities.
 - Nipissing University appears as a separate university. In previous years, Nipissing was reported as an affiliated college of Laurentian University.
- Dec. 1993 **Published: Inventory of Physical Facilities of Ontario Universities, 1992-93 (#93-5)**
- 1995-96 Change made starting with the 1995-96 report:
- The library volume equivalencies used in the generation of stack space entitlement was reviewed in order to bring them up-to-date with changes in library materials, such as the use of CD-ROMS and on-line databases. The Committee adopted the methodology used by CARL (Canadian Association of Research Libraries).
- July 1997 **Published: Inventory of Physical Facilities of Ontario Universities, 1995-96 (#330)**
- 1998-99 Change made starting with the 1998-99 report:
- OISE is included with University of Toronto (St. George campus) data. Prior to 1998-99, OISE was included as a separate institution.
- April 2000 **Published: Inventory of Physical Facilities of Ontario Universities, 1998-99 (#670)**
- 2001-02 Changes made starting with the 2001-02 report:
- The inventory for Dean's office (which was previously reported under Category 10 (administrative office space)), is now reported under Category 4 (academic office space).
 - The assumptions used in the classroom input measure were updated to reflect the way students are being taught today. As a result, (1) the station size increased from 1.4 NASM to 1.7 NASM, (2) the utilization rate increased from 62% to 65%, and (3) the number of hours per week that a classroom is expected to be used, increased from 30 to 34 (to account for evening classes and the lengthening of the teaching day). As a result, the space factor for classrooms changed from 1.2 NASM to 1.23 NASM.
 - Category 5 (Library and Study Space) has been renamed Campus Study Space & Library Facilities) to reflect more accurately how this space is being utilized.
 - Subcategory 12.3 (Student Computer Rooms) is now reported in Category 5 under

Subcategory 5.4 (Computer-Equipped Study Space). This type of space is defined as campus-wide electronically equipped computer rooms available for students for study.

- Other Research Appointments are included in the faculty supplement calculation, Category 4.2. Also, technicians, if they occupy offices, are counted in Category 4.4

- Jan. 2003 **Published: Inventory of Physical Facilities of Ontario Universities, 2001-02 (#734)**
- 2004-05 Changes made starting with the 2004-05 report:
- UOIT is included.
 - The provision for academic support staff and service changed from 30% to 25% of the total generated for faculty and graduate students.
 - The provision for administrative support staff and service changed from 30% to 50% of the total generated for non-academic staff.
 - Study space is reported in Category 5. Previously, it was reported in Category 12.
 - Parking structures are now reported in Category 16. Previously, it was reported in Category 19.
 - A number of changes to the Library/Learning Commons space was made.
- Dec. 2005 **Published: Inventory of Physical Facilities of Ontario Universities, 2004-05 (#779)**
- 2007-08 Changes made starting with the 2007-08 report:
- There were a number of changes made to Category 5 (Library Facilities and Campus Study Space). With the assistance of OCUL, the following changes were made:
 - o Changes were made to equivalent volume calculations for various types of library material.
 - o The space factor for stack space changed. Traditional static shelving changed from a sliding scale depending on the number of volumes to one space factor (0.005). A new category of stack space was introduced - super high density (space factor of 0.0035) – to reflect this new mode of storing library materials.
 - Departmental research support staff offices/workspaces were moved from Category 3 to Category 4.
- Feb. 2010 **Published: Inventory of Physical Facilities of Ontario Universities, 2007-08 (#816)**
- 2010-11 Changes made starting with the 2010-11 report:
- Northern School of Medicine (NOSM) is included.
 - The Recreation/Athletic space subsidy for universities with enrolment less than 8,000 FTEs was eliminated.
 - The amount of space devoted to AV/TV Facilities has declined over time. The Committee agreed to eliminate Category 11: AV/TV Facilities and report the space under Category 12.2 Central Services (Other Central Services).
- June 2013 **Published: Inventory of Physical Facilities of Ontario Universities, 2010-11 (#874)**

- 2013-14 Changes made starting with the 2013-14 report:
- The space factor for Student and Central Services was changed from 2.0 to 1.5 NASM / FTE student.
 - The office space factor (academic and administrative) was changed from 13 to 12 NASM / office.
 - The classroom space factor was changed from 1.23 to 1.11.
 - Graduate student office space was changed from 4 to 3 NASM / office.
 - The faculty supplement (15% of total FTE faculty) was eliminated.

APPENDIX G: HISTORICAL INFORMATION

The Development and Use of Building Blocks

The COU space formula and inventory classification system were developed in the 1970s, and have been revised over the years. The 1986-87 survey data in Volume VII of the *Building Blocks* series was the last time a complete revision was done. Since then, the Committee has conducted periodic reviews of specific space categories.

See pages xx to xx for further details.

The COU Survey of Physical Facilities takes place during the winter of each third academic year. Data as of November 1 are requested, to coincide with the date for reporting of student enrolment to the Ontario government for operating grants purposes.

In the survey, each institution is asked to report current inventory in 20 space categories, as well as related input measures, such as student enrolment, faculty and staff full-time equivalent positions, laboratory contact hours, and equivalent volumes in the library collection. These input measures are used to calculate the space requirements for the first 15 of the categories, for which quantitative space factors have been determined. The resulting calculations of space entitlement are used, with the data on existing inventory, in various ways. For example, COU uses the survey data to monitor changing space needs and to help make the case made to government about capital funding requirements for the university system as a whole. Individual institutions may compare their existing inventory with space entitlement under the COU formula in proposals for capital funding for new buildings, and the COU formula (sometimes with modifications) is used in institutional planning, such as estimating the needs of a division for different types of space.

Outside agencies and institutions, including universities and government ministries in British Columbia and Saskatchewan, are also users of *Building Blocks*. Consultants planning university facilities in Canada and in other countries frequently request COU space publications. The Canadian University Reciprocal Insurance Exchange (CURIE) uses the COU space categories as a basis for determining the value of university facilities for insurance purposes. And, since 1986-87, the "Ontario Ministry" has allocated funds for repair and renovation according to each institution's entitlement (generated space) in the 15 formula categories.

"Ontario Ministry" refers to the Ontario Ministry responsible for postsecondary education. Until February 1993, it was called Ministry of Colleges and Universities; from February 1993 until July 1999 it was called Ministry of Education and Training, and from July 1999 to the present it is called Ministry of Training, Colleges and Universities.

The COU Committee on Space Standards and Reporting

Co-ordination of the triennial survey, periodic reviews of the space standards, and special studies on the availability and utilization of university space are the responsibility of the Committee (established in 1988). The Committee uses the detailed data collected in the survey to monitor changes in space needs, such as the impact of computing on the laboratory, library and office categories.

A list of publications from the Committee since 1991 is included in Appendix F of this report.

In 1992, the Committee prepared the *COU Building Blocks Users' Guide*, in response to requests for a document that would be more concise, up-to-date and user friendly than the volumes in the *Building Blocks* series, which describe in detail the space classification scheme, the assumptions in the space factors and the analysis used in developing, testing and revising the complete COU space formula.⁷ The *Users' Guide* contains instructions for the preparation of institutional responses to the triennial survey, and also explains how the COU space formula can be used to analyze space requirements for purposes other than the survey. The *Users' Guide* is revised every survey cycle.

Capital Issues

In December 2013, the Ministry of Training, Colleges and Universities announced the Major Capacity Expansion (MCE) Policy Framework. In May 2015 the province announced in May 2015, the province announced that they will support a new York University – Markham Centre campus in partnership with Seneca College. To date, the total funding available in the MCE initiative has not been announced. The Ministry has indicated that the objectives of the MCE initiative are to:

- Ensure that future large-scale capacity expansion supports long-term postsecondary education priorities.
- Manage enrolment growth strategically, to address regional capacity gaps in underserved areas.
- Put in place a transparent, evidence-based decision-making and implementation process.
- Address affordability and sustainability for students, institutions, and the province by maximizing the cost effectiveness of targeted investments.
- Create local community and regional economic benefits, leading to job creation and greater economic diversity.

In 2009, the federal government announced the \$2 billion Knowledge Infrastructure Program (KIP), a two-year, economic stimulus measure to support infrastructure enhancement at post-secondary institutions across Canada. This program is part of the \$12 billion Government of Canada stimulus package announced in Budget 2009.

Post-secondary institutions have indicated that a major portion of their existing campus infrastructure is at or near the end of its projected life cycle, and often does not adequately meet the needs of today's research and training activities. The university component gives preference to projects that can improve the quality of research and development at the institution. KIP responds directly to this need by supporting deferred maintenance, repair and expansion projects at post-secondary institutions.

Ontario universities received \$488M in federal funding and \$607M in provincial funding.

⁷*Building Blocks: Background Studies on the Development of a Capital Formula for Ontario. Volume I: Report of the Task Force - Space and Utilization* (Council of Ontario Universities, 1972), COU publication # 72-9; *Building Blocks: Volume VI: Report of the Subcommittee-Revisions to Building Blocks* (Council of Ontario Universities, 1978), COU publication #78-12; and *Building Blocks: Volume VII: The Final Report of the Task Force to Review COU Space Standards* (Council of Ontario Universities, 1988), COU publication #88-1.

Some Recent Committee Activities

Ongoing Activities

- Review and publication of the institutional responses to triennial surveys of physical resources.
- Produced a Users' Guide for completing space surveys.
- Work with the COU Joint Task Force of CSAO and OAPPA on Facilities Condition Assessment.

Formula Space Updates

- Investigated the impact of computing on several space categories. (1992 to 2001)
- Reviewed and/or updated classroom formula, deans' space, computer space. (1999 to 2002)
- Classroom surveys conducted in 1997 and 1999.
- Reviewed and/or updated (1) Research space entitlements and effect of Canada Research Chairs on research space, (2) Academic and Administrative office support space, (3) Library / Learning Commons / Computing Space, and (4) Graduate student space (2004).
- Office-type space used for research, departmental research support staff office/workspaces were moved to Category 4 from Category 3. (2007)
- Reviewed and removed the space subsidy for Athletic/Recreation space for smaller universities (2010).

Library Facilities and Campus Study Space Updates

- The Committee reviewed the library volume equivalencies used in the generation of stack space entitlement. With the assistance of OCUL, the committee adopted the methodology used by the Canadian Association of Research Libraries (CARL). Working with OCUL to review library space factors (1995 and 2004)
- The Committee on Space Standards and Reporting worked with representatives from OCUL (Ontario Council of University Libraries) to review and update library stack, study and support space standards. (2007).

Studies Conducted during Double Cohort

- Provided background information and scenarios for PricewaterhouseCoopers to examine the impact of the anticipated increase of students on the existing physical facilities of Ontario universities. (1998)
- Provided input to COU on the impact of university facilities on increased enrolment due to double cohort. (1999 to 2001)
- Presentation at CAUBO conference entitled "Where Are We Going to Put Them?" (June 2001)

FOR INFORMATION ON COMMITTEE ACTIVITIES IN PREVIOUS YEARS, SEE EARLIER EDITIONS OF THIS REPORT.

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