UNIVERSITY OF TORONTO

OFFICE OF THE GOVERNING COUNCIL

**FOR RECOMMENDATION** **PUBLIC** **OPEN SESSION**

**TO:** Academic Board

**SPONSOR:** Scott Mabury, Vice President, Operations and Real Estate Partnerships
**CONTACT INFO:** 416-978-2031, scott.mabury@utoronto.ca

**PRESENTER:** Gilbert Delgado, Chief, University Planning Design and Construction
Christine Burke, Director, Campus and Facilities Planning
**CONTACT INFO:** 416-978-2011, gilbert.delgado@utoronto.ca
416-978-4333, christine.e.burke@utoronto.ca

**DATE:** September 17, 2019 for October 3, 2019

**AGENDA ITEM:** 7(a)

**ITEM IDENTIFICATION:**

Capital Project: *Report of the Project Planning Committee for 700 University, 4th floor: Fit-out for the Department of Statistical Sciences and A&S Professional Masters Hub*

**JURISDICTIONAL INFORMATION:**

Pursuant to section 4.2.3. of the Terms of Reference of the Planning and Budget Committee, "…the Committee considers reports of project planning committees and recommends to the Academic Board approval in principle of projects (i.e. space plan, site, overall cost and sources of funds)."

Under the *Policy on Capital Planning and Capital Projects*, "…Capital projects over $5 million and up to $20 million will be considered by the Planning and Budget Committee for projects at the St. George campus and by the respective Campus Affairs Committees and Campus Councils for projects at University of Toronto Mississauga and University of Toronto Scarborough and recommended to the Academic Board for consideration. It is expected that such projects will be placed on the Board's consent agenda and be confirmed by the Executive Committee of the Governing Council. Execution of such projects is approved by the Business Board."

**GOVERNANCE PATH:**

**A. Project Planning Report**

1. Planning and Budget [for recommendation] (September 17, 2019)
2. **Academic Board [for approval] (October 3, 2019)**
3. Executive Committee [for confirmation] (October 15, 2019)

**B. Execution of the Project:**

1. Business Board [for approval] (October 7, 2019)

**PREVIOUS ACTION TAKEN:**

Subleased space from the University Health Network on the 4th floor of 700 University presents an opportunity for the Faculty of Arts & Science to accommodate the rapid growth of two units – the Department of Statistical Sciences, (along with its associated Professional Masters program, the Master of Financial Insurance (MFI)) and the Master of Science in Applied Computing (MscAc). The Department of Statistical Sciences had long outgrown its space in Sidney Smith Hall and expanded its footprint in 2016 when leased space became available in the Stewart Building (149 College), thus occupying a second location; however, this was still not enough space. This move to 700 University will not only allow for the growth of the department but will bring them together in one location. The growth in number and sizes of professional masters programs has prompted the Faculty to think about creating a Professional Masters hub which could provide shared amenities and space efficiencies.

Consultation by way of representatives on the Project Planning Committee took place in full committee meetings throughout March 2019; these included graduate, undergraduate and professional masters students who were very engaged. Graduate student spaces will be exceptional, offering a variety of groupings; different furniture types to accommodate a range of work styles/needs and access to natural light. Most important is that there will be sufficient amount of space to accommodate the growing number of graduate students. Undergraduate students were interested in dedicated study space near their home department; however, this cannot be accommodated on this site due to constraints, including building code restrictions.

The long-term plan is for these units to be located in the development of the 2011 St. George Campus Master Plan Site C (215 Huron St) as the University's Data Sciences Centre.

On April 22, 2019, CaPS Executive Committee approval to engage consultants to develop the project through the Construction Documents phase was confirmed. ZAS Architects was retained in June, through an RFP process.

Further, On April 22, 2019, CaPS Executive Committee approval to transfer funds from the Faculty of Arts and Science to the Future Major Capital Project Reserves, for a period of 1 year to April 30, 2020 was confirmed.

## HIGHLIGHTS:

700 University is also known as the Ontario Power Generation Building or Ontario Hydro Building. It was built in 1975 and located at the intersection of University Avenue and College Street. Its distinctive modernism style with large floor plates is comprised of 19 floors.

### Statistical Sciences: The Big Data and Data Science Revolutions

The changes brought in by the Big Data and Data Science revolutions have had a transformative effect on the Department of Statistical Sciences. For instance, the undergraduate enrollments have increased tenfold in the last 8 years. The Department, supported by Arts & Science (A&S), has been involved in intensive hiring campaigns in the last 4 years. Much more needs to be done in order to rebalance the student to faculty FTE ratio. Given the current enrollments, the St George faculty complement is expected to grow, with similar growth at UTSC and UTM campuses. Part of the faculty hiring strategy has involved a number of joint positions with experimental sciences, e.g., Computer Science, Psychology, Astronomy and Astrophysics. Faculty require laboratory space that needs to host staff and equipment. Such space is currently unavailable. The pressure on Statistical Sciences space is exacerbated by the fact that, in addition to faculty complement, the larger courses require simultaneous expansion of the graduate program at both MSc and PhD levels, limited term teaching and postdoc/visitor capacity. Currently, the Department's faculty is divided unequally in two locations situated at considerable distance from each other. Further, graduate students' offices are situated away from most of the faculty in the Department. The negative effects on the Department's research and education processes due to this division are enormous and continue to worsen. Currently, the Department of Statistical Sciences is severely lacking common spaces where students and faculty could interact scientifically, where Department-specific activities related to the undergraduate experience or data-centric competitions and alumni events could be organized. The need to have new space allocated to the Department of Statistical Sciences cannot be emphasized enough.

### Professional Masters Hub: MScAC, MFI and others

The Masters of Science in Applied Computing (MScAC) in the Department of Computer Science (DCS) is purposely designed to train Masters level graduate students in industrial research skills. The program is unique in Canada and one of the few of its type internationally. Envisioned as a hybrid between the traditional research master's and a professional master's, graduates are well placed for private-sector R&D positions while retaining the possibility of continuing to a PhD. Key features of this 16-month cost-recovery program:

- 8 months of breadth graduate courses (aligned with the research Masters)
- 2 specialty business courses (Communications, Entrepreneurship)
- 8 months as a research intern with a partner company
- Research overseen by an academic supervisor and an industrial supervisor

The program is seeing tremendous demand that is aligned with the rapid growth of the IT sector in the GTA. Furthermore, Toronto has become an attractive destination for firms to undertake R&D precisely because of the local talent pool. Firms increasingly view the program as the source of their best research and technical talent.

The 4th floor provides 55,668 square feet or 5,172 square metres of rentable space in base building condition. With a deep floor plate planning and design will continue to be undertaken in such a way as to ensure natural light and views are shared by all in order to provide a healthy place to work, teach & learn.

**Secondary Effects**

- Impact on Other Occupants in Building

Refer to relevant section of the document "**Triovest, 700 University Tenant Manual, August 2018**"

- Coordination with other renovation projects in building

Bridge Connection. The Sublandlord shall have the ongoing right but not the obligation, throughout the Sublease Term, to construct a covered bridge (the "**Bridge**") from the elevator lobby of the 4th floor of the Building, to Princess Margaret Hospital for the exclusive use of the Sublandlord's staff and visitors. The Bridge shall not encroach upon the Premises and the Sublandlord agrees to use reasonable commercial efforts to minimize disruption to the Subtenant's business during the construction of the Bridge.

- Reallocation of Vacated Space

The space vacated as tabulated below will remain within the Faculty and will be reallocated to address other pressing space needs. There are no costs included in this project in connection to the reallocation.

Vacated Space

| **Building** | **NASM** |
|---|---|
| Sidney Smith Hall | 674 |
| Bahen Centre for Information Technology | 189 |
| Stewart Building | 501 |
| Total | **1,364** |

**Schedule**

The proposed schedule for the project is as follows:

| | |
|---|---|
| Project Approval (Interim) | April 2019 |
| Consultant Selection/ Award | May – June 2019 |
| Schematic Design | July – September 2019 |
| Cycle 1 2019-20 Governance | August – November 2019 |
| Design Development | September – October 2019 |
| Construction Documents | November 2019 – January 2020 |
| Tender and Award | February – March 2020 |
| Construction Start | April 2020 |
| Occupancy | Fall 2020 |

## FINANCIAL AND PLANNING IMPLICATIONS:

Discussion of overall costs and sources of funds can be found in the *in camera* document for this project.

## RECOMMENDATIONS:

Be It Resolved:

THAT subject to confirmation by the Executive Committee,

THAT the *Report of the Project Planning Committee for 700 University, 4th floor: fit-out for the Department of Statistical Sciences and A&S Professional Masters Hub*, dated August 23, 2019, be approved in principle; and,

THAT the project totaling 5,172 rentable square metres (sm), be approved in principle, to be funded by the Faculty of Arts and Science Building Fund and Future Major Capital Project Reserves.

## DOCUMENTATION PROVIDED:

- *Report of the Project Planning Committee for 700 University, 4th floor: fit-out for the Department of Statistical Sciences and A&S Professional Masters Hub*, August 23, 2019 (revised September 17, 2019).

Report of the Project Planning Committee for

# University of Toronto
# 700 University, 4th floor: Fit-out for the Department of Statistical Sciences and A&S Professional Masters Hub

August 23, 2019 (revised September 17, 2019)

Office of Campus and Facilities Planning - University Planning, Design and Construction

Faculty of Arts & Science, Infrastructure Planning

## I. Executive Summary

Subleased space from the University Health Network on the 4th floor of 700 University presents an opportunity for the Faculty of Arts & Science to accommodate the rapid growth of two units – the Department of Statistical Sciences, (along with its associated Professional Masters program, the Master of Financial Insurance (MFI)) and the Master of Science in Applied Computing (MscAc).

The changes brought in by the Big Data and Data Science revolutions have had a transformative effect on the Department of Statistical Sciences. For instance, the undergraduate enrollments have increased ten fold in the last 8 years. The Department, supported by Arts & Science (A&S), has been involved in intensive hiring campaigns in the last 4 years. Much more needs to be done in order to rebalance the student to faculty FTE ratio. Given the current enrollments, the St George faculty complement is expected to grow, with similar growth at UTSC and UTM campuses. Part of the faculty hiring strategy has involved a number of joint positions with experimental sciences, e.g., Computer Science, Psychology, Astronomy and Astrophysics.

In 2017, an external review of the Department of Statistical Sciences was conducted. The findings of this report as it relates to space were as follows:

> *"It is clear to the review committee members that space will become the biggest challenge facing the Department. A plan with a three year frame that provides more space for faculty and students is needed."*

The Department of Statistical Sciences had long outgrown its space in Sidney Smith Hall and expanded its footprint in 2016 when leased space became available in the Stewart Building (149 College), thus occupying a second location; however, this was still not enough space.

The Masters of Applied Computing (MScAC) was launched in 2010 by the Department of Computer Science with a vision to train the next generation of talent for research in the information technology space. Since that time the program has grown 10 fold but demand by both students and companies has grown much faster. Today nearly 1,300 students apply for 60 spaces while 350 companies compete for graduates of the program.

This program is unique nationally and internationally as it interweaves the best features of a traditional academic-research MSc degree and a professional masters degree. There is tremendous potential to grow the program and ensuring appropriate physical infrastructure is a key component. A professional integrated space where students, companies, and academic researchers can collaborate is key.

In the global IT race, Toronto has emerged as one of a handful of winners. Sustaining the effort requires a cadre of highly trained personnel. The emergence of research labs in the Toronto IT ecosystem (Uber, GM, Google, Samsung, LG, Thompsons, and others) presents a challenge in ensuring a stream of talent trained in industrial research. The MScAC program is ideally positioned to meet this challenge. To do so will require the program to scale-up quickly and to ensure effective partnership building with local firms.

The move to 700 University will not only allow for the growth of the department but will bring them together in one location. The growth in number and sizes of professional masters programs has prompted

the Faculty to think about creating a Professional Masters hub, which could provide shared amenities and space efficiencies.

Exploration of alternative approaches to the planning of academic spaces; access to natural light-filled spaces to the greatest number of people; and design that supports well-being are guiding principles of this project. This site could serve as a test bed for design that offers a variety of flexible work spaces for occupants to use as their activities shift throughout the day as well as through the academic cycle. The Users' willingness to try something different engenders excitement that the space will be energizing and result in an inspiring workplace for all.

The long-term plan is for these units to be located in the development of the 2011 Master Plan Site C (215 Huron St) as the University's Data Sciences Centre.

On April 22, 2019, CaPS Executive Committee approved Arts & Science to engage consultants to develop the project through the Construction Documents phase. ZAS Architects was retained in June, and the project is currently in the Schematic Design phase. At that time, the CaPS Executive Committee also approved transfer funds from the Faculty of Arts and Science to the Future Major Capital Project Reserves for a period of 1 year to April 30, 2020.

The total project area is 3,084 nasm (5,172 rentable square metres).

**Table of Contents**

## II. Project Background

### a) Membership

Jay Pratt (Committee Chair), Vice-Dean Research and Infrastructure, Faculty of Arts and Science (A&S)
Radu Craiu, Chair, Department of Statistical Sciences
Arvind Gupta, Director, Masters of Science in Applied Computing, (MScAC), Department of Computer Science
Matt Medland, Managing Director, Professional Programs, Department of Computer Science
Minzee Kim, Undergraduate student, Statistical Sciences
Jeffrey Negrea, Graduate student, Statistical Sciences
Chantal Shaib, Professional Masters student, (MScAC)
Kim McLean, Chief Administrative Officer, A&S
Lucy Chung, Director, Infrastructure Planning, A&S
Ron Saporta, Chief Operating Officer, Facilities & Services (F&S)
Gordon Robins, Director, Utilities and Building Operations, F&S
Costas Catsaros, Director, Project Development, University Planning Design & Construction (UPDC)
Laragh Halldorson, Manager, Project Development, UPDC
Sarah Hinves, Senior Planner, Campus and Facilities Planning, UPDC

### b) Terms of Reference

The Project Planning Committee will:

1. Make recommendations for a space program and functional layout for the 4th floor of 700 University.
2. Identify the space program as it relates to existing and approved academic plans for the Department of Statistical Science and the Professional Masters Hub (comprised of the Masters of Financial Insurance, the Masters of Science in Applied Computing and others).
3. Explore new formats of space including (but not limited to) offices, shared offices, and collaborative spaces, and make recommendations to create a forward-thinking space.
4. Demonstrate that the proposed space program is consistent with the Council of Ontario Universities (COU) space standards and University of Toronto space standards.
5. Make recommendations for space that promotes a collaborative environment and a sense of community.
6. Identify all secondary effects and any related costs.
7. Identify all equipment and moveable furnishings necessary to the project and their estimated costs.
8. Identify all data, networking and communications requirements and their related costs.
9. Identify all security, occupational health and safety and accessibility requirements and their related costs.
10. Identify specific sustainability goals and energy efficiency goals for this project. Recommendations for goals that meet academic and operational aspirations should also be cost effective and incorporate proven best practices.
11. Determine a total project cost estimate [TPC] including costs of implementation in phases if required, identified secondary effects, and any requirements for improvements to services and infrastructure upgrades to the site.
12. Identify all sources of funding for capital and operating costs.

## c) Background Information

Subleased space from the University Health Network (UHN) on the 4th floor of 700 University presents an opportunity for the Faculty of Arts & Science to accommodate the rapid growth of two units – the Department of Statistical Sciences, (along with its associated Professional Masters program, the Masters of Financial Insurance (MFI)) and the Masters of Science in Applied Computing (MScAc). The Department of Statistical Sciences had long outgrown its space in Sidney Smith Hall and expanded its footprint in 2016 when leased space became available in the Stewart Building (149 College), thus occupying a second location; however, this was still not enough space. This move to 700 University will not only allow for the growth of the department but will bring them together in one location. The growth in number and sizes of professional masters programs has prompted the Faculty to think about creating a Professional Masters hub which could provide shared amenities and space efficiencies.

The long term plan is for these units to be located in the development of the 2011 Master Plan Site C (215 Huron St) as the University's Data Sciences Centre.

On April 22, 2019, CaPS Executive Committee approved Arts & Science to engage consultants to develop the project through the Construction Documents phase. ZAS Architects was retained in June, and the project is currently in the Schematic Design phase. At that time, the CaPS Executive Committee also approved transfer funds from the Faculty of Arts and Science to the Future Major Capital Project Reserves for a period of 1 year to April 30, 2020.

## d) Existing Space

Table A: Existing Inventory by Building

| Department | Current Inventory (Nasm) |
|---|---|
| **Statistical Sciences, Dept of** | |
| Sidney Smith Hall | 674 |
| Stewart Building | 280 |
| *Total Statistical Sciences* | **954** |
| **MFI: Masters of Financial Insurance** | |
| Stewart Building (MFI) | **221** |
| **MScAC: Master of Science in Applied Computing** | |
| Bahen Centre for Information Technology | **189** |
| **TOTAL** | **1,364** |

Table B: Existing Inventory by Space Category

| Category | Statistical Sciences Existing Inventory (Nasm) | MFI Existing Inventory (Nasm) | MScAC Existing Inventory (Nasm) |
|---|---|---|---|
| 1.0 Classroom Facilities | | 78 | |
| 2.0 Laboratory - Undergraduate | | | |
| 3.0 Research Laboratory Space | | | |
| 4.1 Academic Offices | 515 | | 26 |
| 4.2 Research Office/Project Space | 31 | | |
| 4.3 Graduate Student Offices | 150 | 119 | 143 |
| 4.4 Dept Admin and Support Staff Offices | 144 | 25 | |
| 4.5 Office Support Space | 114 | | 20 |
| 11.0 Informal Study Space | | | |
| Total | **954** | **221** | **189** |

## e) Occupant profile

The COU space standards generate space based on "input measures" - the numbers of faculty, students, staff, etc., applied against "space factors" which indicate the amount of space required by function per input measure.

For the Project Planning Report the "input measures" have been provided by the Arts & Sciences' Financial Services Office, for both the reporting of the 18/19 complement and for projected complements that allow for growth over a five-year period. Although used in developing the preliminary space program, discussions between the Dean's Office and the Departments are to continue and may result in some adjustments.

The assumptions used to determine the five-year projected values were:

1) Changes to the admission plans (re-distribution of intake from Arts to Science), estimated the Total Taught A&S HCEs.
2) Departmental teaching growth/decline rates, estimated the distribution of Total HCEs amongst the planning Departments.
3) Dividing the estimate Departmental HCEs between Tenure/Teaching/Non-Tenure instruction groups
4) For Tenure/Teaching Stream FTE Measurement:
   a) Calculated historical HCE/FTE ratios for each instruction group
   b) Project the required number of FTEs based on estimated Departmental HCE and HCE/FTE ratio
   c) Used the Max (Projected FTE , 2018-19 + Searches).
5) For Non-Appointed Stream FTE Measurement:
   a) Calculated historic HCE/Half-Course Section ratios to determine number of required half-course sections
   b) Projected number of Non-Appointed FTEs using Number of half-course sections * 0.1 FTEs
   c) Non-Appointed FTEs broken down as follows:
      i) Non-Tenure Stream – based on HRIS

ii) Number of Sessional = Non-Appointed FTEs – Non-Tenure Stream FTEs

6) Post-Doc Fellows, Research Associates and Technical Admin Staff increased using Tenure FTE growth
7) FTE Admin Staff increased using Departmental HCE growth
8) MSC and PhD grown using Tenure FTE growth
9) Professional Masters increased using growth plan

Table C: 5 Year Growth Projection

| | Statistical Science | | MFI | | MScAC | |
|---|---|---|---|---|---|---|
| | Profile Current (2018/19) | Profile Projected | Profile Current (2018/19) | Profile Projected | Profile Current (2018/19) | Profile Projected |
| **Academic** | | | | | | |
| Chair/Director | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| FTE Tenure Stream | 15.5 | 20.2 | | | | |
| FTE Teaching Stream | 5.0 | 12.8 | | | | |
| FTE Term Limited/Non Tenure Stream | 1.0 | 1.0 | | | | |
| FTE Approved TBAs - Open&Filled | 5.7 | 0.0 | | | | |
| FTE Sessionals (budgetary) | 1.2 | 1.8 | | | | |
| FTE CANSSI Director | | 1.0 | | | | |
| **TOTAL Academic (FTE)** | **29.4** | **37.8** | **1.0** | **1.0** | **1.0** | **1.0** |
| | | | | | | |
| **Research Appointments** | | | | | | |
| Post Doctoral Fellows (Headcount) | 3.0 | 3.9 | | | | |
| FTE Research Associates | | | | | | |
| **TOTAL Research (HC)** | **3.0** | **3.9** | | | | |
| | | | | | | |
| **Graduate Students** | | | | | | |
| FTE Masters Student | 23.0 | 29.6 | | | | |
| FTE PhD Student | 39.5 | 50.8 | | | | |
| FTE Prof. Masters | | | 15.0 | 30.0 | 148.0 | 300.0 |
| **TOTAL Grad (FTE)** | **62.5** | **80.4** | **15.0** | **30.0** | **148.0** | **300.0** |
| | | | | | | |
| **Admin & Support Staff** | | | | | | |
| FTE Admin & Support Staff | 12.0 | 14.0 | 2.0 | 2.0 | 6.0 | 15.0 |
| FTE CANSSI Admin | | 2.0 | | | | |
| **TOTAL Staff (FTE)** | **12.0** | **16.0** | **2.0** | **2.0** | **6.0** | **15.0** |

## III. Project Description

### a) Vision Statement

Exploration of alternative approaches to the planning of academic spaces; access to natural light-filled spaces to the greatest number of people; and design that supports mental well-being are guiding principles of this project.

This site could serve as a test bed for design that offers a variety of flexible work spaces for occupants to use as their activities shift throughout the day as well as through the academic cycle. The users' willingness to try something different engenders excitement that the space will be energizing and result in an inspiring workplace for all.

The University is currently in the planning stages of a new building on 2011 St. George Campus Master Plan Site C (215 Huron), as the University's Data Sciences Centre. Occupants include the units who will occupy the 4th floor of the Hydro Building; as such, their time in the Hydro Building is expected to be for the intermediate term until the new building is completed. The timeline for Site C is unknown at this time, and is contingent on funding.

## b) Statement of Academic Plan

### Statistical Sciences: The Big Data and Data Science Revolutions

The changes brought in by the Big Data and Data Science revolutions have had a transformative effect on the Department of Statistical Sciences. For instance, the undergraduate enrollments have increased ten times in the last 8 years. The Department, supported by Arts & Science (A&S), has been involved in intensive hiring campaigns in the last 4 years. Much more needs to be done in order to rebalance the student to faculty FTE ratio. Given the current enrollments, the St George faculty complement is expected to grow, with similar growth at UTSC and UTM campuses. Part of the faculty hiring strategy has involved a number of joint positions with experimental sciences, e.g., Computer Science, Psychology, Astronomy and Astrophysics. Faculty require laboratory space that needs to host staff and equipment. Such space is currently unavailable. The pressure on Statistical Sciences space is exacerbated by the fact that, in addition to faculty complement, larger courses require simultaneous expansion of the graduate program at both MSc and PhD levels, limited term teaching and postdoc/visitor capacity. Currently, the Department's faculty is divided unequally in two locations, situated at considerable distance from each other. Further, graduate students' offices are situated away from most of the faculty in the Department. The negative effects on the Department's research and education processes due to this division are enormous and continue to worsen. Currently, the Department of Statistical Sciences is severely lacking common spaces where students and faculty could interact scientifically, where Department-specific activities related to the undergraduate experience or data-centric competitions and alumni events could be organized. The Department has also started an ambitious internship program for undergraduate students. The space requirement includes interview rooms and spaces that can host collaborative industry-academia events.

In 2017, an external review of the Department of Statistical Sciences was conducted. The findings of this report as it relates to space were as follows:

> *"It is clear to the review committee members that space will become the biggest challenge facing the Department. A plan with a three year frame that provides more space for faculty and students is needed."*

### Professional Masters Hub

The Faculty of Arts & Science envisions creating a Professional Masters hub to bring together professional programs at a future development on Site C, the Data Sciences Centre, which is currently in the planning stages. The desired outcome of co-locating the master programs is that there will be synergies between the groups as well as space efficiencies that could be realized as needs are often similar; the co-location also presents an opportunity to share amenities which would otherwise be

duplicated at different sites/buildings. In advance of the realization of the Data Sciences Centre, the Professional Masters Hub will be created at this site to accommodate the Masters of Financial Insurance (MFI) and the Masters of Science in Applied Computing (MScAC).

The type and quality of spaces are similar such as administrative program support spaces, collaborative space, quiet study space, project rooms, interview rooms, event space that would accommodate meetings with industry partners as well as teaching spaces. Course delivery within masters programs is often different from undergraduate teaching from a scheduling perspective; there are more evening classes, seminars and short intensive courses that are held over several days rather than on regular weekly cycles.

**Masters of Financial Insurance (MFI)**

This program aims to address a critical training need in financial insurance (finsurance) and to produce students who will become leaders in the finsurance industry worldwide. Industrialized, and developing, societies are increasingly coping with an aging population. Appropriate financial support for the elderly is a critical component for the wellbeing of the economies of these societies. For example, with many baby-boomers entering retirement in North America managing retirement income becomes an important challenge for the finance and insurance industry as well as for individuals. A multitude of sophisticated finance-insurance hybrid products are being developed to meet the needs of this aging global population. Yet there is very limited supply of graduates who have the required expertise to value, hedge, and manage the combined financial and insurance risks embedded in these products. This program will train students at the interface of finance and insurance and aims to fill the gap in this burgeoning industry demand, an industry that will ultimately have a global scale.

Growth is planned and 10 years hence enrollment in the MFI is expected to be 50 students. This growth is expected to trigger additional demands for space dedicated to activities outside the classroom including internship interviews, alumni events, mini-workshops and collaborative study.

**Masters of Applied Computing (MScAC)**

The Masters of Applied Computing (MScAC) was launched in 2010 by the Department of Computer Science with a vision to train the next generation of talent for research in the information technology space. Since that time the program has grown 10 fold but demand by both students and companies has grown much faster. Today nearly 1300 students apply for 60 spaces while 350 companies compete for graduates of the program.

This program is unique nationally and internationally as it interweaves the best features of a traditional academic-research MSc degree and a professional masters degree. Various “concentrations” within the program create pathways for specialized training in various aspects of IT research. The largest such concentration is in Data Science, offered in partnership with the Department of Statistical Sciences. A concentration in Applied Math in partnership with the Department of Mathematics will launch shortly and additional concentrations are planned with these and other departments.

Envisioned as a hybrid between the traditional academic-research MSc degree and a professional masters, graduates are well placed for private-sector R&D positions while retaining the possibility of continuing to a PhD. Key features of this 16-month cost-recovery program:

- 8 months of breadth graduate courses (aligned with the research Masters)
- 2 specialty business courses (Communications, Entrepreneurship)
- 8 months as a research intern with a partner company

- Research overseen by an academic supervisor and an industrial supervisor

There is tremendous potential to grow the program and ensuring appropriate physical infrastructure is a key component. A professional integrated space where students, companies, and academic researchers can collaborate is key:

- MScAC students across concentrations create natural synergies so as to cross-fertilize ideas and expertise;
- Companies visit regularly to present their challenges and to formulate research plans amenable to students from the MScAC program;
- Faculty, MScAC students, and industry partners collaborate on existing projects and explore new directions;
- Industry focused knowledge exchange activities are a regular feature that draws participants from the broader community;
- Physical proximity to the Fields Institute and Myhal Centre ensure a rich intellectual support network for the program;
- With MaRS, Vector, research hospitals, and a very large cross-section of IT companies close, the MScAC program has many additional opportunities to create synergetic relationships to the benefit of the students in the program.

In the global IT race, Toronto has emerged as one of a handful of winners. Sustaining the effort requires a cadre of highly trained personnel. The emergence of research labs in the Toronto IT ecosystem (Uber, GM, Google, Samsung, LG, Thompsons, and others) presents a challenge in ensuring a stream of talent trained in industrial research. The MScAC program is ideally positioned to meet this challenge. To do so will require the program to scale-up quickly and to ensure effective partnership building with local firms.

The MScAC program is expected to grow to 150 incoming students annually over the next three years. With demand for the program potentially continuing to grow at 30% annually by both perspective students and by companies, the program has room to grow. In part this is seen by the number of departments across the University that are approaching the MScAC program to create partnerships through additional concentrations.

We expect that by 2022 there will be at least six concentrations within the MScAC program:

- General Computer Science stream (MScAC)
- Data Science Concentration (MScAC-DS) in partnership with the Department of Statistical Sciences
- Applied Math Concentration (MScAC-AM) in partnership with the Department of Mathematics
- A Robotics/Advanced Manufacturing Concentration in partnership with the Department of Mechanical and Industrial Engineering
- An Advanced Hardware Concentration in partnership with the Department of Electrical and Computer Engineering
- An AI concentration involving DCS, DoSS, Math. ECE, MIE

As well, MScAC is in the early stages of exploring concentrations in Quantum Information Processing and in Public Health Data. By 2023, MScAC envisions a program with over 4,000 applications and 500 companies that could easily enrol 250 new students annually. It is expected that many MScAC partner companies will be visiting the facilities to collaborate with students and faculty in the program. This will create opportunities to establish wider academic-industry collaborations.

## c) Space Requirements, Program and Functional Plan

Space Requirements

Existing Space Pressures

Recent expansion within the Stewart Building has alleviated some of the space pressure on the Department of Statistical Sciences whose administrative home and majority of space resides in Sidney Smith. However, office space in particular is at a crunch with no new available offices for approved new hires. Temporary arrangements will be made by the A&S Dean's office to accommodate new hires until space becomes available at 700 University.

The MScAC has long been constrained by space occupied within the Department of Computer Science at the Bahen Centre. The existing space is made up of three offices (two academic, one administrative) and a number of hoteling stations for professional masters students. MScAC prefers the model of assigned workstations for masters students, something that cannot be achieved in their current space. Since Computer Science is also constrained for space at Bahen there has been little opportunity to grow into more space and ultimately in program numbers.

Table D: Space Requirements Summary

| Department | Existing | | | 700 University Schematic Design | | |
|---|---|---|---|---|---|---|
| | Inventory (Nasm) | COU Generated (Nasm) | % Inventory to COU | Proposed Space Program (Nasm) | COU Generated Incl Growth (Nasm) | % Space Program to COU |
| Statistical Sciences, Dept of (Research Labs) | | 48 | | 68 | 63 | 107%[1] |
| Statistical Sciences, Dept of (Offices) | 954 | 900 | 106% | 1,139 | 1,167 | 98%[1] |
| Statistical Sciences, Dept of (Student Space) | | 25 | | 232 | 32 | |
| MFI: Master of Financial Insurance (Classroom) | 78 | | | | | |
| MFI: Master of Financial Insurance (Offices) | 144 | 102 | 142% | 173 | 158 | 110%[2] |
| MScAC: Master of Science in Applied Computing (Offices) | 189 | 660 | 29% | 1,090 | 1,365 | 80%[3] |
| Classrooms | | | | 299 | | |
| Shared Common Space | | | | 83 | | |
| Total | **1,365** | **1,736** | **79%** | **3,084** | **2,785** | **111%** |

[1] page 12-13 for a detailed analysis of Statistics, and page 18 for the space program

[2] page 14-15 for a detailed analysis of MFI, and page 19 for the space program

[3] page 15-16 for a detailed analysis of MScAC, and page 19 for the space program

The Departments and programs moving to 700 University are anticipated to be in the leased space for at least 5 years. To reflect this, the space analysis uses projected growth numbers 5 years hence. See assumptions under Space Program.

Department of Statistical Sciences (STATS)

| **Statistical Science** Occupant Profile | Current (2018/19) | Projected | + | Space Requirement |
|---|---|---|---|---|
| **Academic** | | | | |
| Chair/Director | 1.0 | 1.0 | | |
| FTE Tenure Stream | 15.5 | 20.2 | 4.7 | |
| FTE Teaching Stream | 5.0 | 12.8 | 7.8 | |
| FTE Term Limited/Non Tenure Stream | 1.0 | 1.0 | | |
| FTE Approved TBAs - Open&Filled | 5.7 | 0.0 | -5.7 | |
| FTE Sessionals (budgetary) | 1.2 | 1.8 | 0.6 | |
| FTE CANSSI Director | | 1.0 | 1.0 | |
| **TOTAL Academic (FTE)** | **29.4** | **37.8** | **8.4** | Research (3.0) and Office (4.1, 4.5) |
| **Research Appointments** | | | | |
| Post Doctoral Fellows (Headcount) | 3.0 | 3.9 | 0.9 | |
| FTE Research Associates | | | | |
| **TOTAL Research (HC)** | **3.0** | **3.9** | **0.9** | Research (3.0) and Office (4.2, 4.5) |
| **Graduate Students** | | | | |
| FTE Masters Student | 23.0 | 29.6 | 6.6 | |
| FTE PhD Student | 39.5 | 50.8 | 11.3 | |
| FTE Prof. Masters | | | | |
| **TOTAL Grad (FTE)** | **62.5** | **80.4** | **17.9** | Research (3.0), Office (4.3, 4.5) + Student Spaces (11.2) |
| **Admin & Support Staff** | | | | |
| FTE Admin & Support Staff | 12.0 | 14.0 | 2.0 | |
| FTE CANSSI Admin | | 2.0 | 2.0 | |
| **TOTAL Staff (FTE)** | **12.0** | **16.0** | **4.0** | Office (4.4, 4.5) |

Table E i: Detailed Space Requirements Compared to Existing and Space Program (STATS)

| **COU Category** | **Statistical Science Occupant Profile** | **Current** (FTE) | **COU Input Measure** (Nasm) | **COU Generated Space** (Nasm) | **Inventory – Existing Space** (Nasm) | **% I/G** |
|---|---|---|---|---|---|---|
| **3.0** | **Research Labs (Group E)** | **48.25** | **1** | **48.25** | **0** | **NA** |
| 4.1 | Academic Offices | 29.4 | 12 | 352.8 | 515.1 | 146%* |
| 4.2 | Research Offices | 3.0 | 12 | 36 | 31.1 | 86% |
| 4.3 | Graduate Student Offices | 62.5 | 3 | 187.5 | 149.5 | 80% |
| 4.4 | Admin Offices | 12.0 | 12 | 144 | 144.2 | 100% |
| 4.5 | Office Support | NA | 25% of gen. nasm 4.1-4.4 = 720.3 | 180.1 | 114.1 | 63% |

| | | | | | | |
|---|---|---|---|---|---|---|
| **4.0** | **TOTAL Academic Office** | | | **900.4** | **954.0** | **106%*** |
| **11.2** | **Study Space** | **62.5** | **.4** | **25** | **0** | **NA** |
| | **TOTAL Existing (STATS)** | | | **973.9** | **954.0** | **98%** |
| **COU Category** | **Statistical Science Occupant Profile** | **Projected** (FTE) | **COU Input Measure** (Nasm) | **COU Generated Space** (Nasm) | **Proposed – Space Program** (Nasm) | **% P/G** |
| **3.0** | **Research Labs (Group E)** | **63.4** | **1** | **63.4** | **68.0** | **107%** |
| 4.1 | Academic Offices | 37.8 | 12 | 453.6 | 471.0 | 104%* |
| 4.2 | Research Offices | 3.9 | 12 | 46.8 | 50.0 | 107% |
| 4.3 | Graduate Student Offices-A | 50.0 | 3 | 150.0 | 150.0 | |
| 4.3 | Graduate Student Offices-B | 30.4 | 3 | 91.2 | 57.0 | |
| 4.3 | Graduate Student Offices-C | | | | 90.0 | |
| 4.3 | | | | 241.2 | 297.0 | 123%** |
| 4.4 | Admin Offices | 16 | 12 | 192 | 88.0 | 46% |
| 4.5 | Office Support | NA | 25% of gen. nasm 4.1-4.4 = 933.6 | 233.4 | 233.0 | 100% |
| **4.0** | **TOTAL Academic Office** | | | **1,167** | **1,139.0** | **98%** |
| **11.2** | **Study Space** | **80.4** | **.4** | **32.16** | **232.0** | **NA***** |
| | **TOTAL Proposed (STATS)** | | | **1,262.56** | **1,439.0** | **114%** |

* Existing offices in Sidney Smith Hall and the Stewart Building are typically larger than COU benchmark (12 nasm) at 13.9 nasm on average.

Although STATS space in the overall academic office category is similar to existing, the offices at 700 University are planned at 11 nasm or less, smaller than existing offices. Despite this, the office program is 104 % of COU generated space due to the Departmental Chair office size of 18 nasm, and inclusion of shared office space for UTM/UTSC and Visitor faculty who, while requiring space part time, are not included in the FTE count. While the faculty office area decreases from 515 nasm to 471 nasm, the number of offices will increase by nearly 30%.

** Category 4.3 space for STATS includes a mix of 3 nasm workstations for grad students (50 FTE), as is standard, for a total of 150 nasm; hotelling stations for (30.4 FTE) or 57 nasm; and 90 nasm of space for open study space categorised as student office due to its intended use for collaboration between students, faculty and staff.

*** Category 11 Study Space need is difficult to analyze on a project-by-project basis as students have access to spaces across campus. Graduate FTE was used to generate study/lounge space allocation, as building occupants, though undergraduate students will also use this space.

Masters of Financial Insurance (MFI)

| **MFI** Occupant Profile | Current (2018/19) | Projected | + | Space Requirement |
|---|---|---|---|---|
| **Academic** | | | | |
| Chair/Director | 1.0 | 1.0 | | |
| **TOTAL Academic (FTE)** | **1.0** | **1.0** | | Office (4.1, 4.5) |
| **Graduate Students** | | | | |
| FTE Prof. Masters | 15.0 | 30.0 | 15.0 | |
| **TOTAL Grad (FTE)** | **15.0** | **30.0** | **15.0** | Office (4.3, 4.5) + Student Spaces (11.2) |
| **Admin & Support Staff** | | | | |
| FTE Admin & Support Staff | 2.0 | 2.0 | | |
| **TOTAL Staff (FTE)** | **2.0** | **2.0** | | Office (4.4, 4.5) |

Table F ii: Detailed Space Requirements Compared to Existing and Space Program (MFI)

| **COU Category** | **MFI Occupant Profile** | **Current** (FTE) | **COU Input Measure** (Nasm) | **COU Generated Space** (Nasm) | **Inventory – Existing Space** (Nasm) | **% I/G** |
|---|---|---|---|---|---|---|
| **1.0** | **Classrooms** | | | **N/A** | **77.8** | **NA** |
| 4.1 | Academic Offices | 1.0 | 12 | 12.0 | 0 | NA |
| 4.3 | Graduate Student Offices | 15.0 | 3 | 45.0 | 118.8 | 264% |
| 4.4 | Admin Offices | 2.0 | 12 | 24.0 | 24.8 | 103% |
| 4.5 | Office Support | NA | 25% of gen. nasm 4.1-4.4 = 81 | 20.25 | 0 | NA |
| **4.0** | **TOTAL Academic Office** | | | **101.25** | **143.6** | **142%** |
| | **TOTAL Existing (MFI)** | | | | **221.4** | |

| **COU Category** | **MFI Occupant Profile** | **Projected** (FTE) | **COU Input Measure** (Nasm) | **COU Generated Space** (Nasm) | **Proposed – Space Program** (Nasm) | **% P/G** |
|---|---|---|---|---|---|---|
| 4.1 | Academic Offices | 1.0 | 12 | 12.0 | 18.0 | 150% |
| 4.3 | Graduate Student Offices - A | 30.0 | 3 | 90.0 | 90.0 | |
| 4.3 | Graduate Student Offices - B | | | | 52.0 | |
| 4.3 | | | | 90.0 | 142.0 | 158%* |
| 4.4 | Admin Offices | 2.0 | 12 | 24.0 | 13.0 | 54% |
| 4.5 | Office Support | NA | 25% of gen. nasm 4.1-4.4 = 126 | 31.5 | 0 | NA |

| | | | | | | |
|---|---|---|---|---|---|---|
| **4.0** | **TOTAL Academic Office** | | | **157.5** | **173.0** | **110%** |
| | **TOTAL Proposed (MFI)** | | | | **173.0** | |

MFI is a relatively new program and the opportunity to accommodate the program at the Stewart Building has meant that current needs are met. As the program grows, additional space will be required as is reflected in the planning for 700 University.

* A review of Category 4.3 space for MFI demonstrates a reduction in space per student, though still at 158% of COU. To provide clarity, the plan includes 3 nasm workstations for grad students, as is standard, for a total of 90 nasm. It also includes 52 nasm of open study space categorised as student office due to its intended use for collaboration between students, faculty and staff. The 52 nasm area accounts for a portion of the furnished corridor area (10%) along the curved window wall as shown in plan on page 20.

Master of Science in Applied Computing (MScAC)

| **MScAC** Occupant Profile | Current (2018/19) | Projected | + | Space Requirement |
|---|---|---|---|---|
| **Academic** | | | | |
| Chair/Director | 1.0 | 1.0 | | |
| **TOTAL Academic (FTE)** | **1.0** | **1.0** | | Office (4.1, 4.5) |
| | | | | |
| **Graduate Students** | | | | |
| FTE Prof. Masters | 148.0 | 300.0 | 152.0 | |
| **TOTAL Grad (FTE)** | **148.0** | **300.0** | **152.0** | Office (4.3, 4.5) + Student Spaces (11.2) |
| | | | | |
| **Admin & Support Staff** | | | | |
| FTE Admin & Support Staff | 6.0 | 15.0 | 9.0 | |
| **TOTAL Staff (FTE)** | **6.0** | **15.0** | **9.0** | Office (4.4, 4.5) |

Table G iii: Detailed Space Requirements Compared to Existing and Space Program (MScAC)

| **COU Category** | **MScAC Occupant Profile** | **Current** (FTE) | **COU Input Measure** (Nasm) | **COU Generated Space** (Nasm) | **Inventory – Existing Space** (Nasm) | **% I/G** |
|---|---|---|---|---|---|---|
| 4.1 | Academic Offices | 1.0 | 12 | 12.0 | 25.6 | 213% |
| 4.3 | Graduate Student Offices | 148.0 | 3 | 444.0 | 143.0 | 32% |
| 4.4 | Admin Offices | 6.0 | 12 | 72.0 | 20.0 | 28% |
| 4.5 | Office Support | NA | 25% of gen. nasm 4.1-4.4 = 528 | 132 | 0 | NA |
| **4.0** | **TOTAL Academic Office** | | | **660.0** | **188.6** | **29%** |
| | **TOTAL Existing (MScAC)** | | | | **188.6** | |

| COU Category | MScAC Occupant Profile | Projected (FTE) | COU Input Measure (Nasm) | COU Generated Space (Nasm) | Proposed – Space Program (Nasm) | % P/G |
|---|---|---|---|---|---|---|
| 4.1 | Academic Offices | 1.0 | 12 | 12.0 | 18.0 | 150% |
| 4.3 | Graduate Student Offices - A | 150.0 | 3 | 450.0 | 450.0 | |
| 4.3 | Graduate Student Offices - B | 150.0 | 3 | 450.0 | 65.0 | |
| 4.3 | Graduate Student Offices -C | | | | 232.0 | |
| 4.3 | | | | 900.0 | 747.0 | 83%* |
| 4.4 | Admin Offices | 15.0 | 12 | 180.0 | 109.0 | 61% |
| 4.5 | Office Support | NA | 25% of gen. nasm 4.1-4.4 = 1,092 | 273.0 | 216.0 | 79% |
| **4.0** | **TOTAL Academic Office** | | | **1,365.0** | **1,090.0** | **80%** |
| | **TOTAL Proposed (MScAC)** | | | | **1,090.0** | |

* Category 4.3 space for MScAC includes 3 nasm workstations for the first year cohort of grad students (150 FTE), as is standard, for a total of 450 nasm. Second year cohort students (150 FTE) are provided with hotelling stations and lockers, and an allowance is included in the program for future 3 nasm workstations for a total of 65 nasm. The 4.3 space also includes 232 nasm of open study space categorised as student office due to its intended use for collaboration between students, faculty and staff. The 232 nasm area is the furnished corridor area (prorated 90% MScAC/10% MFI) along the curved window wall as shown in plan on page 20.

Space Program

The space program was development using COU analysis as a benchmark, with adjustments made in the following general categories:

- Typical offices are planned at less than 11 nasm. As the design is in process, 11 nasm is indicated in the program for each department, but it is anticipated the design will result in smaller offices (10 to 10.5 nasm) provided small meetings can comfortably be accommodated. Innovation is also demonstrated by this project by locating all faculty offices inboard*. Further, the future 17th floor project will include even smaller offices, at 9 nasm. For reference, current University of Toronto practice is 11 nasm, though many existing offices are 12 nasm or greater.
- 20% allowance was added to academic offices allocation to provide for UTM/UTSC, Joint-Appointed, Visitors and Emeriti offices
- Director and Chair's offices planned at 18 nasm
- Researchers typically share office space at 2 per 11 nasm office. The proposed program includes Project Rooms with an allocation of 5 nasm per FTE.

* See Proposed Layout on page 20 demonstrating priority of student open study, lounge and collaborative work space.

Table H: Summary of Space Program

| **Departmental/Program Space** | **STATS** (Nasm) | **MFI** (Nasm) | **MScAC** (Nasm) | **Shared** (Nasm) | **TOTAL** (Nasm) |
|---|---|---|---|---|---|
| 3.0 Research Laboratories | 68 | | | | **68** |
| 4.1 Academic Offices | 471 | 18 | 18 | | **507** |
| 4.2 Research Offices | 50 | | | | **50** |
| 4.3 Graduate Student Space | 297 | 142 | 747 | | **1,186** |
| 4.4 Non Academic Offices | 88 | 13 | 109 | | **210** |
| 4.5 Office Support | 233 | | 216 | | **449** |
| 11.0 Formal/Informal Study Space | 232 | | | | **232** |
| **Shared Amenities** | | | | | |
| Classroom Facilities | | | | 299 | **299** |
| Shared Common Space (Central Gathering Space) | | | | 83 | **83** |
| **TOTAL PROPOSED SPACE PROGRAM** | **1,439** | **173** | **1,090** | **382** | **3,084** |

The total project area is 3,084 nasm (5,172 rentable square metres) and 5,222 gsm (a gross up factor of 1.7).

Student Space

The perimeter of the floor plate, along the windows, will be designed to serve as student lounge, informal study, and work spaces. A variety of furniture will accommodate different work styles as well as types of work including space for small impromptu group discussions. Access to power will be important for charging devices.

Professional Masters and Grad Workstations

A variety of workstation groupings is desired and this could be provided by way of furniture solutions to enclosed group rooms. Groupings of 8 and 20 are considered ideal. For the Department of Statistical Sciences, there is a need to differentiate between PhD grad workstations and MSc grad workstations.

Shared Spaces

Shared spaces will be provided across the spectrum of needs, they include classrooms, meeting rooms, common space, work rooms, project room, interview rooms etc. Interview rooms accommodate one on one meetings with industry partners and/or provide a space for focused work. A larger variety of shared flexible meeting rooms and classrooms will be located in the inner tier of the floor plate. Shared classrooms will be strategically located in close proximity to the elevator bays allowing for teaching, hosting industry events and guest speakers. To achieve usage efficiencies and encourage collaboration, shared amenities such as the common space which would be used on a day-to-day basis for all as a lunch and lounge area; a place to gather or to showcase events. This would be an ideal spot for the groups to come together. STATS and MScAC has agreed to share all meeting rooms and classrooms on a 50-50

basis. The Department of Statistical Sciences and the MScAC program agree that a memorandum of understanding (MOU) should be put in place outlining how shared space would be booked and used.

Table I: Proposed Shared Amenities (additional):

| **Shared Amenities** | | | |
|---|---|---|---|
| | Qty | Nasm | Total |
| Classroom Facilities (Lecture Style) | 1 | 145 | 145 |
| Classroom Facilities (Active Learning) | 1 | 126 | 126 |
| Classroom Furniture Storage | 1 | 28 | 28 |
| Office Support Space - Shared Common Space | 1 | 83 | 83 |
| **Shared Amenities Total Nasms:** | | | **382** |
| Note: Other shared space is identified in within departments/programs (% proration shown) | | | |

Table H: Proposed Area (nasm) for Statistical Sciences (STATs) by COU Category

**Statistical Sciences**

| COU | Space Category | Qty | Nasm | Total | Notes |
|---|---|---|---|---|---|
| 3.0 | Research Laboratory Space | 1 | 68 | 68 | |
| 4.1 | Department Chair Office | 1 | 18 | 18 | |
| 4.1 | Academic Offices | 35 | 11 | 385 | |
| 4.1 | Shared UTM/ UTSC Offices | 10 | 5.5 | 55 | 2/office |
| 4.1 | CANSSI office | 1 | 13 | 13 | |
| 4.2 | Shared Research/Project Office | 10 | 5 | 50 | Post Docs |
| 4.3 | Graduate Student workstations | 69 | 3 | 207 | |
| 4.3 | Graduate Open Study Space | | | 90 | Future graduate student workstations |
| 4.4 | Dept. Admin/ Sup Staff Office | 2 | 11 | 22 | |
| 4.4 | Dept. Admin/ Sup Staff Off Workstations | 12 | 5.5 | 66 | |
| 4.5 | Kitchen | 1 | 16 | 16 | Copy + Servery Shared with MFI |
| 4.5 | CANSSI Workstation | 2 | 5.5 | 11 | |
| 4.5 | Casual Workstation | 2 | 3 | 6 | |
| 4.5 | Reception | | | 13 | |
| 4.5 | Meeting Rooms / Breakout Space | | | 187 | 50% STATS |
| 11.2 | Informal Study Space | | | 232 | |
| | **TOTAL Proposed (STATS)** | | | **1,439** | **nasm** |

Table I: Proposed Area (nasm) for Masters of Financial Insurance (MFI) by COU Category

**Master of Financial Insurance (MFI)**

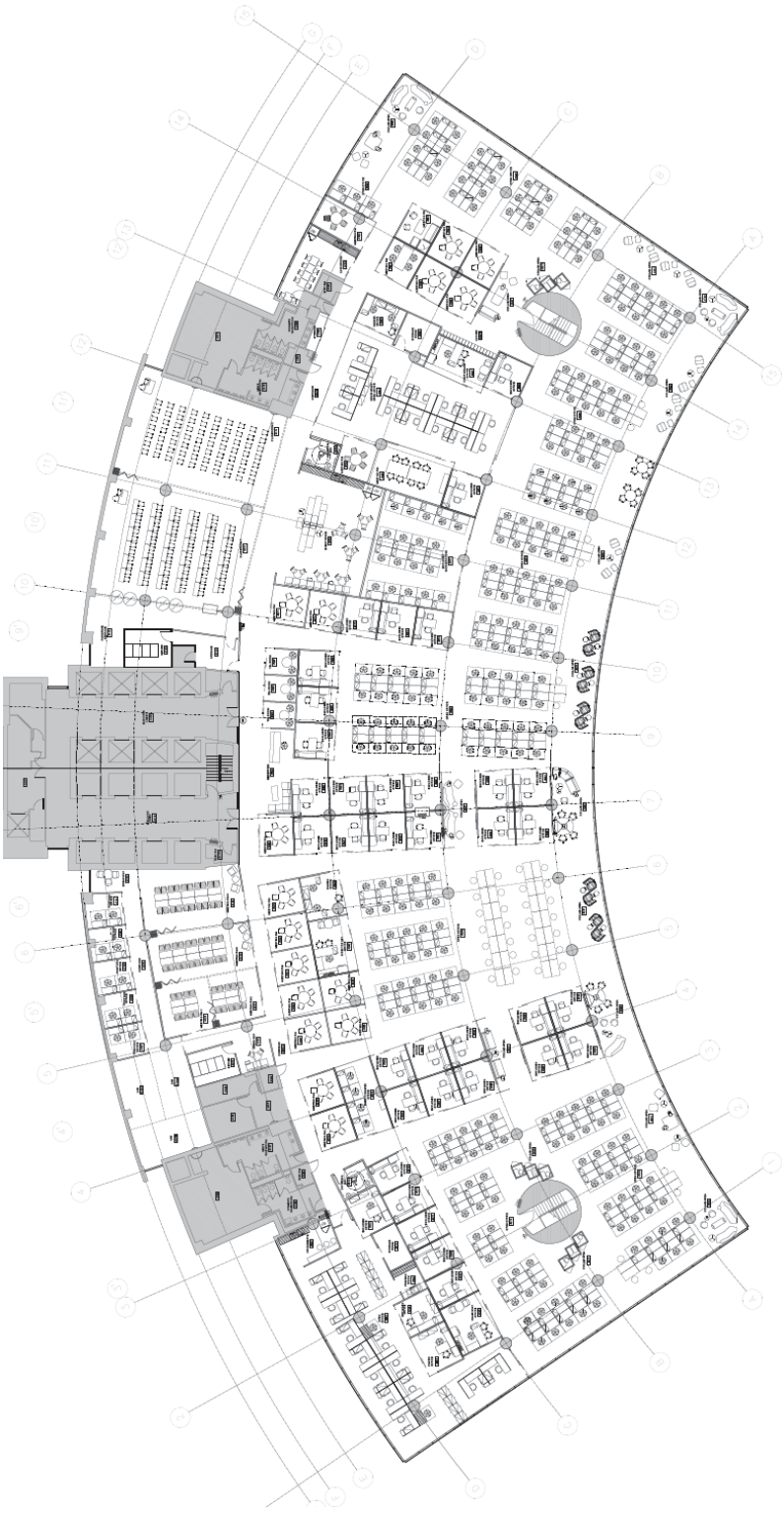
| COU | Space Category | Qty | Nasm | Total | Notes |
|---|---|---|---|---|---|
| 4.1 | Academic Offices | 1 | 18 | 18 | Director |
| 4.3 | Prof. Master Workstations | 30 | 3 | 90 | Assigned workstation |
| 4.3 | Prof. Masters Open Study Space | | | 52 | 10% MFI |
| 4.4 | Dept. Admin/ Sup Staff Off Workstations | 2 | 6.5 | 13 | |
| | **TOTAL Proposed (MFI)** | | | **173** | **nasm** |

Table J: Proposed Area (nasm) for MSc Applied Computing (MScAC) by COU Category

**Master of Science in Applied Computing**

| COU | Space Category | Qty | Nasm | Total | Notes |
|---|---|---|---|---|---|
| 4.1 | Academic Offices | 1 | 18 | 18 | |
| 4.3 | Prof. Masters Workstations | 150 | 3 | 450 | 1st Year Cohort |
| 4.3 | Prof. Masters Workstations (future) | 6 | 3 | 18 | Future graduate student workstations |
| 4.3 | Prof. Masters Hoteling Workstation | 13 | 3 | 39 | 2nd Year Cohort |
| 4.3 | Prof. Masters Lockers | 40 | 0.2 | 8 | 2nd Year Cohort |
| 4.3 | Prof. Masters Open Study Space | | | 232 | 90% MScAC |
| 4.4 | Dept. Admin/ Sup Staff Off | 2 | 11 | 22 | |
| 4.4 | Dept. Admin/ Sup Staff Off Shared | 1 | 15 | 15 | |
| 4.4 | Dept. Admin/ Sup Staff Workstation | 13 | 5.5 | 72 | |
| 4.5 | Reception | | | 13 | |
| 4.5 | Storage | | | 16 | |
| 4.5 | Support Space / Servery | 1 | 23 | 23 | |
| 4.5 | Meeting Rooms / Breakout Space | | | 164 | 50% MScAC |
| | **TOTAL Proposed (MScAC)** | | | **1,090** | **nasm** |

Proposed Layout



## d) Building Considerations

700 University is also known as the Ontario Power Generation Building or Ontario Hydro Building. It was built in 1975 and located at the intersection of University Avenue and College Street. Its distinctive modernism style with large floor plates is comprised of 19 floors.

The 4th floor provides 55,668 square feet or 5,222 square metres of rentable space in base building condition. With a deep floor plate the planning will be undertaken in such a way as to ensure natural light and views are shared by all in order to provide a healthy place to work, teach & learn. To this end, all faculty and staff offices are placed inboard on the floorplate.

The following is an excerpt from the lease:

Environmental Matters. The Sublandlord will provide to the Subtenant any material related to environmental matters which have been provided to it by the Landlord. Such materials will include any asbestos management report or asbestos survey that may have been delivered to the Sublandlord by the Landlord.

Sustainability and Energy Efficiency

The following is an excerpt from the Tenant Manual, under Environmental Programs:

700 University Avenue will be working towards completing the necessary steps to achieve BOMA BEST status. In order to succeed in obtaining the various levels, we are actively looking for ways to improve the building's management of the following:

- *Energy: consumption, features, management and transportation*
- *Water: water efficiency*
- *Resources: waste reduction and recycling*
- *Emissions, effluents and other Impacts: air emissions, ozone depletion, water effluents, hazardous materials, hazardous products, health and safety, and the Workplace Hazardous Materials Information System (WHMIS)*
- *Indoor environment: indoor air, lighting and noise*
- *Environmental Management: Environmental Management Systems (EMS) documentation, purchasing policy, emergency response and tenant awareness*

BOMA BEST is designed to encourage sustainable best practices throughout our industry. It also empowers company-wide participation in the process and simultaneously works to educate everyone involved. Triovest is proud to be recognized for our efforts within the building and continues to develop action plans for future savings on resource consumption and waste reduction.

Accessibility

Interior public spaces (i.e. service counters, fixed queuing guides, and waiting areas), must comply with Part IV.1, Design of Public Spaces Standards (Accessibility Standards for the Built Environment, Integrated Accessibility Standards of the Integrated Accessibility Standards, O.Reg. 191/11, http://aoda.hrandequity.utoronto.ca/buildings/). For additional information contact the University of Toronto's AODA Office. http://aoda.hrandequity.utoronto.ca/

As part of the sublease agreement, the University of Toronto has agreed to install two (2) universal washrooms compliant with the Accessibility for Ontario with Disabilities Act (AODA) and the Ontario Building Code, per section 13 of the lease agreement.

Personal safety and security

Personal safety must be taken into consideration in the design of the space. Transparency on the floor and public areas, including stairwells, is desirable, inserting glazing where possible to allow for visual access, mirrors for hidden corners and security camera should be considered if the space is not going to be on 24 hour FOB access; undergrads would be coming to the space to meet with faculty and the entrance(s) to the space would be unlocked during regular office hours. The building has CCTV cameras. The project team will need to determine if the security cameras should be tied to the building or to Campus Police.

With regards to mirrors, the recommendation is that once the space is complete. An assessment needs to be done to determine where the mirrors would be best situated.

It is anticipated that outside normal U of T hours, electronic access is to be provided for all perimeter exterior doors, office areas, and elevator(s), and staircases.

The following is an excerpt from the Tenant Manual (Building Security Systems:

Triovest is committed to providing our tenants with a safe and secure work environment in which to conduct their business. At 700 University Avenue, we have a range of security equipment in place to ensure the safety of all building occupants at all times. This includes our building card-access control system, CCTV cameras with video backup on the ground and lower building levels, glass break detectors on the ground floor perimeter and our security personnel.

The building offers 24/7 security service. During regular business hours, guards are available to the ID Office, concierge and various building patrols and response procedures.

Our building is open to the public from 7:00am – 6:30pm daily. After-hours access is restricted to those holding a building access security card only. Building access is to be arranged only by authorized tenant representatives. We request that any staffing changes be communicated so that we may activate or deactivate security cards as required. All **deactivated** cards can be dropped off at the main security desk in the lobby, or at the ID/ Access Office in the lobby.

All after-hours visitors to the building must contact the tenant's employee they are visiting, and the employee is to escort the visitor from the front door of the building.

Signage

Interior signage will be a required element of the detailed project design to appropriately integrate all new programmable areas into the existing signage program of the building. Signage will also need to be considered in the building lobby to provide the University of Toronto with a presence at 700 University Ave.

Non-assignable space

Included in the building project are non-assignable elements that are not specifically described in the Space Program, but will be part of the architect's responsibility for design.
Non-assignable spaces include

- Corridors, and public circulation space
- Elevator lobby
- Data & communication closets
- Mechanical and Electrical rooms
- Janitor's closet
- Washrooms: The provision of public washrooms must meet exceed minimum code requirements and should also include an accessible stall, sink, and mirror in gendered washrooms and in separate universal washrooms. Universal washrooms must comply with current AODA standards.

Networking and Data

Connection to the University Backbone will be required.

**General Requirements**

Three networking closets will be provided. One departmental network rack and one institutional network rack (ITS, Lock Shop etc.) will be required in each room.

UPS required, minimum runtime 30min.

**Network Requirements (to be confirmed by consultants)**

12 Cat6A copper drops to each of the floor wiring closets, in rack-mounted patch panel.
12 SM fibre strands (6 fibre pairs), LC connector, to each of the floor wiring closets, in rack-mounted patch panel.

**Cooling Requirements**

Sufficient cooling will be required based on the heat load of the equipment in the room.

**Security Requirements**

Secure door with suitable controlled access for authorized technical staff only.

## e) Other Considerations

The following sections of the document "**Triovest, 700 University Tenant Manual, August 2018**" provides key information related to construction:

- "Tenant Construction Overview"
- "GENERAL CONTRACTOR CONSTRUCTION REGULATIONS"

## f) Secondary Effects

- Impact on Other Occupants in Building

Refer to relevant section of the document "**Triovest, 700 University Tenant Manual, August 2018**"

- Coordination with other renovation projects in building

> Bridge Connection. The Sublandlord shall have the ongoing right but not the obligation, throughout the Sublease Term, to construct a covered bridge (the "**Bridge**") from the elevator lobby of the 4th floor of the Building, to Princess Margaret Hospital for the
>
> exclusive use of the Sublandlord's staff and visitors. The Bridge shall not encroach upon the Premises and the Sublandlord agrees to use reasonable commercial efforts to minimize disruption to the Subtenant's business during the construction of the Bridge.

- Reallocation of Vacated Space

The space vacated as tabulated below will remain within the Faculty and be reallocated to address other pressing space needs. There are no costs included in this project in connection to the reallocation.

Table K: Vacated Space

| Building | NASM |
|---|---|
| Sidney Smith Hall | 674 |
| Bahen Centre for Information Technology | 189 |
| Stewart Building | 501 |
| Total | **1,364** |

### g) Schedule

| | |
|---|---|
| Project Approval (Interim) | April 2019 |
| Consultant Selection/ Award | May – June 2019 |
| Schematic Design | July – September 2019 |
| CaPS Executive - Cycle 1 (full governance) | August – November 2019 |
| Design Development | September – October 2019 |
| Construction Documents | November 2019 – January 2020 |
| Tender and Award | February – March 2020 |
| Construction Start | April 2020 |
| Occupancy | Fall 2020 |

## IV. Resource Implications

### a) Total Project Cost Estimate

The total estimated cost for the project includes estimates or allowances for:

- construction costs
- contingencies
- taxes
- secondary effects
- demolition
- hazardous waste removal
- permits and insurance
- Professional fees, architect, engineer, misc. consultants, project management
- computer and telephone terminations
- moving
- furniture and equipment
- miscellaneous costs [signage, security, other]
- commissioning
- escalation

### b) Operating Costs

Operating costs will be paid for by the Faculty of Arts & Science and refined estimates will be developed through the remainder of the design process.

## c) Funding Sources

The Total Project Cost will be funded through the Faculty of Arts and Science Future Major Capital Project Reserves.

## APPENDICES

### Appendix 1: Existing Space Inventory

Statistical Sciences Existing Space Inventory

| Cat ID | Category Name | Net Area (NASM) |
|---|---|---|
| 4.1 | Academic Offices | 515.14 |
| 4.2 | Research Office/Project Space | 31.11 |
| 4.3 | Graduate Student Office | 149.52 |
| 4.4 | Departmental Support Staff Office | 144.18 |
| 4.5 | Office Support Space | 114.09 |
| | | **954.04** |

Statistics is located primarily at Sidney Smith Hall with 30% of the departmental space at Stewart Building.

MFI Existing Space Inventory

| Cat ID | Category Name | Net Area (NASM) |
|---|---|---|
| 1.2 | Non-Tiered Classrooms | 77.84 |
| 4.3 | Graduate Student Office | 118.80 |
| 4.4 | Departmental Support Staff Office | 24.78 |
| | | **221.42** |

MFI is located at the Stewart Building. The program space includes a classroom, three graduate student rooms with assigned desks and two support staff offices. The director of MFI does not currently have an office outside of the Statistical Sciences department.

MScAC Existing Space Inventory

| Cat ID | Category Name | Net Area (NASM) |
|---|---|---|
| 4.1 | Academic Offices (MScAC) | 25.62 |
| 4.3 | Graduate Student Office (MScAC) | 143.31 |
| 4.4 | Departmental Support Staff Office | 19.68 |
| | | **188.61** |

MScAC space is located within the Department of Computer Science inventory. Currently, there are two academic offices and one support staff office and graduate student hoteling stations.

## Appendix II: Room Data Sheets (on request)

Room Data Sheets: STATISTICAL SCIENCES

STATs – 2.0-01: Statistical Science Learning Center
STATs – 3.1-01: Research Dry Lab Common Space
STATs - 3.1-02: Research Dry Lab Office Space
STATs - 4.1-01: Office Academic Private Chair
STATs – 4.1-02: Office Academic Private
STATs – 4.1-03: Office Academic Shared
STATs – 4.1-04: Office Academic Shared Emeriti Office
STATs – 4.3-01: Office Graduate Assigned Workstation
STATs – 4.4-01: Office Admin Private
STATs – 4.4-02: Office Admin Workstation
STATs – 4.4-03: Office Casual Workstation
STATs – 4.5-03: Kitchenette
STATs - 4.5-04: Storage Copy Room
STATs – 14.3-01: Student Lounge

Room Data Sheets: MASTER OF FINANCIAL INSURANCE

MFI – 4.1-01: Office Academic Private Director
MFI – 4.3-01: Office Graduate Assigned Workstation
MFI – 4.4-03: Office Admin Workstation

Room Data Sheet: MSc of APPLIED COMPUTING

MScAC – 4.1-01: Office Academic Private Director
MScAC – 4.3-01: Office Graduate Assigned Workstation
MScAC – 4.3-03: Office Graduate Shared Workstation
MScAC – 4.4-01: Office Admin Private
MScAC – 4.4-02: Office Admin Workstation
MScAC – 4.4-03: Office Casual Workstation
MScAC – 4.5-03: Kitchenette
MScAC – 4.5-04: Storage Copy Room

Room Data Sheets: SHARED SPACES

SHARED – 1.2-01: Classroom Lg
SHARED – 1.2-02: Classroom Sm
SHARED – 4.5-01: Reception Waiting
SHARED – 4.5-02: Shared Common Space
SHARED – 4.5-03: Kitchenette
SHARED – 4.5-04: Storage IT Room
SHARED – 4.5-05: Meeting Room Lg
SHARED – 4.5-06: Meeting Room Med
SHARED – 4.5-07: Meeting Room Sm
SHARED – 4.5-08: IT Service Closet
SHARED – 4.5-09: AV/IT Support
SHARED – 14.3-01: MScAC /MFI Student Lounge

**Appendix III: Triovest, 700 University Tenant Manual, August 2018 (on request)**