UNIVERSITY OF TORONTO SCARBOROUGH

50 YEARS | GOVERNING COUNCIL

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

TO: UTSC Campus Council

SPONSOR: Professor Scott Mabury, Vice President, Operations and Real Estate Partnerships

CONTACT INFO: 416-978-2031, scott.mabury@utoronto.ca

PRESENTER: Andrew Arifuzzaman, Chief Administrative Officer, UTSC
CONTACT INFO: 416-287-7108, andrew.arifuzzaman@utoronto.ca

DATE: January 18, 2023 for January 25, 2023

AGENDA ITEM: 3

ITEM IDENTIFICATION:

Capital Project: *Report of the Project Planning Committee for the Scarborough Academy of Medicine and Integrated Health (SAMIH) at the University of Toronto Scarborough (UTSC) dated November 17, 2022* – **Project Scope and Sources of Funding**

JURISDICTIONAL INFORMATION:

Pursuant to section 5.6.2. of the Campus Affairs Committee's Terms of Reference, "…the Committee considers reports of project planning committees for UTSC capital projects and recommends to the UTSC Campus Council approval in principle of projects (i.e., site, space plan, overall cost and sources of funds) with a capital cost as specified in the "*Policy on Capital Planning and Capital Projects*."

The Policy on Capital Planning and Capital Projects provides that capital projects with costs in excess of $50 million (Approval Level 3), will first be considered by the UTSC Campus Affairs Committee and the UTSC Campus Council, which shall recommend approval to Academic Board. Following consideration and approval by the Academic Board and Business Board, such proposals are then brought forward to the Executive Committee, and then forwarded to the Governing Council. [Section 3(b)(ii)(1)(b)] The Policy further states that "any financing will be approved by the Business Board". [Section 3(c)]

GOVERNANCE PATH:

A. Project Planning Report, Total Project Cost, and Sources of Funding

1. UTSC Campus Affairs Committee [for recommendation] (January 11, 2023)
2. **UTSC Campus Council [for recommendation] (January 25, 2023)**
3. Academic Board [for recommendation] (January 26, 2023)
4. Business Board [financing, for approval] (February 1, 2023)
5. Executive Committee [for endorsement and forwarding] (February 7, 2023)
6. Governing Council [for approval] (February 15, 2023)

B. Execution of the Project:

1. Business Board [for approval] (February 1, 2023)

PREVIOUS ACTION TAKEN:

On June 8th, 2020, the Terms of Reference for the Scarborough Academy of Medicine and Integrated Health (SAMIH), to be located at the UTSC Campus, was approved. A project planning committee was struck, and meetings occurred in 2020-2021 producing an Interim Project Planning Report.

At the meeting held on September 22, 2022, the Capital Project and Space Allocation Executive Committee (CaPS Executive) approved the request of the amount of $1,374,441 to support the RFP process in soliciting a potential Design Build award of contract.

The project is now being taken into governance for both the approval of the project and full project funding.

HIGHLIGHTS:

The University of Toronto plans to construct the Scarborough Academy of Medicine and Integrated Health (SAMIH) at the University of Toronto Scarborough (UTSC). SAMIH will be a collaboration between UTSC, the Temerty Faculty of Medicine, the Lawrence S. Bloomberg Faculty of Nursing, and the Leslie Dan Faculty of Pharmacy. It will serve as a hub for undergraduate health education and health professional training. At full capacity, the Scarborough Academy of Medicine and Integrated Health will prepare the following number of graduates on an annual basis:

- Up to 50 physicians (Long term – 30 physicians in near term)
- 30 physician assistants
- 30 nurse practitioners
- 40 physical therapists
- 300 life sciences students

In addition to internal partners, SAMIH will be supported through a partnership with The Scarborough Health Network, Lakeridge Health, Sunnybrook Health Sciences Centre, Ontario Shores Centre for Mental Health Science and Michael Garron Hospital. Community-based agencies and health care facilities such as Family Health Teams and Community Health Centres will also be important collaborators.

In keeping with UTSC's mission imperatives, SAMIH will foster an integrated health sciences learning and research approach with health-related faculty and departments at UTSC. The SAMIH project will house the Department of Health and Society; include fMRI facilities and an EEG Laboratory for the Clinical Psychology program; and establish a multi-disciplinary public-facing teaching clinic for the Leslie Dan Faculty of Pharmacy, The Bloomberg Faculty of Nursing Nurse Practitioner Program, and the Department of Clinical Psychology.

The lands South of the Toronto Pan American Sports Centre on the North Campus have been identified for this project site. Situated at the intersection of Military Trail and Morningside Avenue, SAMIH will be an important academic and physical anchor for UTSC within the North Campus master plan. With a space program of 5,401 nasm generating a building gross floor area of 10,802 sm, over 6 stories, SAMIH will leverage its public face and a strong public presence to become a gateway for higher education and community engagement.

The new SAMIH Building will be the third significant development to take place along the new Military Trail realignment and will require the completion of a section of the roadway from Morningside Drive to Pan-Am Drive.

In March 2022, the Ontario Provincial Government announcing funding for 30 new Medical Doctor undergraduate seats and 45 new post-graduate seats at the UTSC campus to be in effect in 2025 and 2027 respectively.

In April 2022, the Interim Project Planning Report was finalized by the Project Planning Committee and a Total Project Cost and project schedule was developed by University of Toronto UPDC - Project Development. UTSC initiated the municipal approvals process with the City of Toronto to support the project milestone schedule. Official Plan Amendment and Rezoning incomplete applications was submitted to the City in mid-May 2022 to 'reserve' space on the June 2022 Community Council Staff Report.

The site for the SAMIH is currently within the existing Toronto Pan-Am Sports Centre (TPASC) zoned lands. UTSC began process for the amendments of existing agreements between the City of Toronto and UTSC established with the TPASC Corporation. Additional amendments to Ministry of Environment Compliance Approval (ECA) Part V and Certificate of Property Use (CPU) were initiated by UTSC in April 2022.

The SAMIH project was issued for Design Builder Team RFSQ in May 2022. Through and RFP process a selected short list of Design Build Teams were invited in October 2022 to provide designs and tender bids for the SAMIH project in March of 2023. Design Review Committee will be scheduled with the Design Bid proposal selection.

The selected Design Build Team will complete the Official Plan Amendment and Rezoning applications and provide a Site Plan Approval Application to the City of Toronto for the SAMIH project.

Project costing was completed by UPDC – Project Development to develop a Total Project Cost (TPC) for the SAMIH project report in September of 2021. A re-costing for the development of a final TPC was completed by Project Development in March 2022. In September 2022, an updated costing report was obtained by Project Development and an updated TPC based on the most current costing report is included with this application to Cycle 3 governance for full project approval.

The anticipated start of construction is October 2023 with the new SAMIH Building projected to be completed and ready for occupancy by the end of August 2026. This challenging schedule will employ a design-build project delivery methodology.

Schedule
The proposed schedule for the project is as follows:

- Preliminary Costing — September 2021
- Updated Costing (Updated TPC) — March 2022
- Preliminary OPA, Rezoning Application — May 2022
- Issue Design Build RFSQ — May 2022
- Updated Costing (Updated TPC) — August 2022
- CaPS Executive Approval (Cycle 2 RFP Costs) — September 2022
- CaPS Executive Approval (Cycle 3 Full Costs) — November 2022
- Community Council Meeting — June 14 2022
- Issue Design Build RFP — October 2022
- Governing Council Approval (Cycle 3) — February 2023
- Design Build Contract Award — March 2023
- Construction – Interim Parking Lot — August – September 2023
- Building Permit Applications (Sequential) — June –December 2023
- Anticipated OPA/Rezoning Approval — November 2023
- Anticipated Site Plan Approval (NOAC) — December 2023
- Construction — October 2023 – June 2026
- Fit-out/Commissioning/Move-In — June – August 2026
- Project Completion — August 2026

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 Recommended:

THAT the project scope of the *Scarborough Academy of Medicine and Integrated Health (SAMIH)* as identified in the *Report of the Project Planning Committee for the Scarborough Academy of Medicine and Integrated Health (SAMIH) at the University of Toronto Scarborough (UTSC),* dated November 17, 2022, be approved in principle; and,

THAT the project totaling 10,801.5 gross square metres (gsm), be approved in principle, to be funded through: the UTSC Infrastructure Fund; Lawrence S. Bloomberg Faculty of Nursing, Temerty Faculty of Medicine, Provostial Funding Sources, Donor and UTSC Financing.

DOCUMENTATION PROVIDED:

- *Report of the Project Planning Committee for the Scarborough Academy of Medicine and Integrated Health (SAMIH) at the University of Toronto Scarborough (UTSC*) dated *November 17, 2022.*

Report of the Project Planning Committee for

The Scarborough Academy of Medicine and Integrated Health at the University of Toronto Scarborough Campus (UTSC)

November 17, 2022

(Image by OOEE Studio)

I. Executive Summary

The University of Toronto plans to construct the Scarborough Academy of Medicine and Integrated Health (SAMIH) at the University of Toronto Scarborough (UTSC). SAMIH will be a collaboration between UTSC, the Temerty Faculty of Medicine, the Lawrence S. Bloomberg Faculty of Nursing, and the Leslie Dan Faculty of Pharmacy. It will serve as a hub for undergraduate health education and health professional training. At full capacity, the Scarborough Academy of Medicine and Integrated Health will prepare the following number of graduates on an annual basis:

- Up to 50 physicians
- 30 physician assistants
- 30 nurse practitioners
- 40 physical therapists
- 300 life sciences students

In addition to internal partners, SAMIH will be supported through a partnership with The Scarborough Health Network, Lakeridge Health, Ontario Shores Centre for Mental Health Sciences and Michael Garron Hospital. Community-based agencies and health care facilities such as Family Health Teams and Community Health Centres will also be important collaborators.

In keeping with UTSC's four mission imperatives, SAMIH will foster an integrated health sciences learning and research approach with health-related faculty and departments at UTSC. In addition to the physician related training program elements, the SAMIH project will house the Department of Health and Society; include fMRI facilities and an EEG Laboratory for the Clinical Psychology program; and establish a multi-disciplinary public-facing teaching clinic for the Leslie Dan Fauclty of Pharmacy, The Bloomberg Faculty of Nursing Nurse Practitioner Program, and the Department of Clinical Psychology.

The lands South of the Toronto Pan American Sports Centre on the North Campus has been identified for this project site. Situated at the intersection of Military Trail and Morningside Avenue, SAMIH will be an important academic and physical anchor for UTSC within the North Campus master plan. With a space program of 5,401 nasm generating a building gross floor area of 10,802 sm, over 6 stories + Penthouse, SAMIH will leverage its public face and a strong public presence to become a gateway for higher education and community engagement.

The new SAMIH Building will be the third significant development to take place along the new Military Trail realignment and will require the completion of a section of the roadway from Morningside Avenue to Pan-Am Drive.

The new SAMIH Building is projected to be completed and ready for occupancy August 2026. This challenging schedule will employ a design-build project delivery methodology.

Table of Contents

Project Background

a) Membership

Andrew Arifuzzaman, CAO, University of Toronto Scarborough (UTSC) (Chair)
Marcus Law, Associate Dean, MD Program, Temerty Faculty of Medicine (Temerty Medicine)
Lynn Wilson, Vice Dean, Clinical and Faculty Affairs, Temerty Medicine
Gina John, Director, Operations MD Program, Temerty Medicine
Liam Mitchell, Senior Project Manager, Strategic Initiatives, Office of the Dean, Temerty Medicine
Sharon Switzer-McIntyre, Program Director & Associate Professor, Physical Therapy, Temerty Medicine
Leslie Nickell, Medical Director, Physician Assistant Program, Temerty Medicine
Linda Johnston, Dean and Professor, Lawrence S. Bloomberg Faculty of Nursing
Katherine Trip, Assistant Professor, Coordinator, MN Program, Lawrence S. Bloomberg Faculty of Nursing
Bernie Kraatz, Professor, Department of Physical & Environmental Sciences (former Vice Principal Research), UTSC
Irena Creed, Vice Principal Research & Innovation, UTSC
Bill Gough, Vice Principal Academic & Dean, UTSC
Mary Silcox, Vice-Dean Graduate and Postdoctoral Studies, UTSC
Joanne Nash, Associate Professor, Biological Sciences, UTSC
Jessica Fields, Vice-Dean, Faculty Affairs, Equity & Success, Professor, Department of Health and Society, UTSC
Michelle Silver, Associate Professor, Chair, Health and Society, UTSC
Suzanne Erb Associate Professor & Chair, Department of Psychology, UTSC
Vina Goghari, Professor, Clinical Psychological Science, UTSC
Anthony Ruocco Professor, Interim Graduate Chair and Director of Clinical Training, Clinical Psychological Science, UTSC
Lisa Dolovich, Professor and Dean, Leslie Dan Faculty of Pharmacy
Ernie Avilla, Manager, Strategic Initiatives, Leslie Dan Faculty of Pharmacy
Aldo DiMarcantonio, CAO, Leslie Dan Faculty of Pharmacy
Therese Ludlow, Director of Operations, Business, Operations and Strategic Affairs (BOSA) , UTSC
Jennifer Adams Peffer, Director, Architecture, Planning and Project Development, UTSC
Jeff Miller, Director Facilities Management, UTSC
Darlene Costas, Project Manager, Facilities Management, UTSC
Hoorik Yeghiazarian, Manager, Facilities Asset and Utility Planning, Facilities Management, UTSC
Agrin Partovyan, Administrative Assistant, Facilities Management, UTSC
Jeevan Kempson, Director, Campus Planning and Analysis, BOSA, UTSC
Zoran Piljevic, Director, Information & Instructional Technology Services (IITS) , UTSC
Brent Duguid, Director of Partnerships and Legal Counsel, UTSC
Louise D'Orsay, Project Coordinator and Office Administrator, BOSA, UTSC
Lisa Lemon, Executive Director, Development & Alumni Relations, UTSC
Costas Catsaros, Director, Project Development, University Planning, Design and Construction (UPDC)
Rajko Jakovic, Senior Manager, Project Development, University Planning, Design & Construction (UPDC)

Michael Clesle, Manager, Project Development, UPDC
Christine Burke, AVP, University Planning (UP), UPDC
Adam Trotter, Senior Planner, UP, UPDC
Evelyn Casquenette, Senior Planner, UP, UPDC
Kavitha Jayakrishnan, Senior Planner, UP, UPDC
Undergraduate, Temerty Medicine (to be confirmed for inclusion in Project Implementation Committee)
Undergraduate, SCSU (to be confirmed for inclusion in Project Implementation Committee)
Graduate Student, UTSC (to be confirmed for inclusion in Project Implementation Committee)

b) Terms of Reference

1. Make recommendations for a detailed space program and functional layout for a new Scarborough Academy of Medicine and Integrated Health (SAMIH) on the UTSC campus.
2. Identify the space program as it is related to the existing and approved academic plan at UTSC, taking into account the impact of approved and proposed program that are reflected in increasing faculty, student and staff complement. Plan to realize maximum flexibility of space to permit future allocation, as program needs change.
3. Demonstrate that the proposed space program will be consistent with the Council of Ontario Universities' and the University's own space standards.
4. Identify all co-effects, including space reallocations, vacated space, impact on the delivery of academic programs during construction and the possible required relocation as required to implement the plan.
5. Recommend a preferred site for the building and identify site plan implications, including parking, safety, accessibility and design guidelines.
6. Address campus-wide planning directives as set out in the campus master plan, open space plan, urban design criteria, and site conditions that respond to the broader University community.
7. Identify specific sustainability goals, including energy efficiency goals for this project in line with U of T standards. Recommendations for goals should also be cost effective and incorporate proven best practices.
8. Identify equipment and moveable furnishings necessary to the project and their estimated cost.
9. Identify all data, networking and communication requirements and their related costs.
10. Identify all security, occupational health and safety and accessibility requirements and their related costs.
11. Identify a communications strategy for the project.
12. Identify all costs associated with transition during construction and secondary effects resulting from the realization of this project.
13. Determine a total project cost estimate (TPC) for the capital project including costs of implementation in phases if required, and also identify all resource costs to the University.
14. Identify all sources of funding for capital and operating costs.
15. Complete project planning report by November 2021.

c) Background Information

The Academic Opportunity

The University of Toronto plans to construct the Scarborough Academy of Medicine and Integrated Health (SAMIH) at the University of Toronto Scarborough (UTSC). SAMIH will be a collaboration between UTSC, the Temerty Faculty of Medicine, the Lawrence S. Bloomberg Faculty of Nursing, and the Leslie Dan Faculty of Pharmacy. It will serve as a hub for undergraduate health education and health professional training. At full capacity, the SAMIH will prepare the following number of graduates on an annual basis:

- Up to 50 physicians (30 currently approved with growth planned to 50)
- 30 physician assistants
- 30 nurse practitioners
- 40 physical therapists
- 300 life sciences students

In addition to internal partners, SAMIH will be supported through a partnership with The Scarborough Health Network, Lakeridge Health, Ontario Shores Centre for Mental Health Sciences and Michael Garron Hospital. Community-based agencies and health care facilities such as Family Health Teams and Community Health Centres will also be important collaborators.

In keeping with UTSC's four mission imperatives, SAMIH will foster an integrated health sciences learning and research approach with health-related faculty and departments at UTSC. In addition to the physician related training program elements, the SAMIH project will house the Department of Health and Society; include fMRI facilities and an EEG Laboratory for the Clinical Psychology program; and establish a multi-disciplinary public-facing teaching clinic for the Leslie Dan Faculty of Pharmacy, The Lawrence S. Bloomberg Faculty of Nursing Nurse Practitioner Program, and the Department of Clinical Psychology.

It is anticipated that greater interprofessional education opportunities will result from co-locating these programs in one building. This will include not only collaborative curricular innovations, but also co-curricular opportunities as students from a variety of programs interact with each other. Also, by including undergraduate programs alongside second entry health professional programs, new mentoring opportunities – both formal and informal – can develop. This will provide a new level of support and career exploration for undergraduate learners and the opportunity to identify role models.

The lands South of the Toronto Pan American Sports Centre on the North Campus has been identified for this project site. Situated at the intersection of Military Trail and Morningside Avenue, SAMIH will be an important academic and physical anchor for UTSC within the North Campus master plan. Through both its siting and its programming, SAMIH will leverage its public face and a strong public presence to become a gateway for higher education and community engagement. On the south side of the building the future planned pedestrianized Military Trail will link SAMIH to the rest of the campus and all of the amenities that are already in place to serve students, integrating SAMIH with the UTSC campus.

The Regional Health Needs

Scarborough and Durham Region, which has a population of nearly 1.3 million people, faces substantial unaddressed health needs that SAMIH can help address. For example, there is currently a shortage of physicians in Scarborough and Durham Region. According to the Canadian Institute for Health Information, 2020 data show that the Central East LHIN (in which Scarborough and Durham Region are located), has the second lowest number of family physicians and the third lowest number of specialists in Ontario per 100,000 population.

Region	**# of family medicine physicians per 100,000**	**# of specialists per 100,000**
Central East LHIN	89	70
Ontario average	115	114
Canada average	123	119

Source: Canadian Institute for Health Information. Supply, Distribution and Migration of Physicians in Canada, 2020 — Data Tables. Ottawa, ON: CIHI; 2021.

Through its experience establishing the Mississauga Academy of Medicine (MAM), U of T's Temerty Faculty of Medicine has developed expertise in leveraging community relationships to address local healthcare needs. Integral to the success of MAM has been the relationships forged with community hospitals and health care practitioners in Mississauga, the investment in infrastructure and the development of newly appointed faculty in the community. The MAM model has enabled Temerty Medicine to develop further expertise in curriculum development and consistency across multiple MD program sites, distance education, and technology, capitalizing on diverse community settings. As with Mississauga, SAMIH will be a catalyst for greater integration with the local hospital partners, enhancing their roles in teaching and community-based research. The learnings from the MAM model will be translated to all health sciences and related programs to be offered at UTSC.

Several studies suggest that where medical students study and do their residency affects where they ultimately practice. For example, in 2017, the Northern Ontario School of Medicine (NOSM) reported that 94% of their MD and residency graduates practice in Northern Ontario (33% in remote, rural communities). In comparison, only 5% of new physicians recruited to Northern Ontario are from other schools (NOSM, 2017). At the Mississauga Academy of Medicine, more than half of the doctors who undertook their family medicine residency training at Trillium Health Partners in Mississauga between 2009 and 2017 continue to work in Mississauga/Halton Region (PGME and CPSO, February 2020). In addition, the number of active specialists practicing in the former Mississauga-Halton LHIN who trained at U of T between 2009 and 2018 grew by 154% (OPHRDC, February 2020).

This will be enhanced by developing an integrated approach to health training and delivery by including physical therapists, physician assistants, nurse practitioners, and pharmacists, in addition to medical trainees at SAMIH. This will create a dynamic learning environment that will be further enhanced through collaborations with clinical and community partners. As stated in the second report from the Premier's Council on Improving Healthcare and Ending Hallway Medicine, *A Healthy Ontario: Building a Sustainable Health Care System*, an integrated health care system is envisioned as the future of health care in Ontario. The report states:

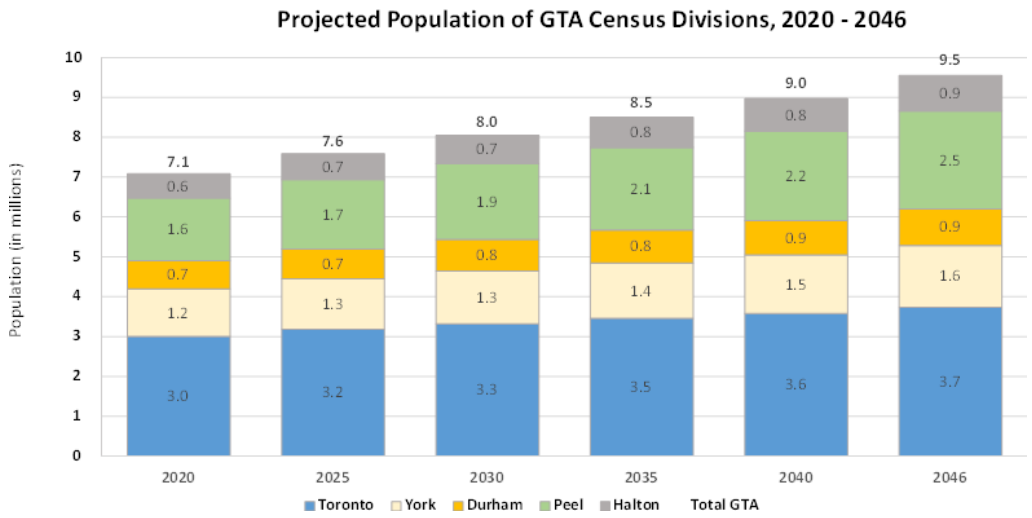
> *"In an integrated health care system, resources would follow the patient. There would be an emphasis on prevention and well-being, which would help divert patients from hospital-level care or from seeking care from the emergency department. Efficient processes, such as centralized intake and shared electronic medical records, are key features of a well-integrated health care system because they are tools designed to improve the allocation of services and connect patients with the right level of care at the most appropriate time. An integrated health care system will improve access and availability of services throughout the health care system, will have a positive impact on wait times and will help solve the problem of hallway health care." (pg. 14)*

To make that possible, health professionals need to learn to work together during training. SAMIH will provide the environment where that can occur, thereby being at the forefront of system transformation in Ontario.

Further, UTSC is an ideal location for SAMIH. As an anchor institution in the eastern GTA, UTSC combines the intimacy of a close-knit campus, the breadth of the liberal arts and the depth and rigour of one of the world's best research universities. The academic home to more than 14,000 U of T students, UTSC offers several distinct programs, including health studies, environmental science, international development studies, suburban studies, food studies, and various humanities, life sciences, and social sciences programs. Importantly, its student body reflects the demographics of Scarborough and the eastern GTA, with more than 80% of students identifying as immigrants, refugees and/or visible minorities, and 83% of domestic students with demonstrated financial need.

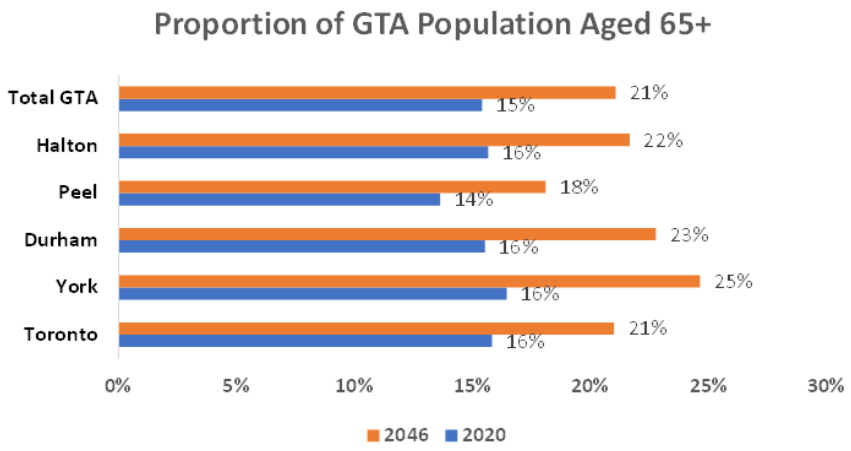
Projected Population of GTA Census Division 2020-2046

Data reported in summer 2020 by the Ontario Ministry of Finance show the GTA will be the fastest growing region in Ontario and is projected to grow by 2.5 million people to 9.5 million by 2046 over 2020. This represents a 35% increase in population and an almost 50% share of total Ontario population. Robust net migration gains, mostly from international sources, will be the major contributor to the population growth. Although some components of demographic change have been affected by COVID-19, the expectation is that projected growth will return to its pre-pandemic track by 2022.



The need for increased healthcare professionals is critical as the population of the GTA becomes older. Approximately 15% or 1.1 million of the 2020 GTA population is aged 65+. By 2046, this percentage is projected to be 21%. The absolute increase in the number of seniors by 2046 over 2020 is projected to be 921,000. An interprofessional approach is key to supporting an aging population with more complex health needs to ensure a healthy population able to maintain their mobility and meet their day-to-day needs. The Government of Canada projects good job prospects for physiotherapists, nurse practitioners, and physician assistants in all regions of Ontario over the next three years.

Proportion of GTA Population Aged 65+

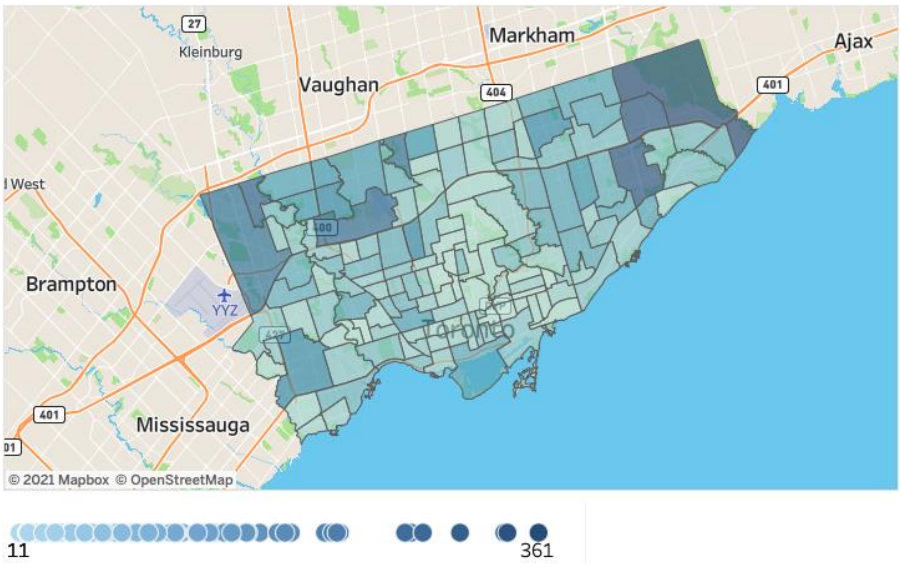


The Impact of COVID-19

During the COVID-19 pandemic, to date, the eastern portion of Toronto and the Central East region (which includes Durham Region) have faced higher rates of confirmed COVID-19 cases. The map below, which was prepared by Toronto Public Health, illustrates the number of cases by neighbourhood in Toronto between December 23, 2020 to January 12, 2021. It shows that the three neighbourhoods in

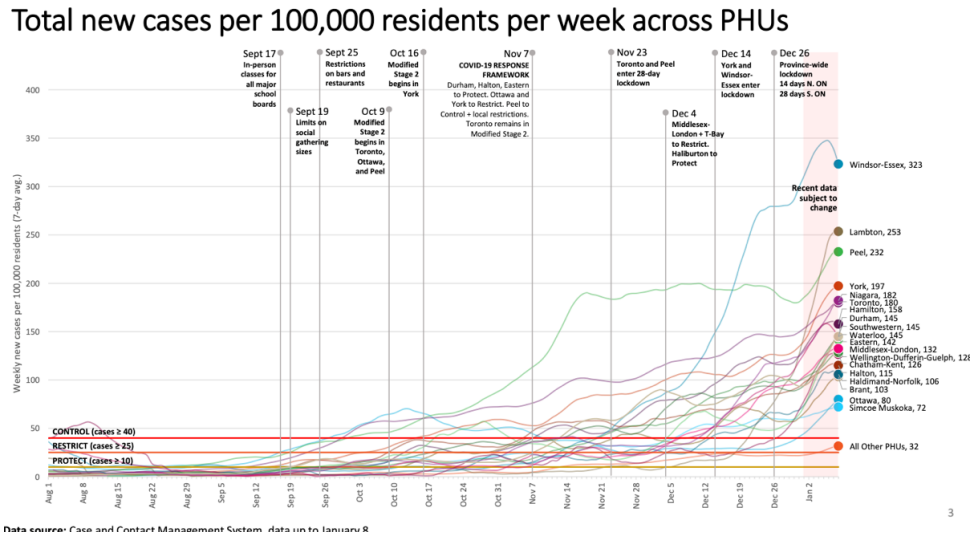
Toronto with the highest number of cases are in Scarborough: Rouge (361 cases), Malvern (340 cases) and Woburn (338 cases).

Map of COVID-19 Cases by Neighbourhood; December 23, 2020 to January 12, 2021. Source: Toronto Public Health



The graph below, which was prepared by Ontario COVID-19 Science Advisory Table, shows that despite exponential growth in other regions, Toronto and Durham regions have consistently had among the highest rates in Ontario of COVID-19 cases per 100,000 people.

Graph of new COVID-19 Cases by Public Health Units (PHUs) (August 1, 2020 to January 8, 2021). Source: Ontario COVID-19 Science Advisory Table



While the long-term impact of COVID-19 remains to be seen, two trends have emerged that must be addressed. First, patients who recover from COVID-19 face long-term consequences that will require support from the healthcare system. This will include ongoing medical treatment, physical therapy, and additional support in long-term care facilities. These impacts disproportionally impact BIPOC and low-income communities. Secondly, anecdotal information – which is being further studied – shows that the COVID-19 pandemic has worsened the health human resource challenges within the region. Many healthcare professionals – doctors and nurses among them – are opting to retire early. This is hastening the need for a new generation of well-trained professionals who can meet the needs of patients and keep the healthcare system resilient.

UTSC Programming

UTSC's four mission imperatives include the following:

1. To advance a culture of leadership that is bold, empathetic, shared, transparent, inclusive and transformational, thereby enabling our collective aspirations.
2. To promote and support an inclusive, healthy learning and working environment.
3. To strengthen, grow, and sustain local and global networks and partnerships that advance our mission.
4. To augment U of T's global standing through scholarly prominence and exceptional learning in unique areas of established and emerging strength.

In keeping with these mission imperatives, the SAMIH project will foster an integrated health sciences learning and research approach with health-related faculty and departments at UTSC. The SAMIH project will house the Department of Health and Society; provide laboratory and research space for the Clinical Psychology program, including an fMRI facility and an EEG Laboratory; and establish a multi-discipline public facing teaching clinic for the Leslie Dan Faculty of Pharmacy, The Bloomberg Faculty of Nursing Nurse Practitioner Program, and the Department of Clinical Psychology. The UTSC departments and programs will be further supported by the general UTSC campus classroom inventory and campus amenities.

Existing space

UTSC Campus COU Analysis by Category (Projected to 2024-2025)

COU Cat.	Cat. Description	Campus Existing (E)*	COU Generated (G) *	%E/G
1.0	Classrooms	11,182.20	14,378.61	77.77%
2.0	Teaching Labs	7,086.50	6,137.59	115.46%
3.0	Research Labs	10,047.10	15,210.84	66.05%
4.0	Faculty & Administrative Offices	13,345.40	12,189.51	109.48%
5.0	Library	3,840.00	9,975.63	38.49%
6.0	Athletic & Recreation Facilities	9,534.00	11,658.33	81.78%
11.0	Non-Library Study Space	4,680.80	5,181.48	90.34%
9.0	Physical Plant	1,907.91	1,549.74	123.11%
7.0	Food Services			
12.0	Common Central Space			
13.0	Health Services			
14.0	Common Space			
	Total Student & Central Services (7,8,12,13,14,15)	14,338.80	19,430.55	73.80%
	Total	**75,962.71**	**95,712.28**	**79.37%**

* 2019 COU Reported numbers projected to 224-2025: not including new SAMIH program enrolment. Includes New Student Residence, IC-2, Parking Structure and Indigenous House

UTSC Department of Health and Society

The Department of Health and Society currently occupies 289.50 nasm of space in Highland Hall and 260.18 nasm of space in the Science Wing on the UTSC Campus.

COU Cat.	Cat. Description	Nasm
3.0	Research Labs	**247.10**
3.1	Research Lab Space	213.36
3.2	Research Lab Support	33.74
4.0	Faculty & Administrative Offices	**291.51**
4.1	Academic Offices	172.01
4.2	Research Offices/Project Space	8.05
4.3	Graduate Student Offices	30.75
4.4	Departmental Support Staff Office	22.36
4.5	Office Support Space	58.34
14.0	Common Space	
14.1	Student Office and Support Space	11.07
19.5	Inactive - Assignable (Included in 4.1 total)	33.08
	Total	**549.68**

UTSC Psychology

The Department of Psychology currently occupies 525.57 nasm of space in Science Research Building, 653.69 nasm of space in the Humanities Wing and 1,949.71 nasm of space in the Science Wing on the UTSC Campus.

COU Cat.	Cat. Description	Nasm
2.0	Teaching Labs	**181.62**
2.1	Scheduled Class Lab	127.61
2.3	Lab Support	54.01
3.0	Research Labs	**1,579.95**
3.1	Research Lab Space	1,279.45
3.2	Research Lab Support	300.50
4.0	Faculty & Administrative Offices	**1,267.40**
4.1	Academic Offices	600.76
4.2	Research Offices/Project Space	69.83
4.3	Graduate Student Offices	394.63
4.4	Departmental Support Staff Office	111.40
4.5	Office Support Space	190.79
	Total	**3,128.97**

Temerty Faculty of Medicine (Includes Medical Doctor and Physician's Assistant Programs)

At the St. George Campus and environs, The Temerty Faculty of Medicine MD Program currently occupies: 140.62 nasm of space in the C. David Naylor Building, 304.05 nasm of space in the 263 McCaul Building, and 859.33 nasm of space in the Medical Sciences Building. Temerty Medicine also includes 1,535.76 nasm of space at 500 University for Faculty and Staff Office space associated with MD program instruction at the preclerkship and clerkship levels. The program also uses spaces shared with other programs including Classroom Space and Anatomy facilities. The Classroom space inventory includes: 128.90 nasm of Anatomy Seminar space at the Medical Sciences Building; 413.97 nasm of Temerty Medicine Dean's Office classroom, seminar and faculty and administrative office space at 263 McCaul St.; and 71.85 nasm of Classroom/Meeting/Workshop space at the Discovery Commons in MSB. Temerty Medicine MD program will also book LSM classroom space for larger classes. LSM controlled classrooms at MSB include:

LSM Existing Space Inventory – Medical Sciences Building

COU Cat.	Cat. Description	Room Number	Nasm
1.0	Classrooms		**1611.96**
1.1	Tiered Classrooms	2170, 2172, 3153, 3154	1188.65
1.2	Non-Tiered Classrooms	2158,2290,2394,3290	393.33

1.4	Classroom Support Space	3153E, 3154D, 3154E	29.98
	Total		**1611.96**

The anatomy space includes the dissection teaching labs where MD students are being taught by Anatomy staff and faculty and accounts for an additional 1,968.82 nasm of Category 2.0 Undergraduate Scheduled Laboratory Space in the Medical Sciences Building.

The Physician's Assistant Program is mostly on-line with a mandatory 4 week on-campus instructional period in Year 1 and a mandatory 1 week on-campus instructional period in Year 2. Year 2 courses are primarily spent in clinical contact in rural and urban settings. While on Campus, the program schedules instruction in classrooms at 263 McCaul Street and 500 University and within the Medical Sciences Building on a contingent basis without space directly allocated to the program.

Temerty Medicine MD Program Existing Space Inventory – St. George

COU Cat.	Cat. Description	Nasm
2.0	Laboratory - Undergraduate	**79.04**
2.2	Unscheduled Class Lab	79.04
4.0	Faculty & Administrative Offices	**1,013.31**
4.1	Academic Offices	185.72
4.4	Departmental Support Staff Office	569.09
4.5	Office Support Space	258.50
11.0	Non-Library Study Space	**201.38**
11.1	Structured Formal Study Space	201.38
14.0	Common Use and Student Activity	**10.37**
14.1	Student Office and Support Space	10.37
	Total	**1,304.00**

Temerty Medicine MAM Program Existing Space Inventory – UTM

The Temerty Faculty of Medicine MD program current space inventory at the University of Toronto Mississauga for the Mississauga Academy of Medicine includes: 1,580.75 nasm of space in the Terrence Donnelly Health Sciences Complex and 14.57 nasm of space in the Communication Culture & Technology Building.

COU Cat.	Cat. Description	Nasm
1.0	Classroom Facilities	**1,125.32**
1.1	Tiered Classrooms	298.54
1.2	Non-Tiered Classrooms	734.59
1.4	Classroom Support Space	92.19
2.0	Laboratory - Undergraduate	**79.04**
4.0	Faculty & Administrative Offices	**257.23**
4.1	Academic Offices	62.63
4.4	Departmental Support Staff Office	107.90
4.5	Office Support Space	86.70
11.0	Non-Library Study Space	**51.30**
11.2	Informal Study Space	51.30

12.0	Central Services	**37.20**
12.1	Central Computing Facilities	37.20
14.0	Common Use and Student Activity	**23.86**
14.1	Student Office and Support Space	23.86
	Total	**1,595.32**

Temerty Medicine - Department of Physical Therapy

The Temerty Medicine Physical Therapy Program currently occupies 1,535.76 nasm of space in the Rehabilitation Sciences Building at 500 University Avenue. There are building dedicated classrooms that the PA Program uses at 500 University which are not LSM controlled due to their distance from the St. George Campus.

COU Cat.	Cat. Description	Nasm
3.0	Research Labs	**1,082.67**
3.1	Research Lab Space	934.30
3.2	Research Lab Support	148.37
4.0	Faculty & Administrative Offices	**453.09**
4.1	Academic Offices	288.03
4.4	Departmental Support Staff Office	81.64
4.5	Office Support Space	83.42
	Total	**1,535.76**

Lawrence S. Bloomberg Faculty of Nursing

The Lawrence S. Bloomberg Faculty of Nursing currently occupies 2,813.11 nasm of space in the Health Sciences Building and 11.17 nasm of space in the 254/256 McCaul Building at the St. George Campus.

COU Cat.	Cat. Description	Nasm
1.0	Classrooms	**136.56**
1.2	Non-Tiered Classroom	135.92
1.4	Classroom Service Space	0.64
2.0	Teaching Labs	**444.93**
2.1	Scheduled Class Lab	391.84
2.2	Unscheduled Class Lab	12.29
2.3	Lab Support	40.80
3.0	Research Labs	**32.51**
3.2	Research Lab Support	32.51
4.0	Faculty & Administrative Offices	**1,922.77**
4.1	Academic Offices	611.97
4.2	Research Offices/Project Space	213.30
4.3	Graduate Student Offices	226.01
4.4	Departmental Support Staff Office	382.39
4.5	Office Support Space	489.10
11.0	Non-Library Study Space	**263.60**
11.1	Formal Study Space	27.60
11.2	Informal Study Space	236.00
14.0	Common Space	**23.91**

14.1	Student Office and Support Space	23.91
	Total	**2,800.37**

Leslie Dan Faculty of Pharmacy

The Leslie Dan Faculty of Pharmacy currently occupies 7,396.69 nasm of space in the Leslie L. Dan Pharmacy Building and 371.72 nasm of space in the 254/256 McCaul Building at the St. George Campus.

COU Cat.	Cat. Description	Nasm
1.0	Classrooms	**364.25**
1.1	Tiered Classroom	26.50
1.2	Non-Tiered Classroom	315.09
1.4	Classroom Service Space	22.66
2.0	Teaching Labs	**1,022.74**
2.1	Scheduled Class Lab	572.75
2.3	Lab Support	449.99
3.0	Research Labs	**2,202.48**
3.1	Research Lab Space	1,528.05
3.2	Research Lab Support	674.43
4.0	Faculty & Administrative Offices	**3,016.50**
4.1	Academic Offices	852.47
4.2	Research Offices/Project Space	17.10
4.3	Graduate Student Offices	849.85
4.4	Departmental Support Staff Office	645.62
4.5	Office Support Space	713.79
11.0	Non-Library Study Space	**785.15**
11.1	Formal Study Space	550.14
11.2	Informal Study Space	235.01
14.0	Common Space	**271.57**
14.1	Student Office and Support Space	84.59
14.2	Recreational Facilities and Service	186.98
15.0	Assembly and Exhibition Facilities	**43.39**
15.2	Exhibition Facilities	43.39
19.0	Other University Facilities	166.25
19.5	Inactive - Assignable (Included in 3.0/4.0 total)	146.34
19.6	Non-Inst. Agency Occupying University Space (Not-Incl)	19.91
	Total	**7,748.50**

Occupant profile

Academic Departments

There are Four Faculties and seven departments and programs proposed to be located within SAMIH, including:

- Temerty Faculty of Medicine: Physical Therapy Program, MD Program, and Physician Assistant Program;
- Lawrence S. Bloomberg Faculty of Nursing: Nurse Practitioner Program;
- UTSC Department of Psychology (Clinical Psychology Program);
- UTSC Department of Health and Society, and,
- Leslie L. Dan Faculty of Pharmacy.

Temerty Faculty of Medicine

The Temerty Faculty of Medicine has an extensive history of leadership in all aspects of its work – from discovery science and ground-breaking innovation to preparing expert physicians, physician assistants, medical radiation clinicians, rehabilitation professionals and researchers. The Faculty is known for attracting top-ranked scientists, fostering interdisciplinary research and learning, and developing graduates who lead in their fields. The Faculty delivers innovative programs at the undergraduate and graduate levels, and is extending its reach through international partnerships and research collaborations with the US and Europe, China, India, Brazil and beyond.

Founded in 1843 as a school of medicine, Temerty Medicine lies at the heart of one of the largest biomedical research, education and clinical care networks in North America, the Toronto Academic Health Science Network (TAHSN). With nine fully-affiliated hospitals and research institutes, four associate affiliated hospitals, and 21 community-affiliated hospitals and clinical care sites, Temerty Medicine offers unparalleled opportunities for its more than 9,000 faculty & staff, and 7,000-plus learners at all levels. It is unique for a greater metropolitan area with a diverse population of more than 6 million to be served by just one Faculty of Medicine.

The Faculty's extensive educational and research activities are informed by its guiding vision, which is that its learners, graduates, faculty, staff and partners will be an unparalleled force for new knowledge, better health and equity. With this foundation, the Faculty has built a reputation that is recognized internationally.

Temerty Medicine is the single largest contributor of physicians in Canada. According to the 2020 Ontario Physician Human Resources Data Centre, of the physicians trained in Ontario between 2002 and 2020, U of T trained 35% of family physicians and 54% of specialists. In addition, 58% of Ontario trained family physicians and 69% of all specialists practising in the GTA are U of T graduates.

Temerty Medicine also makes a major contribution to Ontario's workforce in the regulated health professions. Of Ontario graduates in 2018, 56% of physician assistants and 28% of physiotherapists graduated from U of T.

MD Program (St. George & UTM)

The MD Program at the University of Toronto is the third largest undergraduate medical education program in Canada. We are proud to support and promote the development of future academic health leaders who will contribute to our communities and improve the health of individuals and populations through the discovery, application, and communication of knowledge. The program is organized into tow Curriculums – the Foundations Curriculum and the Clerkship program.

Foundations Curriculum

The first two years of the MD Program occur in laboratory, classroom, clinical, and community settings and are designed to prepare students for the workplace learning that occurs in clerkship.

the first two years of the MD Program, traditionally called the preclerkship, was redeveloped in 2016 to become the current Foundations Curriculum.

Clerkship

Clerkship comprises the last two years of the four-year MD Program. Clerkship is an integrated learning experience that enables students to further develop the knowledge, skills and professional attitudes introduced in preclerkship, as they learn to care for patients effectively, efficiently and humanely. This is achieved through practical application in clinical settings as part of a health care team. As clerks, Students learn to master patient care, both in hospital and at community-based clinics and doctors' offices.

The MD Program goals are to facilitate learning, to stimulate curiosity, to promote independent thinking, to encourage compassionate, excellent care, and to equip students for a lifetime of education.

The clerkship curriculum will allow Students to attain the competencies outlined in the MD Program competencies. The specific learning objectives of each course in clerkship describe how they individually contribute to the fulfilment of these overall goals and objectives.

Clerkship is 75 weeks long, and is divided into third year (50 weeks) and fourth year (25 weeks). In the third year of clerkship, students participate in a rotation-based clerkship.

MD FTE Students, Faculty and Staff

Status	**Existing UTSG FTE**	**Existing UTM MAM FTE**	**Proposed SAMIH FTE**	**Total FTE**
Undergraduate	**874.00**	**216.00**	**200.00**	**1,290.00**
Faculty	**23.00**	**1.00**	**3.00**	**27.00**
Tenure/Chair	1.00	1.00	1.00	3.00
Teaching				
Sessional (Clinicians)*	22.00	2.3	2.00	26.30
3902-3				
Research				
PDF				
Research Associates				
Research Funded Staff				
Graduate				

Non-Academic Staff	**55.00**	**9.00**	**9.00**	**73.00**
Total	**975.00**	**229.30**	**215.00**	**1,419.30**

* Clinicians are clinical faculty (practising physicians who also undertake responsibilities within the University) who deliver the MD Program curriculum through lectures or as tutors in case-based learning and integrated clinical skills. Clinical faculty are generally not paid by the University except through stipends for specific teaching responsibilities and are therefore not included in the Departmental Faculty FTE counts. Clinicians include program leaders (i.e., course directors, program directors, etc.) and are typically employed in this role for 1-3 days per week only with their remaining time being spent engaged in clinical practice. Lectures are broadcast between campuses reducing the requirement for faculty instructors at the three campuses within the MD program.

Physical Therapy

The Department of Physical Therapy was founded in 1929 as the first physical therapy program in Canada in the Department of Extension at the University of Toronto. This diploma was a two-year program with an additional six months of clinical practice. By 1950 the diploma had evolved to a three-year program with eight months of clinical experience. It was transferred to the Temerty Faculty of Medicine and combined with Occupational Therapy. Graduates received a diploma in physical and occupational therapy.

In 1971 the program became a four-year Bachelor of Science in Physical Therapy in the Department of Rehabilitation Medicine, Faculty of Medicine. By 1993, the Department of Physical Therapy was established, and the four-year direct entry Bachelor program included a range of science and physical therapy courses, as well as 30 weeks of clinical practice.

The program evolved again in 1995, becoming a three year, second-level entry program. Graduates received a Bachelor of Science in Physical Therapy (BScPT). This undergraduate program was replaced in 2001 with the 26-month Master of Science in Physical Therapy (MScPT) requiring the completion of a four-year undergraduate degree for admission.

In 2007, the program was consolidated into 24 months including 28 weeks of full-time clinical internships, plus 66 hours of clinical structure skill sessions that are integrated into the curriculum. In 2019, the MScPT curriculum was renewed to meet and exceed the standards laid out by Physiotherapy Education Accreditation Canada (PEAC), and guided by the Competency Profile for Physiotherapists in Canada (2017), which outlines the seven physical therapy domains of practice core competencies of physiotherapy expertise, communication, collaboration, management, leadership, scholarship, and professionalism. The curriculum is structured as 14 units of organized sequential learning experiences, which integrate fundamental physical therapy knowledge, skills and behaviors into evidence-informed contemporary practice and includes 30 weeks of full-time clinical internships.

Department of Physical Therapy FTE Students, Faculty and Staff

Status	Existing FTE	Proposed SAMIH FTE	Total FTE
Undergraduate*			
Faculty	**17.15**	**5.00**	**22.15**

Tenure/Chair	11.00	2.00	13.00
Teaching	6.15	3.00	9.15
Sessional			
3902-3			
Research	**29.40**		**29.40**
PDF	3.00		3.00
Research Associates	0.40		0.40
Research Funded Staff	26.00		26.00
Graduate	**220.00**	**40.00**	**260.00**
Non-Academic Staff	**7.00**	**3.00**	**10.00**
Total	**273.55**	**48.00**	**321.55**

Physician's Assistants

The Bachelor of Science Physician Assistant degree (BScPA) is a full-time professional, second-entry undergraduate degree program, based in the Department of Family and Community Medicine (DFCM) in the Faculty of Medicine at the University of Toronto (U of T).

The BScPA is a University of Toronto degree delivered in collaboration with Northern Ontario School of Medicine (NOSM) and The Michener Institute of Education at UHN. The three institutions have formed the Consortium of PA Education (Consortium) to collaboratively contribute to the development, administration and delivery of the U of T degree.

The Consortium offers students a balance in academic and clinical orientation, extensive access to health care relevant resources and a curriculum delivery model that maximizes rural training and geographic accessibility throughout Ontario. The program is designed to meet the competencies outlined in the National Competency Profile as established by the Canadian Association of Physician Assistants (CAPA). The aim of the program is to equip graduates with the competencies necessary to establish the foundation for a sustainable Canadian Physician Assistant profession.

The BScPA Program was accorded a Canadian Medical Association six-year accreditation status in December 2017. The maintenance of this six-year status is recognized by the Physician Certification Council of Canada (PACCC).

The BScPA Program is a distance and distributed education program with the majority of the first year of the program delivered on-line. It is expected that students will carry out this on-line learning at home. Students are required to attend classes in person in Toronto ('residential blocks') for specific time periods to integrate interprofessional education and simulation-based learning for skills development and for hands-on assessments.

he second year of the program is centered on clinical education, with clinical placements in both Northern and Southern Ontario hospitals and community settings. Residential blocks, with the

The UTSG Physician Assistant program will move entirely to the SAMIH building at UTSC.

Physician Assistants Program FTE Students, Faculty and Staff

Status	Existing FTE	Proposed SAMIH FTE	Total FTE
Undergraduate	**64.00***	**64.00**	**64.00**
Faculty	**2.6**		**2.6**
Tenure/Chair	1.60		1.60
Teaching	1.00		1.00
Sessional			
3902-3			
Research			
PDF			
Research Associates			
Research Funded Staff			
Graduate		**3.00**	**3.00**
Non-Academic Staff	**3.00**		**3.00**
Total	**69.60**	**67.00**	**72.60**

*64 Existing FTE are proposed to move to SAMIH

Lawrence S. Bloomberg Faculty of Nursing

The Lawrence S. Bloomberg Faculty of Nursing has more than 100 years of history at the University of Toronto and is consistently ranked within the Top 10 Schools of Nursing in the world, with a reputation for excellence in nursing education and research. Graduates of the Faculty are in leadership positions throughout Canada and internationally and they exert significant influence in health care systems. Nursing faculty at the University of Toronto are noteworthy researchers in their discipline and major contributors to the health sciences.

Our vision is to be a leader in nursing education, research and practice. Through the mentorship by outstanding and innovative faculty, our graduates excel in professional practice, lead in nursing research and scholarship, and improve health locally and globally.

The Nurse Practitioner program at the University Of Toronto is recognized for the quality of our graduates. Nurse Practitioners (NPs) are Masters- prepared nurses with an advanced knowledge of client care and health management including disease prevention and health promotion as well as advanced health assessment, diagnostic reasoning and therapeutic management. As health care professionals legislated to care for patients autonomously, NPs play a significant role in health care reform, through practice, leadership, advocacy, and research.

As we aim to create a new vision for the health care system in the eastern GTA, the NP program and clinic will create an environment in which to teach evidence-based collaborative care as it was originally intended, with health professions coming together in one, easily accessible location, to address gaps in primary care for underserved populations.

Lawrence S. Bloomberg Faculty of Nursing: Nurse Practitioner FTE Students, Faculty and Staff

The Master of Nursing-Nurse Practitioner field of study program is designed to prepare nurses with the skills and competencies required to practice as a Nurse Practitioner in one of three areas of emphasis: Adult, Paediatric or Primary Health Care – Global Health. Graduates are prepared to lead in the direct

care of patients through the application of advanced practice nursing and nurse practitioner competencies as described by the Canadian Nurses Association.

This innovative population-based program is accessible to students across Canada. Coursework is on-line and the clinical practicums are individually designed to meet the learning needs of students. Students participate in 3 on-campus residencies, simulation-based learning, virtual classrooms and combined asynchronous and synchronous discussions during the 2-year program. Successful completion of Year 1 courses is required for students to continue in Year 2 of the program. Students engage in clinical practicum experience across three courses in the program. During the practicums, students work with nurse practitioners, normally in their communities, to learn about and begin to enact the role of a nurse practitioner. Students in the MN-NP program enroll in one emphasis (Adult or Paediatric or Primary Care – Global Health) and are required to complete all six (6) courses appropriate to that emphasis as well as the 4 MN foundational courses. Courses are offered once per year and must be taken sequentially.

Master of Nursing-Nurse Practitioner FTE Students, Faculty and Staff

Status	Existing FTE	Proposed SAMIH FTE	Total FTE
Undergraduate			
Faculty	**9.00**	**5.00**	**9.00**
Tenure/Chair	3.00	2.00	3.00
Teaching	3.00	3.00	3.00
Sessional			
3902-3	3.00		3.00
Research			
PDF			
Research Associates			
Research Funded Staff			
Graduate	**192.00**	**30.0**	**192.00**
Non-Academic Staff	**3.00**		**3.00**
Total	**204.00**	**35.00**	**204.00**

UTSC Department of Health and Society

UTSC's Department of Health and Society is committed to interdisciplinary research and teaching about health, disability, illness, and disease. The Department is home to over 800 committed undergraduate students and faculty working together in complimentary and linked degree options:

- BA Major in Health Policy
- BA Major Co-op in Health Policy
- BSc Major in Population Health
- BSc Major Co-op in Population Health

The Department of Health and Society is committed to asking cutting-edge questions about health, disability, illness, and disease both locally and globally and from a range of disciplinary perspectives, including:

- Examinations of health and illness across the life course—from infancy and early childhood to adolescence, adulthood, and old age.
- Immigrant and Indigenous health leads us to investigate how social contexts—including work conditions, the law, and ideas about nation—shape experiences of health and illness.
- Biological and genetic factors that affect susceptibility and resistance to a broad spectrum of diseases and aspects of the natural and built environment that shape health and well-being from an individual to a global level.
- Use of humanistic perspectives and arts-based knowledges, to consider lived experiences of health, illness, and disability in Scarborough, Toronto, North America, and Eastern Europe.
- Asking questions about how and why some lives, bodies, and communities are held up as healthy while others are unjustly viewed as somehow deficient.
- Interdisciplinary research and teaching are crucial to understanding pressing health concerns, including the COVID-19 pandemic.
- An understanding of anti-Black racism and other questions of social inequality and justice to be public health concerns.
- Conduct of research in partnership with the communities we study—working with them to, for example, determine research questions, design studies, collect and analyze data, and share findings that make a meaningful difference in people's worlds.

Department of Health and Society FTE Students, Faculty and Staff

Status	Existing FTE	Proposed SAMIH FTE*	Total FTE
Undergraduate	**429.20**	**192.70**	**621.90**
Faculty	**21.60**	**12.50**	**34.10**
Tenure/Chair	11.50	5.00	16.50
CTLA	0.00	1.00	1.00
Teaching	4.50	1.50	6.00
Sessional**	5.60	0.00	5.60
3902-3	0.00	0.00	0.00
Visiting Scholars	0.00	5.00	5.00
Research	**12.00**	**8.00**	**20.00**
PdF	3.00	2.00	5.00
Research Associates	0.00	5.00	5.00

Research Funded Staff (Work/Study/Casual)	9.00	1.00	10.00
Graduate!	**22.95**	**1.77**	**24.72**
Non-Academic Staff	**1.13**	**5.87**	**7.00**
Total	**486.88**	**220.64**	**701.52**

*Includes estimated growth to 2025 from existing condition per confirmation by DHS.

**Sessional FTE = 0.2 x headcount. 28 sessionals x 0.2 = 5.60 FTE.

! Current Graduate TA FCE is 65 with a growth of 5. Total TA instructional contract hours Fall 2019 3,510. 1 FTE is equivalent to 140 of instructional contract hours or approx. 49.44 instructional contract hours per TA per term. Graduate TA's from other campuses to be provided Graduate Student Office Space.

UTSC Department of Psychology

The Department of Psychology at UTSC is home to internationally renowned research faculty who are engaged in cutting edge, cross-disciplinary research spanning 5 main areas of psychology and neuroscience: behavioural, clinical, cognitive, developmental, and social. The department is also engaged in innovative teaching, administering undergraduate programs in experimental psychology, mental health studies, and neuroscience, as well as graduate education through the UTSC Graduate Department of Psychological Clinical Science and close involvement in the tri-campus Graduate Department of Psychology.

Graduate Department of Psychological Clinical Science

Distinguished by its innovative cross-disciplinary approach to clinical science, the Graduate Department of Psychological Clinical Science emphasizes innovation through novel research programs that push traditional boundaries in psychological clinical research and practice.

Graduate training in Clinical Psychology at UTSC has primary research strengths in the areas of clinical neuropsychology and neurosciences, personality and psychological assessment, and mindfulness- and acceptance-based psychotherapies. Distinguished by its innovative cross-disciplinary approach to psychological clinical science, Clinical Psychology at UTSC emphasizes scientific innovation through novel research collaborations that push traditional boundaries in clinical science and practice. This theoretical knowledge is integrated into our clinical training which supports the delivery of evidence-based assessment and psychological interventions.

A unifying theme of faculty research in Clinical Psychology at UTSC is to advance the assessment and treatment of mental disorders, especially depressive and bipolar disorders, anxiety disorders, schizophrenia-spectrum disorders, borderline personality disorder, and neurocognitive disorders, such as traumatic brain injury and dementia due to Alzheimer's disease. Faculty boast world-class expertise in brain imaging, web-based delivery of assessment and intervention, and intensive methods of naturalistic assessment.

Clinical Psychology FTE Students, Faculty and Staff

Status	Existing FTE	Proposed SAMIH FTE	Total FTE*

	(2021-22) (Plus non-SAMIH Growth)		
Undergraduate			
Faculty	**16.00**	**6.00**	**22.00**
Tenure/Chair	7.00	6.00	8.00
Teaching	2.00		2.00
Sessional	4.00		9.00
3902-3 (Graduate TA)	3.00		3.00
Research	**14.00**	**11.00**	**19.00**
PdF	2.00	4.00	7.00
Research Associates			
Research Funded Staff (Work/Study/Casual)	12.00	7.00	12.00
Graduate	**37.00**	**28.00**	**42.00**
Non-Academic Staff	**2.00**		**2.00**
Total	**69.00**	**45.00**	**85.00**

*SAMIH FTE includes relocation of existing Faculty and Staff and 28 FTE Proposed Growth (Non-SAMIH)

Leslie Dan Faculty of Pharmacy

The Leslie Dan Faculty of Pharmacy is at the forefront of developing and evaluating innovative ways to deliver pharmacy services and pharmacy education. LDFP is ranked in the top 10 in the world for pharmacy and pharmacology (QS World University Rankings). The role of pharmacy has evolved beyond dispensing medications and will continue to grow as health care systems around the world work to build modern, integrated, and sustainable health care systems that include the best use of medications to maintain and improve health.

LDFP currently conducts the following academic programs:

1. PharmD - The Doctor of Pharmacy (PharmD) program is the Faculty's entry to the pharmacy practice educational program. The program consists of didactic, lab-based, and experiential education. Students in this four-year program participate in 44 weeks of experiential learning and develop clinical, research, communication, leadership, and project management skills.

2. PharmD for Pharmacists - The PharmD for Pharmacists (PFP) program is a bridging program for pharmacists with a Bachelor of Science in Pharmacy (BScPhm) degree to earn a PharmD degree. This flexible and customizable program combines online didactic courses and experiential learning to assist practicing pharmacists meet the changing needs of the profession and prepare them for the future of healthcare practice.

3. Graduate Programs - The Graduate department offers research-intensive MSc and PhD degrees in a wide range of pharmaceutical science topics. Students work in one of two fields: Biomolecular Pharmaceutical Sciences (BMS) or Clinical, Social and Administrative Pharmacy (CSAP). We also launched an MScPhm program in 2019 as a research oriented professional Master's program.

4. Pharmaceutical Chemistry Program - The Faculty also works collaboratively with the Faculty of Arts and Science (Department of Chemistry) to deliver the Pharmaceutical Chemistry Undergraduate Program.

5. International Pharmacy Graduate Program and Professional Development – The Faculty partners with the School of Continuing Studies (SCS) to deliver both the International Pharmacy Graduate (IPG) Program and Continuous Professional Development (CPD) programs for health care professionals.

The Faculty's academic plan consists of five priority areas:

1. Advance Education Programs that develop leaders for diverse and emerging careers
2. Lead Innovations in Pharmacy and Pharmaceutical Science Education and Learner Engagement
3. Grow our Scientific Impact
4. Build a Distinct Organizational Identity
5. Improve Health through Knowledge Translation and Influence on Policy

Leslie Dan Faculty of Pharmacy FTE Students, Faculty and Staff

Status	Existing FTE (2021-22) (Plus non-SAMIH Growth)	Proposed SAMIH FTE	Total FTE*
Undergraduate	**1,073.00**	0	**1,073.00**
Faculty	**273.57**	**1.00**	**274.57**
Tenure/Chair	24.5	1.00	25.50
Teaching	16.67		16.67
Sessional	232.40		232.40
3902-3 (Graduate TA)			
Research	**48.00**	**1.00**	**49.00**
PdF	18.00		18.00
Research Associates	18.00	1.00	19.00
Research Funded Staff (Work/Study/Casual)	12.00		12.00
Graduate	**133.00**	**5.00**	**138.00**
Non-Academic Staff	**50.00**		**50.00**
Total	**1,577.57**	**7.00**	**1,585.57**

(Source: AFPC)
Note: The FTE students at SAMIH will be conducting their experiential education rotation

II. Project Description

a) Vision Statement

The Scarborough Academy of Medicine and Integrated Health (SAMIH) represents a unique opportunity to establish a hub of health professional education in the Eastern Greater Toronto Area. It will also create a continuum of health education beginning with undergraduate studies and proceeding through professional health training, leading to clinical practice in the fields of physical therapy, nursing, and medicine – as physicians or physician assistants. This is made possible through a unique collaboration involving the University of Toronto Scarborough, the Temerty Faculty of Medicine, the Lawrence S. Bloomberg Faculty of Nursing, the Leslie Dan Faculty of Pharmacy and the UTSC Departments of Health and Society and Clinical Psychology. SAMIH will provide unique educational and training opportunities for students, as well as provide new levels of engagement and service to the local community. SAMIH will also be supported by partnering with local healthcare providers and hospitals, as well as community-based organizations.

At the first-entry undergraduate level, SAMIH will be home to UTSC's Department of Health and Society. Its programs promote an understanding of health across a spectrum of academic perspectives: from the clinical and biological health sciences to social science and humanistic ways of knowing. What binds together these disciplinary approaches is a consciousness of the need for rigorous biological knowledge to be understood in tandem with the social milieu of human health and embodiment. The Department of Health and Society offers several degree options: a BA Major or BA Major Co-op, a BSc Major or BSc Major Co-op, and a Minor in Health Humanities. In addition to the Department of Health and Society, the UTSC Departments of Biological Science, Environmental Science and Chemistry and Psychology provide course offering and research that will support the increase of 300 life science students per year. Through the co-location of health related programs within SAMIH, UTSC is exploring potential undergraduate pathway programs that will facilitate entry into second-entry health professional programs with its U of T partners.

SAMIH will also be home to two second-entry undergraduate programs from the Temerty Faculty of Medicine: the Physician Assistant Program and the MD Program. The Physician Assistant Program, which is currently based on the St. George Campus of the University of Toronto, will relocate to UTSC. This full-time professional program leads to a Bachelor of Science Physician Assistant degree (BScPA) and is based in the Department of Family and Community Medicine in Temerty Medicine. The BScPA is a University of Toronto degree delivered in collaboration with Northern Ontario School of Medicine (NOSM) and The Michener Institute of Education at the University Health Network. The three institutions have formed the Consortium of PA Education to collaboratively contribute to the development, administration, and delivery of the U of T degree. The Physician Assistant Program currently enrols approximately 30 students each year, all of whom will be based at UTSC upon the opening of SAMIH. Planning is underway for a possible future expansion.

Temerty Medicine's MD Program will establish a new academy within SAMIH. Like the Mississauga Academy of Medicine based at the University of Toronto Mississauga, MD students enrolled in the Scarborough Academy will take their courses in the Foundations Program, which encompasses the first two years of the MD Program, at UTSC. Students will then complete their clerkships, which are the last two years of the MD Program, at affiliated hospitals near UTSC. Temerty Medicine will work with The Scarborough Health Network, Lakeridge Health, Ontario Shores Centre for Mental Health Sciences, and

Michael Garron Hospital to provide these hospital-based clinical learning opportunities. With funding support from the provincial government, the MD Program will add up to 30 new students at SAMIH per year, in addition to the 259 students who study on the St. George and Mississauga campuses. The program is planned to grow to 50 students per year in keeping with the student cohort currently present at UTM MAM. The SAMIH will be sized to accommodate this future cohort.

Two graduate programs will be housed within SAMIH: Temerty Medicine's Master of Science in Physical Therapy program and the Lawrence S. Bloomberg Faculty of Nursing's Master of Nursing-Nurse Practitioner program. The Master of Science in Physical Therapy (MScPT) program is accredited by Physiotherapy Education Accreditation Canada and is offered over 24 months (across six academic terms) beginning in September each year. The curriculum is structured as 14 units of organized sequential learning experiences, which integrate fundamental physical therapy knowledge, skills and behaviors into evidence-informed contemporary practice including 30 weeks of full-time clinical practice in approved clinical sites affiliated with the University. Students are required to complete all 14 units to achieve an MScPT degree. With funding support from the provincial government, the MScPT Program will add up to 40 new students at SAMIH per year, in addition to the 110 students who study on the St. George campus.

The Master of Nursing-Nurse Practitioner field of study program is designed to prepare nurses with the skills and competencies required to practice as a Nurse Practitioner in one of three areas of emphasis: Adult, Paediatric or Primary Health Care – Global Health. Graduates are prepared to lead in the direct care of patients through the application of advanced practice nursing and nurse practitioner competencies as described by the Canadian Nurses Association. Coursework is on-line and the practicums are individually designed. Students will participate in three on-campus residencies, simulation-based learning, virtual classrooms and combined asynchronous and synchronous discussions. Students will engage in practicum experience across three courses in the program. During the practicums, students will work with nurse practitioners, normally in their communities, to learn about and begin to enact the role of a nurse practitioner. Students in the MN-NP program enroll in one emphasis (Adult or Paediatric or Primary Care – Global Health) and are required to complete all six courses appropriate to that emphasis as well as the 4 MN foundational courses. Courses are offered once per year and must be taken sequentially. Upon the opening of SAMIH, the Nurse Practitioner Program will move up to 30 student spots based on the St. George campus to UTSC.

In addition to housing the above-mentioned educational programs, SAMIH will provide office, laboratory and research space for the Clinical Psychology program, including fMRI facilities and EEG Laboratories. Significantly, SAMIH will host public facing teaching clinics for the Leslie Dan Faculty of Pharmacy, the Lawrence S. Bloomberg Faculty of Nursing's Nurse Practitioner Program, and the Department of Clinical Psychology. These clinics will serve as living laboratories, dedicated to research, education, and innovation. They will provide professional services for students, staff, and faculty at UTSC. In addition, the Nurse Practitioner Clinic will aim to serve underserved populations in the extended Scarborough community.

By co-locating these educational programs and research facilities alongside the proposed new public-facing clinics unique learning opportunities for students that emphasizes interprofessional care will be created. It is anticipated that SAMIH's programming and facilities will also facilitate new interdisciplinary collaborations, partnerships, programs, clinical innovations, and research opportunities. SAMIH will be a new node through which the University of Toronto will engage local communities and establish new partnerships, while deepening existing bonds. SAMIH will increase the number of health

professionals able to meet the needs of a region in need of a new physicians, physician assistants, physical therapists, and nurse practitioners.

b) Statement of Academic Plan

Temerty Faculty of Medicine

The Temerty Faculty of Medicine at the University of Toronto has a deep history of global leadership in all aspects of its work – from discovery science and ground-breaking innovation to preparing expert physicians, rehabilitation professionals and researchers. The Faculty is known for: developing graduates who lead in their fields; attracting powerhouse scientists; fostering interdisciplinary research and learning; an unprecedented network of integrated academic and clinical sites; and access to one of the most diverse populations in the world.

With this unique breadth, depth and strength, developing a strategy for the next five years was about examining and articulating the impact that the Faculty of Medicine is having on the world, and identifying how it can fully live into its possibilities.

In early 2018, the Faculty held a series of engagement sessions to bring together diverse voices to explore high level strategic questions: How do we fully enable the "Toronto Advantage" – our unparalleled resources and strengths – to make a difference in the world? How do we anticipate what the world will need from our graduates and ensure they are poised to lead and create change in an increasingly complex world? And with our unique resources, where should we be focusing our provincial, national, and global leadership?

These conversations included more than 400 faculty, learners, staff, academic and clinical partners, innovation leaders and patients and focused on the full scope of the Faculty of Medicine – Rehabilitation Sciences, Basic Sciences and Clinical sectors encompassing all aspects of teaching, research and administration.

Among the multiple strengths for the Faculty, the community continually pointed to an openness to collaboration, ranging from interdisciplinary research and interprofessional learning to the Faculty's ability to connect diverse clinical sites through the TAHSN network. This openness to collaboration was matched by a perceived valuing of equity and inclusion, and a deep desire to fully enable diversity in all aspects of our work. This means bring people together from across different disciplines and professions, but also ensuring we reflect the multitude of identities present at U of T and in the population of the Greater Toronto Area. Finally, the engagement sessions revealed a thirst to take the potential for innovation within the Faculty to a new level.

Throughout the planning process it became clear that the Faculty of Medicine is well established in all of its realms for ground-breaking research and innovation, leading approaches to teaching, meaningful relationships with clinical sites and economic sustainability. At the same time, there is a high desire to take on even greater leadership on some of the biggest health, science and equity issues, including Indigenous health, partnering to improve clinical care and ramping up the impact of its research and innovation, through meaningful translation to clinical practice and through commercialization.

Over the next few years, the primary strategic need is not to invent new elements for the Faculty, but to amplify the impact of what it is already achieving. This amplification should be focused on a fusion of what currently exists, to share knowledge and resources more fully across the Faculty, University and TAHSN network, and to expand international partnerships and impact. There is a need to actively incentivize and shape collaboration, cross-pollination and new ideas through process and support. Finally, a need was identified to bring the Faculty's focus on diversity and wellbeing to a new dimension, recognizing that excellence is not possible without equity, diversity, and a thriving human environment. We cannot equip the next generation nor address the most difficult scientific and health questions without bringing the full force of multiple perspectives to bear.

MD Program

The MD Program at the Temerty Faculty of Medicine, University of Toronto, is a four-year program divided into two phases: "Foundations" in the first two preclinical years and "Clerkship" in the final two clinical years. In 2021, the MD program was given full accreditation status for eight years following an extensive review by the AFMC Committee on Accreditation of Canadian Medical Schools (CACMS).

The Temerty Faculty of Medicine currently delivers its undergraduate medical curriculum in partnership with four Academies that are located at fully and community affiliated teaching hospitals in Toronto and Mississauga. The SAMIH will be the fifth Academy and will include both a campus-based venue at UTSC for the classroom teaching and hospital sites for the clinical teaching. The MD program leadership oversees the design and delivery of the curriculum and will ensure that the student experience will be equivalent and equitable at all five Academies.

The SAMIH will provide an opportunity to increase health-science-related teaching and research on the UTSC campus.

Delivery of the Foundations Curriculum

The faculty at UTSC and the community-affiliated hospitals will work in partnership with the MD Program Foundations course directors to deliver the curriculum. In addition, new clinical faculty will be recruited from the physicians on staff at community-affiliated hospitals: Birchmount, Centenary, General, Markham-Stouffville and Michael Garron Hospitals.

Using advanced information technology, all students will be linked by videoconference to enable distributed learning across the campus sites. The Faculty has successfully used the distributed campus model for the past nine years at the University of Toronto at Mississauga, Mississauga Academy of Medicine.

The curriculum to be delivered at the UTSC campus will consist predominantly of lectures, workshops, and seminars, as well as selected classroom-based clinical skills teaching.

Lectures

Lectures are held for the entire class of MD program students together and occupy approximately 10 to 15 hours each week in both first and second year. SAMIH students will attend lectures at UTSC. Lecturers will be broadcasting via videoconferencing from UTSC, St George Campus, or Mississauga campus.

Workshops and seminars

These interactive sessions are usually held for medium-sized groups of students. There are generally one to two workshops or seminars per week. For SAMIH, they will be held on the UTSC Campus with seminar leaders who are faculty of UTSC or clinical faculty from the hospitals.

Case-Based Learning (CBL)

CBL sessions are delivered in small groups of typically six to nine students and one faculty member acting as a facilitator. Students work through a simulated virtual patient case related to the week's topic over the course of two three-hour sessions. Whereas in the existing model, virtually all CBL sessions are conducted in the hospitals, it is anticipated that a significant proportion of CBL in the SAMIH will take place on the UTSC Campus.

Clinical Skills/Bedside Teaching

This format of learning occurs weekly for a half day during Foundations, primarily at the hospitals where the patients are; however, the UTSC Campus will also support student learning for selected sessions, when standardized patients are involved for simulation and practice.

Integrated Clinical Skills: Health in Community (ICE:HC)

This component of the Foundations curriculum uses a combination of didactic and experiential learning modalities to support students to investigate for themselves about community health. The MD Program will recruit community organizations in Scarborough to be partners in delivering ICE:HC, and community supervisors to act as co-educators, along with physician and interprofessional health faculty, for our students. Students complete Community-Based Service Learning (CBSL) placements at these partner organizations.

Delivery of the Clerkship Curriculum

The Clerkship component of the MD program is focused on clinical learning at clinical sites. Some centralized lectures or workshops will be conducted at the UTSC Campus.

Overall, the SAMIH presents a valuable opportunity for the Faculty of Medicine to provide a more community-based and community-oriented undergraduate curriculum. Students will be able to receive almost all of their instruction in Scarborough, either at the UTSC campus, the community-affiliated hospitals, or in the surrounding community.

Physician Assistant Program

Our mission is to deliver a Physician Assistant education program built on a foundation of social accountability, particularly to rural, remote, and underserved communities, and that enhances the effectiveness of services provided by physicians and other members of the healthcare team

Our core values are:

- Social accountability

- Contributing to a sustainable healthcare system
- Sustainable primary care
- Inter-professional collaboration
- Collaborative patient-centred practice
- Critical thinking and life-long learning

The BScPA Program was accorded a Canadian Medical Association six-year accreditation status in December 2017. The maintenance of this six-year status is recognized by the Physician Certification Council of Canada (PACCC).

The program runs continuously for six semesters (24 months). Short periods of time will be spent UTSC SAMIH, but otherwise the student may be in their home location during the first year.

Year 1 (pre-clerkship 3 semesters) is academically focused on:

- Completion of 15 courses in total online with synchronous and asynchronous learning and online proctoring of assessments
- Two mandatory in-person "Campus Blocks" that will be based at SAMIH that will occur for a 3–4-week block in September, and a 7-day block in May/June.

Year 2 (clerkship - 3 semesters) is clinically focused on:

- 44 weeks of supervised direct clinical contact in rural and urban settings:
- 12 weeks of Primary Care, plus four-week core rotations in General Surgery, Emergency Medicine, Hospitalist/Internal Medicine, Mental Health and Paediatrics. The remaining weeks are spent in electives.
- Half of the core clinical practicum will be assigned in Southern Ontario, half in Northern Ontario.
- A mandatory in-person "Campus Blocks" that will be based at SAMIH for one week in March.

Clinical Experiences in Ontario

The BScPA Program is designed so that students may remain in their home community for much of the didactic portion of the training. Although clinical placements occur during Year 2 of the program, Longitudinal clinical experiences are included throughout Year 1.

Home Training Location and N-S Swap Training

For all students whose primary residence is in Northern Ontario, their Home Training Location will be in the North. For all students whose primary residence is in Southern Ontario, their Home Training Location will be in the South. It is expected that, as much as possible, the student's Home Training Location will be in the same community, or near the same community, as their primary residence. However, if the community in which they usually reside is not suitable for PA student training, the student will be expected to relocate to a suitable community within their geographic region (North/South). All students will be allocated to an N-S Swap Training Location in the other geographic region (North or South) from their Home Training Location. Northern Ontario is defined by communities affiliated with NOSM.

Physical Therapy

Our vision is to ***advance the teaching, science and practice of physical therapy as an essential part of individual health and inclusive, flourishing communities***. Underpinned by our values depicted in we identified five strategic priorities each with their own goal and objectives further defined in the strategic plan:

1. Cultivate leaders and change agents
2. Amplify voice and advocacy
3. Foster equity, diversity and inclusion
4. Expand innovative learning
5. Strengthen shared scientific purpose

Our strategic plan also identifies Three Hallmark Initiatives. A "hallmark initiative" is a broad-ranging activity that runs across multiple priorities.

1. Create a flexible structure to bring multiple voices into all of our work
2. Catalyze excellence in virtual learning and practice
3. Co-create a multi-dimensional framework for PT science

Master of Science in Physical Therapy (MScPT) Program

The Master of Science in Physical Therapy program at the University of Toronto has completed the accreditation review process administered by Physiotherapy Education Accreditation Canada (PEAC).

The MScPT Curriculum, aligns with the vision, mission, and goals of the Department. The program is offered over 24 months (across six academic terms) beginning in September and admits 110 students annually.

The curriculum is structured as 14 units of organized sequential learning experiences, which integrate fundamental physical therapy knowledge, skills and behaviors into evidence-informed contemporary practice including 30 weeks of full-time clinical practice in approved clinical sites affiliated with the University. Students are required to complete all 14 units to achieve an MScPT degree.

The 14 Units are:

- Critical Foundations of Physical Therapy
- Physical Therapy Practice I – Fundamentals of Musculoskeletal Physical Therapy
- Physical Therapy Practice II – Cardiorespiratory Physical Therapy
- Physical Therapy Practice III – Neurological Physical Therapy
- Clinical Internship I
- Advanced Critical Thinking in Physical Therapy
- Scholarly Practice I
- Clinical Internship II
- Clinical Internship III
- Physical Therapy Practice IV – Advanced Musculoskeletal Physical Therapy
- Selected Topics in Physical Therapy

- Clinical Internship IV
- Scholarly Practice II
- Clinical Internship V

Educational Principles and Values

Foundational Pillars

The three foundational pillars provide the instructional anchors in our teaching and learning: critical thinking, an inquiry mindset and a strong sense of professionalism. They are shared values of the educators and learners. The three pillars are integrated through all units using multiple strategies and collaborative planning to cultivate students' critical thinking, inquiry mindset and professionalism setting the stage for the importance of life-long learning. A supportive teaching and learning environment is generated to facilitate students to achieve the expected competencies and entry-to-practice milestones.

Three Pillars

Critical thinking is the ability to interpret, integrate, analyse, and evaluate various forms of knowledge to make judgments/inferences in order to make the best evidence-informed1 decisions for clients, families, and communities. The diverse knowledge we draw on include clinical and life sciences, humanities and critical social sciences, and global and indigenous knowledge. Critical thinking requires learners to embrace ambiguity, to reflect and make changes to self and one's practice.

An **inquiry mindset** is characterized by the learner taking initiative to access relevant information and viewpoints. This mindset equips the learner to strive for the highest level of competence by employing the habits of mind needed to succeed throughout one's professional career. Habits of mind that support an inquiry mindset include self-directed and life-long learning, flexibility in thinking, creativity and innovation, and persistence and resilience in the face of difficulties.

Professionalism means acting with integrity and respect, demonstrating leadership within and outside the profession; and working towards the development of a physical therapy identity that reflects these core values. We are committed to principles of equity and diversity. This means implementing a process where learners are engaged in a process of learning to become systemic advocates for the clients, families and diverse communities that we serve.

Professional development resources (on-line modules, workshops, 1 pagers) were developed and made available to our stakeholders through our website, to support our faculty, students and clinical community as they engage in the teaching and learning within our curriculum. Workshops were held in our larger teaching centres to facilitate dialogue with our clinical partners, expose clinical instructors to the teaching and learning strategies and answer any questions that may be specific to their site.

Nature of Teaching and Learning Environment

Based on the educational mission of the MScPT program and the three overarching pillars, we aim to generate a teaching and learning environment that consists of the following specific values and actions.

The learning environment will enable learners to:

- Embrace complexity
- Deal with uncertainty
- Develop and practice resilience and perseverance

Instructors develop a teaching environment to facilitate learning by modeling these educational values by:

- Cultivating a supportive learning environment
- Providing opportunities for creativity and innovation
- Supporting and challenging the learners
- Using a common language to explicate our educational values (e.g., critical thinking, integration, inquiry-mindset)
- Ensuring our shared language reflects our educational values
- Integrating diverse content and practice settings
- Supporting learners with diverse learning needs through multimodal teaching and learning methods
- Creating and using authentic cases

Utilizing the three pillars as a guide, the curriculum challenges students to engage in systematic inquiry, fosters critical thinking, enhances moral reasoning, encourages problem solving, nurtures the integration of scientific knowledge, physical therapy skills and professional attitudes, and cultivate their attributes congruent with the educational principles and values of the program.

Graduates will be eligible to write the Physiotherapy Competency Examination of the Canadian Alliance of Physiotherapy Regulatory Boards, which qualifies them to practice physical therapy in Canada and will be eligible to register in the Canadian Physiotherapy Association and the Colleges of Physiotherapy in all Canadian provinces.

As part of initiatives in interprofessional research and study, the Physical Therapy program looks to potential synergies within SAMIH, including the Nurse Practitioner Program and Clinic, UTSC Department of Health and Society, MD Program at SAMIH, and the UTSC Sports Medicine Program at TPASC.

Lawrence S. Bloomberg Faculty of Nursing

The Lawrence S Bloomberg Faculty of Nursing 2017-2022 Strategic Academic Plan, Shaping Tomorrow's Leaders Today is central to shaping our priorities and defining our path for the future. This plan provides a set of goals intended to facilitate the evolution of our Faculty, focus our priorities, and give us direction and inspiration to move forward as a leading institution.

In a complex and rapidly changing environment, our strategic plan will serve as a blueprint that will engage our faculty members and students, so that our scholars can continue their outstanding work in an environment that allows for, and encourages, them to thrive. As our Faculty evolves to meet the ever-increasing expectations of students, partners and society, our mission of being committed to international leadership in research, education and practice will be supported by our 5-year strategic academic plan. The development of this strategic plan would not have been possible without extensive engagement in the consultation process by our faculty, staff, students, and external stakeholders including our clinical partners, donors and alumni.

Over the next five years, our Faculty will sustain and bolster our existing strengths and focus on five priorities that will advance our role as a local, national and global leader in nursing education, research and practice. We will do this through an ambitious strategy focused on:

- Embedding the internationalization agenda across all domains of activity within the Faculty;
- Pursuing new knowledge through interdisciplinary research of social, cultural, economic and/or public policy benefit, beyond academia;
- Widening access to, and participation in, educational programs delivered with innovative pedagogies that produce graduates with the attributes required to meet the needs of employers;
- Fostering a productive and sustainable partnership with our affiliated world-leading clinical institutions and community-based service providers; and
- Engaging with our community of friends, alumni and donors to contribute to, and advocate for, our success as an internationally recognized leader in health higher education.

Who are Nurse Practitioners?

Nurse Practitioners (NPs) are Masters- or Doctorally - prepared nurses with an advanced knowledge of client care and health management including disease prevention and health promotion as well as advanced health assessment, diagnostic reasoning and therapeutic management. As health care professionals legislated to care for patients autonomously, NPs play a significant role in health care reform, through practice, leadership, advocacy, and research.

What are the benefits of the NP program/clinic at SAMIH?

NP graduates from the Lawrence S. Bloomberg Faculty of Nursing, are prepared to lead in direct care for patients and are taught to maximize their ability to provide evidence-based practice and care, optimizing health and wellness. As part of the SAMIH, our learners will complete their placements at regional hospitals, primary care practices and community agencies across eastern Toronto and the Durham region, providing greater access to direct care providers for the community and enhanced opportunities for employment for our graduates.

Through the establishment of a new teaching and simulated clinic space, our learners in the NP program will have additional opportunities to excel alongside medicine and health sciences students in a model of collaborative care. The development of an NP-led clinic will also give learners an opportunity to provide a range of care (general health, sexual health, mental health, health promotion), under supervision, to diverse populations; including students, faculty and staff of UTSC and communities and populations with historically limited access to primary health care in the region. An additional opportunity exists to engage in outreach among UTSC undergraduate students who may be interested in the health sciences education pathway, helping them learn the value of advanced nursing practice roles and their contributions to our health system.

As we aim to create a new vision for the health care system in the eastern GTA, the NP program and clinic will create an environment in which to teach evidence-based collaborative care as it was originally intended, with health professions coming together in one, easily accessible location, to address gaps in primary care for underserved populations.

UTSC Clinical Psychology

Clinical Psychology S

Clinical Psychology at the University of Toronto Scarborough (UTSC) adheres to a Clinical Science model of training (see McFall, 1991). Housed within the Graduate Department of Psychological Clinical Science, the primary and overriding objective of graduate training in Clinical Psychology at UTSC is to produce exceptional clinical scientists according to the highest standards of research and clinical practice.

Graduate training in Clinical Psychology at UTSC has primary research strengths in the areas of clinical neuropsychology and neurosciences, personality and psychological assessment, and mindfulness- and acceptance-based psychotherapies. Distinguished by its innovative cross-disciplinary approach to psychological clinical science, Clinical Psychology at UTSC emphasizes scientific innovation through novel research collaborations that push traditional boundaries in clinical science and practice. This theoretical knowledge is integrated into our clinical training which supports the delivery of evidence-based assessment and psychological interventions.

A unifying theme of faculty research in Clinical Psychology at UTSC is to advance the assessment and treatment of mental disorders, especially depressive and bipolar disorders, anxiety disorders, schizophrenia-spectrum disorders, borderline personality disorder, and neurocognitive disorders, such as traumatic brain injury and dementia due to Alzheimer's disease. Faculty boast world-class expertise in brain imaging, web-based delivery of assessment and intervention, and intensive methods of naturalistic assessment.

Both MA and PhD graduate programs have a dual focus on research and professional training. Students enrolled in the program will complete coursework, an original piece of research (both at the MA and PhD level), clinical practicum placements, and a 1-year, full-time clinical internship.

Graduate Department of Psychological Clinical Science program's educational approach adheres to a Clinical Science model of training (McFall, 1991; Kazdin, 2008). The program espouses the view that scientific methods and evidence are the core of clinical psychology. Therefore, the scientific approach should permeate all professional activities, including developing and testing valid assessment and intervention methods, applying these methods to benefit human functioning, and disseminating knowledge to consumers, health professionals, and policy makers. Graduate students in our program are trained to: (1) develop a professional identity consistent with the clinical science training model; (2) conduct methodologically rigorous research in etiology, psychopathology, assessment, and intervention; (3) remain knowledgeable about new findings from both clinical and basic science; (4) utilize theory and data to inform clinical decision making; (5) work effectively with diverse populations; (6) use observations from clinical practice to optimize research questions and protocols; and (7) disseminate theoretical and empirical findings to the academic community, public, and policy makers. The goal of the GD-PCS is to train clinical scientists who can be employed in all professional settings including research, applied, or administrative settings. What is of key interest to our program is not the particular setting our students are employed in; rather, within any setting our graduates should function as scientists and contribute to the advancement of clinical psychology as a science.

Following our training model, the GD-PCS also adheres to a generalist model of training, as we train graduate students in all aspects of clinical psychology with a focus on adult populations. Additionally, we follow a mentorship model of training as we think graduate students are best trained by working closely with a faculty member and in a Clinical setting.

fMRI Clinic

Day-to-day operations of the SAMIH human and off-site small animal fMRI scanners will require the support of a full-time MR physicist, who will provide technological support and development for research purposes (e.g. working with researchers on developing and implementing data acquisition protocols and data processing pipelines), and a full-term MR technologist, who will be responsible for assisting researchers with data collection and operating the scanners, and ensuring that safety policies are implemented and adhered to. Behind the scenes, support for the clinic will be provided by existing administrative staff in the Department of Psychology. This support staff will not be located in the SAMIH building but will provide bookkeeping and oversee the computational infrastructure remotely. A radiologist from the local Scarborough Health Network will be needed in a consultancy role to provide expertise in the rare event that clinical input is necessary (e.g., when incidental atypical findings arise in research participants).

A Director position will be created and held by a UTSC faculty member on a fixed-term basis (5-year term) to provide overall leadership of the MRI facility. The Director will report to the Chair of the Department of Psychology, UTSC, as well as the Vice-Principal of Research and Innovation, UTSC, and will provide supervision to both the MR physicist as well as the MR technologist. In addition to this, the Director will chair a MRI users committee, composed of a select number of core users (who will serve on the committee for a 3-year term), the MR physicist, the MR technologist, the Financial Officer of the Department of Psychology, and the Computational Research Support Specialist. This committee will be responsible for overseeing the ongoing operations of the centre with respect to infrastructure (e.g., decisions pertaining to scanner and computer system repairs and upgrades), finances (e.g. ongoing evaluation of user fee rates and assessment of financial accounts), and safety (e.g., issues in relation to the implementation and enforcement safety policies).

Beyond UTSC, partnerships will be established with Baycrest and Ontario Shores, which have a commitment to clinical best practice informed by research, education, and advocacy. These institutions will provide crucial links to neurological and mental health clinical populations and clinical researchers and be key partners in our desire to foster synergy between the basic and clinical sciences. Bayer AG will be our industrial partner in translational research to develop new contrast agents for diagnostic imaging.

Finally, the fMRI Clinic creates a dynamic training hub for highly qualified personnel (HQP), which would be unrivalled locally or nationally. Indeed, there would be significant opportunities for trainees to develop skills in a wide range of areas including clinical science, neuroscience research, computational modelling, medicinal chemistry, and big data analytics. These skills would be delivered through a diversity of training opportunities, including UTSC undergraduate programs (including unique co-op programs) in Mental Health, Psychology, Neuroscience, Chemistry, a graduate program in Psychological Clinical Science housed at UTSC, medical and clinical psychology training internships at Ontario Shores, and U of T tri-campus graduate programs in Experimental Psychology and Chemistry. In addition to opportunities for postsecondary and postgraduate training, it is anticipated that the centre would facilitate recruitment of outstanding postdoctoral fellows and attract visiting scientists from around the world. We expect, therefore, that the proposed centre would produce high calibre HQPs, who would go on to make a significant impact in a range of fields at the regional, national and international level.

The fMRI facility will open up opportunities for research and investigation that are currently severely constrained by the availability of facilities within the Toronto region. This facility will be of particular benefit within the Scarborough region that is significantly under-resourced at present.

UTSC Department of Health and Society

UTSC's Health and Society programs promote an understanding of health across a spectrum of academic perspectives: from the clinical and biological health sciences to social science and humanistic ways of knowing. What binds together these disciplinary approaches is a consciousness of the need for rigorous biological knowledge to be understood in tandem with the social milieu of human health and embodiment.

This program is built around, above all, an evidence-based paradigm, to which the faculty in the program are unreservedly committed. The Department of Health and Society offers several degree options: a BA Major or BA Major Co-op, a BSc Major or BSc Major Co-op, and a Minor in Health Humanities. Each year, Health and Society faculty and instructors offer a variety new Special Topics courses with descriptions that do not appear in the regular course calendar, but which count toward program requirements.

Our interdisciplinary program is designed to offer students the ability to critically explore the complexities of human health, including the following:

- How biological and genetic factors affect human health, as well as how they affect our susceptibility and resistance to a broad spectrum of diseases;
- The ways that the Canadian health care programming and policy have evolved and how changes compare to those in other nation-state models of political governance;
- The conceptual and practical tools offered by critical social science health perspectives for investigating how social, historical, political and economic processes coordinate people's interactions with society's institutions, and in turn, how these shape people's health and well-being, including how people mobilize to bring about progressive social change;
- How cultural factors mediate health practices, and in turn, shape health outcomes through tradition, customs, ritual, and concepts of health, illness, and disease;
- How environmental factors influence the wellbeing of people from an individual to a global level;
- The ways that humanistic perspectives and arts-based knowledges (including literature, film, drama, visual and performing arts) uniquely reveal and inform the lived experience of health and illness;
- Canadian health care system and how it is influenced by and adapts to ongoing challenges presented by changing societal values and political arrangements.

In addition to pursuing a rich core curriculum, students are strongly encouraged to diversify their learning by drawing upon relevant courses in various disciplines including Anthropology, Critical Development Studies, Environmental Science, Geography, Human Biology, Mental Health, Public Policy, Sociology and Statistics, as well as through emerging experiential learning opportunities and ongoing collaborations with community partner organizations.

UTSC's pioneering Health Humanities curriculum—the very first of its kind in Canada—is intended for students who want to explore this emerging and important aspect of health care and undergraduate education. Health Humanities attracts students from a range of disciplines, including neuroscience, human biology, mental health, anthropology, health policy, languages, fine arts, and literature. Among other benefits, working with students, teachers, and researchers from a wide range of disciplines is excellent practice for the kind of interdisciplinary collaboration required in the health professional context.

Health Humanities at UTSC encourages undergraduate students to appreciate the wide applicability of a Health Studies education: after all, health and illness are not experienced exclusively within the hospital setting. By developing your abilities to analyze theoretical and applied dimensions of health studies, you will gain a greater understanding of how the arts and humanities reveal the complex, interdisciplinary nature of human health and illness—in professional settings, scholarly contexts, and in your own lived experience as a health care consumer and potential patient.

Since launching in 2014, hundreds of UTSC students have already discovered how Health Humanities generates meaningful intellectual and professional opportunities through undergraduate courses, independent studies, research awards, academic posters and conference presentations. DHS's pedagogy includes 'performance' and media as techniques for learning and social communication and will be supported by the proposed innovative Health Studies performance space within SAMIH.

Leslie Dan Faculty of Pharmacy

The Discovery Pharmacy is an accredited pharmacy which provides everyday health care as an enterprise dedicated to research, education and innovation. It provides health care programs delivered by members of more than one health discipline and is embedded within the University of Toronto's interdisciplinary health care education and research eco-system so as to provide a training venue to educate students in health and other disciplines, to conduct medication and health care services research and to support the physical, mental health and overall wellness of U of T's faculty, staff, students and wider community. The pharmacy includes a needs-based dispensary with limited onsite inventory and offers a range of professional pharmacy services. It will function as a vehicle for evaluating practice innovation to accelerate the uptake of new models of care applied to practice.

The development of the Discovery Pharmacy SAMIH (DRx-SAMIH) Site is very aligned with The University of Toronto's principle that work-integrated and experiential learning opportunities play an important role in enhancing the educational experiences of students.

In partnership with Student Life and Employee Health and Well-being, the DRX-SAMIH will co-develop programs that support the U of T health and well-being strategy, offer flu clinics and other clinical services. These programs will be developed as research initiatives that will allow for evaluation of program delivery and impact.

Experiential Education

The DRX-SAMIH practice experience will be embedded in the pharmacy curriculum by offering EE placements (both direct and non-direct patient care) designed to prepare and assess students for practice-readiness. It will incorporate best practice models, offer standardized students experiential learning assessments, ensure quality assurance processes, and enhance preceptor development.

The DRX-SAMIH will provide a unique practice environment where LDFP Faculty will have the opportunity to conduct direct observation and assessment of students' application of knowledge and clinical skills in a real-world setting. The DRX-SAMIH will also provide an environment to standardize and build the skills of preceptors to continually improve the quality of our educators. Furthermore, the DRX-SAMIH will reinforce the importance of connecting teaching and learning with research and

practice innovation for students, which is a critical success factor for the pharmacy profession as it continues to evolve.

Furthermore, the DRX-SAMIH will offer LDFP students multiple opportunities to advance their research abilities including: (1) Research Elective during APPE rotations; (2) Year 3 Research Elective; (3) Undergraduate Summer Research; and (4) Graduate student programs (Master's and Doctoral degrees; MSc in Pharmacy). The pharmacy will be a living lab training ground for trainees from different programs and disciplines to develop and implement various types of projects and initiatives. Learners from pharmacy and other health disciplines will train in delivery of interdisciplinary care. Learners from other disciplines will be able to focus on innovation in connected areas such as business, technology, architecture and information science.

Program Description

The DRX-SAMIH will be one of the 377 EE practice sites offered to pharmacy students. It will provide both direct patient care (DPC) and non-direct patient care (NDPC) experiential learning opportunities for pharmacy students. One of the benefits of the DRX-SAMIH site is that it will provide a unique practice environment where LDFP Faculty will have the opportunity to conduct direct observation and assessment of pharmacy students application of knowledge and clinical skills in a real-world setting. Students will have at least one EE opportunity within the DRX-SAMIH site before completing their academic program. The DRX-SAMIH will provide an on-site practice site for students who require remediation. This meets a faculty need because it has been at times challenging to find an available site that can accommodate a student who requires an opportunity for remediation within a timely manner.

We expect that most pharmacy students will spend approximately 10% of their experiential experiences within the DRX-SAMIH (i.e., 1 rotation) so that they obtain the benefit of training within the DRX-SAMIH along with the benefit of the balance of their experiential training at the many other varied placement settings. The entry-to-practice Doctor of Pharmacy program includes forty-three weeks (1720 hours) of practice experiences which complement classroom and laboratory courses and results in an intense program of study to assist students in developing proficiency in all competencies required for entry-to-practice. Our early practice experiences (EPE) involves eight weeks (320 hours) of direct patient care (DPC) in a pharmacy practice setting. Four weeks are completed in a community pharmacy at the end of first year (EPE-1), and four weeks are completed at the end of second year (EPE-2). We provide thirty-five weeks (1400 hours) of Advanced Pharmacy Practice Experiences (APPE) in year 4. At a minimum, students are required to complete twenty-five weeks (1000 hours) in DPC rotations in a variety of practice settings including institutional practice, community practice, and ambulatory care within Canada. The remaining two five-week elective rotations can occur in DPC or non-DPC settings. Non-DPC rotations expose students to wider aspects of the profession of pharmacy.

When fully functioning, the DRX-SAMIH will be included as one of the 378 EE placement options for learners across all pharmacy experiential courses. The DRX-SAMIH placements will be managed by our Office of Experiential Education (OEE) and as such follow the processes and polices already well established. The policies and processes in place include those that address student health accommodations. Students are expected to develop a learning contract, as well as provide specific objectives for each rotation.

Experiential Courses Offered at Discovery Pharmacy

Year	Code	Description	Schedule
1	PHM151H1	Early Practice Experience 1 • Prescription/medication order processing • Patient education • Drug information provision • Medication Hx taking • Observation of/participation in patient safety • Effective communication skills • Professionalism • Teamwork	May – August
3	PHM389H1	Research Project	78 hours
4	Advanced Pharmacy Practice Experience (APPE)		
	PHM401	APPE institutional required DPC	1X5 week rotation
	PHM402	APPE institutional required DPC	1X5 week rotation
	PHM414	APPE community required DPC	1X5 week rotation
	PHM424H1	APPE Selective DPC	1X5 week rotation
	PHM451H1 PHM452H1 PHM461H1 PHM462H1	APPE Elective DPC APPE Elective DPC APPE Elective NDPC APPE Elective NDPC	1X5 week rotation
PharmD for Pharmacists	Required	4 APPEs 3 DPC rotations 1 Elective	1X5 week rotation

Student Supervision

In each Block/rotation, the student is guided, supervised, and assessed on a day-to-day basis by a preceptor/pharmacist. Experiential Course Coordinators, working with the Office of Experiential Education (OEE) staff, Director of the OEE and Program Directors, provide academic oversight on all aspects related to experiential course delivery, and monitoring and assessment of students during rotations.

Interprofessional Education

The DRX-SAMIH will also provide DPC opportunities to build an interprofessional collaborative approach to Medication Management. The DRX-SAMIH will develop hands-on quality learning experiences for students, faculty and staff across the U of T Health Sciences Academic Units (e.g., Dentistry, Nursing, Medicine, Social Work). It is intended that these experiential opportunities will facilitate the uptake of new knowledge, and development of skills and confidence required to deliver high quality, evidence-informed, outcomes oriented direct patient care and promote interdisciplinary education and training opportunities.

The DRX-SAMIH will also offer NDPC opportunities to collaborate within cross-disciplines such as the Rotman School of Management, Faculty of Engineering and the Dalla Lana School of Public Health to pioneer new models of delivering pharmacy practice to ensure optimal medication management efficacy and safety, advance education, training, research, practice and use of leading-edge technology.

Faculty Complement

The Faculty has a strong mix of faculty members that is comprised of four categories: tenure stream (n=32), teaching stream (n=9), status-only (n=49), and adjunct (n=54). In addition, there are a very large number of affiliated preceptors (approximately 900) who provide placements for our students during experiential rotations coordinated through our OEE. Full time faculty members include a high number of clinically expert pharmacists with Part A licences valid through the Ontario College of Pharmacists allowing them to practice as a pharmacist within an accredited pharmacy.

It is expected that many tenure stream faculty will be able to supervise graduate and undergraduate students as part of the DRX-SAMIH and LDFP research and learning enterprise. All faculty supervising research within the DRX-SAMIH will be expected to have appointments with the School of Graduate Studies (SGS) and most with the Department of Pharmaceutical Sciences, although we expect faculty from other Departments to also utilize the DRX-SAMIH for research scholarship.

There are many other faculty with status or adjunct appointments who can support research and education within the DRX-SAMIH. These include affiliated faculty with SGS appointments who can supervise or contribute to graduate trainee activities.

c) Space Requirements, Program and Functional Plan

<u>Space Requirements</u>

The Council of Ontario Universities (COU) formulae are used to generate benchmark requirements for defined categories of space. The formulae utilize occupant profiles (input measures) and space factors.

UTSC's space typically falls under the following categories: teaching, research and office space under the jurisdiction of the department, and that generated for facilities, which are considered campus-wide resources such as classrooms and student space. For the purposes of this report, COU analysis will be limited to the UTSC Campus and the presence of departments and faculties on the UTSC Campus. The full COU analysis is included in Appendix 2 of this report.

Further information included definitions can be found here:
https://cou.ca/reports/2016-17-inventory-of-physical-facilities-of-ontario-universities/

Summary of SAMIH Occupants FTE

Status	Existing FTE	Proposed SAMIH FTE*	Total FTE
Undergraduate	**2,656**	**457**	**3,113**
Faculty	**366.3**	**37**	**403.3**
Tenure/Chair	61	19	80
Teaching	33	8	41
Sessional (Clinicians)	266.3	5	271.3
3902-3 (Graduate TA)	6	0	6
Visiting Scholars	0	5	5
Research	**103**	**20**	**123**
PdF	26	6	32
Research Associates	18	6	24
Research Funded Staff (Work/Study/Casual)	59	8	67
Graduate	**605**	**108**	**713**
Non-Academic Staff	**130**	**18**	**148**
Total	**3,80.30**	**640**	**4,500.3**

Proposed SAMIH Occupant Cohort & Complement Summary

Department/Program	Proposed SAMIH Student FTE (UG/Grad)	Proposed SAMIH Faculty & Staff FTE
MD	200.00	16.00
Physical Therapy	40.00	8.00
Physician's Assistants	67.00	5.60
Nurse Practitioner	30.00	5.00
UTSC DHS	621.70	60.70
UTSC Clinical Psychology	28.00	17.00
Pharmacy	30.00	2.00
Total	**1016.70**	**114.30**

Teaching Laboratory Weekly Scheduled Contact Hours (WSCH)

WSCH = Weekly Student Contact Hours defined by the Council of Ontario Universities as: The total weekly-student-contact-hours of laboratory instruction offered by a university as part of a program of studies leading to a degree or diploma. The contact hours are computed as the product of the course enrolment and the hours of scheduled instruction (when the instructor is in the room) received by each enrolled student during a typical academic week in a "laboratory" setting. Laboratory instruction pertains to activity facilitated by demonstration or experimentation requiring additional equipment and services not ordinarily available in classrooms.

Department	SAMIH Enrolment (2024-2025) (FTE)	Weekly Scheduled Instructional Laboratory Hours (Hr)	WSCH	COU CIP Code	COU Space Factor	COU Generated Nasm (G)
MD	100.00	40.00	400	X	0.6	240.00
DHS	895.00	130.00	2,485	X	0.6	1,491.00
Pharmacy	6.00	6.00	36.00	X	0.6	21.60
Total	**1,001.00**	**176.00**	**2,921.00**			**1,752.6**

Classrooms

The Classrooms proposed for SAMIH fall primarily under priority assignment to Temerty Medicine and are composed of large Active Learning Classrooms, and smaller group learning or PBL classrooms. All classroom spaces will be included in the general UTSC classroom inventory for use by other departments.

Active Learning Classrooms

Classroom Space

The construction of the SAMIH provides an opportunity to create a range of innovative teaching and a Learning Centre for the MD, Physical Therapy, Physician Assistant and Nurse Practitioner programs as well as adding essential classroom space to the UTSC general inventory. As a resource for the institution the new classrooms must be planned thoughtfully and strategically ensuring they meet both current and future campus demand and pedagogical innovations.

Medical Professional programs involve a mix of formal large-group instruction (usually delivered to the entire year class at once) and small-group instruction such as seminars and problem-based learning (PBL) sessions. These scheduled activities currently involve a range of existing Temerty Medicine facilities, including four large tiered lecture theatres, several smaller lecture rooms, and a number of wet teaching laboratories that are employed by the MD program almost exclusively for the delivery of concurrent seminars.

For the Medical Profession programs proposed at UTSC SAMIH, the space program includes two 60-seat active learning rooms. These classrooms are to be technologically rich environments with multiple screens at perimeter walls linked to student stations and instructor's stations. Furniture is to be flexible and mobile allowing for differing classroom configurations: from rows to pods of between 3 and six students.

The size of the classrooms is scaled to accommodate the future planned steady state for medicine of 50 students per year over 4 years as well as the 40 students per year in Physical Therapy and 30 students per year in Physician Assistants and Nurse Practitioners. The classrooms are also sized to allow for the ability to host guests and learners from multiple programs simultaneously.

The new classrooms should be designed to support the following goals:

- Support Active Learning: Classrooms should be flat floored and flexible for active participation of all students during classes, this includes students interacting with each other during discussions and group projects. Interpersonal communication is a key requirement for the future of in person education.

- Meet MD Curriculum Needs: Each MD year' class at the UTSC SAMIH (56 student class per undergraduate year at SAMIH) must be accommodated simultaneously for classes. Further space to allow students from differing years is to be provided in the classroom space. Full cohort instruction will be scheduled in larger classroom spaces at UTSC.

- Provide a “Home” for Temerty Medicine students: The new SAMIH will be the home base for Temerty Medicine students at UTSC. The range of study spaces will provide a home base for students to both collaborate with others and focus on individual studies. It will be a social home for medical science students and included space for student societies and informal lounges. Classrooms are to be used as informal study spaces for students when not being used for scheduled courses.

- Host Events: The classroom spaces should be designed to host significant events. This means events may make use of the larger classroom spaces when not scheduled for curriculum needs. The ability to reconfigure and store furniture will be required of the classroom design.

It is preferred for the majority of classrooms to be co-located primarily on Level 2 to create a Temerty Medicine hub with other medical profession instructional spaces (PBL, CSL), be proximate to interactive learning space and student study spaces.

These 60-seat active learning classrooms will be located along public corridors in the new building which will make them readily accessible to both Temerty Medicine and other UTSC programs. Openings with acoustically treated doors and glazing are to be employed between the classrooms and adjacent lounges, Interactive Learning Space and corridors to provide acoustic separation.

Classroom Space (COU Cat. 1.0)

COU Category	Proposed Laboratory Space	Proposed FTE	COU Input Nasm	Generated Nasm (G)	Proposed Inventory Nasm (P)	P/G
1.0	Classroom (Active Learning)					
	MD*	200.00	1.11	222.00		
	Physician Assistants	60.00	1.11	66.60		
	Physical Therapy	80.00	1.11	88.80		
	Nurse Practitioners	60.00	1.11	66.60		
			TOTAL	**444.00**	**385.00**	**87%**

* Includes use by Physical Therapy, Nurse Practitioner and Physician’s Assistant programs.

The proposed classroom space for the MD program is at 87% of COU standard. Although the initial MD FTE will only be 120, the planned future state accommodating 200 students per year is included in the analysis. The classrooms are to be active learning spaces which have an approximately three times greater area per seat than that which the COU accounts for in traditional classroom planning. Active learning spaces at U of T are typically planned at 3 nasms per seat. For the MD program two 60 seat active learning classrooms are required for the two 50 student Foundations program year 1 and 2 plus additional enrolment capacity for Clerkship students, as well as enrolment of 40 Physical Therapy students per year for the two-year program. And 60 students per year (over two years) for Physician Assistant and Nurse Practitioner programs.

The Department of Health and Society will require classroom use outside of SAMIH within the general UTSC inventory. As such is DHS is not included in the COU analysis for classroom space at SAMIH. The following is a breakdown of DHS’s classroom space requirement under COU.

Division	FTE	COU Input Nasm	Generated Nasm
DHS Existing	429.20	1.11	476.41
DHS Projected to 2025	621.9	1.11	690.31
Increase			213.9

DHS will require 690.31nasm of classroom space to meet 100% of COU requirements. This is an increase of 213.9 nasms to the current DHS inventory. The UTSC campus classroom inventory will have a projected COU Cat. 1.0 classroom inventory of 11,182.20 nasm accounting for approximately 78% of COU generated classroom requirement. The recent increase in the UTSC Classroom general inventory provided by the IC-2 facility has included for planned academic growth. Class scheduling with other programs within the general classroom inventory will be required to accommodate DHS.

Interactive Learning Space

Not included in the above analysis is the classroom generated Interactive Learning Space (ILS) which is included at 25% of the total Cat. 1.0 Classroom program space. The use of 25% in determining the ILS assumes that an equal amount of space will be provided within the overall building gross-up. The interactive learning space in conjunction with corridor space included in the gross-up functionally provides a buffer for accommodating student traffic flow between classes.

In recent years, this space has been identified as being an important 3rd space on campuses offering opportunities for informal learning, conversations and interactions between students, faculty and staff. The importance of these spaces has led them to be included as informal study spaces in this report. Provision of flexible furniture and laptop bars which do not interfere with circulation are to be considered in conjunction with finishes, lighting and views to encourage and facilitate informal interactions.

Undergraduate Scheduled Teaching Laboratories

Anatomy Teaching Facilities

Courses in anatomy are integral to MD Program, PA Program, and PT Program. The SAMIH anatomy teaching facility will be an open instructional laboratory and support facility, to display and make available materials (including highly sensitive, cadaverous materials), to be accessed securely by MD students throughout the academic year during Foundations, and other learners based on their course-based learning. Pedagogically and technically, the proposed anatomy teaching facility at SAMIH will focus on prosections and torso dissections. Gross anatomy will be limited to the St. George Campus where SAMIH MD students will complete the gross anatomy portion of the Structure and Function course and neuroanatomy instruction Year 1 Brain and Behaviour course in MSB facilities.

The anatomy teaching facility will be sized to accommodate 25 students (half of the SAMIH MD class) at a time requiring two scheduled labs for the MD preclerkship class. The Anatomy lab is to be equipped with vestibules at the entrances to deter views into the lab from public corridors. Six Rotating Anatomy tables are to be accommodated for on-going instruction for different sections and anatomy pedagogical methodologies. (prosection/torso dissection) Perimeter benching with sinks are required to support the lab. The Anatomy lab is to contain a small alcove area within the anatomy lab similar to the lab at UTM MAM. Negative pressure via the HVAC system is required to keep odours within the room.

An adjacent support space for maintaining the specimens with a cold room, fume hood and sink is also required. Within the support space, a lab technician's office is to be provided and can be configured to accommodate a touch-down space for visiting instructors/technicians from St. George. Lockers for student lab coats, a handwash area and a PPE station are to be included.

Security is necessary, and cameras and fob access are to be provided to both the Anatomy Lab and Support Space.

Both the Physician Assistant and the Physical Therapy programs have Anatomy courses within their required curriculum. While the Physician Assistant program uses online anatomy tools for instruction, the Physical Therapy department will use St. George Campus anatomy teaching facilities for gross anatomy and neuroanatomy. The Physician Assistant program will require use of the anatomy lab by the course director/TA to be able to be able to create videos of prosections as needed. With the potential reduction in footprint of the existing anatomy facilities in MSB at the St. George campus with the new MSB west wing redevelopment, future consideration of an expanded use of both UTSC SAMIH and UTM MAM anatomy facilities will require future review.

UTSC is anticipating being able to offer Anatomy courses in the Anatomy Teaching Facility for UTSC Human Biology students during non-peak Temerty Medicine scheduled time in the Summer term.

Current planning suggests that the anatomy lab and support space be located in proximity to either the main loading dock or to the freight elevator in the basement level to facilitate logistics in shipping and receiving of anatomy materials to/from the St. George campus.

The anatomy lab and support space will require CL-2 containment level classification and will require approval by the Office of the Chief Coroner.

PBL/Small Group Learning Rooms

The MD Program, Physician Assistant, Physical Therapy and Nurse Practitioner programs require ten 12-seat small group learning rooms. They will be used for small group learning activities facilitated by a tutor (e.g., Case-based Learning).

The number of classrooms was largely determined not only with respect to meeting formal, scheduled instruction needs, but also to informal and/or extra-curricular usage by students and staff. Moreover, the proposed rooms can serve as replacement space for those facilities that are planned for the hospitals in the event of an emergency (such as the recent COVID crisis, assuming limited access to hospitals and ability to continue delivery of the MD curriculum).

To maximize flexibility, these rooms at UTSC will be furnished with portable examination tables and diagnostic equipment and will also be equipped with video and audio recording equipment to monitor and playback student activity. Each room will be provided with flexible furniture.

These spaces are proposed to be located within the Temerty Medicine program's discrete space cluster within SAMIH to ensure security of equipment and privacy when in use for clinical skills practice and student study.

These rooms will be used by the Physician Assistant, Physical Therapy and Nurse Practitioner programs in conjunction with simulation laboratories for small group learning and Objective Structured Clinical Examination (OSCE) sessions.

Clinical Skills Laboratories

The Clinical Skills Laboratory (CSL) space will primarily be used by the Physical Therapy program with use by Physician Assistant, Nurse Practitioner and the MD programs. Currently, Room 750 in the Rehabilitation Sciences Building (500 University) is used by Physical Therapy as their primary CSL. The UTSC SAMIH CSL will be similar in nature to an active learning environment and will consist of a large flat floor open space containing 25 plinths (76”x26” medical tables for body work), perimeter screens and whiteboards, a teaching station, 2 sinks/counters and storage. An area of the room will employ curtaining or room dividers to create a private area for student work and female only practice sessions, as well as a temporary storage area for tables allowing the room to be used for other types of instruction.

Space for circulation and clinical skills practice will need to be considered around each bench for both accessibility of the patients, students and instructors. The instructor’s station will include a medical body worktable and teaching A/V control.

Overhead cameras will be positioned above each table and linked to the instructor’s station and perimeter screens. Tables are to be large enough for 3- 4 students and enough elbow room to practice suture skills, opthosim and otosim activities.

Support spaces for the CSL includes adjacent student day lockers, changing facilities and washrooms and a securable storage area for additional equipment and teaching aids/medical simulators. A laundry facility will be required to clean sheets and PPE.

Simulation Laboratory

An important aspect of the Physical Therapy, Physician Assistant, Nurse Practitioner and MD programs involves formal instruction with professional “standardized patients” and informal clinical skills practice by students on their classmates. Similar facilities are employed at the Toronto General Hospital’s Helliwell Centre (Wightman-Berris Academy) and at other medical schools.

A simulation lab has been requested by the Physical Therapy program that will also be used by the Physician Assistant and Nurse Practitioner programs. It will comprise a high-fidelity simulation room and an observation room. The Simulation room will allow groups of four students to work within each high-fidelity simulation at a time. Overseeing the simulation room will be a centralized Observation Room. The Observation Room will be used for instructor supervision and for debriefing groups of students. Each simulation room is to be equipped with a counter, storage and a sink. A digital monitor will be provided within each simulation room and within the observation room.

The Simulation lab will contain a “mock wall station” used to create buttons, post stickers or hang small equipment on wall for purpose of simulating an ICU. The simulation room will require space for 3 oxygen tanks with proper storage equipment.

The Simulation Lab will be located adjacent to the Clinical Skills Lab and associated changing and laundering facilities.

DHS Central Teaching Laboratory

The DHS Central Teaching Laboratory (CTL) is a hybrid model with an instructional lab with adjacent laboratory support spaces. Instruction for 30 students occurs in the classroom with break-out student groups alternating experimentation between the central lab space and the surrounding support lab spaces.

The Classroom component is to contain laboratory benches. The front of the lab should have: a large white board and a smart board; a teaching station (lab bench); 4 fume hoods,4 sinks, 4 CO2 incubators (Stacked) with necessary wall mounted gas cylinder support and emergency power for incubators.

The adjacent support spaces are to be divided into:

- Tissue Culture Room, containing:
  - bench space
  - 4 CO2 incubators (Stacked) with necessary wall mounted gas cylinder support and emergency power for incubators
  - 2 Bio-Safety Cabinets
  - Anti-Vibration Microscope Table

- Storage & Instructor Preparation Room, containing:
  - Lab Benching with Built in Storage, overhead racks and storage
  - Lab Sink built into bench
  - Fume Hood
  - Bio-Safety Cabinet
  - Countertop Incubator
  - Fridge & Freezer
  - Storage Cabinet
  - Coat Rack

Eye Washing and Safety Showers to EHS standard are to be provide in the DHS Central Teaching Laboratory and support spaces. Distilled water is to be provided at a minimum of one sink – preferably within the Storage & Instructor Preparation Room.

The layout and operation of this space has precedent in the new facility at Northeastern University’s Interdisciplinary Science and Engineering Complex. https://www.payette.com/projects/incubating-new-ideas-in-tissue-culture-based-teaching/

DHS Health and Humanities Teaching Laboratory

The DHS Health and Humanities Teaching Laboratory (HHTL) will be a modular, flexible humanities-based teaching environment capable of supporting the following uses:

Function	Use	Capacity	Equipment / Support Spaces
Black Box Theatre	Student Performances	60 Seats	Lighting Grid & Lights, Staking Chairs, Flat Floor Stage, Curtains
Rehearsal Space / Backstage	Student Performances	40 Performers	Storage Facilities, Change Rooms/Washroom, Curtains
Exhibition Space	Student Work Presentation, Critique and Exhibition	300 (Standing)	Demountable/Mobile Partitions
Digital Recording Studio / Control Room	Student Podcast Recording, Performance Control/Recording	2-3	Lighting/Sound Control Board
Media and Equipment Library/ Storage	Storage and lending of digital media equipment to support functions within the HHTL		Secure storage and monitoring

The space is to be designed to be flexible, making use of the entire floor area for conversion from a flat floor black box theatre into a gallery space for exhibiting student visual graphic work.

The HHTL is to be located in a public area, ideally on the main floor, adjacent to a public foyer space and employ large overhead doors or retractable partitions to allow the HHTL space to open to the adjacent foyer space for larger public events.

DHS is eager for the HHTL to become a campus resource, available for booking by the SAMIH and UTSC academic communities.

There are at least three layers of rationale for ensuring dedicated Health Humanities space in the new SAMIH facility:

1. pedagogical affordances for baccalaureate health education,
2. supporting institutional significance and profile,
3. ensuring parity with peer institutions across North America regarding Health Humanities infrastructure and learning environments.

The proposed DHS Health and Humanities Teaching Laboratory (HHTL) provides space for humanities based interdisciplinary health research that seeks to interrupt racialized, gendered, disability-related, and other forms of oppression affecting health-care outcomes and care seeking. The HHTL will support the following areas of expertise:

- aging and the life course
- community-engagement
- disability studies
- health equity
- health, wellness, and the arts
- Indigenous health
- reproductive and sexual health

DHS Digital Media Computer Studio

In addition to the HHTL, DHS requires a digital media computer studio for instruction and unscheduled student use. The Studio should be available with controlled access for student use after hours for completion of course work.

Departmental Schedule Class Laboratory Space (COU Cat. 2.0)

COU Category	Proposed Laboratory Space	Proposed WSCH	COU Input Nasm	Generated Nasm (G)	Proposed Inventory Nasm (P)	P/G
2.1	Scheduled Class Laboratory		X			
	MD	1,196.00	0.6	717.60	462.00	64%
	Healthcare Professionals (PT, PA,NP)	2,585.1	0.6	1.551.06	264.00	17%
	PA	765.1	0.6	459.06	*	
	NP	1,020	0.6	612	**	
	DHS	2,485.00	0.6	1,491.00	325.75	22%
	Pharmacy	36.00	0.6	21.60	0.00	0%
			TOTAL	**3,301.26**	**1.051.75**	**32%**

* PA and NP inventory included in PT under banner of Healthcare Professionals in the space program

Instructional Laboratory Space need indicated by the COU analysis of 32% proposed over generated space will be addressed primarily through scheduling. The instructional lab space programming takes advantage of use by the spaces by the MD, Physical Therapy, Physician Assistant and Nurse Practitioner programs. Further analysis through scheduled use between graduate and undergraduate programs of PBL and Simulation Lab Spaces demonstrates the following:

Proposed User	Proposed PBL WSCH	Proposed Simulation Lab WSCH	COU Input Nasm (X)	Total Generated Space PBL (nasm)	Total Generated Space SIM. (nasm)	Space Allocation PBL (%)	Space Allocation SIM. (%)
MD	796	0	0.6	477.6	0	37.62%	0%
Physical Therapy	320	183.33	0.6	192.0	110.00	15.12%	13.51%
Physician Assistant	640	1,173.33	0.6	384.0.	704.0	30.25%	86.49%
Nurse Practitioner	360	0	0.6	216.0	0	17.01%	0%
			TOTAL	1,269.6	814.0		

Proposed User	% Allocation PBL	PBL Proposed Space	Space Allocation PBL (Nasm)	% Allocation Sim	Sim Proposed Space	Space Allocation SIM. (Nasm)
MD	37.62%	360	135.43	0%	36	0
Physical Therapy	15.12%	360	54.43	13.51%	36	4.86
Physician Assistant	30.25%	360	108.90	86.49%	36	31.14
Nurse Practitioner	17.01%	360	61.24	0%	36	0
	TOTAL		360.00		36.00	

PBL pro-rated nasm allocation is removed from the Cat. 2.0 space program analysis and included in the Cat. 3.0 space program analysis for Research Laboratory Space for Physical Therapy, Physician Assistant

and Nurse Practitioners programs. Simulation Lab pro-rated nasm allocation is removed from the Cat. 3.0 space program analysis and included in the Cat. 2.0 space program analysis for Instructional Laboratory Space for MD students. A description of the Simulation Lab Suite follows in the Research Laboratories section.

Research Laboratories

Research Laboratories within the SAMIH are to provide state of the art facilities for research and education. As modern collaborative spaces within an interprofessional/interdisciplinary academic facility, these spaces are to promote/facilitate the following:

- Research on Display
- Research Clusters
- Flexibility and Adaptability
- Curate framework to support tomorrow's researchers (undergraduate students)
- Active Learning Environments for students and faculty
- Study Space
- Specialised Research Spaces (lab modules) and Shared Research Spaces (support spaces)

Physical Therapy/Rehabilitation Evaluative Science Research Unit Lab

The Physical Therapy/Rehabilitation Evaluative Science Research Unit Lab (PT-RESR) will be a dry lab providing space for Research Associates and Graduate students within the PT-RESR Unit. The space will allow for 12 computer stations, and file and some equipment storage.

Environment & Health Laboratories

The Department of Health and Society Environment & Health Laboratories (EHL) are currently located in the Science Wing Building. These laboratory spaces are comprised of two recently renovated wet laboratories (one CL-1 and one CL-2 rated) a dry lab suite and lab support spaces. These recently renovated spaces allow for two PI's per lab although currently used by only 1 PI each. The existing dry lab space underserves the laboratory space with little common meeting space and graduate student and PDF workspace.

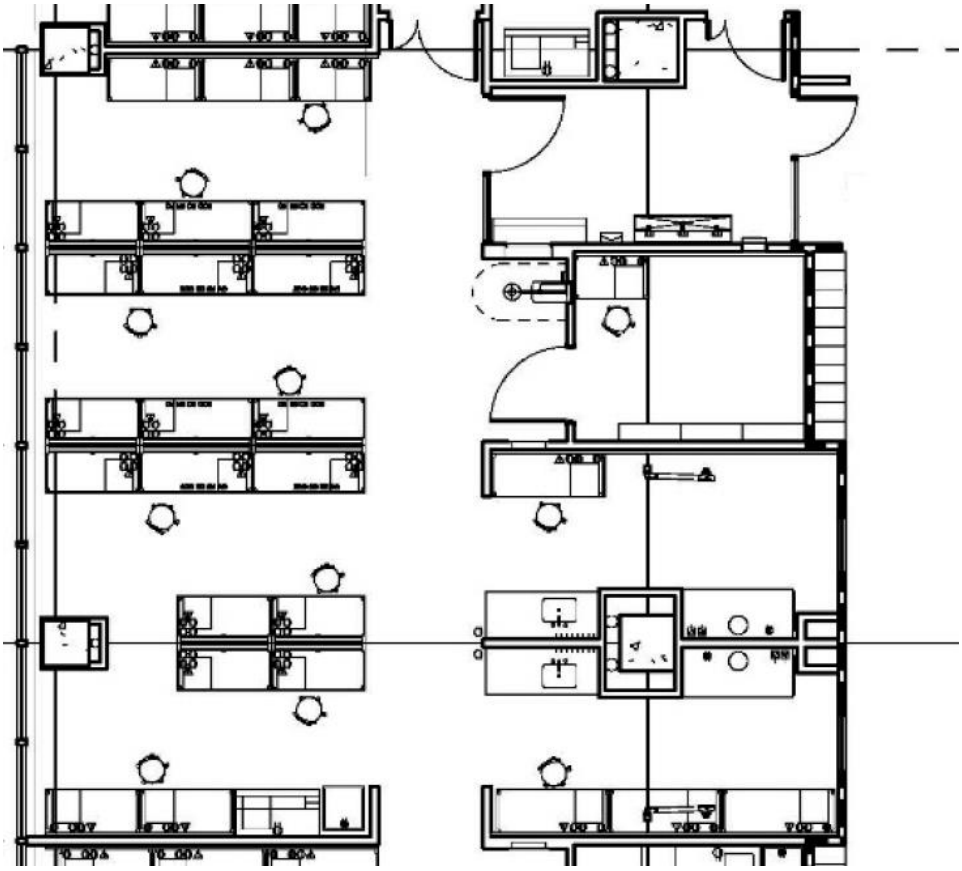
With the move of the DHS to SAMIH, the Environmental and Health Laboratories will vacate their current locations for new laboratory space within SAMIH. The new DHS EHL labs will be based on the modular laboratory model used at Ted Rogers Centre for Heart Research in the MaRS Tower. This EHL will consist of:

- Four Wet Laboratories supporting one PI's each with 6 lab benches each (2 students per lab bench + PI) – CL2 Rated. These labs may be paired into two open lab spaces shared by two PIs.
- At least two separate Dry Lab Spaces with workspace for 12 Gradates and 4 PDF's
- Common Meeting Room with sink, counter space for microwave, and fridge/Table for 12
- 2 PI's Offices, one attached to dry lab space

Wet labs will be equipped with sinks, fume hoods and bio-safety cabinets. The incubators should be located next to bio safety cabinets. Biosafety cabinets and incubators should be served by emergency power.

The EHL will require access to centralized shared laboratory support spaces including microscopy rooms, fridges/freezers/ultra-cold freezers, ice makers, autoclaves, gas storage and general equipment storage. The EHL will require an incubator space and be served with distilled water. Other equipment requirements include the following: biosafety cabinets to accommodate all PIs; Western blot; qPCR; digital PCR; thermocycler.

DHS research currently relies on the CNS facility and technicians in the Science Wing. Specific research coordination between facilities at the UTSC campus will be coordinated with each PI by UTSC.



Modular Lab Precedent Layout showing Open Lab and Shared Service Spaces within the Containment Area

Laboratory Spaces

The research Space Program is essentially two types of space, namely the *wet laboratory CL2 space* and the *dry laboratory spaces,* which does not require the CL2 classification.

The Laboratories are planned to be modular open concept with a single CL2 classified space. Laboratory benches are to be modular, working with the building structural grid and servicing to be re-configurable to new research requirements. The open concept laboratory could be contained within one defined area or

be subdivided into one or multiple open laboratory zones. Each laboratory will be sized to accommodate 12 lab benches providing support for 1 PI, 2 PDFs and 6 Graduate Students. The open laboratory spaces will be served by a bank of supporting enclosed adjacent ante rooms providing standard laboratory equipment and support functions which require separation from the open laboratory space. A common internal corridor will serve all laboratory space and provide areas for commons support such as freezers and fridges. Entrance vestibules, as required, will be integrated into the common corridor and ante rooms.

The wet laboratory spaces are to be located on the upper floors to minimize ventilation runs through the building to the roof.

To allow for flexibility of the open laboratory space and future use, Laboratory support spaces will be located along one half of the building floor plate with direct access to the internal corridor and the central building core. The central support core will be strategically located for access, servicing and containment level compliance. It is envisioned that these central, shared support spaces will contain servicing and space able to accommodate a range of equipment and process in response to the investigations performed within the associated laboratory space.

Dry Laboratory spaces will either be collocated on the opposing side of the floor plate from the associated wet laboratory or will be grouped together on an adjacent floor level. The Dry laboratory spaces will contain research supporting workstations, meeting areas, enclosed offices and amenity spaces, and one PI will need separate space for field gear storage. Interconnecting convenience stairs are to be considered if the Dry Lab spaces are located on an adjacent floor level from the Wet Lab spaces.

Wet Laboratory Module

The wet laboratory, CL2 space will comprise a large open concept laboratory supported by specialized ante rooms adjacent to the open laboratory and the Lab Support Core Module (LSCM). The open concept laboratory could be contained within one defined area or, depending on research requirements be subdivided into multiple open laboratory zones associated with individual PIs. DHS' use of the wet laboratory module will see the open space divided into two spaces with facilities for two PIs in each space. (4 PIs total). As the Lab Support Core Module is intended to be supportive of the entire open laboratory, it is preferable to keep the number of zones to a minimum to allow direct access from the laboratories to the support core module.

8 fume-hoods are included in the project within the Wet Lab Research module for DHS. The Fume hoods are to be distributed 2 per PI within the wet lab module space. The positioning of the fume-hoods within the Open Laboratory (s) should be such as to minimize the length of ducting required for the exhausts.

Laboratories are to contain the following equipment specific to the PI:

1. 2 Fume Hoods (for the sole use of one PI's team)
2. 6 Lab Benches for researchers (2 Grad Students per bench + 1 PDF per bench + 1 PI per bench)
3. Distilled water tap at a minimum of one sink
4. PPE storage and disposal / laundry collection point
5. General Storage (requiring containment level)
6. 2 Laboratory Sinks in Counters - Handwashing Sinks in conjunction with lab sink where permissible
7. Eye Washing and Safety Showers to EHS standard

8. Counters between equipment with overhead racks and shelving

Other requirements of note include:

- One Anteroom per PI/ Wet Lab Module with direct access to the open lab will require:
    - a bio-safety cabinet and
    - 2 CO2 incubators (Stacked) + necessary wall mounted gas cylinder support (for the sole use of one PI's team) + emergency power for incubators
    - Two Fridges
    - One Freezer

- Within the Open Laboratory [or zones thereof] it is recommended that an internal passageway or corridor could conveniently be used to house the freezers and or fridges thereby using the corridor space to access these facilities; this practice to establish a *cold corridor* appears to be used at other facilities within the UofT Inventoryt. The current equipment list includes 4 freezers and 8 fridges and the majority of these are to be located within the Wet Lab Module Ante Room.
- Emergency power is required in the SAMIH facility.
- Chemical Storage is required to be provided in the Open Laboratory within chemical storage cabinets. Recommendations on whether these cabinets are to be located in an enclosed area with suitable venting are to be clarified.
- Gas Cylinder Storage is required to be provided in the Open Laboratory.
- The location of all safety showers and eye washers in the Open Laboratory need to be carefully optimized. Specifically, it is not the intent or requirement to install showers in any of the ante-rooms; however it would be beneficial if a safety shower to be located close to anterooms Containing centrifuges.

The Lab Support Core Module (LSCM)

Specialized anteroom and service room facilities within the LSCM are intended to be supportive of the entire open laboratory. It is anticipated that Ante and Service rooms will be clustered together close to the building service core; some of these rooms specifically request a preference for no windows and vibration control which the building core provides. Given the nature of the planned activity in the various Anterooms it is desirable that equipment be grouped together as possible with servicing alignments to address their specific air handling requirements. A common internal corridor serving the LSCM, ante rooms and the open laboratories will provide potential locations for shared equipment and support services such as fridge or freezer banks, PPE disposal and gas cylinder storage.

The specialized anterooms within the LSCM are to contain the following programming and equipment:

1. Equipment & Storage Room with designated and fixed Lab bench for equipment, including:
    a. Gel Imaging
    b. Flow Cytometer
    c. Western Blot
    d. Enclosed Scales (Small – Mid sized)

e. Incubator
f. Microplate reader
g. Mili Q water dispenser
h. Undercounter Ice Machine
i. File Material & General Storage Cabinets
j. Lockers (6 Half Height)
k. Coat Rack
l. Sink and Counter with overhead racks and shelving

2. Designated freezer room containing 4 Ultra Cold Freezers
3. Glass Wash Room with
    a. Sink and Counter with overhead racks and shelving
    b. Below counter glass washer
    c. Floor Standing Vertical Sliding Door Autoclave Sterilizer (Small – Medium Size)
4. Microscopy Room containing:
    a. Sink and Counter with overhead racks and shelving
    b. Centrifuge (Countertop)
    c. 2 CO2 incubators (Stacked) + necessary wall mounted gas cylinder support (for the sole use of one PI's team) + emergency power for incubators
    d. Bio-safety Cabinet
    e. 2 Anti-Vibration Tables
    f. Counter with storage and: Thermocycler, Digital qPCR, Real Time qPCR and supporting Desktop Computer station
    g. Storage Cabinets for Compound and Inverted Microscopes
    h. Gas Cylinder Storage

The LSCM is to provide Handwashing Sinks in conjunction with lab sinks where permissible. Eye washing and Safety Showers as required by EHS standards.

The LSCM is to be located on upper floors of the SAMIH adjacent to the Wet Lab Module and dependent on the affordances of the floor plate, building service core location.

Integrated into the LSCM will be the entrances into the Level 2 Containment area with doors separating the CL2 area from public areas of the building and from the Dry Laboratory areas.

Dry Laboratory Module

The dry laboratory areas comprise all support services that do not require Level I or II space and include the offices, carrel/table-top space (all outside the open laboratory) for researchers to run computer simulations, engage in machine learning, run statistical analyses, and write up results, etc. The Dry lab will contain or be in close proximity to a shared meeting room. Proximity to a shared floor lounge & kitchenette is desirable. The Dry lab is to contain storage lockers for deliveries and field equipment. These spaces are best located with window exposure in the narrower confines along the building periphery, allowing these areas to benefit from natural light with interior glazing into the corridors and beyond, and allowing the Wet Lab support space to be accommodated in the larger core areas of the floor where most of the ante and service rooms do not require windows. PI and PDF offices should ideally be adjacent to the dry labs, but with proximity to the elevator core and windows as a priority.

Pharmacy Laboratory

The Leslie Dan Department of Pharmacy proposes a research laboratory at SAMIH. The pharmacy research laboratory will support:

- Research projects for the evaluation of all new programs within the AP such as immunization, and travel vaccines.
- Research projects that address the evaluation of new digital health technologies and new pharmacy/health system workflows including work with interdisciplinary colleagues

The research lab will be a dry lab of 35 nasms with space for 1 principal investigator, 1 technician and 4 graduate students. The Lab will support PHM389H1 Research Projects and be used by graduate students and clinician scientists as well. The lab will be a Multi-purpose room that will have tech for virtual care; computers that have access to different dispensing software; a collaborative space for interprofessional meetings.

Potential synergies with other departments and programs at SAMIH include the Department of Health and Society, Clinical Psychology and the Medical Academy.

Clinical Psychology Dry Laboratory

Clinical Psychology Dry Laboratories will be grouped into eight clusters containing four EEG Labs, two generic research rooms used by Neuropsychology, Behavioural psychology, Psychotherapy and Counselling, the CFI Laboratory and the fMRI Laboratory or Clinic. The space will be shared across a number of labs both within and outside UTSC (i.e., Baycrest, who are key applicants on the CFI applications for the MRI scanning centre). Within UTSC, these include the labs of:

Michael Best, Assistant Professor
Matthias Niemeier, Professor
Cendri Hutcherson, Associate Professor, Canada Research Chair in Decision Neuroscience
Jonathan Cant, Associate Professor
Adrian Nestor, Associate Professor
Andy Lee, Associate Professor, Associate Chair, Research

Each of the six EEG and generic research clusters will be dedicated to a Faculty Principal Investigator (PI) and supporting faculty, staff and graduate student office space. Each Lab cluster will include: specialize research rooms; non-specific testing rooms; control rooms (in conjunction with EEG testing rooms); a secure file storage room. Between the clusters a shared sink/wash-up room and non-specific research / meeting room will be provided. Within the suite, the six laboratories will share a group counselling lab, a waiting area and an administrative office.

Current planning envisions the Clinical Psychology Dry Laboratories and shared spaces on an upper floor of the SAMIH building with the fMRI Lab/Clinic and associated CFI Laboratory located in the basement.

Waiting Area

One waiting area will be shared at the entrance of the Clinical Psychology Laboratories – EEG, and Research labs. The waiting rooms will need to accommodate 18 people. Chairs are to be appropriate for waiting room functions and accompanied by small side tables. A play space for children is to be incorporated into the waiting room area.

Access to natural light and exterior views is desirable. The waiting area should be in close proximity to the Clinical Psychology administrative office.

The Canadian Foundation for Innovation (CFI) Lab

As part of the funding application, the CRI lab will contain a shared office for three external visiting researchers, two EEG and EEG Control rooms with internal equipment storage, and several shared testing suites. Opportunities to share a control room between two EEG rooms are to be reviewed to increase spatial efficiencies. This suite will also include a storage room and sink/wash-up co-located with the fMRI. See below for a discussion on EEG room requirements.

EEG Dry Lab

The electroencephalography (EEG) laboratory will support research in psychology. In conjunction with the fMRI scanner, the EEG Laboratory will provide greater access to neuroimaging for research into neuroscience and neuropsychological testing.

The EEG rooms will need to be shielded from electrical interference and sound proofed. Because of issues with EEG interference, these rooms should be located away from potential sources of electrical interference such as elevators and fuse boxes, and other large electrical equipment (e.g., MRI scanners). Access to daylight is not necessary.

Each of these suites will consist of two rooms; an anteroom/observation or ‘control’ room and a subject testing ‘EEG’ room. These suites will be used by researchers to investigate the cognitive abilities in human subjects who are monitored through electroencephalogram (EEG) recording and event related potential (ERP). Typically, a single test subject will be scheduled into each test room and monitored by a researcher in the observation room. These rooms will normally be scheduled for use by various researchers, staff and students. For planning purposes, wall cabinets for equipment storage are requested in each room in the suite. Each subject testing room will be furnished with a desk, ergonomic task chair, EEG/ERP and other research specific equipment; each observation room will be furnished with a desk, two computer stations and ergonomic task chair.

The EEG rooms will also be co-located with a PI office, a Lab Manager office, a shared PDF office (2), and four small non-specific testing rooms complete with lounge or interview furniture. Graduate student offices (6 students) and one funded research workstation should be provided.

A small secure storage space is to be provided for the EEG lab with space for 4 filing cabinets for PI access.

Shared between 2 EEG labs will be a dry lab sink/wash-up area and large shared research lab / meeting room. The shared meeting room is to contain a room divider and two separate access doors.

Research Labs

These suites will be shared between Neuropsychology, Behavioural Psychology, Psychotherapy and counselling groups.

Each of these suites will consist of several research labs with equipment storage.

The Research Labs will also be co-located with a PI office, a Lab Manager office, a shared PDF office (2), and four small non-specific testing rooms complete with lounge or interview furniture. Graduate student offices (6 Students) and one funded research workstation should be provided.

A small secure storage space is to be provided for the Research lab with space for 4 filing cabinets for PI access.

Shared between 2 research labs will be a dry lab sink/wash-up area and large shared research lab / meeting room. The shared meeting room is to contain a room divider and two separate access doors.

Shared Group Counselling Room

Instead of testing cognitive ability in individuals, this larger room will allow investigators to work with small groups (up to twelve individuals). This room will be relatively open design to permit a variety of furniture and equipment arrangements. Although this room will be essentially free of fixed furniture and equipment, it is suggested that this rooms be equipped with wall-mounted storage cupboards, whiteboard and tack board.

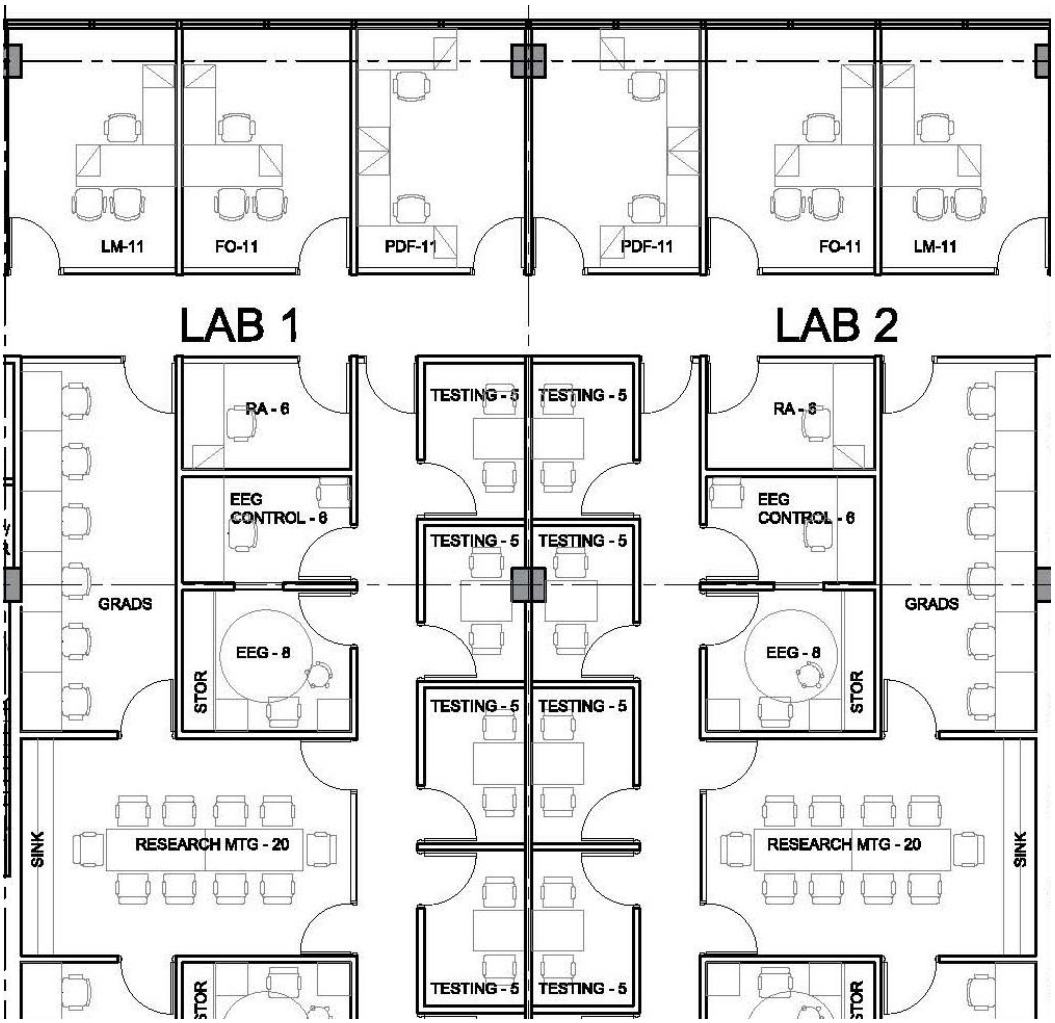
Also, it is suggested that a small coat closet be designed into the room to be readily handy to participants as they enter the room. If a closet cannot be provided, then the room should be supplied with wall-mounted coat hooks.

Although this room will be arranged as required for the particular investigation, the room should be dimensioned to readily accommodate either a single large table or four smaller tables that can be put together to form a single meeting table. Eight stackable meeting chairs, a desk, computer, and ergonomic task chair will also be required.

If smaller tables are supplied, then they should be collapsible and capable of being stored in an appropriately sized closet (next to coat closet). This storage closet should be dimensioned to not only readily accommodate the aforementioned tables and chairs but also other items (such as an AV or equipment cart).

The room should also be provisioned with access to a shared dry lab sink/wash-up area, administrative office and potentially a dedicated IT/server room.

The Group Counselling room is to be located adjacent to the main Clinical Psychology Lab entrance.



Test Fit Plan showing relationships between spaces within the Clinical Psychology Lab Cluster

fMRI Clinic (CFI)

In partnership with Baycrest, the Ontario Shores Centre for Mental Health Sciences, and Bayer AG, a world-class translational neuroimaging centre at UTSC that would enable highly innovative research examining the neural bases of mental and neurological disorders from 'bench to bedside' is proposed. This centre would also meet a critical need in the Eastern G.T.A. by being the first research-grade scanning facility east of downtown Toronto. The proposed facility includes a human MRI scanner for use by existing research expertise at UTSC and new collaborative opportunities with regional and international partners. The rodent fMRI scanners will make use existing facilities elsewhere at the UTSC campus.

The Human fMRI Clinic will be a state-of-the-art head scanning facility. The fMRI will ideally be located at the basement level at an outside corner of the building to minimize exposure of occupied building areas to electromagnetic radiation as well as minimize structural vibration. To further minimize vibrations, consideration of the location of the fMRI is to be taken in regards to proximity to New Military Trail and the future LRT. Enhanced Shielding is to be provided at the room enclosure. The clinic servicing is to be

designed for process cooling and quenching requirements. An external access for installation and repair shall be provided to the fMRI Clinic to accommodate the Scanner equipment. This access is to be located in conjunction with the loading dock area and is to consider relationships to landscaping and the public realm.

A clear and direct path from the main public elevator to the Clinic is recommended to minimize disruption to student areas by clinic patients.

The fMRI clinic will be comprised of:

- Patient waiting area, Patient Change Room and clinic universal washroom
- Two Patient Interview Rooms
- MRI Physician's Office
- Clinic MRI Technologist's Office
- Equipment Room / Storage Room
- MRI Server Room
- MRI Examination Room with Scanner
- MRI Control Room
- Mock Scanner Room (constructed for future use as MRI Examination Room with Scanner)
- File storage Room

The Control room is to be located between the Mock Scanning Room and the MRI Examination Room with shielded windows providing supervisory access to each room. The Mock Scanning room is to be constructed to accommodate future use as an MRI Examination Room should a second scanner be added to the Clinic. The Control room is to be sized to accommodate additional control equipment associated with the potential future second MRI scanner.

Floor plan layouts are to consider placing general storage areas adjacent to the fMRI Clinic for future allocation to equipment storage for the potential future second MRI scanner.

An external access point is required to accommodate future MRI Scanner delivery and installation within the current Mock Scanner Room. Similar access considerations are to be coordinated with entrance and corridor sizes serving these spaces.

Clinics

Pharmacy Clinic

The Leslie Dan Faculty of Pharmacy is planning to open a pharmacy which will serve as a living laboratory, dedicated to research, education, and innovation. The research and educational mission of the pharmacy will be accomplished while providing exemplary patient care for the management of acute and chronic conditions with a special emphasis on health promotion and disease prevention. The pharmacy will include a needs-based accredited pharmacy dispensary and offer a range of professional pharmacy services for students, staff and faculty at the University of Toronto. This academic pharmacy will function as a vehicle for evaluating practice innovation and will accelerate the speed of which new models of care are applied to practice.

The Pharmacy at SAMIH will support:

- PharmD students
- PharmD for practicing pharmacists
- Graduate students MSc (Master of Science, Master of Pharmacy) and PhD (Doctor of Philosophy) degree programs.
- Residency Program students: The Hospital Pharmacy Residency program and the Industrial Pharmacy Residency program
- International Pharmacy Graduate students
- Continuous Professional Development students: pharmacy professionals, researchers, scientists, and allied professionals involved in pharmacy practice and policy
- Students from other faculties or schools such as other health sciences, business, engineering
- Affiliated preceptors (local, provincial, national, international) from different health care settings
- Faculty
- Affiliated preceptors (local, provincial, national, international) from different health care settings

The Pharmacy will be a public facing facility with access and visible presence along Military Trail. The main components of the pharmacy space include a retail area, dispensary, consult room, storage and office space.

Potential synergies with other departments and programs at SAMIH include the Department of Health and Society, Clinical Psychology and the Medical Academy.

Dispensary:	17 nasm, includes handwash sink, refrigerator, worksurfaces and storage for medications.
Consult room:	9 nasm, must be AODA accessible, includes table, computer & seating.
Retail:	28 nasm, includes shelving, transaction counter, POS system.
Storage:	6 nasm, includes space to store retail items
Shared offices:	22 nasm (2@11 nasm)
Private Office:	11 nasm (1@11 nasm)

Nurse Practitioner Clinic (NP Clinic)

Through the establishment of a new teaching and simulated clinic space, learners in the NP program will have additional opportunities to excel alongside medicine and health sciences students in a model of collaborative care.

The development of an NP-led clinic will also give learners an opportunity to provide a range of care (general health, sexual health, mental health, health promotion), under supervision, to diverse populations, including, students, faculty and staff of UTSC and communities and populations with historically limited access to primary health care in the region. An additional opportunity exists to engage in outreach among UTSC undergraduate students who may be interested in the health sciences education pathway, helping them learn the value of advanced nursing practice roles and their contributions to our health system.

The NP program and clinic will create an environment in which to teach evidence-based collaborative care as it was originally intended, with health professions coming together in one, easily accessible location, to address gaps in primary care for underserved populations.

The NP Clinic will consist of:

3 Clinic Examination Rooms, including:

- 2 chairs (6 total)
- 1 Stretcher (3 total)
- Medical lighting

1 Clinic Examination Room, including:

- 2 chairs (2 total)
- 1 Gynecological examination table (1 total)
- Medical lighting

Reception with

- 3 workstations w/ computers and chairs

Staff (Student) Work Room for documentation, review of client records and teaching

Common Facilities, including

- Washroom
- Hand Washing Sink
- Storage for:
    - Otoscope, opthalmoscope, lighting
    - Medical Records
    - Medication (including refrigerator)
    - Supply Cupboards for charts and equipment

The Nurse Practitioner Clinic will be co-located with the Clinical Psychology Clinic to promote efficiencies through the sharing of spaces such as reception, patient waiting, washrooms and storage. Further opportunities for sharing of clinical examination rooms may be possible through scheduling. The combined clinic space is to be located on a main level with direct access to the public streets, ideally in proximity to the main SAMIH entrance. The entrance to the Clinic should be located away from more public gathering areas of the building to mitigate concerns for privacy of the patients. A centralized digital patient medical record system is desirable for the Psychology and Nurse Practitioner Clinics with a centralized terminal and remote terminals in each examination room.

Clinical Psychology Clinic

The Department of Psychology and the Clinical Psychology program look to synergize teaching, research and community services as a clinical and research space. The Clinical Psychology Clinic seeks to:

- Allow research stream faculty opportunity to supervise clinical work of students
- Training throughout the Clinical Psychology program
- Embed experiential in all aspects of programs including course work
- Embed required professional competencies: Consultation, Supervision, Quality Assurance
- Offer first 2-years of clinical training through Clinical Psychology Clinic as it is difficult to obtain hospital based clinical training as a junior Clinician.
- Community serving for both UTSC and outside community
- Clinical faculty can do own clinical work through clinic

The Clinic space will be comprised of Dry Laboratory and support spaces complementing laboratory research elsewhere on the UTSC campus through methodologies such as clinical trials. The Psychology Clinic will be co-located with the Nurse Practitioner clinic allowing for the sharing of spaces such as reception, waiting, washrooms and storage. Interview/Clinic/Treatment rooms are to be reviewed for potential shared use through scheduling efficiencies. The Psychology clinic should be located on a lower level of the SAMIH building will access to the main public entrance and or elevator bank. The Psychology clinic should be located away from public or student gathering spaces. Access to exterior walls for daylight, ventilation and views is preferred.

The Clinical Psychology Clinic will require:

Counselling Rooms paired with Assessment rooms as follows:

- 2 Counselling Rooms, 12 persons (Individual): one paired with 2 Assessment Rooms (4 persons), the other not paired with an Assessment Room; recording capabilities and observation mirror, desks in Assessment Rooms

Counselling Rooms are to be acoustically separated from public areas and equipped with the following:

- Lighting Controls – Dimmer switches and LED colour selection
- Recording Capabilities – integrated microphone and PA system connected to assessment room/Clinic Coordinator Office
- Monitor mounted to wall and connected to assessment room/Clinic Coordinator Office
- One-way mirror to assessment room where counselling room is paired
- Temperature controls and appropriate ventilation rates for group sessions
- Comfortable and flexible furniture

Combined Student Room and Test Library is to contain:

- 8 desks
- 1 open workstation
- secured (locked) storage within the room to hold the test kits, videos, equipment, etc. which the Clinical Coordinator could sign-out
- General Storage

Reception area with:

- Reception desk (shared with NP clinic) with 3 workstations
- Waiting area with 8-10 seats
- Play area within waiting area for client’s children’s use

Administrative Area & Offices

- 1 Clinic Director private office
- 1 Clinic Coordinator private office

- 1 shared office with 2 Clinic Supervisors

Departmental Scheduled Research Laboratory Space (COU Cat. 3.0)

COU Category	PROPOSED Laboratory Space	Proposed FTE*	COU Input Nasm	Generated Nasm (G)	Proposed Inventory Nasm (P)	P/G
3.0	Research Laboratory		A,B,D,E,F			
	Physical Therapy	4.50	30	135.00	67.00	50%
	Clinical Psychology (incl. fMRI)	21.00	30	630.00	578.00	92%
	DHS	27.50	10	275.00	297.00	108%
	Pharmacy	19.5	30	585.00	38.00	7%
				1,730.00	**1,244.00**	**72%**

*FTE (Full-time Equivalent) defined by the Council of Ontario Universities as: FTE Tenured/ Tenure-Track Faculty + 0.5 FTE Other Research Appointments (Post-Doctoral Fellows and FTE Research Associates) + 0.5 FTE Graduates

Faculty and Administration Office Space

The Council of Ontario Universities does not provide density targets for universities, but assigns a space factor of 12 NASM per office per FTE, or 15 NASM per FTE including 3 NASM of support space (25% of office space). SAMIH's Faculty and Administrative office space program includes a mix of standard private offices, shared offices, open workstations and hoteling stations. Co-location of office support spaces such as bookable meeting rooms, lounges and storage areas with departmental offices allows for sharing of amenity resources and results in efficiencies in the space program.

The following tables identify a broad range of office space program allocations (from small workstations and shared spaces to private offices).

1. Faculty private offices are typically proposed at 11 nasm, in line with the UTSC's planning standard. Chair's offices are proposed at 15 nasm to allow for a private meeting area within the office. (COU Cat. 4.1)
2. Share offices and research offices are planned at 5.5 nasm per FTE occupant. (COU Cat. 4.2)
3. Graduate students are provided with a 3 nasm dedicated office allocation within a larger shared office area. (COU Cat. 4.3)
4. Administrative staff private offices are 11 nasm, shared offices and open workstations are 5.5 nasm per FTE of occupant. (COU Cat. 4.4)
5. Hoteling stations will be provided at 3 nasm per station. (COU Cat. 4.2/4.3/4.4)
6. Shared Office Support space is generated by the COU as 25% of the total office area. For the SAMIH project, efficiencies in the space program, the use of shared office support space will employ room booking and scheduling to ensure required access for all departments. (COU Cat. 4.5) The office support space only appears in the combined table below as a function of the capacity of the space to support all departments.

Office spaces are to be teleconferencing ready to allow for connectivity with the St. George and UTM campuses as well as provide opportunities for further space program efficiencies in office support (meeting) space. Meeting rooms in particular are to contain teleconferencing equipment in addition to the standard desktop teleconferencing provisions in individual offices.

Due to the nature of all Temerty Medicine programs, exterior sessional teachers from partnership hospitals, clinics and other professional health service centres will require dedicated space for their use on a day-to-day basis. To provide temporary support for these instructors, a Hoteling space has been included in the space program. This area will contain station sizes of 3 nasms, shared copy, supplies and kitchenette area and personal day lockers. The hoteling space can be used in non-peak times for other users including work study, small group meetings and other scheduled uses.

Office space analysis below only includes existing space comparisons for Faculties, Departments and Programs with current space holdings at UTSC. The overall impact of the SAMIH project on departmental Tri-Campus space inventories will be provided in a later section of this report.

Temerty Medicine – MD

COU Category	PROPOSED OFFICES	Proposed FTE	COU Input Nasm	Generated Nasm (G)	Proposed Inventory Nasm (P)	P/G
4.1	FTE Faculty	3.5	12	42.00	35.00	83%
4.4	FTE Non-academic	9	12	108.00	64.00	59%
4.5	Office Support	150.00 sm	.25	37.50	22.19	59%
	TOTAL			**187.50**	**121.19**	**65%**

Temerty Medicine – Physician's Assistant

COU Category	PROPOSED OFFICES	Proposed FTE	COU Input Nasm	Generated Nasm (G)	Proposed Inventory Nasm (P)	P/G
4.1	FTE Faculty	3	12	36.00	26.00	72%
4.3	FTE Grad Students	3	3	9.00	11.00	122%
4.4	FTE Non-academic	3	12	36.00	33.00	92%
4.5	Office Support	81.00 sm	.25	20.25	10.62	52%
			TOTAL	**101.25**	**80.62**	**80%**

Temerty Medicine – Physical Therapy

COU Category	PROPOSED OFFICES	Proposed FTE	COU Input Nasm	Generated Nasm (G)	Proposed Inventory Nasm (P)	P/G
4.1	FTE Faculty	5	12	60.00	55.00	92%
4.2	FTE Research (PdF)	6	12	72.00	22.00	31%
4.3	FTE Grad Students	3	3	9.00	11.00	122%
4.4	FTE Non-academic	3	12	36.00	33.00	92%
4.5	Office Support	177.00 sm	.25	44.25	18.35	42%
			TOTAL	**221.25**	**139.35**	**63%**

LSBSN – Nurse Practitioner

COU Category	PROPOSED OFFICES	Proposed FTE	COU Input Nasm	Generated Nasm (G)	Proposed Inventory Nasm (P)	P/G
4.1	FTE Faculty	2	12	24.00	22.00	92%
4.3	FTE Grad Students	3	3	9.00	11.00	122%
4.5	Office Support	33.00 sm	.25	8.25	5.00	62%
			TOTAL	**41.25**	**38.00**	**92%**

LDSP – Pharmacy Clinic (Not included in Cat. 4.0 Total – see Cat. 13.0)

COU Category	PROPOSED OFFICES	Proposed FTE	COU Input Nasm	Generated Nasm (G)	Proposed Inventory Nasm (P)	P/G
4.1	FTE Faculty	2	12	24.00	22.00	92%
4.3	FTE Grad Students	3	3	9.00	11.00	122%
4.5	Office Support	33.00 sm	.25	8.25	5.14	62%
			TOTAL	**33.00**	**38.14**	**116%**

UTSC – Department of Health and Society – Existing

COU Category	EXISTING OFFICES	Existing FTE	COU Input Nasm	Generated Nasm (G)	Existing Inventory Nasm (I)	I/G
4.1	FTE Faculty	15.11	12	181.32	172.01	95%
4.2	FTE Research	3.00	12	36.00	8.05	33%
4.4	FTE Non-academic	1.13	12	13.56	22.36	165%
4.5	Office Support	230.88 sm	.25	57.72	52.44	91%
			TOTAL	**288.60**	**254.86**	**88%**

UTSC – Department of Health and Society – Proposed

COU Category	PROPOSED OFFICES	Proposed FTE	COU Input Nasm	Generated Nasm (G)	Proposed Inventory Nasm (P)	P/G
4.1	FTE Faculty	58.42	12	701.04	416.00	59%
4.2	FTE Research (PdF)	20	12	240.00	110.00	45%
4.3	FTE Grad Students *	0	3	0	48.00	0%
4.4	FTE Non-academic	7	12	72.00	73.00	71%
4.5	Office Support	1,013.04 sm	.25	253.26	99.12	70%
			TOTAL	**1,266.30**	**746.12**	**59%**

* Grad Student Office Space provided in Conjunction with PI driven Research Labs. Grad Students are based on St. George Campus but require office space at UTSC. Proposed space is shared office.

UTSC - Clinical Psychology -Existing

COU Category	EXISTING OFFICES	Existing FTE	COU Input Nasm	Generated Nasm (G)	Existing Inventory Nasm (I)	I/G
4.2	FTE Research (PdF)	7	12	84.00	77.00	92%
4.5	Office Support	84.00 sm	.25	21.00		

TOTAL	**84.00**	**77.00**	**92%**	

UTSC - Clinical Psychology - Proposed

COU Category	PROPOSED OFFICES	Proposed FTE	COU Input Nasm	Generated Nasm (G)	Proposed Inventory Nasm (P)	P/G
4.1	FTE Faculty	6	12	72.00	66.00	92%
4.2	FTE Research (PdF)	11	12	132.00	126.00	96%
4.3	FTE Grad Students	28	3	84.00	108.00	129%
4.4	FTE Non-academic	7	12	84.00	95.00	113%
4.5	Office Support	300.00 sm	.25	75.00	77.90	104%
			TOTAL	**447.00**	**472.90**	**106%**

Combined

COU Category	Division	Generated Nasm (G)	Proposed Inventory Nasm (P)	P/G
4.0	MD	187.50	121.9	65%
4.0	PA	101.25	80.62	80%
4.0	PT	221.25	139.35	63%
4.0	NP	41.25	38.00	92%
4.0	DHS	1,266.30	746.12	59%
4.0	Clinical PSY	447.00	472.90	106%
	TOTAL	**2,264.55**	**1,598.89**	**71%**

The office space is significantly under COU recommended space for the facility. In part this is due to: smaller office and workstation sizes, share offices and the sharing of office support space.

Student Space

UTSC – Student Space – Existing

COU Category	Existing Student Space	Existing FTE	COU Input Nasm	Generated Nasm (G)	Existing Inventory Nasm (I)	I/G
11.0	Non-Library Study Space	12,987.70	0.4	5,181.48	4,680.80	90%
14.0	Common Space	12,987.70	0.4	5,181.48	1,976.20	38%
			TOTAL	**10,362.96**	**6,657.00**	**64%**

UTSC – Student Space – Proposed

COU Category	Existing Student Space	Proposed FTE	COU Input Nasm	Generated Nasm (G)	Proposed Inventory Nasm (P)	P/G
11.0	Non-Library Study Space	13,520.45	0.4	5,408.18	4,900.80	91%
14.0	Common Space	13,520.45	0.4	5,408.18	2,028.78	38%
			TOTAL	**10,816.36**	**6,929.58**	**64%**

Student spaces include areas for common use and student activity as well as non-library study space. The total student space area at UTSC is 6,657nasm or 64% of COU standard. This total inventory includes the recently added Student Residence, IC-2, Indigenous House and Parking Structure capital projects. The additional 272.28 nasm of informal study and common space provides an increase in campus-wide inventory of 1% of COU.

As a primarily commuter campus, the availability of student space at UTSC is a concern. Recent projects, such as the IC-2 have included significant student and common spaces to their space program in an effort to rectify the current shortfall. Prior to these projects the COU reported inventory for Cat. 11.0 and 14.0 spaces at UTSC was 5,747.3 nasm or 56% of COU. Ongoing renovations to the UTSC library spaces looks to further expand student support spaces by increasing library-controlled study space on campus.

As pedagogies and modalities have become more collaborative and team-oriented, the time students spend outside of formal learning spaces (e.g., classrooms)—defined as "informal learning"—has become more important. Examples of informal learning include rehearsals, practice, exploration, experiments, research, note-taking, social interaction and instructor-student meetings and discussions. The intent of informal learning spaces is to provide students with essential, thoughtful, and valuable common areas for informal learning, networking and social interaction.

As the proposed SAMIH building will hold an anchor site at a major campus gateway at a higher order public transit stop, the provision of appropriately scaled, accessible and welcoming Student and Common spaces is to be integrated into the project's space program and design. These programming will include space for informal student gatherings, collaborative learning, group projects, presentations, study groups, academic advising and nearby access to food and drink. Student group offices and imbedded counselling will further increase the overall student amenity of the SAMIH and may provide a 'living lab' condition for student wellbeing within an integrated health education facility.

Student spaces are to have access to natural light, views and landscaping. Furnishings, lighting and acoustics are to offer a diversity of environments from quiet and reflective to animated and social.

Recommendations include:

- User-controlled and flexible; reconfigurable technology and moveable furniture to accommodate a variety of learning styles and needs.
- Adjustable and variable: the space configuration will support—simultaneously—a multiplicity of learning activities and the needs of a range of occupants; offer furnishings that allow for different levels of privacy; provide opportunities for both focused, quiet individual learning and more social group learning; overall large space that's easily divisible into smaller spaces.
- Accessible and inclusive.
- Connective: there should be sufficient Wi-Fi and power receptacles. Power receptacles with USB outlets for charging have been requested by students where possible.
- Warm and welcoming: attractive furniture, use of natural materials wherever possible, such as wood; sustainable building materials, soft flooring to muffle sound.

Student Mental Health and Wellness

The University of Toronto identifies mental health as a priority through the University's value statements and strategic goals and adopts a systems approach in creating supportive and inclusive conditions for students to flourish. A systems approach recognizes the reciprocal relationship between wellness and academic achievement and considers an academic environment that sustains health. Physical spaces have a role to play in supporting cognitive and emotional health through design, technology and treatment strategies. In addition, the built environment can help mitigate adverse mental health outcomes through policies, programs and design.

Strategies to consider when incorporating space that promotes mindfulness and wellbeing include:

- Design that promotes calm through consideration of finishes, natural elements, and daylight.
- Design which focuses on stress prevention and healthy lifestyle.
- Spaces that enable focused work by reducing distraction and managing stimuli through the use of intrusive noise and sound masking and visual privacy.
- Providing increased access to therapeutic spaces.
- Including welcoming spaces that provide peer support and wellness programming related to mental health education, reducing stigma and promoting health literacy.
- Providing access to nature.
- Allowing for restorative indoor and/or outdoor spaces designed for contemplation, relaxation and relief from mental fatigue or stress.

Refer to the following link to Provost's Task Force on Student Mental Health for more information: https://www.provost.utoronto.ca/planning-policy/student-mental-health/

Food Services

The space program for the SAMIH includes a food services outlet, approximately equivalent in size to the Goodmans LLP Café at the Law Building on the St. George Campus.

The food services outlet will be located on the ground floor in a prominent location with exterior access and visibility from the surrounding public realm. Connections between the food service outlet and the proposed landscaped plaza are desirable to allow for exterior dining. Further to adjacencies to the exterior and public realm, the food service outlet is to be located within the building in proximity to main public thoroughfares and vertical connections such as the proposed feature stair and elevators. Consideration of delivery of supplies and removal of waste/recycling is to inform the location of the Food Services back-of-house.

Seating for the food services will be bistro style with a café style service counter, display and server. A back-of house area will provide prep-kitchen, storage and staff area program.

The food service outlet is to be designed so that the server and back-of-house can be secured, allowing the dining area to be used after-hours as a student study and informal learning space.

The food service outlet will be shelled space to be fitted out by UTSC Food Services or an outside vendor. The food services outlet will require the provision of adequate power (minimum 250 amp,

120/240 volt, with generous circuit panel) ¾" hot and cold water supply, 4" sanitary drain with grease interceptor and accessible cleanout). Suitable ventilation and storage will be required. Dedicated washrooms to Ontario Building Code and AODA requirements are to have all servicing roughed-in along with all other required services.

UTSC – Food Services – Existing

COU Category	Existing Food Services Space	Existing FTE	COU Input Nasm	Generated Nasm (G)	Existing Inventory Nasm (I)	I/G
7.0	Food Facilities & Services	12,987.70	0.6	7,792.62	9,123.97	117%

UTSC – Food Services – Proposed

COU Category	Proposed Food Services Space	Proposed FTE	COU Input Nasm	Generated Nasm (G)	Proposed Inventory Nasm (P)	P/G
7.0	Food Facilities & Services	13,520.45	0.6	8,112.27	9,261.47	114%

Welcome Centre

A Welcome Centre will serve as a general reception desk for the SAMIH building. The Welcome Centre will be located within direct sight of the main building entrance and will provide space for two workstations in a reception desk format.

The main function of the reception desk is to:

1. Greet visitors and provide wayfinding to the Clinics (Nurse Practitioner, Psychology, fMRI)
2. Provide information on any SAMIH based events
3. Provide information on SAMIH programs, outreach and other health care initiatives
4. Central room booking scheduling and coordination
5. Building emergency, service and security liaison

The Welcome Centre will include digital display monitors connected to consoles at the workstations.

Other Spaces (Physical Plant)

Loading Dock

The SAMIH will contain one Class 'B' loading dock and one Class 'C', for shipping, receiving and waste management. The loading dock will be accessed from the new campus road via New Military Trail at the east side of the SAMIH site. The loading facility will contain storage areas and be connected directly to the proposed Freight Elevator via a service corridor or area for transportation of sensitive materials to laboratories on upper and lower floors. The service corridor, elevator and loading area are to be adequately sized to accommodate services, storage of medical gases, hazardous wastes, deliveries and

waste management for the operations within SAMIH including laboratory and food services supplies and waste as well as Pharmacy deliveries.

Separation between public areas and loading is to be coordinated with programmatic requirements of the basement and ground floor and proposed street network. Secure and conditioned storage areas are to be provide for the temporary storage of medicines and anatomical samples.

The project envisions that the loading facility will be located at the ground floor in conjunction with the east service lane. Dock elevators will be required.

The loading dock is to contain separate storage rooms for the following:

1. Waste Management/Recycling
2. Hazardous Waste Management (Lab waste), comprised of:
    - Biological and Anatomical Hazardous Materials (Requires Refrigerated space)
    - Chemical Hazardous Materials
3. Compressed Gas Cylinder Storage (Lab)
4. Acid & Base Storage
5. General Storage including Fire Safety Kit and Spill Kit
6. Eye wash / Safety Shower to EHS requirements

The East campus road is to be connected to the existing TPASC South Parking lot with an exit only gate and will be designed to anticipate future extension south and east to Pan-Am Drive to provide service to future development projects to the East, South and South-East.

City of Toronto Zoning By-law 200.5.10 Loading Space Rates:

By-Law Paragraph	Space Type	Gross Floor Area (gsm)	Min. No. Loading Spaces Required	Proposed SAMIH GFA (nasm)	No. Loading Spaces Proposed
200.5.10 (3)	Retail Store, Eating Establishment or Personal Service Shop	0 to 499	None Required	165.60	None
200.5.10 (5)	Office	1,000 to 1,999	1 Type "B" and 1 Type C"	1,327.00	1 Type “B” & 1 Type “C”

220.5.1.10 (8) Loading Space Standards:

(b) a Type “B” Loading Space must have a:
- (i) min. length of 11.0m
- (ii) min. width of 3.5m
- (iii) min. vertical clearance of 4.0m

(c) a Type “C” Loading Space must have a:
- (i) min. length of 6.0m
- (ii) min. width of 3.5m
- (iii) min. vertical clearance of 3.0m

A Shipping and Receiving Manager's Office will be provided within the loading area. A dedicated loading entrance will be provided in conjunction with the dock and loading door.

Maintenance and Staff Area

An area will be provided for Maintenance and Operations Staff. This space will consist of two lunch rooms, change rooms, washrooms and lockers.

A maintenance office and building control room along with a maintenance storage room will be required.

Bicycle Storage and Showers

A dedicated Bicycle Storage Facility will be located in close proximity to the Freight Elevator on either the ground or basement level accommodating 32 bicycles.

An adjacent suite of shower and change rooms will be provided for use by cycle commuters or Maintenance and Operations Staff. Per By-La 230.5.09(7)(B): a minimum of 1 shower shall be provided.

UTSC – Physical Plant– Existing

COU Category	Existing Physical Plant Space	Existing Inventory Nasm (I)	Generated Nasm (G)	I/G
9.0	Physical Plant	3,546.30	1,496.46	237%

Generated nasm is derive by 1.5% of the total Nasm for COU Cat. 1-15 + 17-12. UTSC existing = 1.5% x 99,764.10 nasm.

UTSC – Physical Plant – Proposed

COU Category	Existing Physical Plant Space	Proposed Inventory Nasm (I)	Generated Nasm (G)	I/G
9.0	Physical Plant	3,855.30	1,576.87	245%

Generated nasm is derive by 1.5% of the total Nasm for COU Cat. 1-15 + 17-12. Proposed (SAMIH 5,400.76+ UTSC Existing = 105,164.86) x 1.5%.

Space Program

A comprehensive space program for the SAMIH was developed to readily accommodate the current proposed occupants including the MD curriculum while ensuring some flexibility for any future curriculum or enrolment changes and growth in both the MD and UTSC departments.

Typically, space requirements are calculated using the COU space standards and University of Toronto practices. The specialized nature of the MD curriculum, MD accreditation requirements, and the unique circumstances surrounding a distributed cohort at UTSC were also considered in developing the space requirements for the SAMIH. Specific requirements to support research and teaching as identified by each

department were accounted for within the space program. This included CIF application specific space needs, specialize equipment space needs as well as pedagogical space needs.

Where possible, efficiencies were identified and incorporated into the space program as grouping program spaces, such as faculty offices, to allow for sharing of support spaces. Common reception, lounge, meeting and storage spaces not only reduce overall space demand but encourage interdepartmental interactions. The interprofessional, or interdepartmental potential of SAMIH was consistently expressed as important in Project Planning Committee meetings as well as in UTSC and the Department's vision for SAMIH and Medical Education as Integrated.

Space Program

Space Program for the Scarborough Academy of Medicine and Integrated Health (SAMIH)

The following table lists the complete space program for the new SAMIH Building:

SAMIH Space Program

COU Cat.	COU Sub-Cat.	Program Description	Qty.	Occupancy	Nasm / Seat	Nasm / Room	Total Nasm	Archetype
1		**Classroom Facilities Sub-total**					**460.25**	
	1.3	Active Learning						
		Classroom - TEAL - LRG (Classroom)	2	60	3	180	360.00	Academic
	1.4	Classroom Support						
		Classroom Storage	2			12.5	25.00	Academic
	1.4/11.2	Interactive Learning Space					75.25	Academic
2		**Teaching Laboratories Sub-total**					**1,067.75**	
	2.1	Teaching Lab Space						
		Instructional Lab - CBL/PBL	10	12	3	36	360.00	Academic
		Anatomy Lab, Wet (CL-2)	1	25	3.17	76	76.00	Wet Lab
		Health Professionals:						
		Simulation Lab - Suite						
		Simulation Rooms (500 University 490F)	1	4		24	24.00	Wet Lab
		Observation Room (500 University 490E)	1	5		12	12.00	Dry Lab
		Clinical Skills Lab (CSL)(OSCE)	1	40		175	175.00	Wet Lab
		DHS Central Teaching Lab - Central Teaching Space	1	30	4	130	130.00	Wet Lab
		DHS Health Humanities Learning lab (HHLL):						
		HHLL Digital Media Recording Studio Control Room	1	4	3	12	12.00	Dry Lab

		HHLL Digital Media Computer Studio	1	10	3	30	30.00	Dry Lab
		HHLL Modular Performance Space	1	45	0.75	70	70.00	Academic
		HHLL Rehearsal Space	1	33	0.75	25	25.00	Academic
	2.2	**Lab Support Space**						
		Anatomy Lab Support:						
		Alcove (Within Anatomy Lab) (CL-2)	1				3.00	Wet Lab
		Cold Room	1			6	6.00	Dry Lab
		Support Lab Space & Storage				9	9.00	Dry Lab
		Technician's Office/Touch Down Area	1	1		8	8.00	Office
		Health Professionals:						
		Laundry Room (CSL)	1			6	6.00	Dry Lab
		Female Change Room	1	20	1	20	20.00	Office
		Male Change Room	1	20	1	20	20.00	Office
		Gender Neutral / Universal Change Room	1	1 to 2	7	7	7.00	Office
		DHS Central Teaching Lab Support Rooms:						
		DHS CTL - Tissue Culture Room	1			13	13.00	Wet Lab
		DHS CTL - Lab Prep and Support	1			23	23.00	Wet Lab
		DHS Health Humanities Learning lab (HHLL):						
		HHLL Diigital Media and Equipment Storage	1			3	3.00	Academic
		HHLL Foyer	1	25	0.75	18.75	18.75	Academic
		HHLL Backstage WC	1	2		7	7.00	Academic
		HHLL Backstage Change Room	1	1		7	7.00	Academic
		HHLL Equipment Storage	1			3	3.00	Academic
3		**Research Laboratories**					**1,563.00**	
	3.1	Research Laboratory Space						
		Clinical Psychology Lab 1 – EEG						
	3.1	Testing Room - EEG	1	2	4	8	8.00	Dry Lab
	3.1	Control Room - EEG	1	2	4	8	8.00	Dry Lab
	3.1	Testing Room –Non-Specific	4	2	2.5	5	20.00	Dry Lab
	4.5	Secure File Storage	1			3	3.00	Office
	4.1	Private Office – PI (Faculty)	1	1	11	11	11.00	Office
	4.2	Shared Office - PDF	1	2	5.5	11	11.00	Office
	4.2	Private Office – Research Funded	1	1	6	6	6.00	Office
	4.3	Graduate Student Office	1	6	3	18	18.00	Office
	4.4	Private Office – Lab Manager	1	1	11	11	11.00	Office
		Clinical Psychology Lab 2 – EEG						
	3.1	Testing Room - EEG	1	2	4	8	8.00	Dry Lab
	3.1	Control Room - EEG	1	2	4	8	8.00	Dry Lab

	3.1	Testing Room –Non-Specific	4	2	2.5	5	20.00	Dry Lab
	4.5	Secure File Storage	1			3	3.00	Office
	4.1	Private Office – PI (Faculty)	1	1	11	11	11.00	Office
	4.2	Shared Office - PDF	1	2	5.5	11	11.00	Office
	4.2	Private Office – Research Funded	1	1	6	6	6.00	Office
	4.3	Graduate Student Office	1	6	3	18	18.00	Office
	4.4	Private Office – Lab Manager	1	1	11	11	11.00	Office
		Clinical Psychology Lab 3 – EEG						
	3.1	Testing Room - EEG	1	2	4	8	8.00	Dry Lab
	3.1	Control Room - EEG	1	2	4	8	8.00	Dry Lab
	3.1	Testing Room –Non-Specific	4	2	2.5	5	20.00	Dry Lab
	4.5	Secure File Storage	1			3	3.00	Office
	4.1	Private Office – PI (Faculty)	1	1	11	11	11.00	Office
	4.2	Shared Office - PDF	1	2	5.5	11	11.00	Office
	4.2	Private Office – Research Funded	1	1	6	6	6.00	Office
	4.3	Graduate Student Office	1	6	3	18	18.00	Office
	4.4	Private Office – Lab Manager	1	1	11	11	11.00	Office
		Clinical Psychology Lab 4 – EEG						
	3.1	Testing Room - EEG	1	2	4	8	8.00	Dry Lab
	3.1	Control Room - EEG	1	2	4	8	8.00	Dry Lab
	3.1	Testing Room –Non-Specific	4	2	2.5	5	20.00	Dry Lab
	4.5	Secure File Storage	1			3	3.00	Office
	4.1	Private Office – PI (Faculty)	1	1	11	11	11.00	Office
	4.2	Shared Office - PDF	1	2	5.5	11	11.00	Office
	4.2	Private Office – Research Funded	1	1	6	6	6.00	Office
	4.3	Graduate Student Office	1	6	3	18	18.00	Office
	4.4	Private Office – Lab Manager	1	1	11	11	11.00	Office
		Clinical Psychology Lab 5 – Generic Specialty						
	3.1	Research Lab (Large)	2	2	4	8	16.00	Dry Lab
	3.1	Testing Room –Non-Specific	4	2	2.5	5	20.00	Dry Lab
	4.5	Secure File Storage	1			3	3.00	Office
	4.1	Private Office – PI (Faculty)	1	1	11	11	11.00	Office
	4.2	Shared Office - PDF	1	2	5.5	11	11.00	Office
	4.2	Private Office – Research Funded	1	1	6	6	6.00	Office
	4.3	Graduate Student Office	1	6	3	18	18.00	Office
	4.4	Private Office – Lab Manager	1	1	11	11	11.00	Office
		Clinical Psychology Lab 6 – Generic Specialty						
	3.1	Research Lab (Large)	2	2	4	8	16.00	Dry Lab

	3.1	Testing Room –Non-Specific	4	2	2.5	5	20.00	Dry Lab
	4.5	Secure File Storage	1			3	3.00	Office
	4.1	Private Office – PI (Faculty)	1	1	11	11	11.00	Office
	4.2	Shared Office - PDF	1	2	5.5	11	11.00	Office
	4.2	Private Office – Research Funded	1	1	6	6	6.00	Office
	4.3	Graduate Student Office	1	6	3	18	18.00	Office
	4.4	Private Office – Lab Manager	1	1	11	11	11.00	Office
		Clinical Psychology Lab 7 – CFI						
	3.1	Testing Room - EEG	2	2	4	8	16.00	Dry Lab
	3.1	Control Room - EEG	1	2	4	8	8.00	Dry Lab
	3.1	Testing Room –Non-Specific	3	2	3	6	18.00	Dry Lab
	3.2	EEG Storage	1			3	3.00	Office
	4.2	Shared Office - Researchers	1	3	6	18	18.00	Office
	4.2	Private Office – Research Funded	1	1	6	6	6.00	Office
	4.2	Secure File Storage	1			3	3.00	Office
		Clinical Psychology Lab 8 – fMRI						
	4.4	Private Office, MRI Physician	1	1		9	9.00	Office
	4.4	Private Office, MRI Technologist	1	1		9	9.00	Office
	3.2	Waiting, 4 seats	1	2	2	4	4.00	Office
	3.2	Control Room, 4 seats	1	4		20	20.00	Dry Lab
	3.1	Exam Room (3 Telsla MRI Scanner)	1			40	40.00	Dry Lab
	3.1	Interview Room	2	2		7	14.00	Office
	3.1	Mock Scanner Room/Future MRI Room	1	3		40	40.00	Dry Lab
	3.2	Washroom	1	1		7	7.00	Office
	3.2	Change Room with lockers	1	1		5	5.00	Office
	3.2	Equipment Room	1			15	15.00	Office
		Clinical Psychology Lab - Shared						
	3.1	Research Meeting Room (1 per 2 labs)	3	8-10	2.2.5	20	60.00	Dry Lab
	3.1	Group Counselling Lab	1		2-2.5	24	24.00	Dry Lab
	3.2	Waiting Room	1	18	2	36	36.00	Office
	4.4	Administrative Office	1	1	11	11	11.00	Office
		Health Professionals:						
	3.1	Rehab Lab, Dry	1	12	3	36	36.00	Dry Lab
		Department of Health & Society:						
	3.1	Environment & Health Lab 1, Wet, CL2 (Tsuji)	1	9 (1 PI)		55	55.00	Wet Lab
	3.1	Environment & Health Lab 2, Wet, CL2 (Caron-Beaudoin)	1	9 (1 PI)		55	55.00	Wet Lab
	3.1	Environment & Health Lab 3, Wet, CL2	1	9 (1 PI)		55	55.00	Wet Lab
	3.1	Environment & Health Lab 4, Wet, CL2	1	9 (1 PI)		55	55.00	Wet Lab

	3.1	Health Studies Lab, Dry	1	12 (2 PI)	3	36	36.00	Dry Lab
		Health Studies Lab, Dry	1	12 (2 PI)	3	36	36.00	Dry Lab
		Pharmacy:						
	3.1	Dry Lab	1	6		35	35.00	Dry Lab
	3.2	**Lab Support Space**						
		Department of Health & Society:						
	3.2	Environment & Health Lab 1 & 2 Support Ante Room, Wet, CL2	2			20	40.00	Wet Lab
	3.2	Environment & Health Lab 3 & 4 Support Ante Room, Wet, CL2	2			20	40.00	Wet Lab
		Department of Health & Society Core Lab Support:						
	3.2	Glasswash and Sterilization (DHS)	1			12	12.00	Dry Lab
	3.2	Ultra Cold Freezer Room (DHS)	1			17	17.00	Dry Lab
		Microscopy (Confocal)	1			20	20.00	Wet Lab
		Equipment and Storage	1			20	20.00	Wet Lab
		Meeting Room (DHS)	1	12	2	24	24.00	Office
		Health Professionals:						
	3.2	Equipment Room	1			31	31.00	Dry Lab
		Clinical Psychology:						
	3.2	Dry Lab File Storage	3			6	18.00	Office
	3.2	Dry Lab Sink/Wash-up	3			6	18.00	Dry Lab
	3.2	Storage	1			3	3.00	Office
	3.2	Mail/Kitchen/Copy	1				12.00	Office
		Pharmacy:						
		Dry Lab Storage	1			3	3.00	Dry Lab
4		**Office Space**					**1,190.18**	
	4.1	Faculty Offices						
		Director or Chair						
		MD	1	1	15	15	15.00	Office
		PA	1	1	15	15	15.00	Office
		Health & Society	1	1	15	15	15.00	Office
		Faculty - Office						
		MD	1	1	11	11	11.00	Office
		PT	5	1	11	11	55.00	Office
		PA	1	2	11	11	11.00	Office
		NP	2	1	11	11	22.00	Office
		Clinical Psychology (refer to Cat. 3.0)						
		Health & Society - Faculty	23	1	11	11	253.00	Office
		Visiting Scholars	5	1	11	11	55.00	Office
		Sessionals	1	6	3	18	18.00	Office

		Graduate TA's	1	25	3	75	75.00	Office
		Hoteling	3		3	3	9.00	Office
	4.2	Research/Project Rooms						
		PT-PDF/RA	2	3	11	11	22.00	Office
		Clinical Psychology PDF - (refer to Cat. 3.0)						
		Clinical Psychology Research Funded/Casual – Workstation (refer to Cat. 3.0)						
		Health & Society						
		PDF	3	2	5.5	11	33.00	Office
		PDF (Caron-Beaudoin)	1	2	5.5	11	11.00	Office
		PDF (Tsuji)	1	2	5.5	11	11.00	Office
		Research Funded/Work Study/Casual Staff	5	2	5.5	11	55.00	Office
	4.3	Graduate Student Office						
		PT	1	3	11	11	11.00	Office
		PA	1	3	11	11	11.00	Office
		NP	1	3	11	11	11.00	Office
		Clinical Psychology (refer to Cat. 3.0)						
		Grad (Caron-Beaudoin)	1	8	3	24	24.00	Office
		Grad (Tsuji)	1	8	3	24	24.00	Office
	4.4	Administrative Offices						
		MD - Admin - Private Office (Manager)	1	1	11	11	11.00	Office
		MD - Admin - Private Office (Embedded Councellor)	1	1	11	11	11.00	Office
		MD - Admin - Work Stations	7	1	6	6	42.00	Office
		PT - Admin	3	1	11	11	33.00	Office
		PA - Admin	3	1	11	11	33.00	Office
		Clinical Psychology (refer to Cat. 3.0)						
		Health & Society - Office	4	1	11	11	44.00	Office
		Workstation	3	1	6	6	18.00	Office
		Embedded Libararian	1	1	11	11	11.00	Office
	4.5	Office Support Space						
		Common Staff Lounge /Kitchenette	1	10	1.85	20	20.00	Office
		Common Copy/Storage	1			15	15.00	Office
		Graduate Student Lounge (Common)		22	1.85	40	40.00	Office
		Common Meeting Room - Large	2	12	2	24	48.00	Office
		Common Meeting Room - Medium	3	8	2	16	48.00	Office
		Common Meeting Room - Small	2	6	2	12	24.00	Office
		Common Reception	1	2	6	12	12.00	Office
		Hoteling Support	3			1	3.00	Office
		Hoteling Lockers	1	24	0.17	4.18	4.18	Office

		Essay Drop Box	1			6	6.00	Office
7		**Food Services**					**117.50**	
	7.1	Food Services						
		Dining Area/Servery	1		1.1	80	80.00	Retail
		Vending Machines	1			7.5	7.50	Retail
	7.2	Food Services Support						
		Back of House/Storage				20	20.00	Retail
		Dishwashing				10	10.00	Retail
9		**Physical Plant**					**221.00**	
	9.1	Physical Plant						
		Shipping/Receiving Office	1			10	10.00	Other
		Maintenance Office/Control Room	1	2		10	10.00	Office
		Loading Dock (Partitionable)	1			50	50.00	Other
		Long Term Bicycle Parking	1			33	33.00	Other
		Shower Room (Staff/Bicycles)	1			10	10.00	Athletic
		Laundry (Clinics)	1			10	10.00	Dry Lab
	9.2	Loading Dock Storage	1			14	14.00	Other
		Compressed Gas/Cylinder Storage	1			7.5	7.50	Other
		Acid / Base Storage	1			7.5	7.50	Other
		Hazardous Materials Storage (LAB) - Bio/Anatomical Refrigerated	1			5	5.00	Wet Lab
		Hazardous Materials Storage (LAB) - Chemical	1			5	5.00	Wet Lab
		Waste Management/Recycling	1					
		Staff Room/Lockers/Lunch	2			15	30.00	Office
		Staff Change Room	2			7	14.00	Athletic
		Staff Washroom	1			5	5.00	Office
		Maintenance Storage	1			10	10.00	Office
11		**Non-Library Study Space**					**187.00**	
	11.2	Informal Study Space						
		Shared - Informal Study Lounge	1	40	1.85	75	75.00	Academic
		Health & Society	1	60	1.85	112	112.00	Academic
12		**Common Central Space**					**49.00**	
	12.1	Computing Facilities						
	12.2	Central Reception / Welcome Desk	1			8	8.00	Office
		IT Support	1	2	11	11	11.00	Office
		IT Storage	1			30	30.00	Office
13		**Health Services**					**492.50**	
	13.1	**Shared**					**100.50**	
	13.1	Reception	1	3	4	12	12.00	Office

	13.2	Reception Storage	1	1	5	5	5.00	Office
	13.1	Waiting Area & Play Area	1	16	1.5	26	26.00	Office
	13.2	Staff Meeting Room	1	10	2	20	20.00	Office
	13.2	Staff Lounge w/ Kitchenette	1	7	2.5	17.5	17.50	Office
	13.2	Staff Change Room	2	2		7	14.00	Office
	13.2	Infant Feeding Room	1	2		6	6.00	Office
	13.1	**Psychology Clinic: (clients: students, and the public)**					**207.00**	
	13.1	Private Office, Clinical Director	1			11	11.00	Office
	13.1	Private Office, Clinical Coordinator	1			11	11.00	Office
	13.1	Shared Office, 2 Clinical Supervisors per Shared Office	1	2		11	11.00	Office
	13.2	Testing Library	1	1 to 2		11	11.00	Library
	13.1	Student Work Room	1	8	2.5	20	20.00	Academic
	13.1	Group Therapy Room, 12 persons	1	12	2.5	30	60.00	Academic
	13.1	Individual Counselling Room, 4 persons.	3	4	2.5	10	30.00	Academic
	13.1	Assessment Room	5	4	2.5	10	50.00	Academic
	13.2	Secure File Storage	1			3	3.00	Office
		Faculty of Pharmacy Academic Pharmacy: (clients: students, staff, faculty)					**93.00**	
	13.1	Retail	1			28	28.00	Retail
	13.1	Dispensary / Storage / Private Office	1			34	34.00	Office
	13.1	Shared Office / Consult Room	2			10	20.00	Office
	13.1	Shared Office / Consult Room (with Vaccine Fridge)	1			11	11.00	Office
		Nurse Practitioner Clinic					**92.00**	
	13.2	Medical Records	1			12	12.00	Library
	13.1	Shared Office	1	2	2	11	11.00	Office
	13.1	Staff Work Area	1	3	4	12	12.00	Office
	13.1	Exam Rooms	3	2-4	2.5	10	30.00	Office
	13.2	Soiled Equipment/PPE Storage	1			3	3.00	Other
	13.2	Medical Supplies Storage	1	1		6	6.00	Office
	13.2	Drug Storage	1	1		6	6.00	Office
	13.2	Meeting Room (6)	1	6	2	12	12.00	Office
14		**Common Space**					**52.58**	
	14.1	Common Use and Student Activity						
	14.1	MD/PT/NP Student Lockers	1	170	0.174	29.58	29.58	Office
	14.1	Medical Society Office	1			11	11.00	Office
	14.1	DHS Student Office	1	4		12	12.00	Office
		TOTAL (nasm)					**5,400.76**	

		GSM (Gross-up 2.0x)					**10,801.52**	
		GSF (Gross-up 2.0x)					**116,224.36**	

Shared Office Space Allocation

Department/Faculty	Office Space Nasm	% of Total	Office Support Space Nasm (Shared)	Dedicated Office Support Space Nasm	Cat. 4.0 Total Nasm
MD	107.00	7.73%	15.99	7.18	130.17
PA	70.00	5.05%	10.46	0.00	80.46
PT	121.00	8.74%	18.08	0.00	139.08
NP	33.00	2.38%	4.93	0.00	37.93
Rx	0.00	0.00%	0.00	0.00	0.00
DHS	647.00	46.71%	96.70	6.00	749.70
CL PSY	407.00	29.39%	60.83	21.00	488.83
Total (Cat. 4.1-4.4 incl. Lab Offices)	**1,385.00**	**100.00%**	**207.00**	**34.18**	**1,626.18**
Total (Cat. 4.5 Shared)	**207.00**				

Shared Clinic Space Allocation

Department/Faculty	Clinic Space Nasm	% of Total	Shared Clinic Space Nasm	Total Clinic Space Nasm
CL PSY	207.00	52.81%	53.07	260.07
Rx	93.00	23.72%	23.84	116.84
NP	92.00	23.47%	23.59	115.59
Total Dedicated Clinic Space	**392.00**	**100.00%**	**100.50**	**492.50**
Total Shared Clinic Space	**100.50**			

The above space program for the new SAMIH Building is apportioned as follows:

COU Category Summary

COU Cat.	Nasm	% of Total	
1	385.00	7.13%	Excludes Interactive Learning Space
2	1,059.75	19.62%	
3	1,111.00	20.57%	
4	1,650.18	30.55%	Includes Faculty & Staff Offices from Cat. 3
7	117.50	2.18%	
9	221.00	4.09%	

11	262.25	4.86%	Includes Interactive Learning Space
12	49.00	0.91%	
13	492.50	9.12%	
14	52.58	0.97%	
TOTAL	**5,400.76**	**100%**	

Common and service areas within the space program are further pro-rated between the different occupants. Allocation based on the above % of total for each department is as follows:

Allocation Summary

Department/Faculty	Nasm	% of Total less Common Space & Service Space	Common Amenity Space Allocation by % of Academic Program	Total Nasm
MD	1,009.75	20.72%	32.78	**1,042.54**
PA	80.46	1.65%	2.61	**83.07**
PT	481.08	9.87%	15.62	**496.70**
NP	153.52	3.15%	4.98	**158.50**
Rx	154.84	3.18%	5.03	**159.87**
DHS	1,680.45	34.48%	54.56	**1,735.01**
CL PSY	1,313.90	26.96%	42.66	**1,356.56**
Sub-Total	**4,874.01**	**100.00%**		
Common Amenity	158.25		**158.25**	
Services/Plant	368.50			**368.50**
Total	**5,400.76**		**316.50**	**5,400.76**

Space Summary by Campus/Division/Department/Faculty

Department/Faculty	Nasm	% of Total
TFoM	1,622.32	30.04%
UTSC Academic	3,091.57	57.24%
NP	158.50	2.93%
Rx	159.87	2.96%
Common Amenity	Included in Above per Allocation by %	
Services/Plant	368.50	6.82%
Total	**5,400.76**	100.00%

Based on a 2.00 gross-up factor, the new SAMIH Building of **5,401** nasm will have a total building area of **10,802** square metres.

Descriptive room data sheets (RDS) for each discrete and unique facility in the space program are provided in the Appendices.

The Tri-Campus Energy Standard project Charter includes the following space allocation.

Space Archetype for Project Planning Report Charter (Refer to Sustainability Section of this Report and Appendices)

Archetype	Nasm
Academic	1,301.00
Athletic	24.00
Dry Lab	751.00
Wet Lab	794.00
Office	2,237.26
Retail	145.50
Library	23.00
Other	125.00
	5,400.76

Functional Plan

The SAMIH project presents a unique opportunity to create a new facility imbued with a complex program and site. As a gateway site, the SAMIH building will be required to respond to campus edge conditions, public image and access, the establishment of New Military Trail and relationships to TPASC and the future planned pedestrianized Military Trail. When discussing the relationship of the SAMIH massing to the site condition, the Project Planning Committee expressed interest in using the acutely angled intersection of New and Existing Military Trails to inform a 'flat iron' massing to amplify the building's position between a new City boulevard and a major campus pedestrian open space. This position provides SAMIH with the ability to respond to and redefine the notion of a campus 'gateway' within the dialogue of UTSC's vision of inclusive excellence.

To address inclusivity and campus access the SAMIH building massing will create a transparent ground plane with welcoming overhangs, lighting, public art and outdoor landscaped open space for public and student enjoyment. Active public areas will be located within direct public view. These building and landscape expressions will be coordinated with public facing programming within the building to serve visitors to the campus and students alike.

Orientation of the building massing, projections and overhangs will address proportion, lines of sight, solar gain, prevailing wind and other climatic, sustainability and urban design measures.

A multi-storey to a maximum height of 35 meters (6 storeys + basement) structure is considered desirable in optimizing pedestrian traffic into and through the building while ensuring the relative privacy and security of less public operations (such as the research laboratories) can be maintained. The building height is to conform to the urban design guidelines set out in the UTSC Master Plan and is to provide enough mass to mark the significance of the site in the North Campus. Proportions between floor plate efficiency, building height and street frontage are to be considered by the design team.

The Ground floor will contain the most public facing programming including the main building entrances, the Pharmacy, Nurse Practitioner and Psychology Clinics, the DHS Heath and Humanities Lab and the Food Services outlet. These program areas should be located with varying degrees of access and visibility at the building perimeter depending on the specific programming. Frontage along New Military Trail and the new landscaped plaza to the west will provide differing program orientation opportunities from the south and east facades of the building. The loading area and associated storage and maintenance facilities and bicycle parking will be located at the east or south perimeter of the ground floor adjacent to the service lane.

More internalized programming such as MRI based Clinical Psychology Labs, the fMRI Clinic, DHS Digital Lab and the Anatomy Lab are considered appropriate for location within the basement level. The basement will also contain building and central servicing space and student study areas. The fMRI Clinic is to be located at an exterior corner of the basement to reduce the amount of shielded partitions required. Exterior access to the fMRI Clinic will be required to provide future access for MRI Scanner installation and maintenance.

The second floor of the SAMIH building is to contain the bulk of the Temerty Medicine programming including the Teal Classrooms, PBL rooms, Simulation Lab and the Clinical Skills Lab. Student lockers, lounges and study areas will accompany the academic programming.

The third, fourth and potentially fifth floors will primarily contain offices and office support space. Clinical Psychology lab are to be located within these floors to provide access to natural light and ventilation to the associated office spaces within the lab clusters.

The DHS Central Teaching Lab and two Research Labs are to be located on the upper floors (4-6) to minimize ventilation runs to the roof and isolate labs from more public areas of the building. The top floor will contain the main mechanical, electrical and servicing rooms integrated into the building as well as roof access.

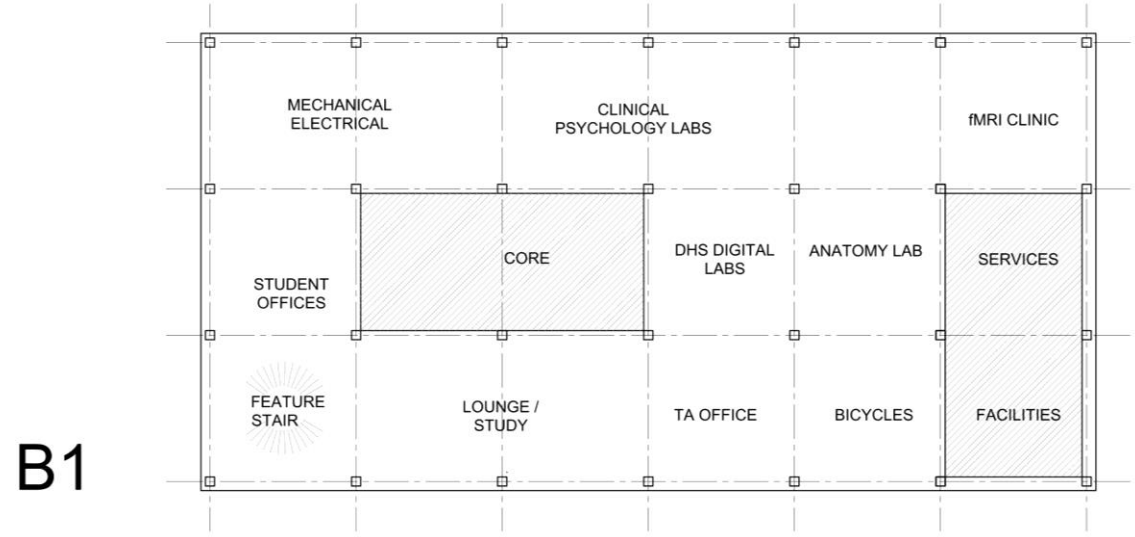
Throughout the building exterior terraces and internal floor openings with a maximum of 3 floors of vertical exposure are to be considered to provide additional exterior amenity space, natural light and views to lounges, meeting areas and other public spaces within the building.

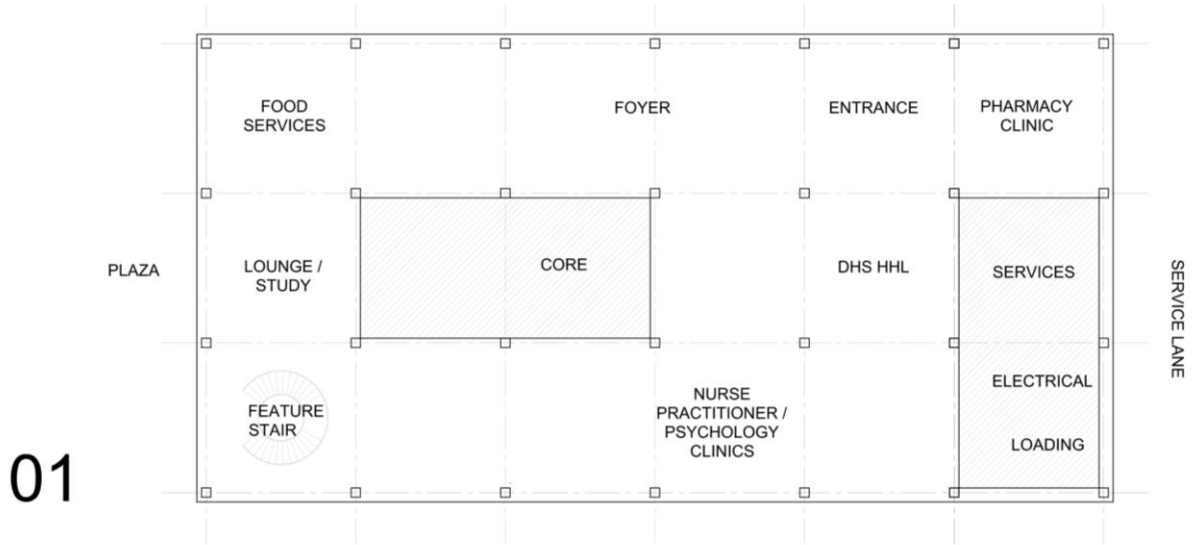
A narrower floor plate is proposed for the SAMIH building to maximize efficiency and reduce distances between the central core areas (service runs) and the building exterior (natural light & ventilation, views). This narrower floor plate will reduce the need for central atria spaces prevalent in many buildings on the UTSC Campus. Provision of a feature stair with coordinated slab openings, with a maximum interconnected height of 3 storeys is to be considered to provide a socially interactive circulation hub and promote fitness and wellbeing.

FUNCTIONAL PLANS (PROGRAM STACKING DIAGRAMS)

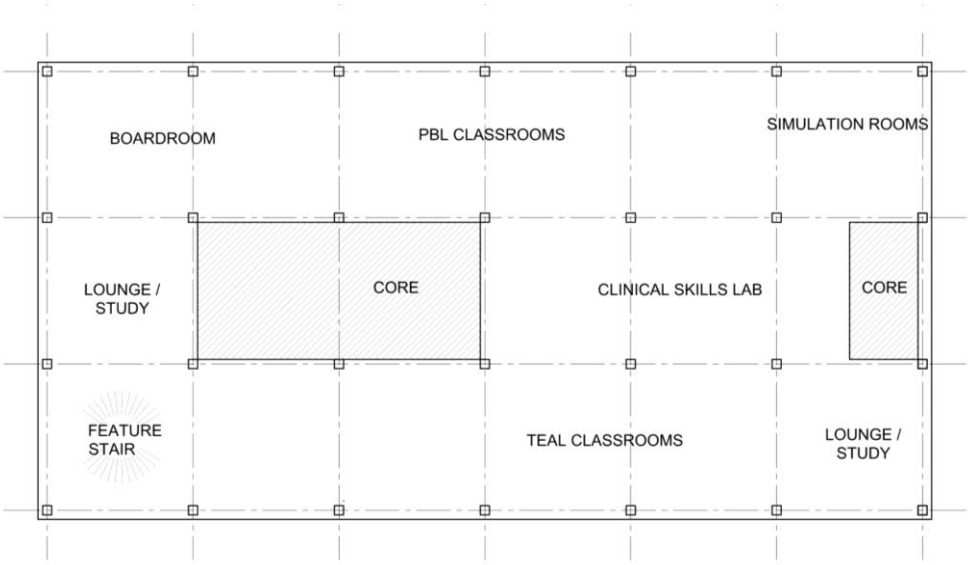
The following functional plans and stacking diagrams are for planning purposes only. The intent of these drawings is to convey the internal and external program and site adjacencies of the future building and are meant to be a reference for the use of the selected designers. A massing of 5 storeys + Basement is

assumed in the below functional plans. A maximum of 6 storeys will be permissible on the SAMIH site. Designers are to consider relationships between massing, context and functional adjacencies.

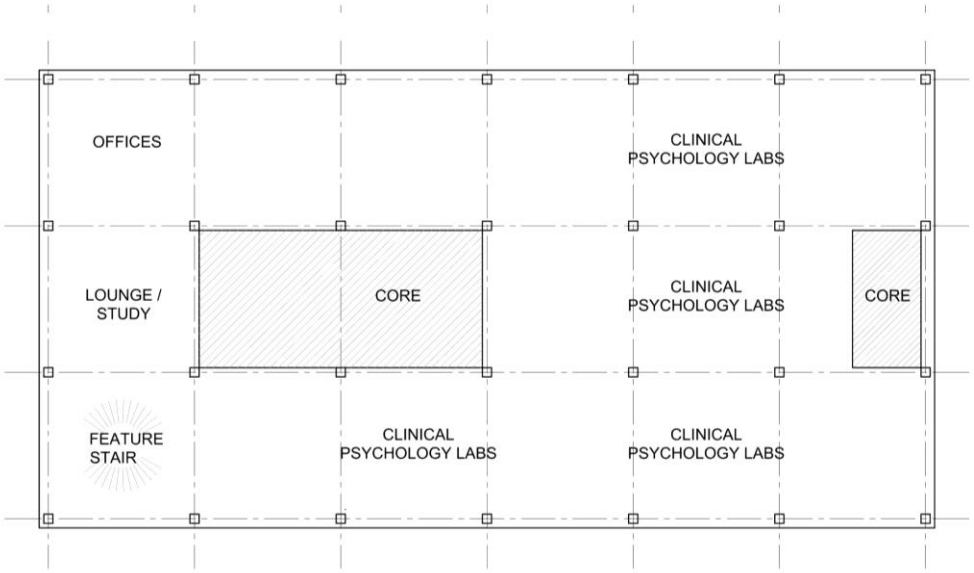




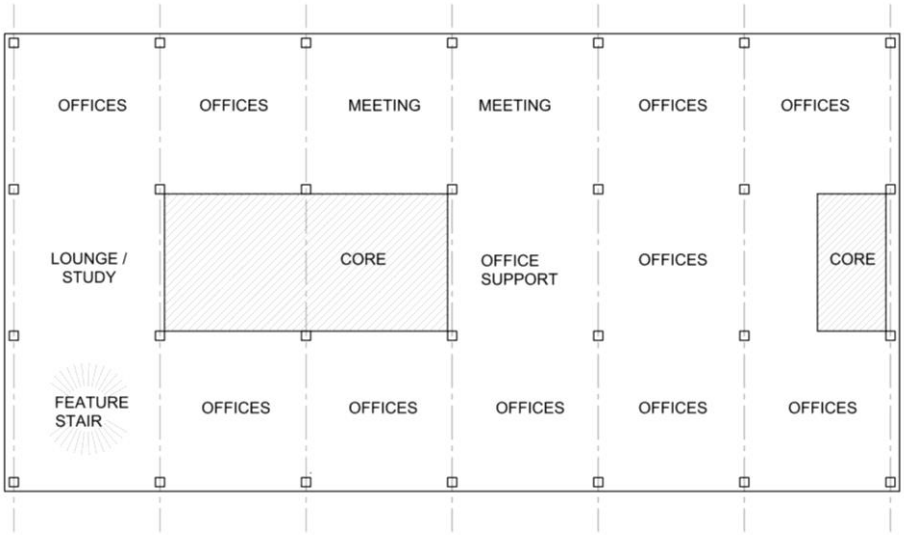
02


BOARDROOM
PBL CLASSROOMS
SIMULATION ROOMS
LOUNGE / STUDY
CORE
CLINICAL SKILLS LAB
CORE
FEATURE STAIR
TEAL CLASSROOMS
LOUNGE / STUDY

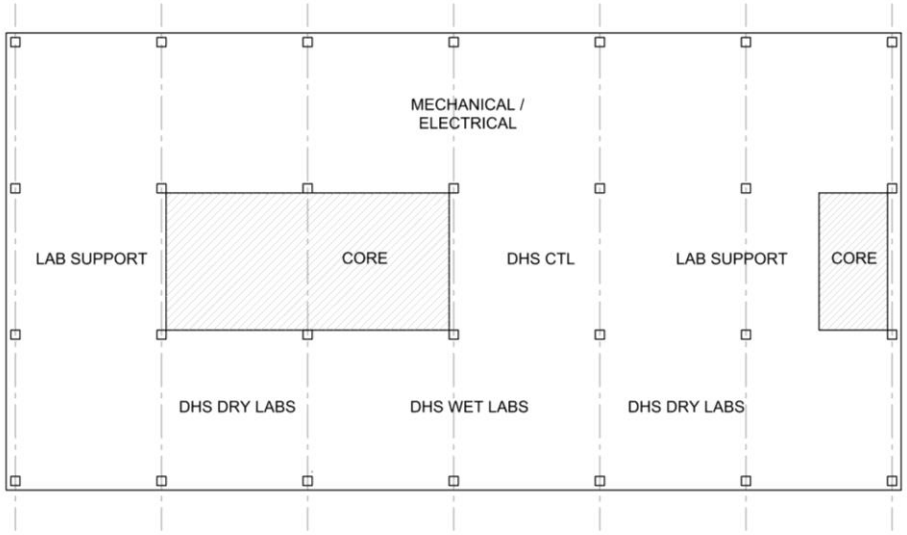
03

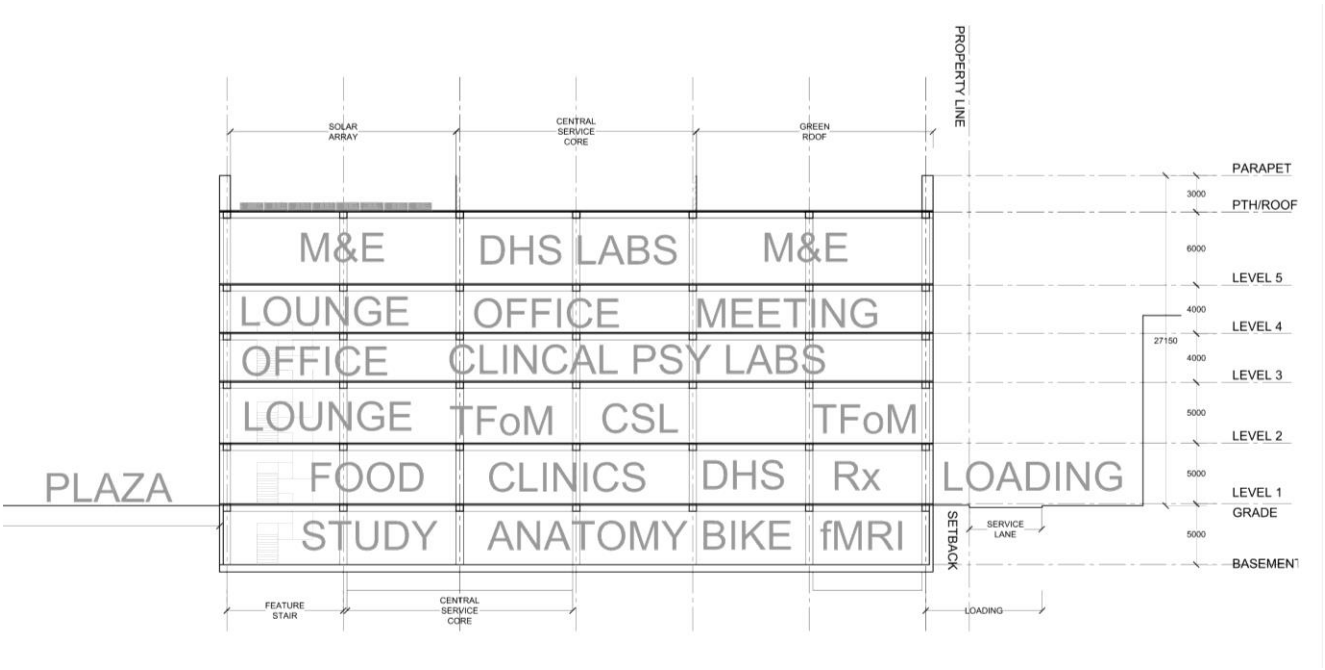

OFFICES
CLINICAL PSYCHOLOGY LABS
LOUNGE / STUDY
CORE
CLINICAL PSYCHOLOGY LABS
CORE
FEATURE STAIR
CLINICAL PSYCHOLOGY LABS
CLINICAL PSYCHOLOGY LABS

04

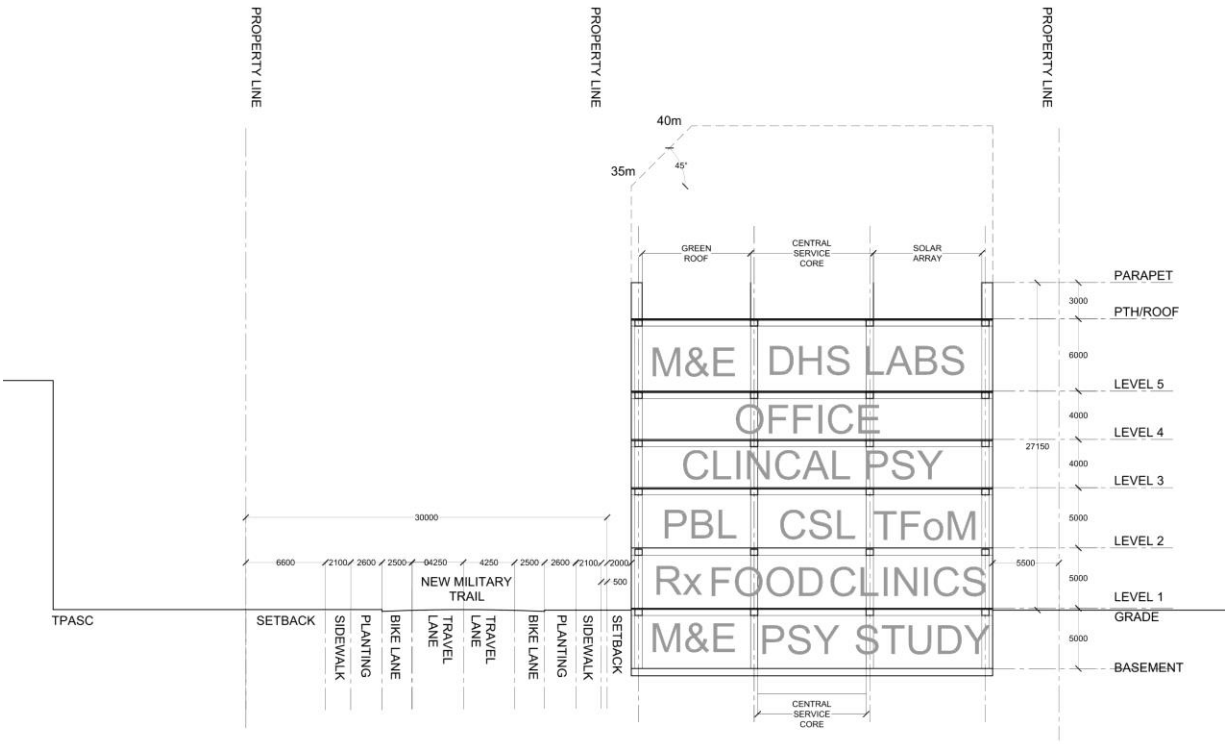

OFFICES
OFFICES
MEETING
MEETING
OFFICES
OFFICES
LOUNGE / STUDY
CORE
OFFICE SUPPORT
OFFICES
CORE
FEATURE STAIR
OFFICES
OFFICES
OFFICES
OFFICES
OFFICES

05


MECHANICAL / ELECTRICAL
LAB SUPPORT
CORE
DHS CTL
LAB SUPPORT
CORE
DHS DRY LABS
DHS WET LABS
DHS DRY LABS



Schematic Section – East-West



Schematic Section – North-South

Wet Research Laboratory

The research laboratory should be comprised of modules that allow collaboration of research teams, while at the same time allow a single research team to operate independently within. Modules should be designed with flexibility in mind and allow for combination, expansion and contraction as research teams grow and adjust over time.

The research laboratory area should be separate from the undergraduate and public areas of the building, ideally on the upper floors with suitable security features in place. They should be close to faculty offices to ensure proper supervision and consultation.

The labs should be day-lit, and the various labs should be separated by glass. Entry should proceed from the hallways into the graduate space, and from the graduate space into the labs. The proximity is critical for monitoring time sensitive experiments, enables GLP, and supervision.

Ideally this is an open concept space with shared instrument rooms and fridge/freezer rooms.

The wet laboratory, CL2 space will comprise of a large open concept laboratory supported by four special purpose ante rooms adjacent to the open laboratory and four support core modules rooms. The open concept laboratory will be contained within one defined area. The positioning of the fume-hoods within the Open Laboratory should be located to minimize the length of ducting required for the exhausts.

Within the Open Laboratory it is recommended that an internal passageway or corridor could conveniently be used to house the freezers and or fridges thereby using the corridor space to access these facilities.

Dry Research Laboratory

The dry research laboratory will primarily incorporate computer-based or instrument-intensive activities and will not be dedicated to a single research team. The lab should be accessible to the other research laboratories configured in a manner that will allow the ready removal, relocation and replacement of furniture, furnishings and equipment. It should be capable of being divided into multiple light-tight compartments.

Ideally this laboratory mirrors a wetlab. This simplifies planning and avoids potential issues with labs that are specific to any particular researcher labs.

Teaching Laboratories

The labs include support and storage spaces. The teaching labs should be located within vicinity to one another and separate from the graduate and research spaces in the building. It is suggested that the teaching facilities be placed on lower floors, with easier access for undergraduate students who will be moving to and from the building for other classes. Attention to ventilation runs and efficiencies in vertical placement of laboratories in the building is be applied to the location of the teaching laboratories.

Chem-Store

The Chemical Store will be housed on the first floor of the building within the loading dock. This space will be primarily used to house compressed gases for laboratory use and is included as Compressed gas storage in the space program.

Refer to EHS section for further standards for hazardous material storage.

d) Building Considerations & Sustainability

Standards of construction

The new mid-rise classroom, office and laboratory structure is planned to be a maximum of six storeys in height, and will include a basement. The Building will have four active facades with all loading and exterior building service penetrations strategically located to anticipate future development to the east of SAMIH. Servicing and loading are to be integrated into the landscaping. The University wishes to promote activity at the ground floor, thus more than one exterior entrance should be used to animate this level. Ample crush space and additional activity and lounge space add to usage patterns at the more public and populated floors, requiring durable, well-wearing material selection and appropriate seating and other furnishings. Local materials should be used where possible, for both interior and exterior elements. Building materials embodied carbon properties will be a criteria for selection.

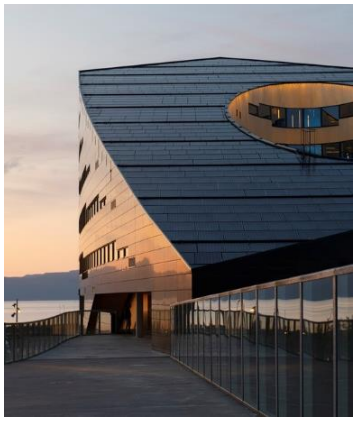
For planning purposes, a structural grid of 9.6m x 9.6m was employed. This grid dimension was based on several existing laboratory buildings within U of T's inventory (MaRS TBEL) and accommodates modularization of lab benching and equipment. Along with criteria of structural efficiency, material selection and embodied carbon the structural grid of the SAMIH building is to be scaled to a standard laboratory module.

The SAMIH project will be reviewed by the University of Toronto Design Review Committee (DRC). Review of design-builder proposals will occur prior to close of Design Build RFP. Further DRC review may be required during further design development of the awarded scheme to the discretion of the University of Toronto. The following is a link for information on the UofT DRC:

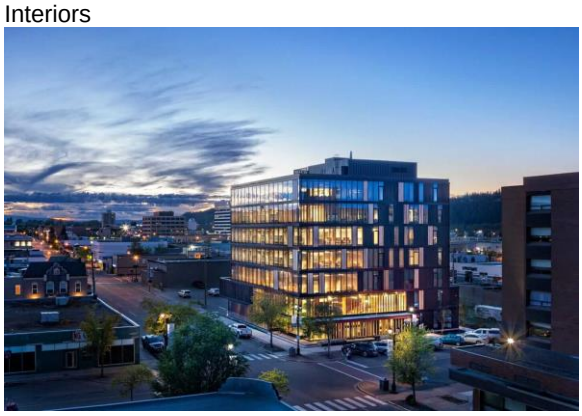
https://updc.utoronto.ca/university-planning/reviews-approvals/design-review-committee-drc/

The following are peer building precedent examples:

UTSC Instructional Centre 2; CEBRA / ZAS Architects + Interiors



Powerhouse Brattørkaia; Snøhetta



Wood Innovation Centre: Michael Greene Architects

UTSC Environmental Science & Chemistry, DSAI

UTM Terrence Donnelly Health Sciences Complex; Kongats Architects

Gothenburg University Library; COBE

Building Characteristics and Massing

The building will include a maximum of six levels above grade and one level below. In general, teaching and student spaces will be located on the lower levels of the building while the upper levels will house faculty and laboratory functions. A mechanical penthouse will be required and should be incorporated into the upper floor where possible. The basement and first 2 levels will have a floor-to-floor height of approximately 5m to accommodate the majority of the teaching spaces. The upper three levels will have 4m floor-to-floor heights consistent with academic offices, administrative and laboratory functions to be located on these floors. The top floor will have a 6m floor to floor height to allow for integration of mechanical systems within the building envelope.

The building will be located along New Military Trail, immediately across from TPASC. The building should include multiple entry points acknowledging that further development on the north campus will eventually mean there is no "back door". As the campus grows, consistent with the master plan and proposed secondary plan, secondary access streets, open space corridors and through-block connections may be included on the site.

The building is expected to have an area of 9,002 gsm above grade with an additional 1,800 gsm below grade. Designers are encouraged to respond to the project's context, desired expression as a campus landmark as well as considerations of structural economy and embodied carbon intensity.

The Mechanical penthouse is planned to be integrated into the top floor to increase the vertical presence of the SAMIH on campus. The Floor-to-floor height at the top level has been planned at 6m to allow for mechanical equipment and venting. Designers are to use the most suitable floor to floor height to achieve all project aspirations.

Rooftop screening of Mechanical Units, Elevator Over-runs and Access Stairwells are to be considered and coordinated with green roof and Photovoltaic requirements. Laboratory Ventilation stacks and bracing is to be coordinated with all rooftop equipment and screening to provide a cohesive design coordinated with the building massing and materiality.

The SAMIH building is to continue UTSC's commitment to sustainability. Optimization of Embodied Carbon in the design of structure, foundation and façade is to be considered in the design and verified through the University's quality control process.

Materials should be selected for durability, sustainability and are to be of a higher end institutional grade reflective of the commanding location of the SAMIH building at a Gateway to the Campus.

Project Vision Imaging

UTSC engaged an architectural visualization consultant to produce images of the SAMIH project for advancement purposes. These images are based on UTSC's vision for the facility in terms of public realm interface, massing, quality of materials and detailing and relationship of interior space to the campus. The project visualization material was provided to costing consultants for reference in developing cost estimates for the total project cost. The image shows a 'flat-iron' design for the SAMIH massing as a potential response on the proposed development site.

The following are images prepared by OOEE Studio for UTSC:

View of SAMIH from Intersection of Military Trail and Morningside Avenue (image by ooee studio)

View of SAMIH Interior Reception/Food Service and Feature Stair (image by ooee studio)

Elevators

To increase the overall accessibility and functionality of the building, passenger elevators will be incorporated into the design, in compliance with AODA requirements, the building code, and other applicable regulations. The number of elevators to be provided will depend on the layout of the building and the arrangement of the spaces within.

Depending on building height, a designated fire fighters' elevator may be required.

It is expected that three elevators will be required, including two passenger elevators, and a freight elevator directly serving the loading dock. The building elevators will be regenerating machine room-less traction type elevators of a quantity to meet the form, massing and service requirements of the project. Elevator capacities and expected use coordinated with programmatic requirements are to be confirmed during the design process.

It is recommended that both of the passenger elevators be sized to accommodate scooters and a stretcher, with tactile, audio and visual indicators. This is to provide continuous access should one of the elevators require maintenance.

The freight elevator is to extend to the mechanical penthouse level for maintenance access.

Sustainability design and energy conservation

The University of Toronto is committed to reducing its scope 1 and 2 greenhouse gas (GHG) emissions by at least 37% below its 1990 level of 116,959 tonnes eCO_2 by 2030, targeting a net-zero GHG institution by 2050. To accomplish this, the University has retired the previous Energy Performance and Modelling Standard (April 1, 2019) and introduced this now-governing Tri-Campus Energy Modelling & Utility Performances Standard. This new standard provides project-specific energy and water efficiency targets, used to calculate energy and GHG project budgets, and necessary to achieve the 2030 goal, while also introducing a streamlined modelling and documentation submission approach.

This standard is meant to inspire innovative designs based on absolute energy and GHG targets that are used to calculate energy and GHG performance budgets according to when the building is going to be constructed and the program use. The targets ratchet down predictably over time as cost-effective technologies and delivery methods improve. The tool used to define the targets and budgets is called the "Charter" and completed by U of T staff before the call for design tenders is issued.

The energy and GHG performance targets for new construction are defined for the year that occupancy is scheduled in the project planning reports. If the actual occupancy is delayed for any reason, the original scheduled occupancy date and targets will hold.

The approved energy modelling procedures will be used to calculate the energy and GHG performance for the designs and compared to the Charter targets throughout the design stages.

These Standards and resulting models are not post-occupancy energy or GHG predictions – they are to be used as a comparative tool for building baseline and performance evaluation. Post-occupancy evaluation will be completed (12 – 14 months post-occupancy) by the U of T facilities staff and compared to the final performance model results.

Throughout, whenever Codes, Guidelines or Standards are referenced, they are to be those during the targets and budgets periods. For example, the Ontario Building Code, Toronto Green Standards and ASHRAE revise their criteria toward more stringent levels of performance regularly, usually every four years.

Estimates of the impact of these future standards, codes and guidelines may be required and shall be presented to the U of T Implementation Team for consideration. In all cases, higher performance targets shall be the preferred targets.

Utility Performance Requirements for New Construction Projects

Energy

New construction projects must meet the project-specific energy performance targets established in the Project Charter. The requirements will be calculated using the archetype targets in: https://www.fs.utoronto.ca/wp-content/uploads/2021/05/DesignStandards_Part2_May3_2021.pdf and project information, including: planned building use, year of occupancy, presence of a connection to the U of T district steam or low temperature heating, and district chilled water energy systems. For buildings with mixed uses, the targets are area-weighted using the Project Charter to determine a set of performance targets that are representative of the building programming.

The Project Consultant Team must complete and submit an energy simulation, key performance indicators (TEUI, TEDI, GHGI) with associated documentation at each stage of the design process to demonstrate ongoing compliance with these performance targets.

At the completion of the commissioning, the simulation must be updated to reflect the as-constructed building characteristics. This will form the basis of the baseline performance.

The targets will be revisited and adjusted regularly to ensure U of T remains in a leadership position. The progression of targets depends on numerous factors, many of which are outside U of T's direct control (e.g., the rate at which new technologies come to market). However, projects should anticipate the following adjustments for 2022-2026 (Table 7) and 2026-2030 (Table 8) for all the key performance indicators included in the standard.

New Construction: Targets for Scheduled occupancy dates between 2022 to 2026

Building Type	Thermal energy Source	TEUI ekWh/m²/yr	GHGI kg $eCO_2/m^2/yr$	TEDI - Heating ekWh/m²/yr	TEDI - Cooling ekWh/m²/yr
Academic	District Energy	97	15	37	23
	Non-District	75	5		
Office	District Energy	97	15	37	37
	Non-District	75	5		
Wet Labs	District Energy	470	46	95	95
	Non-District	395	28		
Dry Labs	District Energy	212	15	20	104
	Non-District	195	10		
Retail	District Energy	120	15	24	24
	Non-District	195	10		
Residence	District Energy	97	10	28	19
	Non-District	74	5		
Athletic	District Energy	103	15	38	33
	Non-District	78	5		
Library	District Energy	92	14	24	19
	Non-District	69	6		

New Construction: Targets for Scheduled occupancy dates between 2026 to 2030

Building Type	Thermal energy Source	TEUI ekWh/m²/yr	GHGI kg $eCO_2/m^2/yr$	TEDI - Heating ekWh/m²/yr	TEDI - Cooling ekWh/m²/yr
Academic	District Energy	78	12	30	18
	Non-District	59	4		
Office	District Energy	78	12	30	18
	Non-District	59	4		
Wet Labs	District Energy	376	37	76	76
	Non-District	316	22		
Dry Labs	District Energy	170	12	16	83
	Non-District	156	8		
Retail	District Energy	96	12	19	19
	Non-District	78	8		
Residence	District Energy	78	8	22	15
	Non-District	59	4		
Athletic	District Energy	82	12	30	26
	Non-District	62	4		
Library	District Energy	92	10	19	15
	Non-District	69	6		

The targets and resulting budgets assigned to this timeline are approximately 20% lower than those in Table 7 to account for increased capabilities of designers, technologies and the industry practices to meet net zero targets by 2030 in many jurisdictions, including the City of Toronto.

SAMIH Space Program Archetype Summary for New Construction Project Charter

Archetype	Space Program Area (nasm)
Academic	1,334.00
Athletic	24.00
Dry Lab	744.00
Wet Lab	724.00
Office	2,261.26
Library	23.00
Retail	165.50
Other	125.00
Total	**5,400.76**

Air Leakage

Air in/ex-filtration can cause significant and unpredictable energy loads for the life of the building. The University shall require the envelope and air barrier provide a high performance reliable, continuous and durable air barrier for all designs.

There is no maximum required whole-building air leakage rate for new construction projects; however, a target whole building air leakage rate must be determined and accepted by the U of T Implementation Committee during the Project Initialization for use in all design phase energy modelling.

Assumptions used by the energy modelling team as regards to air leakage shall be presented to the Project Consultants and Implementation Team for description, consideration and review before being used in the model.

In addition, per the U of T Utilities & Building Operations Commissioning Process for Overall Building Commissioning (refer to the Reference section for a link), all new buildings must undergo air leakage testing following the U.S. Army Corps of Engineers Air Leakage Test Protocol for Building Envelopes, version 3 (May 11, 2012). The final air leakage testing results and report must be submitted to the U of T Implementation Committee, and the result used in the final occupancy energy model.

Air leakage testing shall be completed by a third party proficient in these tests and the report(s) presented to the U of T Implementation Team. The results from any air leakage testing shall be made available to the energy modelling team as soon as possible to refine the air leakage factor inputs.

Water

To further reduce GHG emissions, indoor and outdoor water consumption performance targets have been set in accordance with the higher levels of performance in LEED™ version 4 as follows:

- A minimum indoor water use reduction of 50% below the LEED™ version 4 baseline consumption; and
- A minimum outdoor water use reduction of 60% below the LEED™ version 4 baseline consumption.

The Project Consultant Team must submit a completed LEED™ v4 indoor water use reduction calculator and an outdoor water use reduction calculator to demonstrate the design fixture flush and flow rates will meet the required indoor and outdoor water use reductions. The current excel based LEED™ v4 calculators can be found online on the LEED™ New Construction website (refer to the Reference section for a direct link).

LEED™ and Toronto Green Standard (TGS)

The University requires that all new buildings and major renovations are designed to a minimum of LEED™ Silver, but are not required to be certified. The building design is to maximize LEED™ points for Energy & Atmosphere - to a minimum of 10 points. Sustainable Sites, Water Efficiency, Indoor Environment, and Enhanced Commissioning shall also be pursued. Contract documentation, including specifications, are to include LEED™ requirements. Refer to the following environmental standards:

https://www.fs.utoronto.ca/wp-content/uploads/2021/05/DesignStandard_part1.pdf

Points are to be tracked at each progressive design submission

The Design build team is to assemble relevant back up to be able to certify the building LEED™ Silver should the University choose to do so. The backup is to be assembled progressively so that the university can track progress

The project has been submitted to the city in the initial development submission as TGS tier 1 level with higher levels attained in the Energy Performance category. Achieving higher levels of TGS should be considered an asset. Other Considerations

Other Considerations

New construction will increasingly include multiple uses and occupancies resulting in “mixed use buildings”. As indicated, the energy performance targets and resulting budgets will be based on the area weighted aggregate as calculated by the Charter. Care is required when assigning the use areas when completing the Charter. For example, a large commercial kitchen would best be assigned as a dry lab to account for the high ventilation loads, a math lab might be closer to an office space as it likely only includes medium plug loads and lighting but not high ventilation.

The building is to consider a holistic optimization approach to design of building systems to minimize embodied carbon.

If the design seeks to include large atria spaces, the consultants will be required to demonstrate operational benefits vs. deficits against the design of a smaller floor plate. Access to natural light and ventilation will be reviewed against internal building space conditioning and potential additional 'façade' systems at atria perimeter.

District Energy includes that supplied from a central steam or other gas fired network. For networks supplied from low temperature heating sources (heat pumps, heat reclaim energy) the non-district system targets and factors will be used.

Further, the project must comply with City of Toronto Tier 1. Electric Vehicle parking requirements and Photovoltaic-ready initiatives will be reviewed by the Project Committee for appropriateness and alignment with the vision and budget of the Campus and building program.

Please refer to the City of Toronto Green Roof Bylaw No. 583-2009, Chapter 492 for specific green roof requirements.

Sustainable strategies to be considered during the design phase include:

- Green roofs (to improve rainwater absorption, mitigate local heat island effect, decrease the building's solar heat gain, and to increase the available habitat and help offset the impact of habitat loss associated with the new building)
- Low maintenance native plantings
- Roof areas suited to the incorporation of solar thermal water collectors and/or photovoltaic collectors.
- Rainwater harvesting systems for flushing toilets and urinals, and for landscape watering systems
- Water-efficient fixtures and combined water fountains/bottle-filling stations
- Optimal energy efficiency for reduced operating cost and emissions
    - Geothermal energy sourcing if deemed feasible (with boilers and cooling tower for redundancy)
    - Energy efficient lighting and controls, coordinated with natural light where appropriate
    - Energy efficient equipment and fixtures
    - Flexible building automation systems (with occupancy/occupant load sensors to moderate HVAC and lighting levels)
    - Low Carbon HVAC systems using heat recovery and electric heating and cooling
    - Zoned HVAC control wherever beneficial and desirable
    - Ultra-low flow, energy efficient fume cabinets in laboratories (with variable volume air flow and automated sashes)
- Durable, local materials with renewable and/or recycled content
- Provision of recycling depots for source-separation of waste throughout the building to meet the needs of the University's recycling and waste reduction programs and vehicular access to these sites
- Structural Thermal breaks where applicable
- Low carbon /embodied energy material sourcing

Accessibility

The design of the building will provide meaningful access for persons with disabilities. This will be achieved through a design which is informed by three principles: respect for dignity, individualization, as well as integration and full participation. To design for inclusiveness the concept of universal design must be applied. This will support the University in achieving our goal to remove barriers for students, staff, faculty and visitors with disabilities from fully participating in our environment without the need for modification, where possible.

The building will meet the highest level of accessibility standards throughout. The University of Toronto is currently updating its accessibility standards. In the interim all capital projects are to meet the reach for the highest level of accessibility within the guideline provided. The requirements of the current OCAD University Facility Accessibility Design Standards (OCADU 2017 FADS) The OCADU FADS standard will be the required accessibility standard for the SAMIH facility. Please find the OCADU FADS standard at the following link:

https://www.ocadu.ca/sites/default/files/2021-06/OCADU_FADS_21-05-26.pdf

Standards are to include the most stringent of the following:

- *Ontario Building Code* (OBC)
- *University of Toronto Accessibility Draft Guidelines* (to be provided) (for similar requirements prior to releasing the guidelines see the *City of London FADS* and *OCADU FADS*)
- *City of Toronto Accessibility Guidelines*
- New or redeveloped exterior, and some interior public space, 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).*
- Comply with the *AODA Health Standards Development Committee Recommendations on the design and procurement barrier removal*
- Comply with the *AODA Postsecondary Education Standards Development Committee Final recommendations specifically Barrier area 7: Physical and architectural barriers.*
- *CNIB Clearing our Path*
- *OCAD University - 2017 Facility Accessibility Design Standards (OCADU FADS)*
- *Checklist for Making Science Labs Accessible for Students with Disabilities*

Consideration for accessibility in all aspects of the building is required including the design for vehicular traffic (e.g., Wheeltrans drop-off), parking, exterior approach and entrances, interior circulation, services, washrooms, signage, wayfinding, emergency systems, finishes, and furniture layouts and designs.

Amphistairs and other vertically tiered public spaces will be considered as non-inclusive elements within the design and will be discouraged, unless specific reason and demonstration of inclusive use can be

provided. Should vertically tiered elements be included, accessible spaces shall be provided at an equal distribution throughout.

Innovative features, where possible, are encouraged to create a welcoming, inclusive, accessible design (e.g., beacons for wayfinding).

All design proposals are to be reviewed and approved by the UTSC Access*Ability* Services office for compliance.

Four (4) drop-off on-street short term parking spaces are planned to be located adjacent to the north-east corner of the SAMIH building along the west side of the new Campus Road N-S segment. These spaces are located in adjacency to the main entrance, Pharmacy Clinic entrance and in proximity to the elevators and Food Service outlet. Drop off spaces are to conform to the City of Toronto Parking Space guidelines and will be provided with metering and/or signage designating rates, use and duration. At least one space must be designated Accessible Type A (AODA O. Reg. 191/11: Integrated Accessibility Standards – min width of 3,400mm) available for both users of the facility and Wheel-Trans Short Term loading and unloading. Furthermore, a full analysis of the off-street parking facilities on the North campus is required as per sub-clauses (2) which states:

(2) If an obligated organization provides more than one off-street parking facility at a site, the obligated organization shall calculate the number and type of parking spaces for the use of persons with disabilities according to the number and type of parking spaces required for each off-street parking facility.

Other parking spaces, including accessible spaces will be available in the near term TPASC South Lot (modified) and the Parking Structure. Travel distances from adjacent lots and the parking structure to SAMIH will require further assessment for compliance with UTSC and AODA accessibility standards.

Personal safety and security

The building design must allow its students, faculty, staff and visitors' access as required and as allowed, safely and easily. At the same time, the design must be sensitive to the needs of those whose activities require security after hours. Limited areas of this building could be operational throughout the week for 24 hours a day. An example is the provision of security shutters at the Food Service Outlet servery and back of house to allow use of the seating/dining area outside of operational hours as an informal study and meeting amenity.

A detailed security plan will need to be developed for each room, zone or floor, and factored into the design of the building to ensure that accessibility, security and functional objectives are all met simultaneously. Specific security requirements have been identified in the Room Data Sheets.

Security provisions at the Pharmacy Clinic, anatomy lab and support space, chemical stores and other sensitive materials areas will be required and will be connected to the UTSC campus security system.

Signage, Wayfinding & Donor recognition

This project will need to provide all necessary signage, wayfinding and donor recognition associated with the building. Interior signage includes not only those signs mandated by the Ontario Building Code but also departmental identifications, room names and numbers, room schedules (as required) and interior wayfinding. Exterior signage includes building identification, street and road signage for pedestrian and vehicular wayfinding, and other site-specific signage (e.g., parking, loading dock instructions, etc.). As well, building may utilize digital signage for the cycling of campus information, events, student services, etc.

U of T has specifications and standards for both interior, exterior and digital signage that the design team will be required to implement on this project. Exterior donor recognition signage will be subject to the University of Toronto Design Review Committee review.

All signage is to abide by UTSC Signage and Graphics Standard dated January 30, 2017 or later and the AODA Information and Communication Standards. The ground floor should accommodate the display of public art, and space to display material relating to faculty and student work in public areas. At minimum, the space should be able to accommodate the length and width of glass vitrine cases. The exact sizing will be determined during the design phase.

The design must include allocation for signs on street side of building or lawn, in addition to signs affixed to building. Accessible parking spaces are to be signed in conformance with Ontario regulations. External building signage is to be in conformance with U of T standards and all provincial regulations including but not limited to the Ministry of Transportation Ontario.

Larger Graphics on the building Façade are to be considered as a Campus Gateway building and to aid wayfinding to the public facing programming.

Non-assignable space

Typical non-assignable spaces will be included in the building including the following

- Janitors closet on each floor
- Electrical room
- Accessible and gender neutral w/c
- Mechanical and electrical space as designed
- Building storage

Each floor of the building will contain one janitors' closets. The closet on the ground floor (preferably) or at the basement level, must be min. 2.5m wide by 6m long, (to permit storage of maids carts, floor scrubber machine and vacuums), and include a slop sink, one dedicated outlet for recharging equipment, and storage shelves. The other closets may be sized at a minimum of 1.5m x 3m and include a slop sink, storage shelves, and an electrical outlet. A separate area must be provided for garbage and recycling.

Servicing/Deliveries will be via the loading dock for the building.

The building will include a gender-neutral washrooms in close proximity to classrooms

All non-assignable spaces are identified and describe in room data sheets.

Mechanical/ Electrical and Data

Central Heating and Cooling

The building will require its own central heating and cooling plant as it there is no additional capacity in the neighbouring buildings and it is remote from the south campus central utilities plant.

As a basis for design, the building should be well zoned for air handling to allow for system scheduling such that the offices, classrooms, laboratories, clinics and other support areas all can be zoned separately. This will allow for the building to function efficiently as occupancy can be scheduled and the air handling systems can shut off in unoccupied hours (where possible). In addition, an air quality monitoring system should be implemented to allow air change rates to be reduced based on identified risk. These systems have become industry standard and have effectively balanced capital cost with reduction in operating costs driven by the elevated ventilation rates in laboratories.

The building should use modern air handling technology and design as described below:

- Variable air Volume with enthalpy wheels and CO2 Controls in the lecture halls
- VAV with CO2 in the offices and general areas in concert with chilled beams or VRF decoupling ventilation from air conditioning
- fMRI: Enhanced Shield in room enclosure; locate in basement at exterior corner: Include for process cooling and quenching requirements
- Laboratories: Central Station Air Handling Units, demand based and air quality monitoring ventilation controls, high efficiency fume hood system
- Office and Academic Spaces: Perimeter Dual Radiators: Room Ceiling Cassettes, ERV and VRF units or chilled/beams for office space

The building should be designed to allow low temperature heating (130°F and less) and other modern best practice technologies in building services design, with low carbon solutions. A Ground Source Heat Pump System with Geo-Exchange Field below the building along with condensing boilers and/or other auxiliary heating (simplifiers) will be considered. Dedicated features to support heating and cooling in the Wet Laboratories and areas of high containment may be required. A geothermal conductivity test was conducted and concluded that this location was ideal for such an installation.

Natural gas will come from the Ellesmere or Military Trail main service and extend to the building. Natural Gas is required to be piped into the Open Laboratory and to be provided at each of the fume-hood locations. Compressed air, vacuum, natural gas, hot and cold water, RO water with polishing facilities at lab bench sites are to be provided at locations within the Open Laboratory. An RO water facility is to be located in a Service Room. Safety showers w/ eyewash stations and drains are required in the Open Lab space(s); eyewash stations may be required in Tissue Culture rooms as well as at handwash sinks and lab sinks in each room. Floor drains are not to be provided in special purpose rooms.

Natural gas service may be required for the standby generator systems and supplemental boilers. This is to be confirmed in design with consideration of building efficiency, standby power requirements, building conditioning requirements and low carbon aspirations of the facility.

Gas cylinders: The gases to be used in the facility include: oxygen; nitrogen; propane; carbon dioxide; air; helium; and argon. These will be delivered to the site and suitably stored and secured within the Service room until required to be used in either the Open Laboratory and or Special Purpose rooms. All cylinders will be required to be secured when stored and or in use consistent with environmental health and safety guidelines.

Ventilation

fMRI:	Enhanced Shield in room enclosure; locate in basement at exterior corner: Include for process cooling and quenching requirements
Laboratories:	Central Station Air Handling Units, demand based and air quality monitoring ventilation controls, high efficiency fume hood system
Office and Academic Spaces:	Perimeter Dual Radiators: Room Ceiling Cassettes, ERV and VRF units or chilled/beams for office space

Domestic water, Plumbing & Sanitary Sewers

Domestic water and sanitary sewer is required to service the washroom facilities, kitchenettes and retail spaces. This sanitary infrastructure will connect to existing servicing at Military Trail. Local Electrical DHW at point of use (ie., Faculty Kitchenette) will supplement hot water heaters within the mechanical room. Separate Lab Plumbing infrastructure along with effluent cleaning will be required.

Electrical Systems

The incoming service for the building will be separate from the remaining buildings. The service in this building shall be flexible, to accommodate the connection of existing north campus buildings and expansion to accommodate future extensions for upcoming projects.

An underground electrical ductbank is planned to run east from Monringside Avenue along the northern boundary of the SAMIH site to a new pad-mount electrical switching station located at the Eastern side of the site. The specific location of the ductbank, servicing and pad-mount switch is to be determined in coordination with Toronto Hydro and UTSC Facilities and Services. A corresponding electrical room will be required on the first floor with perimeter access. It is envisioned that this electrical room will be at the South side of the East façade.

There shall be stacked electrical and communications rooms, sized to accommodate all required equipment for the current project and spare for future expansions. A riser by the main electrical room stack will serve as the main electrical room riser. Depending on the building footprint, and communications cable runs, multiple communication rooms per floor may be required. In all cases, the rooms shall be stacked for ease of creating a riser.

All lighting in the building shall be LED, with a CRI of 90+ and dimmable drivers. All light fixtures shall have centralized controlled system with alerts for the main user (UTSC facilities), with local override switches/dimmers. All LED light fixtures shall be tunable to create the colour temperature desired for the space by end users.

All receptacles in the common areas to be duplex receptacles with Type-A and Type-C USB connection ports for device charging.

Security, Automation: Security on the floor needs to conform to the specific building standard. A card reader system that will provide secure access to the anatomy lab spaces and open concept laboratory facility with provision for individual researcher access to be granted to selected ante-rooms is anticipated. Research files are to be stored in secured cabinets within the open concept laboratory and/or special purpose rooms as required. Display with negative pressure alarm are to be provided in anatomy lab spaces and open research lab spaces.

Standby Power

Standby power will be provided by a diesel or natural gas generator (natural gas preferred) with a main breaker on the generator supplying a splitter/main distribution panel, which will supply individual feeds to the life safety system, non-life safety system and the fire pump system. There will be two Automatic Transfer Switches serving the life safety and non-life safety systems.

Emergency power and associated fuel system shall be designed with a separate automatic fuel filling system that holds 48 hours of fuel.

The building will also have a central Uninterrupted Power Supply (UPS) to serve the data and communication closets described below.

A separate emergency generator is preferred for lab usage. Life safety generators are tested monthly and this strains research equipment on that system. The fMRI lab is to be on the emergency generator. The generator is to be located at the 5^{th} floor/roof level.

Helium quenching is to be included in the fMRI Lab space.

Photovoltaics

Allow for Photovoltaics at Upper Roof. All photovoltaic panels, armatures, infrastructure, electrical and structural loading to be included in base project scope to allow for installation of PV array. Photovoltaics to be reviewed against project energy targets, operational (payback) benefits, project budget and requirements of the Toronto Green Standards.

Telecommunications

Communications (phone/data) Data will be provided by connecting with a new sub-surface duct bank to the existing run between IC-2 and TPASC.

Telecommunications rooms will be placed in the building so as to support the maximum UTP cable length of 90m. Wireless will be deployed though out with a focus on high-speed and high reliability to support both the staff and students. For more details, please refer to:

"UTSC_Cable_Systems_Specification_V3.4" or later, and
"UTSC_Wireless_Systems_Specification_V1.0" or later.

- Life safety and fire protection
- Emergency lighting requirements
- Elevators
- Information Technology and Record keeping for business continuity

Fire Protection

Fire service will be required from a feed from Military Trail/Ellesmere.

Acoustics

The design should ensure that any noise emissions from the Facility impacting nearby receptors falls within the acceptable sound level limits defined by the Ministry of Environment (MOE) in publications NPC-205 or NPC-232.

Noise mitigation designs should also be considered for off-property points of reception, which are not defined as such in MOE Publication NPC-205/232. It is preferred if an effort is made to prevent the noise impact of the site to these points to be above a reasonably expected noise environment.

There will be an NC level matrix developed for specific spaces/functions within the building and these will be target then tracked for quality/delivery through out the design/construction process. NC and STC ratings will be included in Room Data Sheets in the appendices. All partitions are to extend to underside of floor slab.

<u>EHS (Environmental Health and Safety)</u>

EHS planning will be aimed at recognizing, assessing, controlling, and evaluating hazards as they relate to the building, work areas and environment. EHS involves the identification, evaluation, and control of hazards in the workplace in order to prevent illness and injuries of staff, faculty, students and visitors. Types of hazard can include biological, chemical, physical (including safety hazards from equipment) and ergonomic.

Wet laboratories are laboratories where chemicals, drugs, or other material or biological matter are handled in liquid solutions or volatile phases, requiring direct ventilation, and specialized piped utilities (typically water and various gasses). Containment level 1 (standard chemical 'wet lab' and biological agents) teaching labs and containment level 2 research labs in this project will include the minimum physical containment and operational practice requirements for handling infectious material or toxins safely in laboratory and animal work environments.

Laboratory piping shall be of acid resistant material to accommodate accidental spills and sanitary waste.

EHS is guided by U of T's Biosafety policies and procedures manual, Laboratory Safety Program and Design Standard, the Ontario Occupational Health & Safety Act, associated regulations, relevant standards, Public Health Agency of Canada (PHAC), Canadian Food Inspection Agency (CFIA), Canadian Nuclear Safety Commission (CNSC) and Environment Canada.

Laboratories, ante rooms and support space design and specifications must comply to all applicable governing body safety regulations, including the University of Toronto's Office of Environmental Health and Safety Lab Protocols and Resources, and Laboratory Hazardous Waste Management and Disposal Guidelines.

All Containment Level 2 spaces (CL2) must satisfy Public Health Agency of Canada's requirements for Containment Level 2 Compliance in accordance with Canadian Biosafety Standards and Guidelines.

Lab exhaust will be registered with the Ministry of the Environment and a Certificate of Compliance for both sound and emissions will be required. The Fume hood management will follow University of Toronto's policies and procedures. A

Laboratory Safety Design Standard
https://ehs.utoronto.ca/wp-content/uploads/2018/12/Lab-Safety-Design-Standard-December_2018.pdf

Fume Hoods
https://ehs.utoronto.ca/wp-content/uploads/2018/12/Fume-Hoods-03-Design-Standard_November-2018.pdf

Eyewash and Shower Standard
https://ehs.utoronto.ca/wp-content/uploads/2015/10/Emergency-Eyewash-and-Shower-Std.pdf

e) Site Considerations

Site context

The construction of a new building to accommodate the Scarborough Academy of Medicine and Integrated Health (SAMIH) on the UTSC Campus presents an opportunity to further develop a sector of the campus that recently has seen the opening of three architecturally dramatic buildings: the Toronto Pan-Am Sports Centre (TPASC), the Instructional Centre II Building (IC-2), and the new UTSC Retail and Parking Commons. The accompanying campus plan shows the proposed location for the new SAMIH Building east of the intersection of Morningside Avenue and Military Trail, directly south from TPASC.

The proposed building site is currently occupied by the TPASC South Parking Lot (Lot 13). Aside from parking lot the existing site is comprised of hard and soft landscaping associated with TPASC. To the east of the site a newly re-aligned Pan Am Drive will provide North-South vehicular access to SAMIH. Pedestrian access will be promoted from TPASC to the North, Morningside from the West and Military Trail from the East. New Military Trail will be established with a temporary campus road East of Pan Am

Drive and North of the UTSC Retail and Parking Commons. Access to SAMIH is envisioned to be an extension of this temporary campus road west of Pan Am Drive, turning South to the remaining southern portion of the TPASC South parking lot.

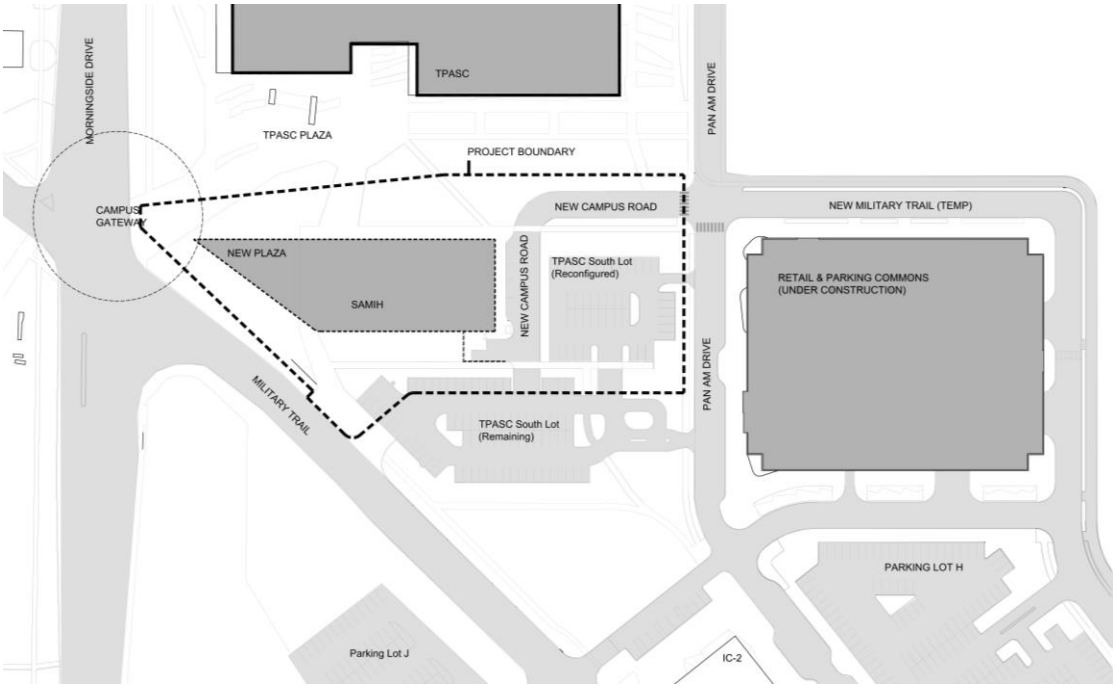
This site was selected as a prominent location at the primary arrival point to the UTSC campus from the Highway 401. This location provides an opportunity to have a stand-alone facility with its own "street" profile along New Military Trail with visible facades on all sides and significant views south and west to the UTSC Campus and the Highland Creek Ravine. The south-west exposure will also present opportunities for on-site solar energy production. Proximity to the Sports Medicine Facility within TPASC, adjacencies to the Proposed Partnership Hotel and the Parking structure serve to link the SAMIH within the amenities afforded by the recent build-out of the UTSC north campus.

Although the design team will have a significant amount of latitude to develop a new building on this site, the Project Planning Committee and UTSC recommend that the following master planning guidelines be incorporated:

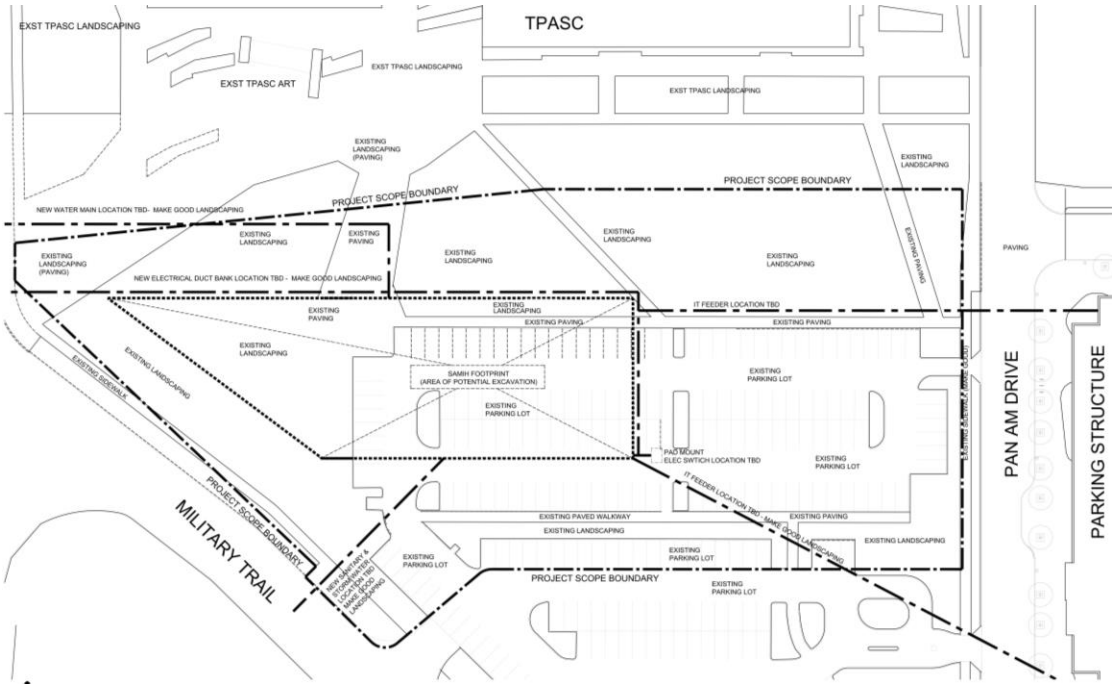
- a prominent facade;
- a sense of architectural transparency and porosity at grade to ensure both visual connections to neighbouring buildings and open spaces;
- a strong street presence and connection to New Military Trail;
- access to natural light, and photovoltaics for adjacent TPASC building must be preserved;
- secondary building entrances should be linked to pedestrian paths and the pedestrianized Military Trail;
- the landscape and public realm design is to conform to the UTSC Landscape and Public Realm Master Plan and should define pedestrian connections, provide shelter from the sun and winds, and strengthen the presence of a new gateway to the campus;
- Building specific parking, loading and drop-off are to be coordinated with public realm, landscape and vehicular traffic patterns;
- any service functions (such as shipping and receiving, garbage disposal, etc.) should be physically and visually separated from the main entrance and pedestrian pathways;
- the connection (and its subsequent extension in the new building) to existing services should consider future building extensions and development of adjacent master plan identified sites; and,
- the siting of the building should be mindful of future development of the quadrant for UTSC.

Location of the Proposed Site for the SAMIH Building within the Secondary Plan Framework

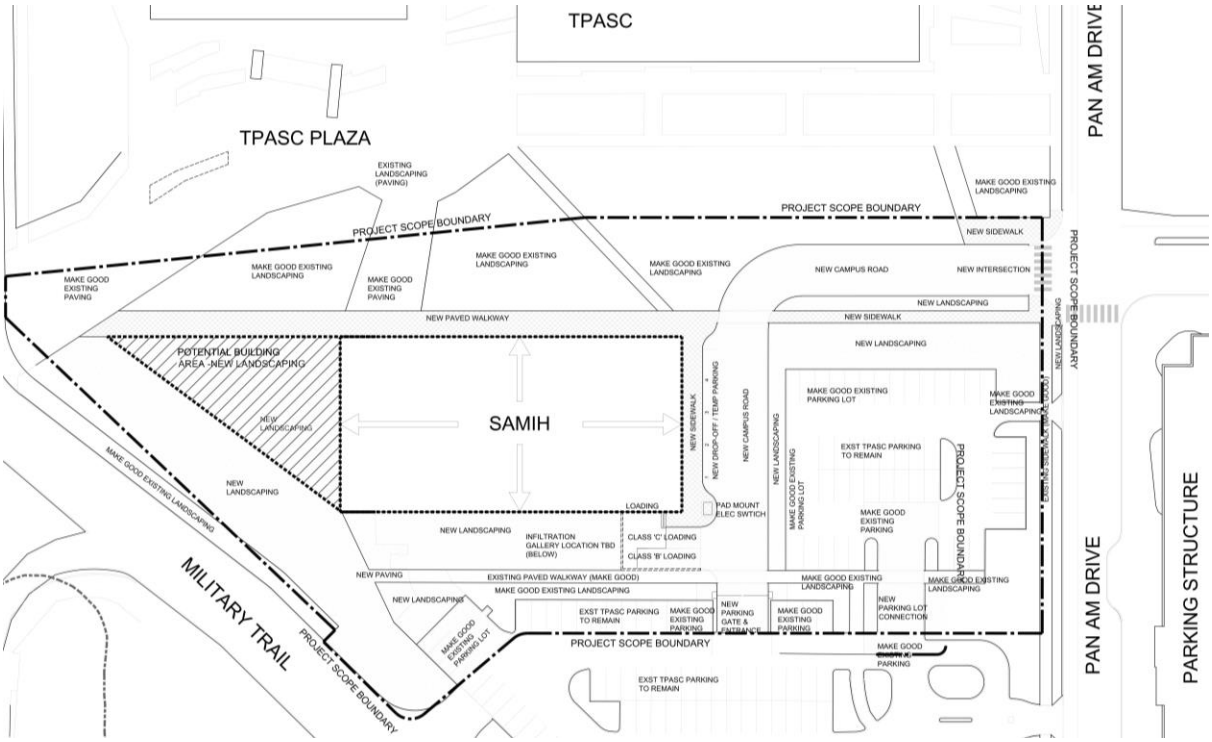
UTSC North Campus Interim Condition Plan



Site Plan Showing Existing Condition and Site Boundary



SAMIH Site Plan & Public Realm Plan



Building Massing and Urban Design Guidelines

The pedestrian experience primarily occurs in the spaces between buildings and streets. Consequently, achieving a balanced relationship between these two elements is fundamental to supporting a walkable campus environment. Generally, a comfortable pedestrian environment is achieved when building heights are comparable to the width of the streets upon which they front. However, in an academic campus setting, the diversity of building types and scales will ensure the creation of a pedestrian-oriented scale through the dynamic street relationships. The proposed SAMIH will front the main arterial street of the north campus – New Military Trail with pedestrian through-block connections and open space corridors along its East, West and South facades. A public realm space announcing the Campus gateway may be included in the project site to the West at the intersection of Morningside Avenue, New Military Trail and the pedestrianized Military Trail. The following recommendations are provided in the UTSC Urban Design Guidelines for buildings along larger Arterial Streets and Military Trail, and for smaller University Streets and Laneways.

To allow for architectural expression, an area of potential building massing has been included within the SAMIH site which could be used to create a ‘flat-iron’ building massing at the acutely angled western end of the site. (see diagram above) The appropriateness of the building massing, site coverage, landscaping

and impression on visitors coming to the campus from the North along Morningside Avenue are all to be considered in the design of the SAMIH project.

Urban Design Guidelines

Below are excerpts from the UTSC Campus: Urban Design Guidelines Draft July 9, 2020, as they pertain to the SAMIH project. Please refer to the full document at the following link:

https://www.utsc.utoronto.ca/aboutus/sites/utsc.utoronto.ca.aboutus/files/docs/UTSC_Urban_Design_Guidelines_20200709_FINAL-min.pdf

Guidelines

1. New development and public realm elements in gateway areas should be designed to signal the transition from city to university.
2. Distinct signage, lighting, landscaping, and public art features may be incorporated into the public realm within gateway areas.
3. Where feasible, gateways should support and frame sightlines to key destinations across campus.
4. Iconic building design is encouraged at gateways to support the gateway function.
5. Important pedestrian entrances to campus may be designed with appropriately scaled landscape features and built form elements that reflect a gateway condition.

New Military Trail

The design of New Military Trail will be a critical structuring element of the North Campus that requires a unique set of guidelines to help achieve the University's long-term vision.

New Military Trail will be designed as a multi-modal street that can accommodate the potential future Eglinton East LRT in addition to pedestrian, cyclist, and vehicular movement. With generously proportioned sidewalks, quality landscaping and street furnishing, New Military Trail will develop as an active and animated main street. Designed at a right-of-way width of 30 metres, New Military Trail will ensure a desirable street condition for the near-term, that can adapt to potential scenarios in which the Eglinton East LRT is delivered at a future date.

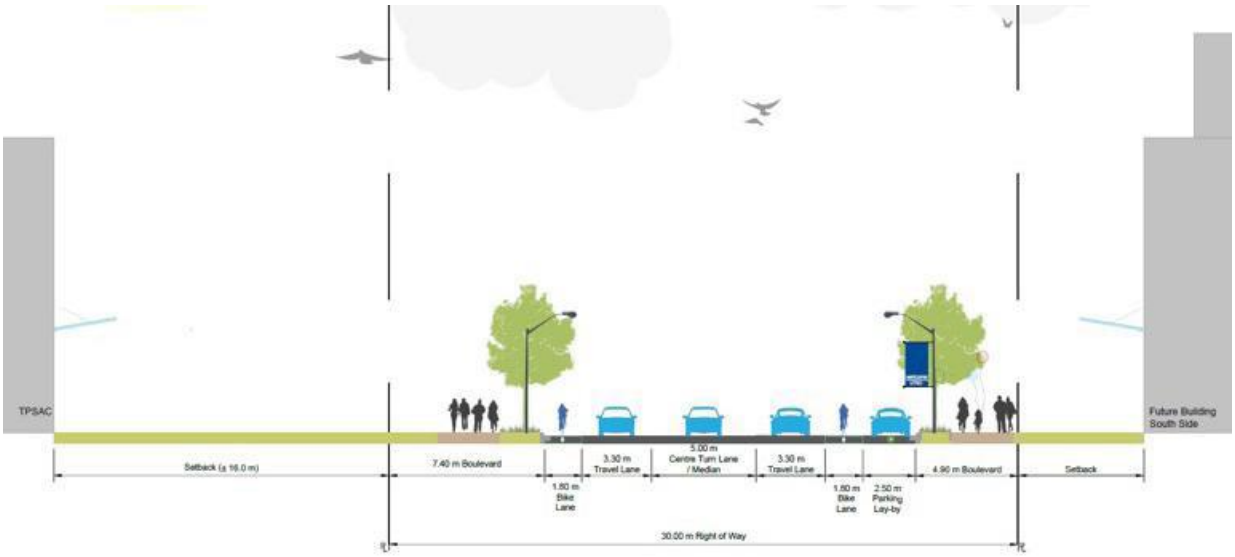
The following pages include street cross sections that depict the street condition both with and without the potential future LRT, illustrating that a desirable and attractive street condition can be achieved in both scenarios.

1. New Military Trail will accommodate high traffic volumes and be the primary street for accessing and servicing the campus.
2. The design of the New Military Trail will accommodate potential LRT travel lanes, vehicular travel lanes, bicycle lanes, wide sidewalk areas with street trees, and at signalized intersections, vehicular turn lanes (as shown in Figures 3.3 - 3.8).
3. Building setbacks and intersection treatment will vary along New Military Trail, and will respond to site-specific constraints, in order to preserve the functionality of New Military

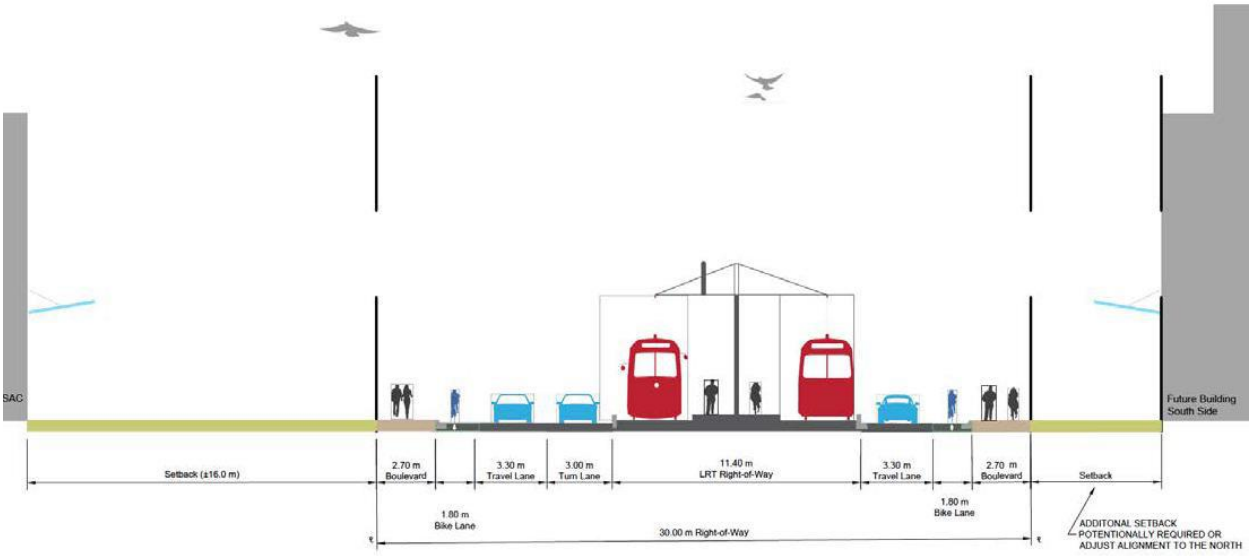
Trail to accommodate vehicle, potential future LRT, cyclist and pedestrian movement within the planned right-of-way.

4. The pedestrian experience will be improved through enhanced sidewalk and landscape areas within the public right-of-way and in setback areas beyond the right-of-way.
5. Intersections should be designed to support safe and convenient pedestrian crossings.
6. Streetscape design should clearly identify re-aligned Military Trail as part of the campus setting through the use of consistent pavement and materiality of the road and sidewalk surface throughout the campus.

New Military Trail at Morningside Avenue (pre-LRT)



New Military Trail at Morningside Avenue (with LRT)



Built Form Guidelines

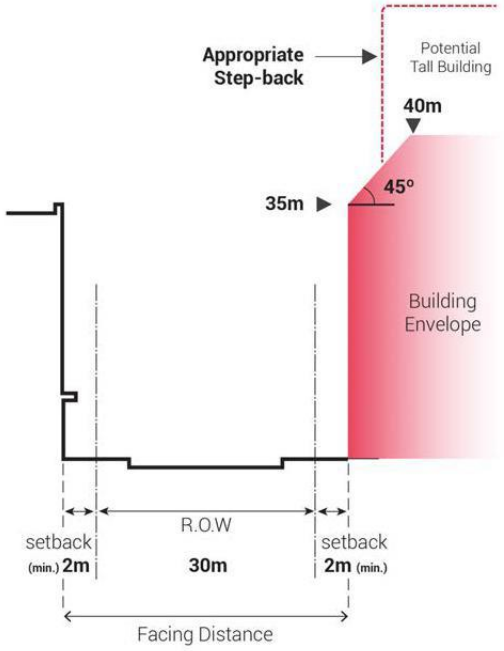
The SAMIH site sits at the intersection of Morningside Avenue, Military Trail and New Military Trail. The UDG Built Form Guidelines provides the following:

Setbacks

Public Streets (Morningside Avenue, Pan-Am Drive	3m
New Military Trail	2m

Massing

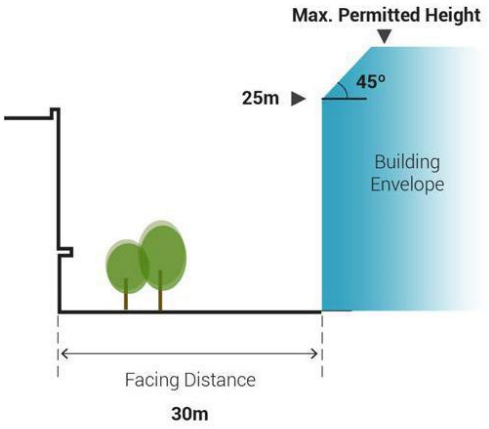
New Military Trail Massing Conditions



1. Buildings fronting onto Military Trail (as shown on Figure 4.2) will feature greater heights in response to the wide right-of-way and the intention to create a consistent mid-rise streetwall.
2. Buildings should ensure a consistent and coordinated setback that preserves a minimum of 2-metres from the public right-of-way to support wide pedestrian sidewalks.
3. The rear condition of base buildings should ensure an appropriate relationship to the campus setting and, where appropriate, should also be designed as a frontage.
4. Continuous street walls will be disrupted through building articulation, stepbacks, and other architectural features including potential projections outside of the building envelope as appropriate.
5. Taller building elements may be permitted along New Military Trail. Appropriate stepbacks or transitions should generally be applied from the base building to reduce the visual impact of taller elements.

6. Buildings along the South Military Trail should maintain a 10 to 15-metre setback to reflect existing buildings and to provide adequate transition between institutional uses and adjacent Neighbourhoods.

Military Trail (Decommissioned) Massing Conditions



1. Buildings along the eastern edge of Decommissioned Military Trail should ensure appropriate setbacks to provide for a series of smaller open spaces and landscape elements, including plazas, courtyards, and interior connections.
2. Decommissioned Military Trail will be a focal point for new development and will feature active frontages.
3. Buildings will be massed and oriented in relation to higher order streets and Major Open Spaces.
4. Taller building elements may be permitted along Decommissioned Military Trail. Appropriate stepbacks or transitions should generally be applied from the base building to reduce the visual impact of taller elements.
5. Continuous street walls will be disrupted through building articulation, stepbacks, and other architectural features including potential projections outside of the building envelope as appropriate.

Active Frontages and Building Entrances

1. Wide sidewalks and covered entrances are encouraged to promote a comfortable pedestrian environment along primary frontages.
2. Building entrances should be located in clearly visible locations, free of obstruction, and directly accessible from pedestrian circulation routes to ensure ease of access.
3. Unobstructed sightlines between main building entrances of adjacent buildings is encouraged.
4. To support intuitive way finding on the campus, main entrances should be designed as the most prominent features on the main building façades, with clearly visible street addresses and/or building names.
5. Entrances should be welcoming and feature hardscaped plazas to accommodate anticipated users.
6. All public entrances, amenity areas and adjacent outdoor public spaces will be grade-related and accessible.

Glazing and Transparency

1. Street level facades should feature transparent glazing to ensure a high degree of permeability between interior and exterior spaces.
2. Transparent glazing is encouraged above ground to break up the perception of large floor plates and density and to provide overlook into the public realm.
3. Highly reflective materials may be used as a means to provide additional light in areas that may otherwise have reduced access to direct sunlight.4. Interior pedestrian connections should be clearly marked with entrances in highly visible areas, transparent glazing, signage, and architectural features.
5. Glazing and surface treatments should be consistent with the City of Toronto's Bird Friendly Guidelines.

Growth Corridors

1. Development along Growth Corridors will generally feature the application of consistent and narrow setbacks from the adjacent right-of-way. Upper-level stepbacks will be encouraged to minimize the visual impact of mechanical penthouses and other equipment located on the roofs of buildings.
2. Ground floors will be designed to accommodate active uses and will feature transparent glazing to help create a sense of visual interest from the public realm.
3. Long development blocks will be broken up through the introduction of mid-block atria and interior connections, serving as primary gateways, and contributing to greater block-level porosity. Where midblock atria are introduced, they will be recessed from the streetwall to allow for street furniture and other landscaping elements.
4. Servicing will be integrated into new developments and will be located away from primary frontages and public realm features.
5. The introduction of outdoor public amenity and open spaces will be encouraged, to contribute to a lively and active public realm, and to help break up long development blocks.

Loading and Servicing

1. To ensure that the design of servicing and loading areas is sensitively integrated with development and promotes pedestrian safety, building servicing and loading should:

    i. Be accessed away from public streets and main pedestrian entrances where feasible;
    ii. Be integrated into building form where possible;
    iii. Be carefully screened with landscaping or other architectural features in order to avoid direct views and mitigate noise to adjacent streets;
    iv. Prioritize the safety and comfort of pedestrians;
    v. Serve multiple connected buildings.

2. A preliminary, block-level loading and servicing strategy — that demonstrates how the proposed development's loading and servicing will be integrated with future developments within its block — should be included with the first development proposal for each block.

Arterial Streets and Military Trail

New development along Arterials Streets and re-aligned Military Trail should be designed to relate to the width of the street. Appropriate upper level stepbacks may be considered for taller buildings to minimize impacts on the adjacent Neighbourhoods, open spaces, and streets.

Streetwall and stepbacks should be designed to ensure appropriate skyview and shadowing conditions, with particular attention to impacts to neighbourhoods and open spaces. Angular planes and other tools may be used ensure appropriate conditions.

University Streets/Laneways

New development on University streets will reflect a variety of heights, floorplates and streetwall relationships to ensure a diverse and varied street wall. Continuous street walls will be disrupted through building articulation, stepbacks, and other architectural features.

New buildings in the University of Toronto Campus should:

- Frame and support the public realm at a scale that balances building height and built form with the scale of adjacent streets and open spaces; and
- Minimize shadowing and negative wind impact on the public realm where possible.

Development within Mid-Rise Campus Areas should:

- Accommodate a broad range of mid-rise institutional buildings with varied footprints and heights; and
- Provide an opportunity for transition in height between higher density uses along re-aligned Military Trail and low-rise buildings in Neighbourhood Transition Areas.

Development along the Military Trail Corridor should:

- Provide an intensive and consistent urban street wall
- Contribute to the evolution of re-aligned Military Trail as an active main street that can accommodate additional height, supported with enhanced setbacks and other design features intended to create a comfortable, safe and vibrant pedestrian environment.

Key factors begin to shape the layout and massing of the SAMIH:

- Student Lounge and food services space at grade will face the proposed LRT stop at New Military Trail, with some integral canopy over entrances at the North
- vehicular access off the Military Trail will be located/maintained at current entry point to loading areas will be located along the eastern site boundary between the proposed partnership hotel and conference centre and the SAMIH
- connectivity with existing and proposed pedestrian paths, including mid-block connections between New Military Trail and the pedestrianized Military Trail
- Main Pedestrian entrance to be located at the West and North façades
- Covered bicycle storage location should be located near the southwest corner

Master Plan

Founded over fifty years ago at the edge of the City, the University of Toronto Scarborough was envisioned as an intimate, interactive, and interdisciplinary campus where exciting new technologies and bold approaches to research and education could be tested and explored. The University has continued this commitment to innovation and academic excellence, growing from a small satellite campus to a major mid-sized university serving a rapidly expanding city-region.

In 2008, UTSC determined it needed a new vision and master plan to guide the future expansion of its physical campus. Developed through extensive consultation, the vision provides direction for the evolution of the campus and its relationship to the surrounding community and region. The 2011 master plan and subsequent secondary plan is the fulfillment of the campus vision, providing a comprehensive framework to guide UTSC as it reaches its full potential. The framework continues past traditions, where ideas of innovation and excellence informed the built environment, and it establishes a new direction, where a hub of mixed-use facilities promotes openness and integration and creates a vibrant centre for learning and community.

As the campus embarks on this plan to develop the North Campus, it is important that the campus vision be understood with a long-term view. The master plan and secondary plan represent this long-term view, outlining large patterns of development that can serve the needs of the campus over the next 50 years or

more. With this framework in place, the university is positioned to make more detailed development decisions with a full understanding of the larger context. As development unfolds, elements of this plan will be phased to meet the requirements of the day for the university. Achieving the master plan objectives create the essential conditions for the realization of the UTSC Master Plan by providing a physical framework for the future growth and evolution of the University of Toronto Scarborough campus.

The master plan objectives include:

- Create a single, accessible campus
- Realign Military Trail to form a single cohesive North Campus
- Construct a bridge over Ellesmere Road to create an internal pedestrian and service network
- Foster an inclusive campus community
- Develop the lands surrounding the Military Trail/Ellesmere Road
- Maintain continuity with existing Neighbourhood
- Develop low-rise residential uses to ensure an appropriate
- Preserve land for academic uses
- Preserve open spaces for future investment
- Expand UTSC development opportunities
- Design the campus for improved mobility

Secondary Plan

Below are excerpts from the UTSC Campus Secondary Plan Draft November 27, 2019, as they pertain to the SAMIH project. Please refer to the full document at the following link:

https://www.utsc.utoronto.ca/aboutus/sites/utsc.utoronto.ca.aboutus/files/docs/Proposed_Draft_Secondary_Plan-Clean%20Version_UTSC-Secondary_Plan_Resubmission_2019-FINAL_SUBMISSION_DRAFT-min.pdf

The SAMIH is situated in within the North Campus Character Area. The North Campus provides a focal point for academic growth and development within the Secondary Plan Area. The North Campus had historically been comprised of open space and surface parking, oriented around the existing diagonal alignment of Military Trail, and more recently the location of University expansion. The North Campus' commitment to sustainable building design coupled with a high-quality public realm will be upheld as growth occurs across the North Campus. Generous pedestrian boulevards and new campus open space will complement and balance new development and will appropriately integrate with the surrounding context.

Enhancements to the ravine edge will protect the natural heritage features while enhancing the campus setting. Building on the framework provided by the realignment of Military Trail, the North Campus will contribute to the creation of a vibrant, well-connected, cohesive, and complete university community.

Gateways

Gateways are significant access points to and from the University which foster a sense of arrival. As the University grows, gateways will play an important role in orienting travelers, facilitating wayfinding to

and throughout the campus, framing views of the University, and fostering a sense of pride and place. Gateways can be expressed through a combination of signage, landmarks, landscaping, art, lighting, architecture, and other public realm elements.

Public Art

The provision of public art in both the public and private realm will support and enhance the character of the Secondary Plan area and enhance place making opportunities. Public art can contribute to defining identity by celebrating the history, culture and creativity of the area and its people.

Natural Heritage

Located on the Highland Creek Ravine, the ravine is part of a much larger natural heritage system that extends through to Lake Ontario. While the ravine is the most prominent part of the University's natural heritage resources, the campus contains a wide variety of other natural heritage features that collectively contribute to the health of the Highland Creek Watershed.

The University will implement a comprehensive program of natural heritage protection, restoration and enhancement. Given the proximity and ubiquity of natural heritage features on campus, it is anticipated that some development may have an impact on some natural heritage resources; however, any adverse impacts will be minimized, and where feasible, natural features and ecological functions will be restored or enhanced. Specific stewardship objectives will include:

- Protecting natural heritage features and functions within the Secondary Plan Area;
- Extending the Highland Creek valleylands onto the tablelands;
- Establishing a natural connection between valleyland and tableland features;
- Actively managing invasive species; and,
- Increasing the ecological value of the natural heritage features.

These objectives may be met through active restoration and tree planting, forest edge management, invasive species management, and stewardship initiatives which involve the University population and wider community in activities such as litter clean-ups and wildlife habitat construction.

Contaminated Sites

The North Campus and City-owned lands to the immediate north have a historic legacy of aggregate removal and subsequent infilling. Remnants of these activities remain, most notably in the prominent hill northeast of TPASC. Based upon available information, the Closed Morningside Landfill is bounded by soil gas mitigation measures installed generally to the west, south and east. Testing demonstrates that the mitigation measures are operating as designed and acting as a barrier to the migration of methane.

Remediation efforts have been undertaken, including large-scale soil and fill removal. With these improvements, the North Campus is anticipated to accommodate a wide range of University activities. Soil gas, soil quality and groundwater quality in some areas of the North Campus lands may require further analysis and potential remediation to address contamination and implement the University's objectives for sustainability and environmental stewardship.

The Site was remediated during the TPASC project construction at which time the "H" was lifted through a rezoning process. This process required Phase 1 and Phase 2 Environmental Site Assessment (ESA) Reports and Record of Site Condition (RSC). As part of the environmental mitigation matters, a Ministry of the Environment (MOE) Part V Environmental Compliance Approval (ECA) will need to be removed. Tied to the ECA is an MOE Certificate of Property Use (CPU) for the TPASC site which will be required to be amended to remove the existing Aquatics Facility use. It is also recommended by UTSC counsel that the requirement for Soil Vapour (methane) and Indoor Air Quality testing for Contaminants of Concern be removed from the CPU to avoid future potential 'false' readings due to new construction material VOC emissions registering in the testing.

Built Form

Built form controls will be applied within the Secondary Plan Area through the Zoning By-law and Urban Design Guidelines. These development criteria will ensure contextually appropriate urban design, respect for Significant Heritage Resources, and opportunities for public realm improvements.

The Secondary Plan Area contains a wide range of architectural and urban design expression. This ongoing commitment to exciting and context-sensitive design should continue as growth occurs.

Sustainable Design and Construction Practices

The future development and growth of the Secondary Plan Area will be inherently sustainable. Compact, integrated development will be supported by high quality rapid transit and enhanced pedestrian and bicycle connectivity. Development in the North Campus will continue to be characterized by a broad range of built forms and animated streetscapes.

The North Campus will become a centre for University and community activity. Diverse open spaces and the large natural landscape of the ravine provide relief from the built environment. These open spaces will help reduce heat and manage stormwater, and will continue to support biodiversity and carbon sequestration, in addition to research, teaching and other institutional activities that do not adversely impact the natural features and functions.

In addition to integrated land uses, active transportation options, and environmental conservation, sustainable building design and operations are key elements in fostering a truly sustainable campus. The University will work to minimize environmental impacts through efficient management of water, storm water, energy, and waste.

Stormwater Management

Given the University's commitment to sustainability, efficient resource and operations management, and environmental stewardship, stormwater management is a critical element of the Plan. With changes in the City's approach to managing stormwater, a new approach to managing campus stormwater will be implemented. Peak stormwater flows will be addressed primarily on-site and within the Secondary Plan Area, rather than through the City's stormwater system. The natural sloped geography and sandy geology of the Secondary Plan Area provide ideal conditions to support on-site stormwater infiltration, which will reduce stormwater volume, rate of outflow and pollutant load. Opportunities to incorporate innovative

stormwater controls such as permeable pavement, green roofs, small retention ponds and cisterns, will be explored throughout the Secondary Plan Area. Stormwater management facilities that offer opportunities for landscaping and place-making will be prioritized. Grey water cisterns and filtration system should be considered to capture roof-water for use within the building.

Zoning regulations

Currently, the UTSC campus is part of the Highland Creek Community Secondary Plan. The zoning permits a building up to five storeys in height. The proposed site is within a current Toronto Pan-Am Sports Centre (TPASC) zoning area which is composed of City owned lands to the north, two parcels of joint City/UTSC owned land in the centre and UTSC owned land to the South. Zoning and urban design guidelines within the TPASC zoning are related to TPASC itself and will require amendments to permit the SAMIH development within the UTSC owned southern parcel.

Official Plan Amendment and Rezoning will be required along with Site Plan Approval for the SAMIH development.

The current designated use of the TPASC zoning is Recreational Facility, Daycare and Retail amenity uses. The specific use under TPASC zoning Exception 52 for the proposed SAMIH site is 'parking'.

Typical for the north campus zoning is the requirement to remove a "hold" or 'H' from the zoning within the Highland Creek Zoning Bylaw. For the TPASC zoning, the H was 'lifted' during the development of TPASC. Further lifting of the 'H' for SAMIH will not be required.

TPASC Zoning

The proposed site of the SAMIH building is currently located within the existing TPASC zoning. Along with Official Plan Amendment, Rezoning and Site Plan Approval; the SAMIH development will require amendment to ownership agreements between the City of Toronto and UTSC. The existing zoning stipulations for the SAMIH site include the following guidelines, applicable to TPASC:

Area

The current TPASC zoning By-Law allows for a maximum build area of 37,000 m2. The Existing TPASC building is 34,025 m2.

Building Height

The current TPASC zoning By-Law includes the following height restrictions:

The Maximum building height shall be as follows:

(i) 35m for the first 42m of the building north and east of the south-west corner of the building;
(ii) 32m for the next 90m (length along Morningside Avenue) for a depth of 10m of the building north of the south-west corner of the building, and for the remaining length of the building for a depth of 10m east of the south-west corner of the building; and

(iii) 30m for the remainder of the building.

The current Highland Creek By-law which governs the UTSC campus outside of the TPASC Zoning allows for buildings of 5 storeys or less. The current planning for SAMIH is in compliant with this Bylaw.

The UTSC 2011 Campus Master Plan designated a maximum height for the SAMIH site of 21 storeys.

Setbacks

No portion of the main wall of the building wall shall extend south of the north property line more than:

(i) For the first 50% of the south building wall closest to Morningside Avenue: 278m, except that canopies may project up to 2m.
(ii) For the remainder of the south building wall: 284m, except that canopies may project up to 2m.

Use

5.1 On those lands identified on the accompanying Schedule "C" map, the following provisions shall apply:

(a) Only the following uses are permitted:

- Recreational Uses
- Parks

The following ancillary uses are also permitted:

- Retail Stores
- Restaurants
- Business and Professional Offices
- Parking Lots
- Day Nurseries
- Educational and Training Facility Uses

5.2 On those lands identified on the accompanying Schedule "C" map, the following provisions shall apply:

(a) Only the following uses are permitted:

- Parking Lots

<u>Parking Space Bylaw and Inventory</u>

UTSC is required to provide parking spaces for all of existing buildings and for those currently under construction. This includes Centennial College, which sits on land leased from UTSC. Prior to May 5, 2015, the City of Toronto Parking By-Law, as it applied to the University of Toronto at Scarborough, required 2.15 parking spaces per 100 gross square metres of non-residential building area (0.75

residential). In 2014, UTSC applied to the City of Toronto to reduce the number of required from the historical figure to a reduced number of 1.75 spaces per 100 square metres (0.2 residential). A statutory public meeting was held in December 2014 and City of Toronto Council approved the amendment on May 5th. The TPASC lands have specific parking requirements with the 2.15 spaces per 100 gross square meters of parking required. This TPASC parking is permitted to be split between 1.15 spaces per 100 gross square meters of on-site and 1 space pre 100 gross square meters of off-site parking locate north of Ellesmere.

In March of 2021 a minor variance to the Highland Creek UTSC parking by-law was approved reducing the overall campus minimum requirement from 2,666 spaces to 2,218 spaces for a period of 5 years. This variance is to allow for the campus parking inventory to meet the minimum requirements of the by-law while the current North Campus capital projects are in construction, including; Student Residence, IC-2, Indigenous House, Retail and Parking Common and SAMIH.

As part of the initial Official Plan Amendment and Rezoning application,

The table below shows the effect of the recent reduction in parking space bylaw requirements both currently and in future with full build-out of the Master Plan.

Parking Space by-law: Requirement: Existing Campus Summary

Inventory	**GFA (gsm)**	**Rate**	**Spaces Required**	**Spaces Provided**
Existing Campus Academic	130,426.00	1.75 spaces /100gsm	2,282	
Existing Campus Residential	21,959.00	0.2 spaces /100gsm	44	
		Total	**2,326**	**2,747**

Prior to March of 2021 a total minimum of 2,666 parking spaces was required in the by-law for the UTSC campus. The current total of available parking prior to the construction of the Student Residence or IC-2 exceeds this minimum limit by 147 spaces.

Capital Project	**GFA (gsm)**	**Rate**	**Spaces Required**	**Spaces Provided**	**Spaces Removed**	**Net Spaces**
Student Residence	23,660.00	0.2 spaces /100gsm	48	4	-251	-247
Instructional Centre 2 (IC-2)	19,646	1.75 spaces /100gsm	262	60	-147	-87
Indigenous House	1,014.00	1.75 spaces /100gsm	18	0	-58	-58
Retail and Parking Common	2,554.00	1.75 spaces /100gsm	45	1,229	-312	917
		Total	**373**	**1,293**	**768**	**525**

N.B. the above totals include alterations to existing parking lots

Added to the Existing inventory this results in a pre-SAMIH condition as follows:

Inventory	**Spaces Required**	**Net Spaces Provided**

Existing Campus	2,338	2,747
Capital Projects	295	525
Total	**2,633**	**3,272**

Highland Creek UTSC parking by-law required a minimum campus total of 2,666 spaces. The current capital project developments generate a parking inventory requirement of 33 spaces less than the by-law minimum and a surplus of 639 spaces.

Post SAMIH Project Campus Parking Summary

Inventory	GFA (gsm)	Rate	Spaces Required	Spaces Removed	Spaces Provided	Net Spaces Provided
Pre-SAMIH Campus Total			2,633		3,272	3,272
SAMIH	10,802.00	1.75 spaces /100gsm	189	122	4	-118
		Total	**2,822**			**3,154**

The SAMIH project increases the campus parking inventory requirement to 2,822 spaces but provides a total campus inventory of 3,154 spaces reducing the campus wide surplus to 332 spaces.

Designated spaces for the SAMIH building will be accommodated within the Retail and Parking Common (RPC). Along with the completion of the proposed RPC, the temporary surface lots will continue to be used to provide parking capacity to satisfy the requirements of by-law for the current and near future north campus development. Minimum parking ratios stated below are per the existing by-law and should be reviewed with the City of Toronto to take in to consideration the new UTSC Retail and Parking Commons and the required official plan amendment, rezoning and land ownership revisions required for the SAMIH development approvals.

TPASC Parking

Further to the overall UTSC campus parking by-law, TPASC parking by-law requirements will be required to be met.

The existing site is subject to the TPASC Zoning by-laws including the exception requirement to provide 2.5 parking spaces per 100m2 of gross floor area for shared TPASC use.

28,930gsm/100sm = 289.3 sm x 2.5 spaces/sm = 723.25 spaces

Minimum parking rates within TPASC zoning site is to conform to 1.5 spaces per 100 gsm while off-site parking is required at a rate of 1.0 space per 100gsm. The total aggregate minimum parking for TPASC shared use is 2.5 spaces per 100 gsm. However there is an exception within the by-law (26 Schedule "C") which allows the aggregate requirement to be reduced to a minimum of 2.15 spaces per 100 gsm.

TPASC has an existing area of 34,025 gsm. The generated parking need for location north of Ellesmere per by-law exception 'C' is:

28,930gsm/100sm = 289.3 sm x 2.15 spaces/sm = 736.4 aggregate spaces

28,930gsm/100sm = 289.3 sm x 1.15 spaces/sm = 433.95 on-site spaces

28,930gsm/100sm = 289.3 sm x 1.0 spaces/sm = 289.3 off-site spaces

SAMIH will generate parking requirement at 1.75 spaces per 100 gsm. This equates to the requirement of

10,802 gsm/100 sm = 108.02 sm x 1.75 spaces/sm = 189.04 spaces

The following table summarizes the required TPASC dedicated parking to be included within the secondary effects of the development of SAMIH project:

Parking Area	**No. of Parking Spaces**
TPASC North Lot	179
TPASC East Entrance	9
TPASC South Lot	249
TPASC Total	**437**
TPASC South Lot Spaces Removed for SAMIH development	105
Total Remaining TPASC Dedicated Parking Spaces	**332**
SAMIH Provided Parking Spaces	4
By-Law Generated TPASC Parking Space Minimum	736
By-Law Generated *On-site* TPASC Parking Space Minimum	**434**
On-site TPASC Parking Deficit	102
Off-site TPASC Parking minimum required	289
SAMIH Generated Spaces	184
Required Off-site minimum TPASC / SAMIH Parking to be provided	**438**

The Zoning By-law for TPASC contains minimum parking requirements pertaining to the TPASC. The site for the proposed SAMIH building occupies lands currently occupied by one of the two surface parking lots servicing the TPASC. As a result, the parking supply currently utilized by the TPASC would be reduced by the proposed SAMIH building. Further, while the south TPASC parking lot will not physically move, it is proposed for it to be considered “off-site” parking in the TPASC Zoning By-law 781-2011. The proposal will therefore result in a reduction to the “on-site” minimum parking requirement (1.5 parking spaces per 100 m2 GFA) to 0.65 parking spaces per 100 m2 GFA. However, it is intended to continue to meet the aggregate (i.e. combined on-site and off-site) minimum parking requirement (2.5 parking spaces per 100 m2 GFA) by increasing the “off-site” minimum parking requirement, currently 1.0 parking spaces per 100 m2 GFA, to 1.85 parking spaces per 100 m2 GFA, commensurate to the decrease in on-site parking supply. The required 102 spaces generated for the on-site parking requirement are to be accommodated within the UTSC Retail and Parking Commons as off-site spaces. The Retail and Parking Hub is scheduled to be completed prior to the opening of SAMIH. Refer to secondary effects section for a discussion on requirements to provide temporary parking during the construction of SAMIH and the Retail and Parking Commons.

Bicycle Parking Space Bylaw and Inventory

Bicycle parking spaces are required as part of the May 5, 2015 By-Law amendment. Prior to this date, the Highland Creek Community By-Law did not require bicycle parking. The requirement will apply to new projects moving forward and will be based on interior area for new construction.

Zoning for bicycle parking was amended as follow:

Post Secondary (Bicycle Zone 2)

0.6 bike parking spaces for long term parking per 100 sq.m

3 + 2.0 bike parking spaces for short term parking per 100 sq.m

Eating Establishment (Bicycle Zone 2)

0.13 bike parking spaces for long term parking per 100 sq.m

3 + 0.25 bike parking spaces for short term parking per 100 sq.m

For the purpose of the by-law, the proposed SAMIH will have a total Gross Floor Area of 5,263.26 sm per the by-law definition of Gross Floor Area for Bicycle Parking Space Calculations (230.5.10.1(6)). For planning purposes, this total is based on the total nasm less the loading dock to account for exclusions listed in the bylaw. (stairs, elevators, services, etc.) The specific bicycle parking requirement will need to be revisited during design. The overall gross floor area will be divided between Eating Establishment and Post-Secondary designations as follows:

Eating Establishment:	137.50 gsm
Post-Secondary:	5,263.26 gsm

The above gross floor areas will generate the following bicycle parking space requirements:

Long Term Bicycle Parking: 31.58 + 0.18 = 31.76 = 32 spaces

Short Term Bicycle Parking: 108.27 + 3.34 = 111.61 = 112 spaces

The proposed SAMIH will have 35 nasm of long-term parking space for **32** spaces as a minimum. The bicycle parking spaces are to are to be located in a secure bicycle parking room. Bicycle parking space dimensions are based on City of Toronto By-law 230.5.1.10 (4)(A) at 1.8m x 0.6m.The SAMIH project will provide exterior short term parking spaces for a minimum of **112** bicycles. Bicycle parking space racks, both surface and vertically stacked are to conform to UTSC standards.

One Shower will be provided to serve bicycle commuters. Refer to COU Cat. 9.0 discussion of this report.

Loading Requirements

The current TPASC zoning requires:

A minimum of 4 loading spaces shall be provided as follows:

(a) 2 Type “B” loading spaces, which each must have a: minimum length of 11.0m; minimum width of 3.5m; and minimum vertical clearances of 4.3m
(b) 2 Type “c” loading spaces, which each must have a: minimum length of 6.0m; minimum width of 3.5m; and minimum vertical clearance of 3.0m

The SAMIH project proposes one Class B and one Class C loading facility be provided. The TPASC zoning requirement will be removed with OPA/Rezoning amendments.

Refer to Loading paragraph of this report for further information.

Environmental Issues, Regional Conservation, Ministry of the Environment Considerations

The site does not have any “top of bank” issues with the TRCA and is well beyond the boundaries of the TRCA designated Environmentally Significant Area. Storm-water management and runoff will be reviewed as part of the Site Plan Application.

Investigations will need to take into account small amounts of methane detected east of the site. Management may involve the incorporation of an impermeable membrane around the basement and foundational building elements and a passive venting system.

In addition, there are likely Chloride impacts in the soil on the site that will be required to be excavated, removed from site and backfilled. These can be managed through a soil reuse program through a construction soil management plan.

Deposits of organic material have been documented in lands to the north and east of the SAMIH site. Allowances for potential excavation and engineered fill of organic deposits may be required at both the SAMIH and New Military Trail areas of the project scope.

Existing ESA 1 and 2 reports have been completed as part of the Record of Site Condition for the TPASC project. As such the lifting of the ‘H’ typical to UTSC North Campus development projects is not required. Amendments to the existing TPASC land ECA Part V and CPU are required prior to rezoning approval and issue of building permit.

Refer to appendices for further information.

Landscape and Open Space Requirements

In 2020 UTSC initiated the UTSC Campus Landscape + Public Realm Master Plan to guide future improvements and redevelopment to the campus and serve as a clear organizing physical framework linking people, places and community through a hierarchy of open spaces and circulation networks with a particular focus on the pedestrian relationship to the physical environment, the use of hearty native landscape materials and the ease of maintenance.

The Landscape and Public Realm Master Plan provides the framework for a welcoming, unified and cohesive campus that furthers the above themes of native/edible landscape and permaculture,

healthy/active campus and environmental sustainability. Under these primary themes, the following design objectives should be considered:

- Create a hierarchy of pedestrian and open space connections addressing lighting, seating, green space, planting and paving for the multiplicity of campus users
- Identify safe passage for cycling and discrete accessible parking where appropriate
- Maintain opportunities for research and experiential learning within the natural environment including Indigenous Knowledge, the Edible Landscape and Permaculture principals
- Locates opportunities for outdoor program elements to accommodate special events, ceremony, celebration and gathering

A new streetscape along Military Trail and New Military Trail should coordinate with the Parking Structure, the Instructional Centre 2 (IC-2) and TPASC projects. It is anticipated that retail frontage will require pedestrian and exterior dining supportive paving. Pedestrian connections will be required to the north to TPASC and at the South-West corner to Military Trail and onwards to IC-2. The design of the SAMIH building must acknowledge the future adjacent developments in the North Campus, including a Hotel to the East and a future Academic Building to the South. An open space future through block connection will be located within the setback along the south site boundary.

Landscaping will be provided at the perimeter of the building with both hard and soft landscaping providing a welcoming environment for pedestrians. Landscaping is to consider the campus masterplan and proposed secondary plan provision for open space in the north campus.

An exterior landscaped plaza at triangular intersection of Military Trail, Morningside Avenue and New Military Trail is to be included in the design and massing of the SAMIH building. This landscaped area is to provide connections north south between the future pedestrianized Military Trail and TPASC, serve as an amenity space for SAMIH and enhance the gateway condition of the intersection. The design of SAMIH is to coordinate and integrate with the plaza. The plaza landscaping is to consider relationships to SMAIH's ground floor adjacent to the food services outlet and a main entrance. This area should incorporate hard and soft landscaping, with accommodation for café tables, benches and bicycle parking in line with the campus landscape standards and Landscape Master Plan. Planting and landscape elements are to consider the site location as a Campus Gateway as well as an amenity space for students and the UTSC community at an anchor location of the future pedestrianized Military Trail. Opportunities for distinctive planting, such as the existing lodge pole pines, in keeping with the vision of the UTSC Landscape and Public Realm Master Plan are to be considered within the new plaza and landscaping at the western portion of the SAMIH site. The SAMIH project will also provide landscaped pathways connecting TPASC to SAMIH and to the existing to remain South TPASC parking lots.

The existing TPASC South Entrance Plaza will be disrupted and partially replaced by New Military Trail. A reworking of the southern extent of the remaining TPASC South Entrance Plaza will be included in the SAMIH project scope.

Landscaping, planting and lighting will be included in the preliminary build-out of the western portion of New Military Trail from SAMIH's east facade to Pan-Am Drive. Landscaping will include planting along adjacent boulevards separating the road from existing to remain SAMIH south parking lots.

Short term parking for 105 bicycles will be required within the site boundary of the SAMIH project. Bicycle parking is to be integrated into the landscape design and is to conform to UTSC Campus Standards.

Site access

Site access will be provided via a new campus road located in the right-of-way planned for New Military Trail. This campus road will extend west from the newly realigned Pan Am Drive (built for the Retail and Parking Commons) west, turning south along SAMIH's east façade and terminating in a new entrance, complete with new one-way entrance gate, to the existing to remain TPASC south parking lot. A new exterior facility for loading, and waste management will be located at the south-east corner of SAMIH to be accessed from the temporary new campus road. The north-south component of the new campus road is anticipated to serve the future hotel planned for the site east of SAMIH and is to extend east to connect back to Pan Am Drive in the final implementation of the precinct. Once New Military Trail is constructed, deliveries to SAMIH will be able to entre off the future New Military Trail, access the loading facility and continue through to Pan Am Drive.

The existing remaining TPASC South Parking Lot is to be reworked as required for use in the short term connected to the existing entrance at the east connected to Pan Am Drive and to the new temporary campus road described above.

Vehicular drop-off spaces including Wheel Trans and pedestrian circulation space will be incorporated into the design along the north-south segment of the new temporary campus road to provide access to SAMIH from Pan Am Drive.

Main pedestrian entrances will be located along the North and South and West façades. The front facade and main entrance of the SAMIH will face onto the future realigned Military Trail with a secondary pedestrian access entrance at the West façade off the new landscaped plaza. Accessible access is required at all entrances, short-term retail parking, drop-off and loading areas. Provision for ambulance, police and Wheel-Trans vehicles is required along the new campus road.

Existing bus stops at the North-West corner of Morningside Avenue and Military Trail and at Military Trail West of the South TPASC lot are to be maintained and connected to SAMIH pedestrian access. Landscape upgrades to support a new bus shelter and the creation of a lay-by at the Military Trail stop are to be considered.

Soil conditions

Refer to Contaminated Sites section of this report.

Site servicing; existing and proposed

Existing site servicing currently consists of stormwater piping + electrical services (LV electrical + communications) for parking gates and a large infiltration gallery serving the TPASC site and parking lot.

These will have to be relocated prior to construction as these services need to be maintained during construction and in the future. Underground telecommunications and electrical supply for Code Blue emergency phones on the North Parking lots must be relocated prior to construction.

New site servicing will see water and hydro services connecting to existing services at Morningside Avenue and Storm Sewer and Sanitary services connecting to existing Military Trail runs.

IT backbone will connect via a new sub-grade duct bank to existing duct bank running between IC-2 and TPASC.

Designated Substances

The University of Toronto will investigate and identify designated substances and other site-specific hazardous materials present within the project area as per appropriate regulations and the Ontario Occupational Health and Safety Act.

There will be very limited hazardous waste removal required as this will be a teaching/academic facility with limited research function. Hazardous materials will be removed using University Environmental Health and Safety (EHS) practices and housed in certified receptacles in a closed room in the storage area of the facility managed by facilities and EHS staff.

f) Campus Infrastructure Considerations

Utilities (electrical capacity, water, gas, steam lines)

The main electrical service will come from the Morningside Avenue feeder. The feeder will be fed in a duct bank with spaces for other services (Future Data). Similarly, the Hydro service will be brought to the SAMIH facility in a duct bank. The duct bank will extend to the north-eastern site boundary of SAMIH to serve future buildings on adjacent development sites.

All services from Military Trail and Morningside Avenue should be grouped together to minimize disruption on the roadway even possibly allowing for continuous access to the outer parking lots.

Standby Power will be required to keep the building safe and warm, provide emergency lighting, fire service, elevators, life safety and emergency lighting for egress. In addition, the standby power solution will need to be designed to suit the critical research activities programmed in the facility. Large gathering areas may be considered areas of refuge during a sustained power outage or emergency and should be considered for standby power as well.

A new water service will be required to run east from the Morningside Avenue. The sizing of the service is to be coordinated with future New Military Trail development and the UTSC Secondary Plan. Water service is to be temporarily terminated at the SAMIH building for use by SAMIH. This service and other services are being coordinated with the city for proof of concept for the future road.

Sewer and storm water management

Storm runoff will be managed through an infiltration-based storm water system such as a “storm tech”. Water conservation and other sustainable approaches such as bio-swales and porous landscaping features should be considered. The Landscaped area between the south boundary of SAMIH and the north boundaries of Military Trail/Existing to remain South TPASC parking lot, or east of the proposed SAMIH site / West of the existing eastern parking lot to remain are current considered the potential locations for infiltration beds and storm water management. The new landscaped plaza to the west of SAMIH is a potential location for on-site storm water management, to be coordinated with existing grading and drainage.

A Site Servicing Report prepared by an external consultant with the University’s proposed Secondary Plan has confirmed that the existing storm water retention system may be sufficiently sized to accommodate a new facility.

A metering program on the sanitary infiltration has been completed to ensure that requirements of Toronto Water are met.

Storm water management for the new temporary campus road will be required. Connections to existing storm water sewer at Morningside Avenue may be required. Connections to existing sanitary and storm water at Military Trail is assumed. An updated storm water management plan and functional servicing report will be required to formalize the servicing. The report is to include future development in the design criteria.

An existing infiltration gallery located below the existing parking lot and future site of SAMIH will need to be removed and accommodated within the new storm water management design for SAMIH, TPASC Plaza (South) and surrounding existing parking lots to remain.

Roads and Pedestrian Pathway Landscaping

A new streetscape adjacent to the SAMIH is to coordinate with (as an extension of) the Parking Structure project. It is anticipated that the North, West and South frontage will require more considered landscape design and potentially allow for outdoor seating. A pedestrian connection and landscaping will be required at the south to the pedestrianized Military Trail and at the north-west corner to TPASC and the new gateway plaza space. The east façade will be coordinated with the proposed adjacent Hotel and Conference Centre and accommodate vehicular access, loading and waste management. Landscape screening is to be provided around the loading facility at the south-east corner of SAMIH. Sidewalks and boulevard landscaping along new roads will be required. All Landscaping will conform to the requirements of the UTSC landscaping standards and Landscape master plan.

A landscaped open space is identified in the UTSC Masterplan at the intersection of Military Trail, Morningside and New Military Trail. This open space, envisioned as a plaza space will serve to announce the arrival to the UTSC Campus, provide access from the future pedestrianized Military Trail to New Military Trail, TTC stops and TPASC. The design of the SAMIH project is to balance the building’s massing with open space to create a significant gateway condition at this intersection.

New roads are to be designed to accommodate necessary traffic flow and are to confirm the to requirements of the UTSC Masterplan and proposed Secondary Plan. A traffic study will be required to be provided by the consultant team as part of the Rezoning and Site Plan applications as well as to determine optimal design of access/egress roadways and circulation. The consultant team will coordinate with UTSC's representative Traffic Engineer to ensure that the intent of the proposed secondary plan and the proposed Eglington East LRT criteria are met.

g) Secondary Effects

Impact on campus sector

TPASC will be affected during construction as follows:

- Demolition of TPASC South Parking Lot (in part)
- Demolition and relocation of TPASC storm water infiltration bed
- Partial Demolition and reconstruction of TPASC South Plaza
- Restricted access to TPASC South Entrance
- Potential vibration, noise and dust impact on TPASC
- Potential vibration, noise and dust impact on IC-2

Access and egress to/from TPASC will need to be maintained and clearly communicated during construction.

The intersection of Morningside Avenue and Military Trail will be impacted with construction of site and building servicing connections. Re-routing of traffic to Pan-AM Drive during intersection closures may result in increased vehicular traffic within campus.

Military Trail may require closure for site servicing connections. Interruption of pedestrian routes along North-East Side may be required.

Pedestrian access from South Campus and South and East TPASC Parking Lot to TPASC may be limited or re-routed temporarily during construction.

UTSC Retail and Parking Common use may increase due to contractor parking.

The Existing to remain TPASC South parking lots may be required for contractor stating and lay-down purposes. Designated TPASC parking to supplant existing is to be provided in the North Campus, north of Ellesmere Avenue. The new Retail and Parking Commons is expected to provide replacement parking for the TPASC South Lot.

Vacated space

The relocation of academic department to the new SAMIH will permit the relocation and consolidation of other academic departments within the existing buildings. Vacated space in existing buildings will be an opportunity to create high quality study spaces and possibly to relocate administrative units.

Building / Department	NASM
Science Wing	
DHS	259.73
Science Research Building	
Clinical Psychology	525.57
Highland Hall	
DHS	308.40
Total NASM to be vacated	**1,093.70**

The UTSC Space Planning committee will look at reallocation and renovation of the space that will be vacated by SAMIH occupants, as well as other space vacancies as they become available. This committee serves as a governing body to review and oversee the space allocation and renovation needs on campus. The priority for this group will be to address the critical space shortages as well as providing opportunities to meet newly identified academic and strategic planning requirements on campus.

Current Campus Space Planning anticipates the following proposed reallocations:

All DHS space currently located in Highland Hall will be vacated and made available to other Social Science departments within the building to allow for planned growth in faculty, staff and student complement. Student study space should be considered as part of the reallocation to grow this under-accommodated amenity. Minimal renovations are expected to be necessary to accommodate like uses.

DHS Research Laboratory spaces in the Science Wing (SW151, 165) will be vacated and made available for planned growth in science research, likely within the Department of Biological Sciences that is currently significantly constrained by space limitations. These spaces were fully renovated as part of the last infrastructure renewal plan in 2018-2020 and will require little renovation to make ready.

Clinical Psychology office and research spaces currently located in the Science Research Building will be vacated and also made available for planned growth in Biological Sciences. Existing building services will make this space reasonably easy to repurpose for certain science-based research.

In 2016 the parking by-law governing the UTSC campus was revised to require 1.75 spaces per 100 square metres of building area. The current campus total parking inventory is currently being supplemented by a +/- 1084 parking space parking structure to serve the north campus and allow further campus development within the structure of the existing By-Law. A recent By-law amendment was approved in March of 2022 reducing the minimum campus parking space total from 2,666 spaces to 2,218 spaces for a period of 5 years to allow for interim conditions during construction of the North Campus capital projects. Refer to the zoning below parking impact paragraphs for further discussion on parking and SAMIH.

A short-term visitor parking area and drop off lay-by is proposed at the east side of the SAMIH site along the new Campus Road north-south segment. This parking layby is to contain pay-and-display parking meters. The total number of proposed spaces are 4 including 1 Type ‘A’ and 1 Type ‘B’ accessible spaces.

SAMIH Parking Impact

Designated spaces for the SAMIH building will be accommodated within the parking structure. Along with the completion of the proposed parking structure, the temporary surface lots will continue to be used to provide parking capacity to satisfy the requirements of by-law for the current and near future north campus development. Minimum parking ratios stated below are per the existing by-law and should be reviewed with the City of Toronto to take in to consideration the new UTSC Retail and Parking Common and the required official plan amendment, rezoning and land ownership revisions required for the SAMIH development approvals.

The SAMIH project will displace existing TPASC parking requiring the accommodation of 332 spaces of On-site shared TPASC parking and 438 Off-site TPASC shared parking spaces. The deficit of On-site parking spaces is to be negotiated with the City of Toronto to propose a suitable location outside of the TPASC site boundary through the increase of the Off-Site Parking ratio form 1.0 parking spaces per 100m2 to 1.85 parking spaces per 100m2 to meet the existing TPASC Zoning by-laws exception requirement to provide and aggregate of 2.5 parking spaces per 100m2 of gross floor area for TPASC use. This generates a need for 102 off-site parking spaces. This offsite parking is expected to be accommodated within the new UTSC Retail and Parking Commons scheduled to be completed prior to the SAMIH project completion. While both projects are under construction temporary off site parking spaces are to be made available. UTSC is working with traffic consultants to review three potential off - site parking areas to accommodate the 102 off site parking spaces. The threes potential sites are:

1. Southern expansion of southern portion of existing to remain TPASC South Parking Lot
2. Expansion of eastern portion of existing to remain TPASC South Parking Lot
3. New temporary parking lot on east side of Pan Am Drive across from TPASC East entrance

Negotiations between the City of Toronto and UTSC as well as coordination with Construction management and access plans for the SAMIH and Retail and Parking Commons projects will be required to best determine the location of the temporary off-site parking spaces.

Additional off-site parking spaces may be required to be provided as part of the UTSC Retail and Parking Commons. The location of these temporary spaces is to be determined in consultation with the City of Toronto.

Temporary parking serving TPASC will be constructed outside of the SAMIH project scope and will be required to be complete prior to start of construction of SAMIH. This parking is to include all accessible parking spaces planned for removal to accommodate SAMIH construction which are currently in the TPASC South Lot.

As the SAMIH project will separated TPASC from the remaining TPASC South Parking Lot, the South Parking Lot will be designated as Off-Site TPASC Parking. A proposed expansion to the remaining TPASC South parking lot to accommodate the required By-law aggregate TPASC parking inventory is in discussions with the City of Toronto.

Refer to the Parking paragraph of the Zoning section of this report for further analysis.

Parking during Construction will require the potential loss of all of the TPASC South lots for use as contractor lay-down and storage. Further coordination with the City of Toronto and the Design Build Team will be required during the Rezoning and Site Plan Approvals processes. Construction Management plans may be required by the City and UTSC.

SAMIH Bicycle Parking Impact

Removal of any exterior bicycle parking spaces currently within the TPASC site boundary will be required to be replaces to meet City requirements. UTSC will review with the City of Toronto to see if SAMIH provided short-term bicycle parking can be designated shared with TPASC to fulfill by-law requirements.

Staging

Given the proposed massing is low-rise; the anticipated effect on nearby residential homes is minimal. Construction staging can be provided in the remaining portion of TPASC South parking lot.

Other effects include:

- Renovation of existing Science Wing Laboratory Space
- Renovation of existing Science Research Building Space
- Renovation of existing Highland Hall Space
- Scheduled use of UTSC Classroom inventory to accommodate departmental growth afforded by relocation of UTSC departments to SAMIH
- Scheduled use of UTSC Classroom inventory to accommodate use by Temerty Medicine students
- Increase in parking demand and potential dedication of parking spaces within the Parking Structure and/or surrounding surface lots to accommodate SAMIH instructors and students
- Temporary traffic coordination may be required at the intersection of Military Trail, Morningside Avenue and New Military Trail until such time as Military Trail is pedestrianized.

h) Schedule

The proposed schedule for the project is as follows:

- Preliminary Costing — September 2021
- Updated Costing (Updated TPC) — March 2022
- Preliminary OPA, Rezoning Application — May 2022
- Issue Design Build RFSQ — May 2022
- Updated Costing (Updated TPC) — August 2022
- CaPS Executive Approval (Cycle 2 RFP Costs) — September 2022
- CaPS Executive Approval (Cycle 3 Full Costs) — November 2022
- Community Council Meeting — June 14 2022
- Issue Design Build RFP — October 2022
- Governing Council Approval (Cycle 3) — February 2023

• Design Build Contract Award	February 2023
• Construction – Interim Parking Lot	August – September 2023
• Building Permit Applications (Sequential)	June –December 2023
• Anticipated OPA/Rezoning Approval	November 2023
• Anticipated Site Plan Approval (NOAC)	December 2023
• Construction	October 2023 – June 2026
• Fit-out/Commissioning/Move-In	June – August 2026
• Project Completion	August 2026

III. Resource Implications

a) Total Project Cost Estimate

Project costing was completed during the planning process. Updated costing checks were performed prior to release of RFP and a Total Project Cost (TPC) was developed by UPDC Project Development.

The SAMIH will pursue a design build delivery methodology with an anticipated start of construction is targeted for October 2023 with building occupancy in September 2026.

On September 22, 2022, cost for the Design Build RFP and preliminary municipal approvals applications were approved by CaPS Executive Committee.

The Project Scope and Total Project Cost is being brought forward for full approval by the University of Toronto Governing Council, prior to award of Design Build contract.

b) Operating Costs

Operating costs will be funded by the University of Toronto Scarborough Campus.

c) Other Related Costs

None Identified.

d) Funding Sources

The UTSC Infrastructure Fund provided funding for the Design Build Request for Proposal Stipend for Compliant RFP submissions to unsuccessful biding teams for their proposal and to engage consultants to support the Design Build Request for Proposal process.

The project will be funded through: the UTSC Infrastructure Fund; Lawrence S. Bloomberg Faculty of Nursing; Temerty Faculty of Medicine; Provostial Funding Sources; Fundraising and Borrowing.

APPENDICES:

1. Existing Space Inventory (on request)
2. TPASC Staff Report for Community Council Zoning – dated May 5, 2011 (on request)
3. Test-fit Floor Plan Drawings (on request to limited distribution)
4. SAMIH visualization renderings (on request to limited distribution)
7. Request for Proposal Appendices (on request to limited distribution):