

TO: Business Board
FROM: John Bisanti
FOR: Meeting of May 6, 2002
AGENDA ITEM: 4(c)

ITEM IDENTIFICATION:

- **Capital Project
University of Toronto at Scarborough (UTSC)
Management Building - Phase 1**

SPONSOR:

- John Bisanti
Chief Capital Projects Officer
Call 978-4322 for further information

JURISDICTIONAL INFORMATION:

Basis of Board's Jurisdiction

- Once Governing Council approves a capital project, Business Board has approval of execution of the capital project.
- Pursuant to Section 5C of the Policy on Capital Planning and Capital Projects, the Business Board is charged to assess the "cost effectiveness of the project, the extent to which full funding is committed or obtainable, and whether there are any significant outstanding and unresolved issues with respect to the project".

PREVIOUS ACTION TAKEN:

- Business Board approval to expend up to \$1.0 million for design and site development work received November 19, 2001.

HIGHLIGHTS:

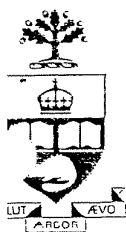
- See attached.

ACTION SOUGHT:

- That the Vice-President, Business Affairs be authorized:
 - (i) to execute the revised UTSC Management Building project at a cost not to exceed \$15.53 million (2003 dollars) excluding campus improvements;
 - (ii) to arrange such bridge and term financing as required, either internally or externally.

FINANCIAL IMPLICATIONS

- Cost Estimate
The project is estimated to cost \$15.53 million
- Funding Sources
 - (i) Allocation of \$14.37 million from Phase I enrolment growth income on the UTSC campus;
 - (ii) External contributions by donors and other support through UTSC in the amount of \$1.16 million.



UNIVERSITY OF TORONTO

Office of the Vice-Provost, Space & Facilities Planning

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March 7th, 2002.

MEMORANDUM

To: Planning and Budget Committee

From: Ron Venter, Vice-Provost, Space and Facilities Planning

Re: Revised Project Planning Report for the Management Building at UTSC.

Item Identification

Project Planning Report for a Management Building at the University of Toronto at Scarborough

Sponsor

Ron Venter, Vice-Provost, Space and Facilities Planning

Jurisdictional Information

The Committee considers reports of the Project Committee and recommends to the Academic Board approval in principle of projects.

Highlights

In anticipation of the double cohort, it was proposed that the University of Toronto at Scarborough, [UTSC] would expand enrolment by 42 percent over 2000-01 levels [50% over 1997/98 levels]. Two new Buildings were planned, namely the Management Building and the Classroom/ Arts Building; the Project Reports for both buildings were approved by Planning & Budget in late 2001 and approved by Governing Council in December 2001. These approvals were given based on the understanding that the financial support would be negotiated with the Ontario Government. Funding for both capital projects has not materialized and as a result the University Administration has elected to advance the enrolment expansion at UTSC in two phases. Phase I will allow for a 30% expansion with the fuller 50 % expansion taking place as Phase II. Accordingly the funds available for all capital developments have had to be re-assessed. Based on the planned enrolment expansion, an allocation of \$28.98 million will be available to UTSC; these funds have been identified as a component of the income to be derived from the 30% expansion. UTSC has therefore had to re-examine their needs in the light of this reduced funding and has elected to delay the Classroom/Arts Building to Phase II, and to proceed with a revised Management Building that will include some of the elements, notably classrooms, that were previously incorporated into the Classroom/ Arts Building. The new Management Building therefore includes many of the pressing elements of both the buildings approved earlier. It is expected that the Classroom /Arts Building which will now be built in Phase II be accordingly adjusted so that the essential elements of the two original buildings will not be lost.

The Management Building is planned to accommodate the UTSC expansion in Phase I, focusing on the particular needs of the Division of Management while providing sufficient general office and classroom capacity to accommodate enrolment growth in all programs at UTSC. It will include instructional spaces, offices, study spaces, research areas and support areas.

The Project Planning Report recommends a building of 2436 net assignable square metres or approximately 4385 gross square metres.. The building site is to the east of the Humanities Wing,

consistent with the Campus Master Plan 2001 which was the proposed site for the planned Management Building.

The 98/99 Physical Resources Submission to COU identified a severe deficit of classroom space, where the UTSC inventory was at 63% of the required classroom space by provincial standard. These classrooms [including four caserooms and a skills room] will assist in alleviating the shortage of instructional space and all such classrooms in the building will be controlled centrally; being designated as general campus resources. The Division of Management will have priority booking for the case rooms (specifically equipped for electronic presentations) and the skills room (a flat floor classroom for group work with presentation facilities with video taping and feedback capabilities). In addition, a classroom with a capacity of 120 stations will be built, another with 50 stations, 4 at 30 stations and a meeting seminar room of 25 stations.

Under the Policy on Capital Planning and Capital Projects, the Project Committee will continue through the implementation phase. The Working Executive of the Project Committee will comprise the lead User, a Planner and Implementer all of whom have been intimately associated with the project definition since its inception; this membership is:

User: T. Relph
Planner: G. Milgrom
Implementer: J. Binks

This Working Executive will expand to include the Project Manager, once appointed, and would normally, given that the project is at UTSC, also include either the Associate Principal, Campus Development or the Associate Principal & Chief Administrative Officer to directly link the project with the Operations and Services sector on the UTSC campus.

The role of the Working Executive is to ensure the successful completion of the project and to ensure that the user needs and concepts introduced into the Project Planning Report are addressed throughout the process of consultant selection, design and implementation which are carried out under the direction of the Assistant Vice-President, Operations & Services.

Resource Implications

The total project cost is estimated to be \$15.53 million in 2003 dollars, point of tender being January 2003.

There are major secondary effects of all new projects at UTSC that involve parking, mechanical & electrical infrastructure and municipal requirements. Specifically these include the relocation of parking services to the Outer Campus, the provision of a new drop-off circle (the East Arrival Court), a deliveries/storage facility, the provision of a pedestrian bridge over the Ellesmere Road and landscaping. The costs of these are being investigated by various project committees and reports on these needs should be available in May, 2002.

In addition, space that is planned to be released as a result of this new building may also require renovations, which have not been estimated. A separate Project Committee will be struck to address this need.

The annual operating costs for the Management Building are estimated to be \$207,000 when the building opens in 2004.

Funding Sources

The source of funding for the Management Building will be derived from income generated by enrolment expansion at the University of Toronto at Scarborough as well as fundraising opportunities.

As a result of the increased enrolment it is crucial that every effort be made to target completion of this Management Building by August 2004 for immediate use in the 2004/2005 academic year. This is a compressed schedule and will require efficient planning and consultant selection to advance the timing of the project; the projected price of \$15.53 million is a good estimate but might have to be adjusted upwards in the event that it is necessary to consider *construction management* of the project. To further accelerate this project, it is proposed that selected group consultants be invited and considered to undertake the Management Building on the UTSC Campus; these consultants to be selected from firms that have established an excellent track record at the University of Toronto and who are preferably knowledgeable of the UTSC campus.

Accordingly, it is anticipated that the Management Building project will proceed through governance within the current calendar year to allow for the anticipated completion of the project in time for the 2004/5 academic year.

Recommendations

That the Planning and Budget Committee recommend to the Academic Board:

1. THAT the revised Project Planning Report for the Management Building be approved in principle.
2. THAT the revised project scope of 2436 nasm in total on a site adjacent to the existing Humanities Wing be approved at an estimated cost of \$15.53 million (2003 dollars) excluding campus improvements.
3. THAT the funding sources to construct the Management Building and advance the project will be allocated as follows:
 - (i) Allocation of \$14.37 million from the Phase I enrolment growth income that will be available to UTSC, and
 - (ii) External contributions by donors and other support through UTSC in the amount of \$1.16 million.

REVISED
PROJECT PLANNING REPORT
FOR A
MANAGEMENT BUILDING
AT
THE UNIVERSITY OF TORONTO AT SCARBOROUGH

Revised January 28, 2002

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**REVISED PROJECT PLANNING REPORT
FOR A MANAGEMENT BUILDING
AT THE UNIVERSITY OF TORONTO AT SCARBOROUGH**

I. EXECUTIVE SUMMARY

In November and December 2001 the Planning and Budget Committee, Academic Board and Business Board approved Project Committee Reports for two proposed academic buildings at the University of Toronto at Scarborough – a Management Building and a Classroom/Arts Building. Those Reports assumed a 42 per cent enrolment growth at UTSC, over 2000-01 levels, with Provincial assistance for the capital projects to accommodate the growth. The Provincial assistance has not been immediately forthcoming and enrolment growth is now anticipated to occur in two phases, with the first phase at 22.5 per cent of 2000-01 levels. The capital construction plans have been modified accordingly; the Classroom/Arts Building has been postponed to Phase 2 and the proposed Management Building has been revised to provide classroom and office capacity for Phase I growth for all programmes at UTSC as well as for Management.

- The Management Building is to be a general academic building that is focussed on the particular needs of the Division of Management, while providing sufficient general office and classroom capacity to accommodate enrolment growth in all programmes at UTSC. It will include instructional spaces, offices, study spaces, research areas and support areas.
- The Revised Project Committee recommends a building of the same size as the previously approved Management Building - 2436 net assignable square metres or approximately 4385 square metres. The building is to be constructed on a site, to the east of the existing Humanities Wing, that is identified in the Campus Master Plan 2001 as the location of a proposed Management Building.
- The Management Building will house four case rooms and a skills room specifically designed for the needs of instruction in Management; these will be centrally scheduled but the Division of Management will have first priority for their use. There will also be a centrally scheduled classroom of 120 stations, another at 50 stations, four at 30 stations and a meeting/seminar room of 25 stations.
- The Management Building will have at least 38 faculty offices allocated to the Division of Management, 10 additional faculty offices, offices and space for all support needs for the Division of Management, including Co-op facilities, and space for graduate students and for research.

- It is proposed that the Management Building be designed so that in Phase 2 of enrolment growth the small classrooms can be easily converted to accommodate additional research facilities, graduate spaces and other needs of the Division of Management; the displaced classrooms will be replaced by instructional facilities in a new Arts Building and a new Science Building.
- The total project cost is estimated at \$15.53 million in 2003 dollars. This is a 1% increase over the previously approved Management Building which had a total project cost of \$15.34 million. The annual operating cost is estimated at \$207,000 in 2003 dollars.
- The funding plan indicates that \$10.76 million, or 70 per cent of the cost, will be met from a mortgage paid for through income generated by enrolment expansion in the University, with \$4.77 million, 30 per cent, to be achieved through fund raising. However, if absolutely necessary, funds from enrolment growth income can be used to cover \$14.37 million or 93 per cent of the total project cost, with \$1.16 million to be provided through fund-raising.
- It is important that every effort be made to complete the construction of the Management Building by August 2004, so that the enrolment increase associated with the double cohort in 2003 can be accommodated as it moves into second year.

II. MEMBERSHIP

To expedite the revisions to the original report and to ensure that formal approval of the change of scope and architect selection can be achieved as quickly as possible, a slightly revised version of the original project committee was reconvened.

Edward Relph, (Chair), Associate Principal Campus Development, UTSC
Julian Binks, Facilities and Services
Sandford Borins, Chair, Division of Management, UTSC
Michael Krashinsky, Professor, Division of Management, UTSC
Bao Lam, Undergraduate Student, Division of Management, UTSC
Kim McLean, Associate Principal and Chief Administrative Officer UTSC
Gail Milgrom (Secretary), Campus and Facilities Planning, Office of the Vice-Provost,
Space and Facilities Planning
Kim Richard, Co-ordinator of Co-operative Programmes, Division of Management, UTSC
Judith Smith, Administrative Assistant, Division of Management, UTSC

III. TERMS OF REFERENCE

The terms of reference for the Revised Project Committee for the Management Building at UTSC are the same as those of the original committee but with a reporting date of January 28, 2002.

1. Identify the demand for additional academic space, specifically for Management programmes at UTSC, taking into account the Council of Ontario Universities standards.
2. Make recommendations about a detailed space plan or programme indicating how space and facilities should be organized.
3. Identify the functional relationships between the elements of the detailed space programme.
4. Identify secondary effects, including the reuse of spaces vacated by Management
5. Identify equipment and movable furnishings necessary to the project and their estimated cost
6. Identify the site for the Management Building and site plan implications, with reference to the design guidelines and other issues included in the University of Toronto at Scarborough Master Plan 2001 and the University of Toronto Environmental Protection Policy
7. Identify all resource implications, including a preliminary estimate of capital costs, and projected increases to the annual operating costs of the University of Toronto at Scarborough.
8. Identify a funding plan for the project.
9. Report by January 28, 2002.

NOTE: This report includes the requirements of the revised space programme as well as all the key sections from the previous report, such as Vision, that provide important context, especially for the architects. New appendices include the material on utilization from the original report (Appendix 8) and background information on the capital requirements for the phasing of the enrolment growth target (Appendix 7). The other appendices have been brought up to date to reflect the new space programme.

IV. BACKGROUND INFORMATION

In March 2001 the University of Toronto submitted a proposal to the Province of Ontario for “Development on the University of Toronto Scarborough Campus”. The proposal identified the need for enrolment growth on the campus, in the first instance to meet the needs of the double cohort in 2003-04, and subsequently to support underlying growth in demand for University places in the GTA. This proposal anticipated a 50 per cent enrolment increase at UTSC over 1997-98 levels by 2007 (42 per cent over 2000-01 levels), to be achieved by 2007. Detailed Project Reports for a new Management Building and for a new Classroom/Arts Building were prepared in Fall 2001 and were approved in November and December 2001 by the Planning and Budget Committee, Academic Board and Business Board. A Project Committee for a new Science Building was due to submit its report in January 2002.

In December 2001 it became clear that there was little likelihood of immediate Provincial assistance for capital expansion at the University, and it is now planned to accommodate growth in two phases, with Phase 1 achieving a 22.5 per cent enrolment expansion over 2000-01 levels, because this level of expansion can be funded from additional enrolment income. In order to provide facilities to accommodate the double cohort Phase 1 needs to be completed by Fall 2004.

The UTSC capital plans were revised so that the Arts Building and Sciences Building were part of Phase 2 expansion, and the Management Building would be modified to provide the necessary instructional and office facilities for growth in all programmes. The original space programme for the Division of Management had to be scaled back and some of the space dedicated to general instructional needs. The overall building size was maintained. In addition, adjustments have been made to the ARC, already in advanced stages of design, and some funds have been allocated to facilitate renovations to Science laboratories, service/infrastructure improvements and other teaching facilities that will be essential to accommodate the expected growth.

A nominal target date for achieving Phase 2 growth is 2007-08. When Phase 2 growth occurs, and additional buildings for Arts and for Sciences are completed, some of the general classrooms in the new Management Building can be converted into the offices, research spaces and other spaces that will be needed for the Division of Management to achieve 42 per cent undergraduate plus graduate enrolment growth, as in the original project proposal.

The University of Toronto at Scarborough Master Plan 2001 identifies an extension at the end of the Humanities Wing of 8000 gross square metres (4,400 nasm), with two components. Internal discussions at UTSC have indicated that the easternmost of these is appropriate for the Management Building, and the Revised Project Committee concurs with this. It is anticipated that another new building (of 3,400 – 4,000 gross square feet) will be located in the interstitial site. The Master Plan also makes several design suggestions regarding the orientation of the

building and the internal street system to the Highland Creek Valley and to a new Green Court.

The May 2001 Provincial Budget announced that funding would be provided to support enrolment growth at the University of Toronto. Much of this enrolment growth will occur in 2003-04, when the double cohort is created by the termination of Grade 13. The first year of this enrolment increase can be accommodated in the large lecture hall in the ARC, but in the Fall of 2004 many of the new students will be involved in smaller, specialised classes. It will be impossible to accommodate these without the new Management Building. In short, the need for this building is urgent.

The Division of Management is the newest of the academic Divisions at UTSC. The Humanities, Life and Physical Sciences and Social Sciences Divisions were all created about 1970, but the Division of Management was created two decades later in 1991 in response to what appeared to be an inexorable demand for programmes in economics and business, especially in Co-op. The new Division was created without new capital resources. Space had to be claimed from the other Divisions. In the last decade enrolment has grown to about 30 percent of the total FTE undergraduate enrolment at UTSC and even with a very high entry level requirement (equal to or exceeding that of the Commerce programme on St. George), the high demand continues, especially for the co-operative programmes. There are no dedicated teaching facilities for Management programmes, such as case rooms. The two closest competing programmes, the BBA at the Schulich School and the B Com at the Rotman School will soon have new facilities. Second-entry undergraduate management programs have been deregulated and students will expect higher quality education and appropriate dedicated facilities commensurate with higher fees.

Without these facilities, and without adequate space to attract both new students and new faculty, the Division of Management will not be able to compete. Plans for growth at UTSC anticipate that Management will retain its share of undergraduate enrolment at about 30 per cent of all enrolment. Without additional space this simply will not be possible.

Vision

The mission of the Division of Management is to provide its students with the best pre-professional undergraduate management education in Canada. To achieve this, a distinctive model of undergraduate management education has been developed. The Division's co-op program emphasizes linkages between education and the workplace. Its' pedagogy supports the Co-op program by focusing on instruction of management skills as well as analytical and critical thinking. The Division thus creates a three-way partnership among students, faculty, and employers.

The representatives of the Division of Management on the project committee discussed the impact of this vision – in particular, the three-way partnership among students, faculty, and employers – on building design. The following implications were identified:

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- Employers frequently visit the Division to interview Co-op students and therefore should have direct access to the Management building from the closest parking lot.
- Classrooms should have state of the art technology, especially for internet access.
- Student group work is an important and often-used pedagogy. The building should have rooms for student group work, with appropriate supporting technology (e.g., internet access).
- Contact between students and faculty should be enhanced. Faculty offices should not be completely separated from classrooms and public space.
- There will be a substantial number of events to initiate contact between students and employers (e.g., CA facts night, employer presentations followed by a reception). Employers will also be invited to address students and faculty. This argues for an atrium or public space that can be used for both presentations and receptions.
- The Management and Economics Student Association, sponsoring many student events involving contact with employers, as well as convening student events, is an important partner in the student component of the three-way partnership and should continue to have its office in the division.
- Consistent with the Division's emphasis on quality of education, the building should exhibit a high quality of design and materials. This would make it more attractive to donors. The building should also support art exhibits.

V. STATEMENT OF ACADEMIC PLAN

Most instrumental in creating the need for this project is the Provostial plan to increase enrolment growth by 50 per cent at UTSC and at UTM. This growth is to occur in two phases.

In Phase 1, it is proposed that FTE undergraduate enrolment at UTSC increase by 22.5 per cent from 4679 in 2000-01 to 5725 by 2003-04, with an increase in the number of FTE graduate students from 35 to about 110. The undergraduate growth will be concentrated in Management and Humanities and Social Sciences programmes, each of which will expand by about 25 per cent. Expansion in the Sciences will be about 14 per cent because it will be impossible to achieve adequate capital plans to accommodate a larger enrolment increase in Sciences in the relatively short term.

Phase 2 expansion will increase undergraduate FTE enrolment at UTSC to about 6500, and graduate FTE enrolment to 250 with a target date for achieving this of 2007-08.

Undergraduate Student Growth

The enrolment in Management courses in 2001/02 is 6906 FCE and in 2000/01 was 6500 in 00/01, representing 26 to 30 per cent of the UTSC enrolment. Programme enrolments are about 450 Specialists in BBA Management Co-op, 400 Specialists in BBA Management non-Coop, 80 Majors in Economics for Management, totaling 930 Specialists and Majors. A shared programme with Political Science has 30 additional majors, and there are 230 Economics for Management minors. The BBA specialist programmes are the largest ones at UTSC.

The details of enrolment growth increases by programmes have yet to be determined, but Management is expected to increase by about 25 per cent in FCE enrolment from 6900 to approximately 8600 in Phase I.

Faculty Growth

The Division currently has 23 FTE faculty positions and two positions which have been approved but have yet to be filled. This represents about 15 per cent of UTSC full-time faculty. There are also approximately 20 part time faculty. The part-time faculty are an integral part of the programme because they bring current professional expertise in areas such as accounting.

The 8600 FCE enrolment for Management, in Phase I, represents a 25 per cent increase in FCE but the faculty complement will increase by rather more than 25 per cent. With enrolment growth and deregulation it is planned to increase the complement by at least 13 positions to 38, an increase of about 50 per cent. This increase will help correct the current high teaching loads (30 per cent of UTSC enrolment taught by 15 per cent of faculty, with an FCE to faculty ratio of 300 to 1) and provide the quality of instruction that is commensurate with a deregulated fee programme. Even with this increase the FCE to faculty ratio will be about 240. It is not planned to increase the number of part-time faculty.

Growth in Non-Academic Staff

It is anticipated that the Divisional administrative staff and staff for the coop programme will increase by several positions, including another Co-op coordinator, a secretary, a clerk and a receptionist.

Graduate Student Growth

The Division is planning to introduce a doctorate in Public Management because of considerable faculty expertise in this area and because only one other graduate programme exists in Canada devoted to this field. A detailed proposal, prepared by the Division in 2001, includes a full curriculum and a detailed budget. This proposal is consistent with a call by the
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Provost to increase graduate enrolment at UTSC. The proposal indicates an annual intake of 5 graduate students, for a total maximum steady state of 20-25 students. It will be submitted for formal approval as soon as is appropriate. A nominal space allocation has been made to accommodate the first stages of this graduate programme.

VI. SPACE PROGRAMME

Existing Space Allocation

The Division of Management occupies approximately 640 net assignable square meters (nasm) primarily in the H Wing with four offices located in the B Wing at UTSC. The space is inventoried in the following categories:

<u>Space Category</u>	<u>Nasm</u>
Faculty Offices	383
Student Offices	27
Non-Academic Staff Offices	120
Research Facilities	38
Support Space	59
Student Activity Space	14
Total Nasm	641

The detailed space inventory of the existing facilities can be found in Appendix 1. There are no teaching spaces currently dedicated to Management

Nominal Space Allocation Required

For the November 2001 Project Planning Report a detailed space utilization analysis, using the COU space standards and the internal university guidelines, was conducted to determine the nominal space allocations required. The space programme proposed in this Revised Project Planning Report is based on that analysis adjusted down from the anticipated 42% growth to the Phase I growth plan - 22.5% enrolment increase over 2000-2001.

Appendix 8 contains the utilization analysis from the original report and Appendix 7 is a discussion of the capital requirements for the phasing of the enrolment growth target on which much of the adjusted space programme was based.

The following profile of the Division shows existing, approved and planned academic and non-academic complements, programs and student numbers and compares that information from 2000/01, the original proposal for 42% growth and the current Phase I proposal:

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<u>Departmental Profile</u>	2000/01	Nov. 2001 Report		Revised Report	
		Growth	Steady State	Growth	Phase 1
FTE Full time faculty members (incl unfilled)	25	15	40	13	38
FCE's taught by stipend staff, per term	11-13		11-13		11-13
FTE non-academic staff, divisional	3	3	6	3	6
FTE non-academic staff, Co-Op	6	2	8	1	7
Total FTE Graduate Students	0	20	20	20-25	20-25
Average weekly T.A. hours, 00/01	400	200	600		
Management Programme FTE	837	328	1,165		
Total FCEs (1st.-4th. Years, winter & summer)	6,900		9,000-10,000	1,700	8,600
Mgt (BBA) Co-op (2nd., 3rd., 4th. Yrs)	450	300	750		
Mgt (BBA) non-Co-op	400	100	500		
ECM majors	80	40	120		
ECM-Poli Sci joint specialists	30	15	45		
ECM minors	230	90	320		

The next table compares the space programmes of the existing facilities, the November 2001 Report, and the Revised Project Report. The existing figures do not include facilities that are currently shared with other academic divisions - large lecture theatres and meeting rooms.

Category of Space	Existing Nasm	Nov 2001 Report Nasm	Revised Report Nasm
<u>Divisional Space</u>			
Academic Offices	383	646	542
Student Offices	27	104	52
Non-Academic Offices	120	179	169
Research Facilities	38	120	83
Divisional Support Space	59	238	166
Student Activity Space	14	13	13
Group Study Area	-	-	60
	641	1,300	1,085
<u>Campus Facilities</u>			
Classrooms	-	797	1078
Study Area	-	204	-
Additional Faculty Offices	-		130
Atrium Area	-	85	110
Audio/Visual Office and Storage	-	20	13
Food Kiosk	-	30	20
	-	1,136	1,351
Total	641	2,436	2,436

In summary, the total nominal space allocation for the proposed Management Building is 1351 nasm for campus activities and 1085 nasm for specific Management activities – a total of 2436 nasms. The space allocated to Management represents a 69% increase over the current January 28, 2002

allocation. This reflects a 22.5% increase in students, a 52% increase in FTE faculty (as a response to deregulated fees) and an adjustment for historical deficiencies in space. The revised space programme will also accommodate the classroom space and offices required by other Divisions during Phase I. The detailed space programme is shown below.

Division of Management Revised Space Program

# Rooms Room Function	Room Size	Total Nasm
ACADEMIC OFFICES		
1 Chair's Office	26	26
24 Faculty offices, balance of current complement	13	312
1 Stipend Office, 5 – 6 stations	33	33
1 Stipend Meeting Room	15	15
12 faculty offices, enrolment expansion	13	156
		542
STUDENT OFFICES		
2 T.A. Offices, 3 stns per	13	26
2 Graduate Offices, 3 stns per	13	26
		52
NON-ACADEMIC OFFICES		
1 Chair's Secretary	13	13
1 Clerk, in open area with above	13	13
1 Admin Assistant	15	15
1 Receptionist (growth)	15	15
1 Program Secretary	13	13
4 Coop Coordinators	13	52
1 Coop Support Staff	11	11
1 Coop IT Web Administrator	11	11
1 Coop Secretary	11	11
1 Senior Coop Coordinator	15	15
		169
RESEARCH FACILITIES		
1 Waiting area with kitchenette	15	15
1 Discussion Room	13	13
4 Private Labs/Testing Spaces	8	32
Unfinished open area to be divided on demand		23
		83

# Rooms	Room Function	Room Size	Total Nasm
DIVISIONAL SUPPORT SPACE			
	1 Reception Waiting Area	10	10
	1 Mail Room	15	15
	1 Photocopier Room	13	13
	1 Storage	13	13
	1 Coop - Student Resource Room	40	40
	4 Coop Interview Rooms	10	40
	1 Lounge	35	35
			166
CLASSROOMS			
	1 Case Room @ 80 stations	144	144
	3 Case Rooms @ 60 stations	108	324
	1 Skills Room @ 30 stations	75	75
	1 Seminar/Meeting Room @ 25 stations	55	55
	1 Classroom @ 120 stations	200	200
	1 Classroom @ 50 stations	80	80
	4 Classroom @ 30 stations	50	200
			1078
STUDENT ACTIVITY SPACE			
	1 MESA office	13	13
	5 Group Study Rooms	12	60
			73
OTHER			
	10 Faculty Offices	13	130
	1 Atrium area	110	110
	1 Audio/Visual office and storage	13	13
	1 Food kiosk	20	20
			273
TOTAL			2,436

Room Specification Sheets in Appendix 6 provide more information on the requirements of the individual spaces.

The proposed space programme is 2,436 nasm and with a gross up multiplier of 1.8 would be 4,385 gross m².

Highlights of the Revised Space Programme

Academic Offices

While the majority of the twenty-seven Management offices are to be built at the 13 nasm standard, there are a few exceptions. The Chair's office is to be slightly larger (26 nasm) to accommodate a meeting space. An office/meeting room suite for stipend staff is to be allocated 48 nasm (33 nasm for the office and 15 nasm for the meeting room).

The ten faculty offices that will initially serve to accommodate general campus growth in the academic complement, should be grouped with the Management offices to allow for growth in that Division in Phase 2.

Graduate Student and Teaching Assistant Offices

Two standard offices (13 nasm each) are to be allocated for TAs in Management and TAs in Economics for Management. These offices are to be used for both interviews with undergraduates and for group marking of assignments.

Two standard offices are to be provided for graduate students. The COU standard is 4 nasm of office type space per FTE graduate student, so the proposed offices will be sufficient for 6 graduate students. Since the Division has no graduate programme at present, these offices will allow for the accommodation of any graduate students in Phase 1 of growth. If these offices are not required for graduate students they could be allocated to visiting faculty, post-doctoral students, or other purposes.

Non-Academic Staff Offices

The Division of Management, in 2001/00, had a non-academic complement of 9 FTE consisting of 3 FTE divisional staff and 6 FTE Co-op staff.

The proposed increase to accommodate enrolment growth is for an additional 3 FTE divisional staff and 1 FTE Co-op staff, bringing the total to 13 FTE.

The space programme proposes 168 nasm, including a shared reception/work area for three of the staff, and slightly larger offices at 15 nasm each for the Administrative Assistant and Senior Co-op coordinator.

Research Facilities

Space is required for faculty members in organizational behaviour and marketing. Currently four faculty members are working on this type of research and the number will likely

increase. The research space is needed for administering research instruments and psychological experiments.

The COU space formula for facilities for this type of research is one nasm per full time faculty member, plus a small allocation for graduate students and is intended to create a pool of research project or office workspace, to be used as dedicated computer, interview, analysis, confidential file storage and research assistant workspace and to be allocated based on the needs and priorities of the department.

The space programme proposes a more generous allocation (83 nasm) because it is expected that several new faculty hires will do research requiring this type of facility.

The details of this area will need to be worked out in consultation between the architect and the faculty members who will use it. It is recommended that approximately 23 nasm of this facility be constructed as a shell, so that part of it can be adapted to the specific needs of future faculty. Attention should also be paid to adjacent spaces, so that in the long-term they can be converted to research activities, to create a single research facility.

Divisional Support Space

Support space includes meeting rooms, faculty conference rooms, lounges, office storage and supplies.

In addition to the standard office support spaces like mail room, photocopier space and storage the new building will also include some specialized facilities for the Division of Management. A reception area is to be included. This will be adjacent to the Divisional administrative offices.

The Co-op area will have a Student Resource Room for students to research employers using the web and employer files, drop off job applications and pick up returned work term and tutorial assignments. Two interview rooms are also to be located in the Co-op area.

The lounge area is important both for hosting employers and guests, and, since this will be a stand-alone building at least in the short-term, for the social interaction of staff and faculty. It can also be used as an interview room should the need arise.

Student Activity Space

A series of group study rooms is to be provided. These can be interior spaces (without windows). Management students often have group assignments and require study rooms equipped with docking outlets for laptop computers and telephones. Students would be required to book times in these rooms. Co-op interviews could also take place in these rooms as could group study take place in the Co-op interview rooms.

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The Management and Economics Student Association (MESA), as a sponsor of many student events involving contact with employers, as well as a convener of student events is an important partner in the student component of the three-way partnership among students, faculty and employers. There will be one office (13 nasm) allocated for MESA.

Classrooms

All classrooms and instructional space in the building will be controlled centrally and are considered general campus resources. However, the Division of Management will have priority booking for the Case Rooms, the Skills Room and the Seminar/Meeting Room.

The four case rooms are standard tiered horseshoe shaped rooms, fully equipped for electronically supported instruction with power outlets and laptop capability at each student station. Data drops at each station should be provided if wireless technology is not available at the time of construction. The skills room will be a flat floor room with moveable furniture for group work and be a presentation facility with video-taping and feedback capability. The Seminar/Meeting room will have modular furniture that can be arranged to create a central meeting table – this will be its normal configuration. It will be used to host presentations and for meetings as well as for small classes. The Skills room is a specialised facility that needs to have as much flexibility as possible in terms of furniture arrangement, including break-out groups within a class. The relatively generous space allowance per student is to permit this flexibility of use. These rooms will add 315 stations to the current pool of classrooms.

The number and type of classrooms, over which the Division of Management will have priority booking (particularly the case rooms and skills room), were determined by the Division based on the following assumptions. Details can be found in Appendix 2:

- All introductory courses will be taught in rooms outside the Management Building
- ECM courses are to be taught in section sizes of 80
- MGT/ECM courses are to be taught in section sizes of 60
- Skills courses are to be taught in section sizes of 30
- Each course meets at 3 hours per week (including a tutorial hour)

Descriptions of the other classrooms follow:

The 120 station classroom will be tiered and have fixed benches so that it can be used for examinations. It should be designed so that it can accommodate music instruction, and should have space for a piano at the front the classroom. It will be equipped as a smart classroom with data projection and podium.

The 50 station classroom will have a flat floor and tablet arm chairs. It might also be used for Skills instruction if needed.

The four 30 seat classrooms will be flat with tablet arm chairs. One will include a piano at the front.

The 50 seat classroom and the 30 seat classrooms should include outlets, conduit and HVAC that will allow them to be easily converted into alternative, Management facilities at some time in the future, for instance, offices for faculty or graduate students, administrative space or group study rooms, or research facilities depending on their location.

Other

The ten general faculty offices are described above under Academic Offices.

An allocation of 110 sq.m. has been identified for the Atrium. The Atrium which is seen as a welcoming space and casual meeting area is to be located close to the main entrance and will take advantage of the non-assignable space in the design of the building. This atrium can be used for receptions, for instance of employers, and could support art exhibits.

The corridor space on the grade level should be treated as a possible future extension of the existing pedestrian street system in the John Andrews building that lead into the atrium, approximately as indicated in the Campus Master Plan 2001.

An allocation of 20 nasm has been made for a small food services kiosk - also to be located adjacent to the pedestrian street/atrium.

An allocation of 13 nasm has been made for an audio-visual storage and office area - also to be located adjacent to the pedestrian street/atrium. Since in Phase 1 of growth the Management Building will be a stand alone structure, this is essential if AV equipment in the case rooms and classrooms is to be well supported and maintained.

Water fountains should be provided in the atrium and in corridors near washrooms on upper floors.

Space Entitlements and Future Adjustments to Space Programme

The space programme outlined above has been adapted from the original space programme in order to accommodate additional offices and classrooms in Phase 1 of enrolment growth. Management will have the primary claim on this general UTSC space, so long as the need for it can be demonstrated in a way that is consistent with the University's and UTSC's policies on space allocation.

In the long-term, that is with Phase 2 growth, the additional classrooms and offices will

be reassigned to Management and adapted to purposes, consistent with their relative needs. The Revised and the November 2001 Space Programmes, by major category, are shown in the table below, to provide a sense of where substantial conversions of space may be required in the future in order to achieve the intent of the original space programme. The third column in the table gives a brief description of where the differences lie. Note that the original space programme called for 100 nasm of study space in bays around the atrium, which would have increased the apparent size of the atrium. This space has been reallocated to general faculty offices, which will be located on the upper floors in the revised programme. A design strategy to substitute for this will be needed to protect the long-term space allocation for the atrium area, perhaps allocating the group study areas to edges of the atrium. Partly to compensate for this loss of atrium related space the allocation to the atrium itself has been increased by 25 nasm in the revised space programme.

Category	Nasm Nov 2001 Space Progr	Nasm Revised Space Progr	Description of Difference (the original proposal had ...)
Faculty offices	646	542	More faculty offices
Student offices	104	52	More graduate student offices
Non-Academic Offices	179	169	One additional staff office space
Research Facilities	120	83	More space for future needs
Divisional Support Space	238	166	More storage space
Student Activity Space	217	73	More groups study rooms
Classrooms	797	1078	Fewer classrooms (50 seat and 30 seat classrooms not included)
Other	135	273	General faculty offices claimed from former general study space; atrium space increased
TOTALS	2436	2436	

VII. FUNCTIONAL PLAN

The Project Committee discussed the impact of the Division's vision – in particular, the idea of a three-way partnership among students, faculty and employers – on building design. Facilities to support this partnership have been provided within the space programme and proper relationships between these facilities would enhance the partnerships.

Entrance/Atrium

Employers frequently visit the Division to interview Co-op students. There should be a direct and clear entrance to the building with an architectural identity to make way-finding from the parking area straightforward. There should also be a clear way-finding or directory system at the main entrance to locate the appropriate Divisional offices without difficulty. There will be an

elevator in the atrium area that will provide access to the upper floors.

Clusters of Activities

The elements of the space programme should be grouped in three major clusters, corresponding approximately to the floors in the new building. It is assumed that this new facility will be three or four stories, but will not be more than four.

Cluster One

Most of the classrooms, atrium area and food services kiosk will be grouped on the lowest level. The group study rooms may also be located here, with the intention of using them in some way to increase the effective appearance of the size of the atrium (though they will have controlled access). In Phase 2 they could be converted to general study bays and the group study rooms relocated into Cluster Two.

If classrooms are located on the second level these should be the smaller classrooms. If possible the 120 seat, 50 seat and 30 seat classrooms should be located on the side of the building closest to the Humanities Wing because there will be considerable pedestrian movement back and forth between Humanities or the ARC and Management.

A donor wall should also be incorporated into the design of the atrium.

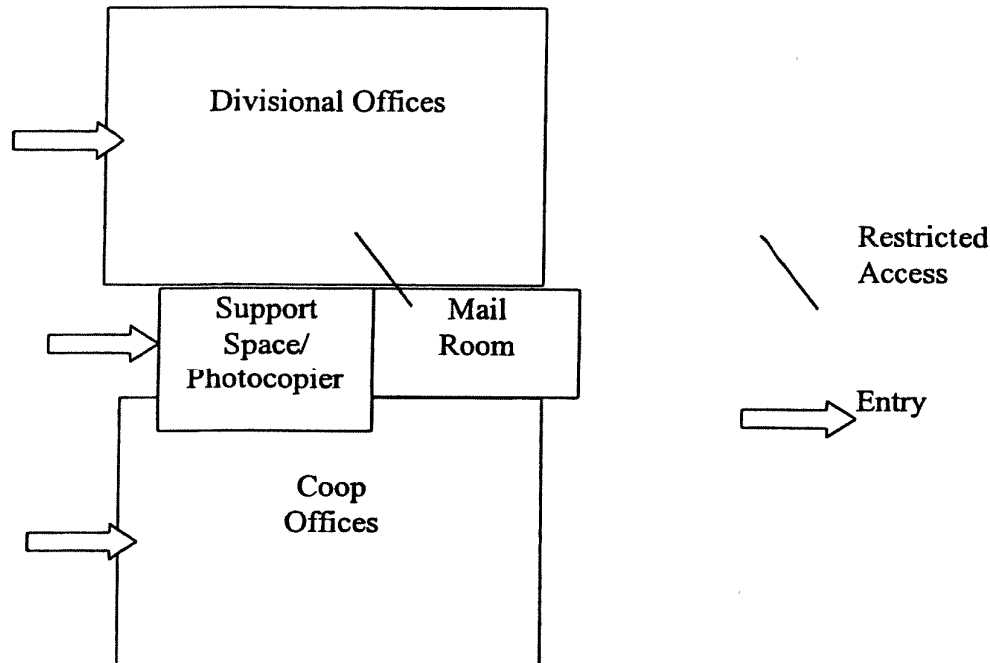
Cluster Two

The non-academic offices, including Co-op offices and interview rooms, support space including the Seminar/Meeting room, MESA office, TA offices, Chair's Office, and some other faculty offices should be located together, possibly on the second level. The general faculty offices should be located in this cluster.

Offices should be arranged in groups, rather than along corridors.

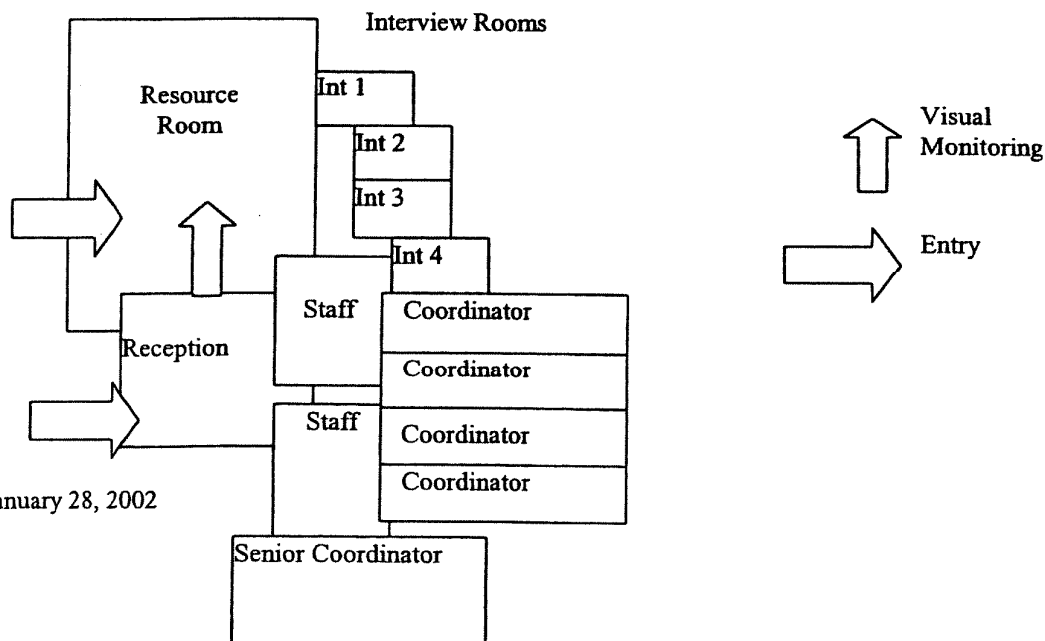
Offices which overlook the atrium should have some noise separation from that area, perhaps achieved by a glazed barrier.

Divisional and Co-op Offices should be contiguous, as follows:



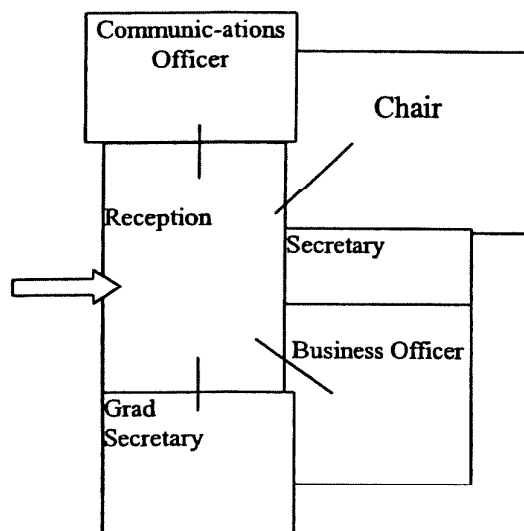
The Co-op Offices will have a front desk/reception space for student inquiries and greeting employers. Two work stations should be in the vicinity of the reception desk. The IT station for maintenance of file and web servers can be out of view of the front desk. This area must accommodate file storage for current student files and co-op files. The reception desk should be situated to enable staff to overlook activity in the resource room.

Organization of the Co-op space can be roughly as follows:



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The Divisional Offices will have a reception area. Behind the clerk-receptionist and reception area should be the office of the Chair, administrative assistant, communications officer. The arrangement should be roughly as follows:



In the design of the administrative cluster, consideration should be given to the possibility of expanding these spaces to provide additional administrative facilities to meet enrolment growth beyond 22.5 per cent. This might be done, for example, by ensuring that there are some standard academic offices adjacent, which can be converted as required, with the faculty moving into new offices created from the conversion of the small classrooms.

Cluster Three

The remaining faculty and graduate offices, and research facilities should be situated together. The graduate offices should be adjacent to the research space so that they can be used by research assistants or as part of the research space, if needed.

Offices should be arranged in groups, with small meeting alcoves or wider corridors to allow for informal interaction. It is preferred that they not be arranged in long double loaded corridors, with doors facing out onto other doors.

VIII. PROPOSED SITE AND ENVIRONMENTAL IMPACT

The proposed site for the Management Building is clearly indicated in the Master Plan 2001 for the University of Toronto at Scarborough as part of an extension to the Humanities Wing. In the original project report for the Management Building, and in the project report for the proposed classroom/arts building, it was decided that Management would occupy the easternmost part of this extension, with the classroom/arts building serving as the link between it and the existing Humanities Wing. With the change in growth strategy, and the phasing of the classroom/arts building in Phase 2, the question arose whether the revised Management building should be sited as a direct extension of the Humanities Wing or on its original proposed site. This was discussed at both the Site Planning Committee meeting and the Planning and Budget Committee meetings of UTSC in December 2001. Though there are some advantages in terms of servicing and access for siting the revised Management building immediately adjacent to the Humanities Wing, the consensus on both committees was that this would compromise future plans, especially by fragmenting facilities for Visual and Performing Arts and other programmes in the Humanities. The recommendation was that the Management Building should be located on the site proposed in the Campus Master Plan 2001, leaving a gap that can be filled in with future growth. In the interim, this gap will allow a clear view of the mature trees at the edge of Highland Creek, and should be appropriately landscaped to enhance this view.

This decision is fully endorsed by the Revised Project Committee for the Management Building at UTSC.

The precise site of the Management Building will have to be identified so that sufficient space is left for the future infill. The project committee report for the classroom/arts building proposed a building of 2252 nasms or 4050 gross square metres. Assuming that this will be a three story building, its footprint may be approximately 1400 gross square metres

The Management Building, including all services and corridors at grade, should be designed so that it can, at some point in the future, link to the classroom/arts building which will in turn be linked, on the west side, to the Humanities Wing. It can be assumed that the only enclosed pedestrian connection will be at grade level.

The design of the building should be responsive to the valley and views of the valley. One possibility is that the atrium and/or internal corridor could be designed so that the valley can be seen from the other side of the building, i.e. there is a transparent element in the building.

The proposed site for the Management Building is in part close to the top of the bank of Highland Creek. The TRCA requires a 10 metre setback from the top of slope. Careful attention will have to be paid to this requirement. Highland Creek is especially sensitive to problems of storm water drainage, and special care will have to be taken to ensure that run-off from the site

does not cause erosion of the valley slope.

The removal of mature trees should be compensated for by the planting of new trees elsewhere on Campus - the Campus Master Plan 2001 proposes a reforestation area on the outer campus, north of Ellesmere Road.

The proposed site is also intended to create a valley courtyard in association with the Phase 4 residence, and careful attention will need to be paid to the relationship to the Residence and the valley.

A preferred design would be a three story building that responds to the massing of existing structures, especially the Humanities Wing, but given these site constraints some consideration should be given to the merits (and costs) of a four storey building.

All new buildings are to be constructed within the terms of the University of Toronto Environmental Protection Policy. In essence, this stresses the importance of green design and energy efficiency. Specific considerations are:

- wherever possible, windows should open
- buildings materials, furnishings and fittings should minimize environmental impacts in production and use (i.e. no tropical woods, no materials that emit interior gases, use materials with recycled content, reuse materials)
- design HVAC to ensure sound ventilation
- maximize views to exterior and ensure that as many work spaces as possible have natural light
- provide sufficient and convenient spaces for recycling bins.

IX. SPECIAL CONSIDERATIONS

A. Accessibility and Personal Safety

The building will be accessible throughout. Fully accessible washrooms will be provided at the classroom level. A single elevator will provide access to all floors.

B. Campus Planning Issues

The proposed site for the Management Building is one component of an extension to the Humanities Wing. This site is indicated in the Master Plan 2001 for the University of Toronto at Scarborough. The Master Plan proposed that:

- The new buildings extend the existing massing and pattern of the Humanities Wing along the brow of the valley.
- The extension be repositioned back toward Military Trail in order to enclose a green space, the Green Court, as does the Science Wing..
- This extension respond to the panoramic view of Highland Creek.
- The east end of the extension, the Management building component, creates a new open space entry to the valley, the Valley Court, between it and the new Phase IV Residence.
- The new buildings be no higher than the original Humanities and Science Wings.
- The internal street of the Humanities Wing be extended. The Master Plan has the internal street against the valley side for part of the extension and where the extension turns away from the valley the internal street crosses over to run along the green space. The specifics of this will be determined in the design phase.
- All new buildings be designed to conform with the intent of the Master Plan and specifically the Design Guidelines included in Appendix A of that report.
- A major element be located at the southeast end of the extension to become a visual feature from the new welcome centre and the new entry drive to the easterly entry court.
- The Master Plan does not indicate a fire route close to the building. If this is required it should be treated as a pedestrian pathway, except for emergencies and perhaps for infrequent deliveries.

It is essential that the new buildings relate clearly in form and design to the John Andrews buildings and to the Phase 4 Residence and the ARC. Close communication with the architects of the two projects currently under construction will be essential to ensure both design compatibility and efficient construction access.

C. Computing and Telecommunications

All classroom are to have data connections. The case rooms and the 120 seat classroom will be equipped as smart classrooms, including wireless data connections. All offices and all group study areas will have data connections and adequate power outlets. The atrium should also have power outlets and data connections. These connections may be wireless, as appropriate.

D. Standards of Construction and Quality

Because of its proximity to the original John Andrews building, and because of the
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importance of an attractive building in order to compete effectively in student and faculty recruitment with other Management schools in southern Ontario, the building should be of high quality in terms of its design and materials.

E. Landscape Requirements

As indicated in the Campus Master Plan, the Management Building is intended to cup a simple and elegant green space, the Green Court, on the north side, and, with the Phase 4 Residence, to frame a Valley Court area on its south-eastern end. A landscaped pedestrian pathway on the northern edge of the Green Court will serve as a pedestrian spine from the Phase 4 residence through the heart of the campus.

Landscaping should be consistent with the proposals of the Master Plan. The landscaping should be reasonably low maintenance. An allowance for landscaping is included in the project cost, which is intended to provide for a share of the Valley Court, and a share of the Green Court and pedestrian pathway.

Campus standards for the design of pedestrian pathways and for pedestrian lighting are being established in the context of the Phase 4 residence and the ARC projects. This project will conform as closely as possible to these standards.

F. Parking, Entrances, Site Servicing

The Campus Master Plan indicates a comprehensive reorganization of the parking lot into an East Arrival Court. The design of the Management Building must be attentive to this new traffic and parking arrangement.

Site servicing must recognise the future needs of the infill building between the Management Building and the Humanities Wing.

X. RESOURCE IMPLICATIONS

A. Total Project Costs

The University retained an external quantity surveyor to prepare an estimate of construction costs. Specification sheets describing space requirements, essential equipment, and services for each room planned to be included in the new Management Building were provided to the surveyor. Principals of the firm met with the University staff from Facilities & Services, and Planning staff to review this material. The assumption was made that the complete program would be incorporated in a single building, at grade, with three stories above grade, of 4,385

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gross square meters.

The construction costs assume that the project will be procured on a stipulated sum basis and that bids will be received from at least six competitive and pre-qualified general contractors.

The estimate was priced at current rates and reflects current market conditions. An escalation allowance has been included to account for increases in construction costs to the anticipated bid date of March 2003. A 6% per annum escalation is assumed.

The total project costs, including all taxes, contingencies, secondary effects, permits and professional fees, furnishings and equipment, landscaping, and miscellaneous costs are estimated to be \$15.53 million. Details are attached in Appendix 3 as Tables 1.

B. Operating Costs

The maintenance, operating and utilities costs per net assignable square metre will be \$85 at 2003 prices. Using this figure the operating cost for the Management Building will be 2436 nasms x 85 = \$207,060 per annum.

B. Secondary Effects

- Site service relocates

The UTSC utility plan for the area shows no significant services are present on the site, although there are main water and sanitary lines just to the north. There appears to be an underground electrical service for the perimeter campus pole lights that will be replaced by new site lighting, the cost of which is carried in the construction budget.

- Infrastructure Upgrades

An engineering study by MacViro on the capacity of the existing campus infrastructure was submitted in December 2001. The project has been estimated as a complete stand-alone project with new connections to existing services. In the costing it has been assumed that the building will be served by main water and sanitary lines running close by. Electrically, a new substation has been assumed, fed from the existing outdoor main substation, that will service the new Residence, the Management Building and the future Arts Building.

- Parking

The construction of this building, together with Phase 4 Residence and the ARC will

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cause approximately 220 parking spaces to be relocated to the Outer Campus. There is no cost for this attributed to this project. (Refer to Major Secondary Effects not covered in this Report.)

- **Reallocation of Released Space**

The Management Building will lead to a number of offices and other facilities being vacated as follows:

- vacating 37 offices on level four of Humanities Wing. These will be used as offices for the expanded faculties of Humanities and Social Sciences. The costs incurred will be minimal - mostly for decoration.
- vacating a multi faculty office of 45 nasm on Humanities level four. This will be reused for part-time faculty in Social Sciences. Minimal costs.
- vacating various interior and storage spaces on Humanities level four. These areas can be reused by the relocated Division of Humanities Office (it will be relocated from Level 5 to Level 4) to provide improved access. Minimal costs.
- vacating four offices on level 4 of Bladen Building. These will either be reused as offices by increased computing staff, or converted in Computer labs. Costs will be attributed to a separate renovation/retrofit project that will encompass a variety of needs at UTSC.
- vacating offices and research space in H302. This is under consideration for conversion to a food preparation/servery area; this was its original function, and much of the wiring and infrastructure remain in place. (The adjacent classroom, originally a cafeteria, will be converted to its original purpose). If this proves to be impractical, the area can be used as a lunch area for grounds and cleaning staff. In either case, costs will be attributed to a separate renovation/retrofit project.
- vacating a small research area of 15 nasm on Humanities level 2. This is adjacent to the existing cafeteria and will be incorporated into a redesign of the food services area. Costs will be attributed to a separate budget.

UTSC has estimated the costs of the various renovations associated with the reallocation of space to be attributed to this project at \$50,000. This amount is carried in the Total Project Cost.

- **Major Secondary Effects not covered by this report**

There are major secondary effects of all the new projects at UTSC that involve parking, mechanical and electrical infrastructure, and municipal requirements. Specifically these include the relocation of parking spaces to the Outer Campus, the provision of a new drop-off circle (the East Arrival Court), a deliveries/storage facility, the provision of a pedestrian bridge over Ellesmere Road, and landscaping. The costs of these are being investigated by various project committees and reports on them should be available by May 2002.

XI. FUNDING SOURCES AND CASH FLOW ANALYSIS

This project will be funded from enrolment growth income, fund-raising and other sources of capital funding that may become available.

The Budget Model for 22.5 per cent enrolment growth at UTSC, prepared by the University of Toronto Planning Office, indicates that a total of \$28.98 million can be provided for funding capital construction. Of this \$10.61 million has been attributed to meeting costs associated with the ARC, and \$4 million is reserved to meet existing commitments (such as support for a CFI grant submission) and for various renovations and retrofit requirements such as upgrades to science laboratories, and parking. The maximum budgeted allowance for the Management Building from growth income is \$14.37 million, with \$1.16 million to be provided through fund raising.

In addition, some increases in faculty, administrative and instructional costs can be met from deregulated tuition fee income.

While the budget requirement for fund-raising for this project is \$1.16 million, the Management Building is a high priority for fund-raising at UTSC, with a target fund raising figure of \$4.6 million. It is considered that this building offers excellent naming opportunities, both for the Building and for the Division. A special committee with membership from the Division and the advancement office will be struck to pursue fund-raising for the building and its major elements. Any funds raised will be offset against the income from enrolment growth, which can then be released for other purposes, such as capital needs elsewhere on campus, or instructional improvements.

In the event that funds are successfully raised for the Management Building above the \$1.16 million base target, the donated funds will be put toward the cost of the building and the enrolment growth funds previously committed to this project will be reallocated to priorities to be determined by the Principal at UTSC, such as other capital projects or budgets to support instruction and research.

Other potential sources of funding include Federal Research grants which include a capital allowance, or SuperBuild, but these remain uncertain. In the event that they are forthcoming, they too can offset the income from enrolment growth.

The cash flow analysis is included in Appendix 3 Table 2.

XII. SCHEDULE

It is essential that this project be completed in time to accommodate the incoming class in September 2004. This is the year following the double cohort, when the large enrolment increase

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in first year classes, which can be accommodated in the new large lecture theatre in the ARC, will move into smaller second year classes requiring additional classrooms and faculty. It is important that the move of the existing Management Offices occur in time to allow the necessary renovations and decoration of their current offices and the reassignment of these to Humanities and Social Sciences faculty and staff. Project occupancy should therefore be achieved by 1 August 2004, allowing a month for move in and for renovations to the vacated spaces in the Humanities Wing.

The expected project schedule will be as follows :

- | | |
|-------------------------------------------|-------------|
| 1. Governance Approval to Hire Architects | Mar 2002 |
| 2. Design Phase Complete | Jan 2003 |
| 3. Tendering and Award of Contract | Mar 2003 |
| 4. Construction Complete | July 2004 |
| 5. Project Occupancy | August 2004 |

Any delay in required approvals would be expected to have a corresponding impact on the occupancy date. Since the faculty and students will be on campus in September 2004, requiring offices and classrooms, such delays must be avoided.

XIII. RECOMMENDATIONS

The Revised Project Planning Report for the Management Building at the University of Toronto at Scarborough proposes a building that is the same size as that already approved by Planning and Budget and Business at their meetings of 13 November and 19 November 2001 respectively. The changes proposed are to the allocation of space and to the Funding Plan. The change in space allocation is a necessary adjustment to accommodate Phase 1 enrolment growth at the level of 22.5 per cent, as planned by the Provost. The change in funding is consistent with the budget model proposed by the Provost to provide capital construction to accommodate 22.5 per cent enrolment growth.

It is recommended that Revised Project Report for the Management Building at the University of Toronto at Scarborough, which proposes a project scope of 2436 net assignable square metres and 4385 gross square metres at a total project cost of \$15.53 million in February 2003 dollars, with the funding sources indicated above, be approved.

APPENDIX 1

DIVISION OF MANAGEMENT SPACE INVENTORY

Selections from the Current Space Inventory (August 2001) – based partly on information provided by Division of Management which updates the official inventory of March 2000

Building	Blk	Room #	%Time	%Space	Room Use Description	Stns	Square Metres	Occupant	Position	FTE
FACULTY OFFICES										
B-Wing	B	400	100	100	Faculty Office Single	1	13.28	T. Litovitz	Senior Lecturer	100%
B-Wing	B	414	100	100	Faculty Office Single	1	13.50	G.Georgopoulos	Senior Lecturer	100%
H-Wing	H	302 G	100	100	Faculty Office Single	1	18.61	P. Radhakrishnan	Assist.Prof.	100%
H-Wing	H	302 B	100	100	Faculty Office Single	1	20.59	D. Zweig	Assist.Prof.	100%
H-Wing	H	302 C	100	100	Faculty Office Single	1	19.82	P. Aggarwal	Assist.Prof.	100%
H-Wing	H	404 A	100	100	Faculty Offices Multi	6	45.83	P/T faculty		
H-Wing	H	409	100	100	Faculty Office Single	1	15.68	S. Borins	Prof. & Chair	100%
H-Wing	H	411 A	100	100	Faculty Office Single	1	14.70	C. Loughlin	Assist.Prof.	100%
H-Wing	H	412	100	100	Faculty Office Single	1	15.68	C. Bovaird	Senior Lecturer	100%
H-Wing	H	414	100	100	Faculty Office Single	1	14.70	W. Hejazi	Assist.Prof.	100%
H-Wing	H	415	100	100	Faculty Office Single	1	14.70	I. Parker	Assoc. Prof.	100%
H-Wing	H	416	100	100	Faculty Office Single	1	14.70	J. Wei	Assoc. Prof.	100%
H-Wing	H	417	100	100	Faculty Office Single	1	14.70	D. Hyatt	Assoc. Prof.	100%
H-Wing	H	418	100	100	Faculty Office Single	1	14.70	H. Krashinsky	Assist.Prof.	100%
H-Wing	H	419	100	100	Faculty Office Single	1	14.70	S. Ahmed	Senior Lecturer	100%
H-Wing	H	420	100	100	Faculty Office Single	1	14.70	I. Averbakh	Assoc. Prof.	100%
H-Wing	H	421	100	100	Faculty Office Single	1	14.70	A. Stark	Professor	100%
H-Wing	H	422	100	100	Faculty Office Single	1	14.70	R. Powers	Senior Lecturer	100%
H-Wing	H	423	100	100	Faculty Office Single	1	14.70	G. Cleveland	Senior Lecturer	100%
H-Wing	H	424	100	100	Faculty Office Single	1	14.70	S. Law	Assist.Prof.	100%
H-Wing	H	426	100	100	Faculty Office Single	1	14.70	J. Parkinson	Assist.Prof.	100%
H-Wing	H	427	100	100	Faculty Office Single	1	14.70	M. Krashinsky	Professor	100%
H-Wing	H	428 B	100	100	Faculty Office Single	1	14.04	A. Stawinoga	Senior Lecturer	100%
							382.83			
STUDENT OFFICES										
B-Wing	B	456	100	100	Graduate & TA Office Multi	2	13.50	MGMT. T.A.'s	Teach.Assists.	
B-Wing	B	578	100	100	Graduate & TA Office Multi	2	13.76	ECM T.A.'s	Teach.Assists.	
							27.26			
NON-ACADEMIC OFFICES										
H-Wing	H	409 A	100	100	Office Single	1	14.70	J. Forbes	Chair's Secretary	100%
H-Wing	H	410	100	100	Office Single	1	18.13	J. Smith	Admin.Assist	100%
H-Wing	H	411	100	100	Office single	1	16.17	A.M. Kelly	Clerk	100%
H-Wing	H	428 A	100	100	Office Single	1	15.48	M. Coutinho	Coop Field Coord.	100
H-Wing	H	431	100	100	Office Shared	2	16.10	C.Arsenault/J.French	Coop Assoc.Coord	100
H-Wing	H	432	100	100	Office Single	1	15.58	K. Richard	Coop Coordinator	100
H-Wing	H	433	100	100	Office Shared	3	23.30	K. Robinson/U. Lyte	Sec.&Support Staff	
							119.46			

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Building	Blk	Room #	%Time	%Space	Room Use Description	Stns	Square Metres	Occupant	Position	FTE
RESEARCH FACILITIES										
H-Wing	H	226	100	100	Research lab	2	15.00	Res. Assistant		
H-Wing	H	302 F	100	100	Research lab	3	23.08	Res.Assistants		
							38.08			
OFFICE SUPPORT SPACE										
H-Wing	H	404 B	100	100	Office File storage	0	16.93			
H-Wing	H	408 A	100	100	Photocopy / Mail Room	0	10.65			
H-Wing	H	408 B	100	100	Office Storage	0	1.19			
H-Wing	H	433 C	100	100	Interviewing	1	8.19	Coop Employers		
H-Wing	H	433 A	100	100	Multi Students	4	21.83	Coop Students		
							58.79			
STUDENT SPACE										
H-Wing	H	302 E	100	100	Student Association office space	1	13.94	MESA	Exec.Committee	
							13.94			
							640.36			

APPENDIX 2

Analysis of Classroom Utilisation and Needs at UTSC – Fall 2001

TABLE 1

Existing Classrooms by Size, hours of Use and Use of stations - for Fall 2001

[note: the data for these may be low because all tutorials may not have been scheduled]

Size Range	Number	Avg Hrs Use per week	Avg of % use of stns
14-30	6	35	82
31-40	3	28	66
41-50	8	34	61
51-70	4	30	62
71-100	2	46	72
101-150	3	38	64
151-200	2	43	81
240	1	39	81
300	1	52	79
		38.3	72.0

all portables

Pavilion

2001-02 Total seats in classrooms = 2475 (includes Sprung)

Initial Recommendation

22.5% increase in number of seats = 557 additional (Note this does not resolve current shortages)

25% INCREASE IN SEATS = 619 additional WILL RESOLVE CURRENT CROWDING AND TIMETABLING PROBLEMS
BUT STAY IN COU UTILISATION STANDARDS

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TABLE 2

Additional Recommendation

With growth some core facilities can only expand from existing locations and will displace existing classrooms. These will have to be replaced as follows:

	Current Stations	Rooms Needed	Ideal Replace Capacity	Essential Replace Capacity
1 Replace all portables (combined capacity 116) (on site of Sciences Expansion) with 3 rooms at 50	116	3	150	50
2 Replace Pavilion for Recreation/Athletics	300	1		
3 Replace S208 (cap 25) isolated location: off Meeting Place, noisy, needed for admin uses	25	1	30	30
4 Replace 4 underutilised small seminar rooms (combined cap 72) on Bladen 3 with 2 rooms at 30 (old rooms reused as study space)	72	2	30	
5 Replace B307 with 1 at 30 (this is on the corridor that will link to Student Centre and will be reused as part of new Gallery facility)	29	1	30	30
5 Replace B 380 (cap 30) and B 382 (cap 50) with 1 at 30, 1 at 50 These are adjacent to access corridor to ARC large lecture theatre - which will claim part of them as new corridor space. Remaining space will be reused for Bookstore	80	1	50	50
6 Replace B526 with 1 at 30 This small seminar room is on Social Sciences Level is badly situated and will be converted to faculty and graduate offices for Social Sciences	30	1	30	30
7 Replace B 487 (30 capacity) with 1 at 30 This is on the floor now devoted almost entirely to computer labs - it will be converted to extra computer facilities	30	1	30	
8 Replace H305 - 120 seat classroom and reuse as cafeteria (its original function) : central food preparation means cafeterias have to be close	120	1	120	120
Net total for replacement				340

TABLE 3
Revised Recommendation for New Classrooms

Size Range	COL A		COL B		COL C		Proposed Stations	Number of Rooms In use 2004-05	Total stations 2004-05			
	Number 2000-01	Stations 2000-01	Number Replacement Stations Required From Table 2	Number Growth Stations Required 25% Col A	Total Stations Needed Col B + Col C	Total Stations Needed						
1-20	4											
21-30	6	244	120	61	180	150 MGT (includes 1 skills room)	11	330				
31-40	3											
41-50	8	507	100	127	227	50 MGT	11	550				
55	1	55		14	14		1	55				
60						180 case rms MGT	3	180				
65	1	65		16	16		1	65				
70	2	140		35	35		3	210				
80						80 case rm MGT	1	80				
92	2	184		46			2	184				
120	1	120	120	30	120	120 MGT	1	120				
135	2	270		68	68		2	270				
175	2	350		88	88		2	350				
240	1	240		60	60		1	240				
300	1	300		75	75		1	300				
500				500	500	500 ARC	1	500				
Total Stations							2475	340	1119	1459	1080	3434
note:includes Pavilion												

note: includes Pavilion

TABLE 4

**CALCULATION OF
FTE STUDENTS PER
STATION**

Fte enrolment 2001-02	
	4679
fes/station	1.92

Fte enrolment 2004-05	
	5725
fes/station	1.827
	WITHOUT PAVILION

Fte enrolment 2004-05	
	5725
fes/station	1.670
	WITH PAVILION

Analysis of requirements for Management classrooms in new management building

1. Assumptions:

- all intro courses are taught in rooms outside the Management building
- enrolment in the BBA program rises by 50% to 420 in each year
- enrolment in ECM major is set at 150 in each year (approximately 50% above this year's enrolment, including preprogram students accommodated by Division)
- each BBA student takes 4 ECM half-courses in a class of 80, 11 MGT/ECM half-courses in a class of 60, 1 half-courses (skills) in a class of 30
- each ECM major takes 4 ECM half-courses in a class of 80, 6 ECM half-courses in a class of 60
- 40% of the classes are offered in each winter term, while 20% are offered in the summer term
- each course operates at 3 hours per week (including a tutorial hour), allowing each room to accommodate 15 sections in any given week
- 20% is added to total demand for rooms to allow for some courses operating at below capacity, and for some students taking more than the minimum number of courses (essential friction within the system)

2. Calculations:

Imagine that we offer all the courses for a given entering class in a single year (this avoids the need to figure out which courses are being taken by which students in any given year):

Classroom with capacity of 80 - the BBA students need $420 \times 4 \div 80$ sections each year, while the ECM majors need another $150 \times 4 \div 80$ sections each year, for a total of 28.5 sections. Adding 20% for friction makes this number 34.2 sections. With 40% of these in each winter term, we get 13.68 sections. We thus require **one room with capacity 80**.
Classroom with capacity of 60 - the BBA students need $420 \times 11 \div 60$ sections each year, while the ECM majors need another $150 \times 6 \div 60$ sections each year, for a total of 92 sections. Adding 20% for friction makes this number 110.4 sections. With 40% of these in each winter term, we get 44.16 sections. We thus require **three rooms with capacity 60**.

Classroom with capacity of 30 - the BBA students need $420 \times 1 \div 30$ sections each year, for a total of 14 sections. Adding 20% for friction makes this number 16.8 sections (the need for friction is less important since there is only one course in this category). With 40% of these in each winter term, we get 6.72 sections. This room could also be used for various seminars. We thus require **one room with capacity 30**.

APPENDIX 3**PROJECT COST ESTIMATE, TABLE 1 Prepared January 23,2002**

Project Title: UTSC Management Building

TABLE 1: Total Project Cost Estimates

Column 1 will be completed with the Project Planning Report.

Column 1-5 will be included in the Project Implementation Report.

Items	Project Planning Report	Concept Design	Design Devel't	Drawings @ 90%	Tender	100% Complete
Construction Cost [from Table 2] note 1	9,435,000	0	0	0	0	0
Escalation allowance to Mar 2003	801,975					
Construction Contingency	1,023,698					
Applicable GST	260,122					
Total Construction Costs, plus taxes	\$11,520,795	\$0	\$0	\$0	\$0	\$0
Site preparation	inc					
Services to site	inc					
Secondary Effects note 2	50,000					
Demolition	inc					
Landscaping, note 3	200,000					
Permits & Insurance	127,039					
Professional Fees note 4	1,468,662					
Computer & Telephone Terminations, moves	260,000					
Moving & Staging	10,000					
Furnishings & Equipment	1,300,000					
Miscellaneous Costs [signage,security..]	64,000					
Commissioning	inc					
Donor Recognition	10,000					
Finance Costs note 5	512,000					
Project Cost Escalation [to feb 2003]	inc					
Total Project Cost Estimate GST included	\$15,522,496	\$0	\$0	\$0	\$0	\$0

Notes:

- 1 includes a reduction of \$285,000 to allow for reduction in GSM from 4552 to 4385. building assumed to be three stories, on grade.
- 2 covers light renovation to 640 sq M of vacated space.
- 3 allows for work in immediate vicinity including 1/2 of the "Green Court".
- 4 interest expense assumes no money down and a 4% rate. See cashflow.

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TABLE 2
UTSC Management Building Cashflow Model
 Approval in Mar 2002, tendered in Mar 2003.

Cash flow by quarter		feb-apr 2002	may-jul 2002	aug-oct 2002	nov-jan 2002-3	feb-apr 2003	may-jul 2003	aug-oct 2003	nov-jan 2003-4	feb-apr 2004	may-jul 2004	aug-oct 2004	nov-jan 2004-5	feb-apr 2005	totals
Funding:		0	0	0	0	0	0	0	0	0	0	15,272	0	0	15,272
Expenditure:															
fees & soft	137	274	274	274	274	264	62	62	62	62	62	63	63		1,596
construction						826	1653	1653	1653	1653	1653	1653	827		11,571
furn, equip, la												1844			1,844
nd															
subtotal	137	274	274	274	274	1090	1715	1715	1715	1715	1715	3560	827	0	15,011
net cash flow	-137	-274	-274	-274	-274	-1090	-1,715	-1,715	-1,715	-1,715	-1,715	11,712	-827	0	
open bal	0	-138	-415	-696	-696	-981	-2,090	-3,842	-5,615	-7,411	-9,230	-11,071	576	0	
change	-137	-274	-274	-274	-274	-1090	-1715	-1715	-1715	-1715	-1715	11,712	-827	0	
int earn @	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 gain
4.0%															
int exp @	-1	-3	-7	-10	-10	-19	-37	-59	-81	-103	-126	-65		0	(512) expense
4%															
close bal	-138	-415	-696	-981	-981	-2,090	-3,852	-5,647	-7,460	-9,291	-11,141	576	-251	0	(512) net interest income (cost)

Prepared 18th. Oct 2001
 Revised 17th. January 2002

January 28, 2002

APPENDIX 4**EQUIPMENT/FURNISHINGS****UTSC Management building, Furniture & Equipment Schedule**

#	Room	Room Function	Room Size	Total item Nasm	furniture unit	allow	extn	equipment item	unit	allow
ACADEMIC OFFICES										
1	Chair's Office		26	26 lot	1	8,000	8,000			
24	Faculty offices, balance of current complement		13	312 lot ??	24	4,000	96,000			
1	Stipend Office, 5 – 6 stations		33	33 lot	6	2,000	12,000			
1	Stipend Meeting Room		15	15 lot	1	3,000	3,000			
22	faculty offices, enrolment expansion		13	286 lot	20	4,000	80,000	0	0	0
				672			0			
STUDENT OFFICES										
							0			
2	T.A. Offices, 3 stns per		13	26 lot	6	2,000	12,000			
2	Graduate Offices, 3 stns per		13	26 lot	18	2,000	12,000			
				52			0			
NON-ACADEMIC OFFICES										
							0			
1	Chair's Secretary		13	13 lot	1	4,000	4,000			
1	Clerk/Secretary		13	13	1	4,000	4,000			
1	Admin Assistant		15	15	1	4,000	4,000			
1	Senior Coop Coordinator		15	15	1	4,000	4,000			
4	Associate Coop Coordinators (1 expansion)		13	52	4	4,000	16,000			
3	Coop Secretary/Support Staff/IT Web Administrator		11	33	3	4,000	12,000			
1	Divisional Receptionist, expansion		15	15	1	4,000	4,000			
0	Communications Officer, expansion		13	0	0	0	0			
1	Program Secretary, expansion		13	13	1	4,000	4,000			
				169			0			
RESEARCH FACILITIES										
							0			
1	Waiting room		15	15 lot	1	1,000	1,000			
1	Kitchen/Common Area		0	0			0	allow	1	2,000
1	Discussion Room		13	13 lot	1	2,000	2,000			
1	Observation Room	non-assignable space		lot	1	500	500			
1	Testing Room		0	0	1	2,000				
1	Computer Room		0	0	6	1,000		comp	6	3,000
1	Storage Room		0	0			0			
4	Private Labs/Testing Spaces		8	32	3	2,000	8,000			
1	unfinished area		23	23						
				83			0			
DIVISIONAL SUPPORT SPACE										
							0			
1	Reception Waiting Area		10	10	1	3,500	3,500	allow	1	2,000
1	Staff Mail Room		15	15	1	1,000	1,000	allow	1	1,000
1	Photocopy/Supplies Room		13	13	1	1,000	1,000	allow	1	10,000
1	Storage		13	13	1	1,000	1,000	allow	1	2,000
1	Coop - Student Resource Room		40	40	1	10,000	10,000			
4	Coop Interview Rooms		10	40	4	2,000	8,000			
1	Faculty/Staff Lounge		35	35	1	5,000	5,000	allow	1	2,000
				166			0			

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#	Room	Room Function	Room Size	Total item Nasm	furniture unit	allow	extn	equipment item	unit	allow
CLASSROOMS										
	1	Case Room @ 80 stations	144	144 chairs	80	250	20,000	allow	1	50,000
	3	Case Rooms @ 60 stations	108	324	180	250	45,000		3	50,000
	1	Skills Room @ 30 stations	75	75	30	500	15,000		1	30,000
	1	Seminar/Meeting Room @ 30 stations	55	55	25	500	12,500		1	2,000
	1	Classroom @ 120 stations	200	200	120	250	30,000		1	50,000
	1	Classroom @50 Stations	80	80	50	500	25,000		1	30,000
	4	Classroom @30 Stations	50	200	120	500	60,000		4	30,000
				1078						
								0		
STUDENT ACTIVITY SPACE										
	1	MESA office	13	13	1	4,000	4,000			
	5	Group Study Rooms	12	60	5	2,400	12,000			
				73						
OTHER										
	1	Atrium area	110	110	1	25,000	25,000			
	1	AV office & storage	13	13	1	4000	4,000			
	1	Coffee Kiosk	20	20	na		0			
				143						
TOTAL										
				2,436			568,500			
					contingency	5.00%	28,425			5.00%
							596,925			
					PST/GST	10.31%	61,453			10.31%
							658,468			
					Inflation to mid 2004	10%	65,847			10%
					TOTAL		724,315			

APPENDIX 5

ENVIRONMENTAL PROTECTION ADVISORY COMMITTEE REPORT

University of Toronto Environmental Protection Policy

PREAMBLE

The University of Toronto is committed to being a positive and creative force in the protection and enhancement of the local and global environment, through its teaching, research and administrative operations. Recognising that some of its activities, because of their scale and scope, have significant effects on the environment, the University as an institution, and all members of the university community, have the responsibility to society to act in ways consistent with the following principles and objectives:

FUNDAMENTAL PRINCIPLES

- Minimisation of negative impacts on the environment
- Conservation and wise use of natural resources
- Respect for biodiversity

In adopting these fundamental principles, the University will be guided by ethical attitudes towards natural spaces, and will take all reasonable steps to meet the following objectives:

- Minimise energy use, through efficient management and practice
- Minimise water use, through efficient management and practice
- Minimise waste generation through reduction, reuse and recycling
- Minimise polluting effluent and emissions into air, land and water
- Minimise noise and odour pollution
- Minimise and where possible eliminate use of chemicals, including outdoor salt, pesticides herbicides and cleaning agents
- Include biodiversity and environmental concerns in planning and landscape decisions
- Meet and where possible exceed environmental standards, regulations and guidelines

IMPLEMENTATION

To implement this Environmental Protection Policy:

- An Environmental Protection Advisory Committee (EPAC) will be established consisting of administrative staff, academic staff and student groups, to be chaired by a member of the University's academic staff. The Committee will provide advice to the Assistant Vice-President, Operations and Services, on programs to meet the environmental protection objectives. Membership of the committee will be made known to the community to ensure that new and existing initiatives are brought forward for consideration. The meetings of EPAC will be open.
- Facilities and Services, through the Waste Management Department will facilitate the development, implementation and evaluation of environmental protection programs, and will liaise with the EPAC and all three campuses on the programs.
- In this role Facilities and Services will:
 - Regularly review university policies to ensure consistency with this policy;
 - Carry out appropriate environmental audits and pilot projects;
 - Undertake education and training programs to inform the University Community about this and how its members, both personally and collectively, can best meet the objectives set forth in it;
 - Inform all contractors, service operations and users of University facilities that they must comply with the requirements of the policy;
 - Annually issue a report concerning the University's impact on the environment, summarising initiatives undertaken and identifying matters which require particular attention.

Approved by Business Board of the Governing Council on March 7, 1994.

January 28, 2002

Environmental Checklist for Users Committees (5/99)

1. General planning principles: Consideration of alternatives, Life cycle approach
2. Minimize Energy Use
 - a) Thermal Energy: Heating, Cooling
 - b) Lighting/Use of Natural Light
 - c) Ventilation/Windows
 - d) Machinery/Equipment
 - e) Orientation of Building - effect on building energy needs
 - f) Roof Design
3. Minimize Water Use (Maximize Reuse)
 - a) Flushing
 - b) Washing - hands and body
 - c) Building Cleaning
 - d) Drinking
 - e) Experimental/Labs
 - f) Equipment Cooling
 - g) Outdoor Vegetation - choice and watering (see #4)
4. Utilization and Diversion of Rainwater
 - a) Use of Roof Water
 - b) Porous Pavements
5. Waste Management (offices, classrooms, food outlets, outdoors, construction/demolition)
 - a) Reduction
 - b) Reuse
 - c) Recycling
 - d) Treatment and Disposal - possible on campus
6. Effluent and Emissions (reduce, reuse, recycle, dispose)
 - a) Indoor (Air Toxics, Noise, Odours, Ventilation)
 - b) Outdoor Air - laboratory emissions
 - c) Water - Hazardous Wastes
 - d) Land
7. Reduce Harmful Chemicals
 - a) Outdoor Salts
 - b) Pesticides/Herbicides
 - c) Cleaning Agents
8. Outdoor Environment
 - a) Encourage Biodiversity (encourage and protection of species)
 - b) Landscaping/Shading - effect on building energy needs in summer and winter
 - c) Use of outdoor space (e.g. rest areas, roof gardens)
9. Monitoring and Metering of Use of Resources and Wastes
 - a) Water
 - b) Electricity
 - c) Heat
 - d) Wastes
10. Visibility of Environmental Concerns
 - a) Pilot Projects
 - b) Posters/Displays
11. Material Choice (Use of endangered/exotic materials, off-gassing)
 - a) Building Fabric
 - b) Fixtures and Furnishings

APPENDIX 6
ROOM SPECIFICATION SHEETS

(available on request)

APPENDIX 7

PROPOSALS FOR SPACE AND CAPITAL PLANNING FOR UTSC 15 JANUARY 2002

Overview of Existing Space and Needs for 22.5% growth – University of Toronto at Scarborough

The table below shows the current space allocations at UTSC from the COU inventory of 1998-99, the COU generated nasms and required nasms for 22.5 per cent growth. It is taken from the document included as Appendix 2 "Proposals for Space and Capital Planning at UTSC for 22.5% and 50% growth" 15 December 2001. This document indicates how additional space should be allocated across the COU categories.

Growth at 22.5 per cent requires about 8,000 additional nasms of academic space. The ARC provides a blend of library space, support services and classroom space (it includes a 500 seat classroom); the Student Centre provides 2300 nasms of support service space. Both the ARC and the Student Centre will make substantial areas available through secondary effects, some of which can be used for academic and other offices.

Space needs for 22.5 per cent expansion are generated from existing nasms, from COU standards, and from the submission to the Province made in March 2001. The Proposed space allocation adjusts these to reflect the lower enrolment growth in the Sciences, and to correspond to the actual space programmes for the ARC and the Student Centre. The major variances are in classrooms (for which a higher allocation is being made to adjust for the fact that the existing classroom capacity is so far below the COU standard), and in Teaching and Research Labs. The latter reflects the fact that enrolment expansion in Phase 1 will be lower in the Sciences. Existing Teaching Labs, with some renovations, should be adequate. Research labs will be provided either through CFI submissions or through conversion of existing space.

	Existing Nasms 1998-99	COU generated nasms 1998-99	Difference Existing And COU Generated	22.5% of existing Nasms	22.5% of COU space	Submitted to Province March 2001 for 42% growth (1)	Half of Submission to Province =21% growth	Proposed Space Allocation	Notes
CLASSROOMS	3,246	5,175	(1929)	730	1,164	2,760	1,380	1,890	(2)
TEACHING LABS	4,811	4,135	676	1058	930	2,090	1,045	0	(3)
RESEARCH LABS	4,013	3,482	531	907	783	2,935	1,468	83	(4)
ACADEMIC OFFICES	4,230	4,339	(109)	950	976	3,080	1,540	1,000	(5)
CENTRAL OFF	1,843	1,441	402	415	324	863	432	0	(6)
LIBRARY	3,282	5,831	(2549)	738	1,312	1,951	976	2,300	(7)
SUPPORT SERVICES	5,317	8,624	(3307)	1196	1,940	2,300	1,150	2,700	(8)
ATHLETICS	3,968	4,881	(913)	893	1,098	1,035	518	0	(9)
MAINTENANCE SHOPS	1,093	652	441	246	147	163	82	0	
TOTALS	31,803	38,846	(7043)	7,156	8,740	17,183	8,592	7,950	

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Proposed Space Allocations for 22.5% Growth at UTSC

The table above adjusts nominal allocations taken as half the March 2001 submission to the Province, according to modified priorities at UTSC. The total space added by the ARC, the Management/Classroom Building and the Student Centre is 7818 nasms. Additional space will be added through balcony enclosures and other strategies.

Note 1: The column titled “Submitted to Province” is from March 2001 University submission on growth for UTSC, prepared by the Planning Office.

Note 2: 1890 nasms includes ARC, Sprung. Does not include 400 nasms of classroom replacement

Note 3: Since existing Science Teaching Labs are underused and science enrolment in the early phases of growth will be less than in the Arts and Management, the proposed increase for Teaching Labs is reduced. Some renovation of existing Teaching Labs, including those used by VPA, is essential.

Note 4: The allocation for research labs is shown as only 83 – the research space allocation in the Management/Classroom building - because no new structure is planned to accommodate them. Most faculty hiring in Sciences will occur in Phase 2 of growth in conjunction with the construction of a new science building, but some new labs will be needed. 800 nasms should provide for about 15 wet labs but these will have to be achieved by converting existing space or the CFI Urban Ecosystems facility.

Note 5: Possible faculty increase from Table 1 is 45 positions, which generates 585 nasms. This table allows for 77 offices, sufficient to resolve current shortages, and to include increases in Divisional administration, especially for Coop and for graduate students and others. .

Note 6: No new central administrative space is proposed. In fact about 400 nasms will be required, and this can be found through secondary effects of the Student Centre and the ARC.

Note 7: This is an allocation for the new additional part of the ARC, and excludes 700 nasms for the large lecture theatre included under classrooms.

Note 8: This is the area of the Student Centre, plus an allocation of 300 nasms for additional food services adjacent to the existing H-Wing Cafeteria

Note 9: In fact about 500 nasms of space will become available for renovation for Recreation and Athletics through secondary effects of the Student Centre.

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The classroom allocation is based on a detailed analysis of classroom needs included as part of Appendix 2. In addition to the 1890 nasm of classroom space proposed, an additional 400 nasm of instructional space will be needed to replace classrooms that will have to be allocated to other uses (for instance a seminar room currently located adjacent to Computer Labs will be displaced by a new computer laboratory).

The analysis in Appendix 2 indicates that the revised Management Building will have to provide at least 1000 nasms of classrooms, about 80 nasms of research space, and 1000 nasms of academic and divisional offices. The proposed allocation of campus facilities is as follows:

<u>Space Category</u>	<u>Nasm</u>
Classrooms (total of 605 stations)	1078
General Faculty Offices (in addition to Management)	130
Atrium area	110
AV area	13
Food Kiosk	20
Total Proposed Campus Facilities Nasms	1351

APPENDIX 8

SPACE UTILIZATION ANALYSIS FROM THE NOVEMBER 5, 2001 PROJECT PLANNING REPORT FOR A MANAGEMENT BUILDING AT UTSC

The following discussion of the different categories of space identify the input measures (#s of FTE academic, students, etc.) and the standards used to generate the space requirements for the Division of Management and associated activities. As this project must accommodate an expanded Division, both current and growth requirements have been carefully identified.

Divisional Facilities

Faculty Offices

The Division of Management, in 2001/02 has an academic complement of 25 FTE on the Scarborough Campus, 3 of which are currently unfilled positions. In addition there are, each term, from 22 to 26 courses taught by stipendiary instructors who must also be accommodated. There is a further increase of 15 FTE planned for expansion.

The COU space standard, in generating academic office space, uses a space factor of 13 nasm per FTE faculty member. Although 12 nasm is the accepted planning standard for a typical office, 13 nasm is the most commonly used guideline. A supplement of 15% is added to the total office needs on the assumption that the number of faculty requiring accommodation is greater than the recorded FTE. Therefore, the standard provides space to accommodate cross-appointments, part-time appointments, status-only appointments, visiting scholars, post doctoral fellows and offices for faculty with administrative appointments.

The table below shows the space required to accommodate the existing FTE (22), the approved TBAs (3) and the proposed FTE (15) using the COU Space Formula:

Academic	#FTE	#Offices	Nasm
2001/02 Complement	22	22	286
Approved TBAs	3	3	39
Current	25	25	325
Enrolment Increase FTEs	15	15	195
15% supplement		6	78
Total		46	598

The COU space standard, with the 15% supplement, generates the equivalent of 46 offices in 598 nasm.

While the majority of the offices are to be built at the 13 nasm standard, there are a few exceptions: the Chair's office is to be slightly larger to accommodate a meeting space and an office/meeting room suite for stipend staff is to be allocated 48 nasm. These larger rooms increase the allocation to a total of 646 nasm:

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<u>Room Function</u>	<u>Nasm</u>
Chair's Office	26
24 faculty offices, balance of current complement, @ 13 nasm	312
Stipend Office, 5 – 6 stations	33
Stipend Meeting Room	15
15 + 5 faculty offices (enrolment expansion + 15%)@ 13 nasm	260
	646

The current inventory of faculty offices is 383 nasm (23 offices) with an average of 15.3 nasm for private offices. At 646 nasm and 47 rooms the proposed increase represents an overall increase in the total number of offices but a decrease in the average office size to correspond to the university standard.

The Division of Management foresees the possibility that its academic complement may increase even further and the Committee recommends that, should this happen, the Division be given priority for the use of five of the existing faculty offices in the Humanities Wing. These offices will be allocated when the academic complement of the Division rises above 40 FTE. In the meantime the offices will be used to accommodate general faculty office needs generated by enrolment growth during the period of capital construction.

Student Offices

The planned expansion at UTSC includes a graduate student increase of 150 FTE graduate students in addition to the 35 FTE of 1997/98. The Division of Management currently has no graduate students physically present although there are graduate and undergraduate students providing an average of 400 weekly TA hours. The Division is proposing a Graduate Program in Public Management with a steady state FTE of 20 FTE. It is anticipated that the increase in undergraduate enrolment will necessitate that TA hours be increased by about 50% to 600 weekly hours. The required 600 weekly TA hours will necessitate the employment of undergraduate students as TAs in addition to the 20 graduate students.

The COU standard is 4 nasm of office type space per FTE graduate student. In practice significantly less has been allocated to graduate students both at the University of Toronto and in the Ontario system (averages of approximately 1.9 nasm and 2.5 nasm respectively). In most departments graduate student space has been provided for teaching assistants, research assistants and full time resident graduate students engaged in thesis preparation. In some disciplines dedicated graduate student study and workspace has also been provided for in laboratories or in libraries. However, few disciplines have been able to provide the facilities that would meet the COU guideline for office space

This report recommends a space allocation for the 20 graduate students of 78 nasm. As the graduate students will provide approximately 200 hours of teaching assistance each week two additional offices are required to accommodate undergraduate students providing the other hours.

The proposed allocation will provide the equivalent of 8 standard offices for graduate students as study space and to graduate and undergraduate students in their capacity as tutors, teaching and research assistants.

<u>Room Function</u>	<u>Nasm</u>
2 TA offices @ 13 nasm, 3 stns per	26
6 Graduate Offices @ 13 nasm, 3 stns per	<u>78</u>
	104

The use of graduate student offices should be monitored to ensure that they are used.

It is recommended that these graduate student offices be constructed as two open areas, to be used initially as small classrooms until the graduate programme is in place. This would, in effect, create two additional small classrooms, each with an area of 39 nasm and a capacity of about 25 in tablet chairs. It would be necessary to design these rooms with the appropriate outlets and air distribution to allow for conversion to offices once the programme is in place and graduate students are enrolled.

Non-Academic Staff Offices

The Division of Management, in 2001/00, has a non-academic complement of 9 FTE consisting of 3 FTE divisional staff and 6 FTE Co-op staff. The proposed increase to accommodate enrolment growth is for an additional 3 FTE divisional staff and 2 FTE Co-op staff, bringing the total to 14 FTE. This represents 20% of the planned growth for all non-academic positions in academic divisions and 22% of the planned co-op positions campus wide.

The COU guidelines provides 13 nasm per FTE non-academic staff and generates 117 nasm for the current staff and 65 nasm for the planned FTE, a total of 182 nasm. The space programme proposed by the Division is for 179 nasm:

<u>Room Function</u>	<u>Nasm</u>
Current Divisional:	
1 Chair's Secretary	13
1 Clerk/Secretary	13
1 Admin Assistant	<u>15</u>
	41
Planned Divisional:	
1 Receptionist	15
1 Communications Officer	13
1 Program Secretary	<u>13</u>
	41
Current Co-op:	
1 Coordinator	15
3 Associate Coordinators	39
1 Secretary	10
1 Support Staff	<u>10</u>
	74
Planned Co-op	
1 Associate Coordinator	13
1 IT Web Administrator	<u>10</u>
	23
Total	179

Research Project Workspaces

Space is required for faculty members in organizational behaviour and marketing. There are currently four faculty doing this type of research and the number will likely increase to 8 faculty. The research space is needed for administering research instruments and psychological experiments.

The COU space formula for research facilities provides research laboratories or equivalent research space for the majority of the Humanities and Social Sciences generating 1 nasm per FTE faculty and .5 nasm per full time equivalent graduate student. This formula is intended to create a pool of research project or office workspace, to be used as dedicated computer, interview, analysis, confidential file storage and research assistant workspace and to be allocated based on the needs and priorities of the department.

Input Measure	FTE	Space Factor	Nasm
Current FTE Academics	25	1	25
			25
Planned FTE Academics	15	1	15
Planned FTE graduate students	20	.5	10
			25
Total nasm			50

The COU formula generates 50 nasm for research activities for the Division of Management. The Division has requested that a Behavioural Research Laboratory facility be included in the building program. It would accommodate 5-6 principal investigators and would consist of:

<u>Room Function</u>	<u>Nasm</u>
Waiting area/kitchenette	16
2 Discussion Rooms @ 13 nasm	26
Observation Room	non-assignable space
Testing Room	13
Computer Room	10
Storage Room	7
6 private labs/testing spaces @ 8	48
	120

It should be noted that there are a few Social Science disciplines which have larger COU research space factors, some at 10 nasm per faculty and 5 nasm per graduate student. In these disciplines additional space is required to accommodate animals, materials and equipment more associated with "laboratory" space than with "office" space. The description of the facilities required matches more closely to the interview and analysis space described above than to "animal and equipment" laboratories. Using 10 nasm, the next larger COU space factor, would generate 600 nasm for the whole Division and approximately 120 nasm for 6 FTE faculty (with two graduate students each).

Rather than redesigning a full facility which makes assumptions about the research space needs of yet-to-be appointed faculty, it is recommended that only about two thirds of this facility be constructed

in close consultation with the current faculty engaged in behavioural research, so that specific facilities appropriate to their needs are provided. The remaining areas are to be left as shell space allowing facilities appropriate to the needs of new faculty to be incorporated when faculty are appointed. Until this occurs this area can serve as general common space. It should be designed with adequate data and electrical outlets and an air distribution system that can be adapted easily to different configurations. This flexible space would be subdivided as shown below:

Room Function	Nasm
Waiting area/kitchenette	16
1 Discussion Room @ 13 nasm	13
Observation Room	non-assignable space
Testing Room	13
Computer Room	10
Storage Room	7
3 private labs/testing spaces @ 8	24
1 Unfinished open area to be divided on demand	37
	120

The current research allocation is 38 nasm and is used to accommodate research assistants.

Divisional Support Space

Support space includes meeting rooms, faculty conference rooms, lounges, office storage and supplies.

The COU guidelines generate support space at a ratio of 30% of the space generated for offices. This number is a university wide guideline where in central administrative offices, Dean and Faculty offices, etc. the ratio is larger and at departmental level the ratio is usually around 15 - 20%. The space programme proposes 238 nasm of office and support space, in line with 25% of the COU space generated for faculty, staff and student offices.

In addition to the standard office support spaces like mail room, photocopier space and storage the new building will also include specialized facilities for the Division of Management.

The Co-op area will have a Student Resource Room for students to research employers using the web and employer files, drop off job applications and pick up returned work term and tutorial assignments. Two interview rooms are also to be located in the Co-op area.

The Faculty/Staff lounge will also be used for Co-op staff to have lunch with employers and be used for small receptions.

Room Function	Nasm
Reception Waiting Area	10
Mail Room, faculty and staff	15
Photocopier Room	13
Storage	25
Coop - Student Resource Room	40
Coop - 4 Interview Rooms @ 10 nasm	40
Faculty/Staff Lounge	35
1 Seminar/Meeting Room @ 30 stations	60

The current combined allocation is 59 nasm.

Campus Facilities

Classrooms

All classrooms and instructional space in the building will be controlled centrally and are considered general campus resources. The case rooms are standard tiered horseshoe shaped rooms, fully equipped for electronic presentation with power outlets at each student station. Data drops at each station should be provided if wireless technology is not available at the time of construction. The skills room will be a flat floor room with moveable furniture for group work and have presentation facility with video-taping and feedback capability. These rooms will add 230 stations to the current pool of classrooms.

The Division of Management will have priority booking for both the Case Rooms and the Skills Room. The number and type of classrooms, over which the Division of Management will have priority booking, were determined by the Division based on the following assumptions. Details can be found in Appendix 2:

- All introductory courses will be taught in rooms outside the Management Building
- ECM courses are to be taught in section sizes of 80
- MGT/ECM courses are to be taught in section sizes of 60
- Skills courses are to be taught in section sizes of 30
- Each course meets at 3 hours per week (including a tutorial hour)

There will also be one other classroom with a 120 stations, bringing the total classroom stations in the building to 410.

<u>Room Function</u>	<u>Nasm</u>
1 Case Room @ 80 stations	152
3 Case Rooms @ 60 stations	342
1 Skills Room @ 30 stations	75
1 Classroom @ 120 stations	<u>228</u>
	797

The University of Toronto at Scarborough currently has 2,475 classrooms stations within 3745 nasm (including the newly erected temporary 300 seat Sprung structure about 500 nasm). The new classrooms in the Management Building will add 410 stations to the current pool (797 nasm).

In the 98/99 Physical Resources Submission to COU, Scarborough had only 3245 nasm in the classroom space category for 4312 FTE students, equivalent to 63% of the classroom space generated by the COU standard. With expansion the FTE undergraduate student count at Scarborough is expected to increase to a total of 6,432 and the graduate count to 185 FTE, for a total of 6,617 FTE. The COU standard would generate approximately 7940 nasm of classroom space for the campus in steady state. However, the Ontario system is operating at an average of 90% of this space standard and the University of Toronto at Scarborough is proposing that the instructional activities at steady state can be accommodated in a slightly smaller pool of classroom facilities than would be generated by the COU Space Formula. A detailed classroom utilization and needs analysis is currently being conducted and will recommend that the number of classroom seats be increased from 2,475 to 3,794 and that the number of

classrooms increase from 34 to 47. This represents an approximate increase of 55% in the number of stations and is designed to accommodate expansion and resolve some of the current crowding and timetabling problems which has resulted from being at 63% of the space standard. Details can be found in Appendix 2

Student Activity Space

The Management and Economics Student Association (MESA), as a sponsor of many student events involving contact with employers, as well as a convener of student events is an important partner in the student component of the three-way partnership among students, faculty and employers. There will be one office (13 nasm) allocated for MESA.

Study Bays and Group Study Rooms

A series of study bays in 100 nasm will be located in this building to augment study spaces in the ARC and elsewhere on campus. This facility will be open to the general campus. It should be well equipped with power outlets for laptops. Data drops are not necessary.

Eight group study rooms will be provided. These are intended primarily for Management students and are to be booked. An appropriate system for this will have to be established. The group study rooms should have data drops and adequate power outlets. Each study room will be 13 nasm for a total of 104 nasm.

Atrium, Coffee Kiosk, Audio-Visual

An allocation of 85 nasm has been identified for the Atrium. The Atrium which is seen as a welcoming space/lounge/casual study space is to be located close to the main entrance and will take advantage of the non-assignable space in the design of the building. There will be a substantial number of events involving contact between students and employers (e.g., CA facts night, employer presentations followed by a reception). Employers will also be invited to address students and faculty. This atrium can be used for both presentations and receptions and could support art exhibits. The additional 85 sq.m. is to ensure an adequate sized facility.

A coffee kiosk, in 30 nasm, will be located on the main level close to the link to the Arts Building and will serve the occupants of both buildings.

An office and storage facility for audio-visual services will be required on the main level. 20 nasm have been allocated for this to enable rapid service to various classrooms in both the Management and Classroom/Arts Buildings.

A summary of the space program for the Division of Management is shown on the following page.

**Division of Management
Space Program**

# Rooms	Room Function	Room Size	Total Nasm
ACADEMIC OFFICES			
1	Chair's Office	26	26
24	Faculty offices, balance of current complement	13	312
1	Stipend Office, 5 – 6 stations	33	33
1	Stipend Meeting Room	15	15
20	faculty offices, enrolment expansion	13	260
			646
STUDENT OFFICES			
2	T.A. Offices, 3 stns per	13	26
6	Graduate Offices, 3 stns per	13	78
			104
NON-ACADEMIC OFFICES			
1	Chair's Secretary	13	13
1	Clerk, in open area with above	13	13
1	Admin Assistant	15	15
1	Receptionist	15	15
1	Communications Officer	13	13
1	Program Secretary	13	13
1	Senior Coop Coordinator	15	15
4	Coop Coordinators	13	52
1	Coop Secretary	10	10
1	Coop Support Staff	10	10
1	Coop IT Web Administrator	10	10
			179
RESEARCH FACILITIES			
1	Waiting area with kitchenette	16	16
1	Discussion Rooms	13	13
1	Observation Room	Non-assignable	
1	Testing Room	13	13
1	Computer Room	10	10
1	Storage Room	7	7
3	Private Labs/Testing Spaces	8	24
1	Unfinished open area to be divided on demand		37
			120

# Rooms	Room Function	Room Size	Total Nasm
DIVISIONAL SUPPORT SPACE			
1	Reception Waiting Area	10	10
1	Mail Room	15	15
1	Photocopier Room	13	13
1	Storage	25	25
1	Coop - Student Resource Room	40	40
4	Coop Interview Rooms	10	40
1	Lounge	35	35
1	Seminar/Meeting Room @ 30 stations	60	60
			238
CLASSROOMS			
1	Case Room @ 80 stations	152	152
3	Case Rooms @ 60 stations	114	342
1	Skills Room @ 30 stations	75	75
1	Classroom @ 120 stations	228	228
			797
STUDENT ACTIVITY SPACE			
1	MESA office	13	13
8	Group Study Rooms	13	104
	Student Study Bays	100	100
			217
ATRIUM			
1	Atrium area	85	85
1	Audio/Visual office and storage	20	20
1	Coffee Shop and Food kiosk	30	30
			135
TOTAL			2,436

Room Specification Sheets in Appendix 7 provide more information on the requirements of the individual spaces.

The Gross

The proposed space programme is 2,436 nasm and with a gross up multiplier of 1.8 would be 4,385 gross sq.m.