UNIVERSITY OF TORONTO

OFFICE OF THE GOVERNING COUNCIL

FOR CONFIRMATION **PUBLIC** **CLOSED SESSION**

TO:	Executive Committee
SPONSOR:	Cheryl Regehr, Vice-President and Provost
CONTACT INFO:	(416) 978-2122, provost@utoronto.ca
PRESENTER:	As above
CONTACT INFO:	
DATE:	June 7, 2018 for June 14, 2018
AGENDA ITEM:	4(a)

ITEM IDENTIFICATION:

New Graduate Program Proposal: Doctor of Philosophy (Ph.D.) in Architecture, Landscape, and Design, John H. Daniels Faculty of Architecture, Landscape, and Design.

JURISDICTIONAL INFORMATION:

Under section 5.4 of the terms of reference for the Executive Committee:

The Executive Committee confirms certain decisions reached by the Academic Board, as specified by the Board's Terms of Reference.

GOVERNANCE PATH:

1. Committee on Academic Policy and Programs [for recommendation] (May 10, 2018)
2. Academic Board [for approval] (May 31, 2018)
3. **Executive Committee [for confirmation] (June 14, 2018)**

PREVIOUS ACTION TAKEN:

The proposal for the Ph.D. in Architecture, Landscape, and Design received approval from the John H. Daniels Faculty of Architecture, Landscape, and Design Faculty Council on April 11, 2018.

HIGHLIGHTS:

This is a proposal for a four-year doctoral degree program in Architecture, Landscape, and Design to be offered by the John H. Daniels Faculty of Architecture, Landscape, and Design. The degree program will consist of course work (6.0 full-course equivalents), a two-part comprehensive exam, and thesis. It will address a need for advanced specialized research within the design disciplines and produce students who will become traditional academics as well as consultants, and leaders in diverse fields and sectors, such as museums and other cultural institutions, non-profit organizations, government, finance, and the consumer market.

The proposed Ph.D. program aims to advance scholarship and skills beyond the disciplinary boundaries of the individual design professions. It will be unique in going beyond the history and theory focus of many Ph.D. in architecture programs to offer an integrated approach with landscape and its focus will be cross-disciplinary study and collaboration. A primary goal of the program is to contribute to emerging forms of design and scholarly practice that address the complex issues in the social, environmental, historical, physical, and technical questions of design and the built environment.

The momentum for the proposed program comes from student demand, changes in the profession, and industry need. The creation of a doctoral program was conceived as an integral part of the Daniels Faculty's Academic Plan since 1998 when Daniels transitioned its long-established undergraduate professional programs into graduate programs. Since this time, the demand for furthering faculty and student research beyond a strictly professional focus and the need for advanced study have steadily increased.

Applicants to the Ph.D. will have a master's degree or equivalent in Architecture, Landscape Architecture, Fine Arts, Engineering, Environmental Design or, exceptionally, in a related field. Assigning a supervisor will take place through the admission process. It is anticipated that five new students will enter the degree program each year. The program will consist of 20 students at steady state. Faculty teaching in the program will be drawn from the John H. Daniels Faculty and cross-appointed faculty members from cognate disciplines at the University of Toronto who have graduate faculty memberships in the Daniels Faculty.

Consultation took place with the Dalla Lana School of Public Health, Faculty of Arts and Science, Faculty of Forestry, Faculty of Information, Faculty of Law, as well as with the Graduate Department of Art, Department of Computer Science, Department of Geography and Planning, Institute for the History and Philosophy of Science and Technology, Munk School of Global Affairs, and Department of Civil Engineering.

The program was subject to an external appraisal on March 12, 2018 by Professors Michelle Addington of the University of Texas at Austin and Hashim Sarkis of the Massachusetts Institute of Technology. The external appraisers made a number of suggestions, which resulted in changes to the program as is reflected in the Dean's response to the appraisal report.

FINANCIAL IMPLICATIONS:

The new financial obligations resulting from this program will be met at the divisional level.

RECOMMENDATION:

Be It Confirmed by the Executive Committee

THAT the proposed degree program, Doctor of Philosophy in Architecture, Landscape, and Design (Ph.D.), as described in the proposal from the John H. Daniels Faculty of Architecture, Landscape, and Design dated April 6, 2018 be approved effective September 1, 2019.

DOCUMENTATION PROVIDED:

- *Proposal to create a Ph.D. in Architecture, Landscape, and Design*

UNIVERSITY OF TORONTO

University of Toronto
New Graduate Program Proposal

Full Name of Proposed Program:	Ph.D. in Architecture, Landscape, and Design
Degree Name and Short Form:	Ph.D.
Program Name:	Architecture, Landscape, and Design
Professional Program:	No
Unit (if applicable) offering the program:	N.A.
Faculty / Division:	John H. Daniels Faculty of Architecture, Landscape, and Design
Dean's Office Contact:	Richard Sommer
Proponent:	Richard Sommer
Version Date:	April 6, 2018

New Graduate Program Proposal

Ph.D. in Architecture, Landscape, and Design in the John H. Daniels Faculty of Architecture, Landscape, and Design

Contents

1 Summary

This proposal is for a new four-year doctoral program, the Ph.D. in Architecture, Landscape, and Design, offered by the John H. Daniels Faculty of Architecture, Landscape, and Design. It will address a need for advanced specialized research within the design disciplines and produce students who will become traditional academics as well as consultants, and leaders in diverse fields and sectors, such as museums and other cultural institutions; non-profit organizations; government; finance; and the consumer market.

This is a research-based Ph.D. program with the aim of advancing scholarship and research beyond the boundaries of the individual design disciplines that are currently the focus the Faculty's accredited professional Master's programs. Graduates will be grounded in a research-informed practice that will transcend current disciplinary boundaries and will be positioned to lead the emerging, broader discussion, outside and between the specific design disciplines.

Whereas most related Ph.D. programs in North America take a siloed approach to separating the design disciplines, the structure of the Daniels Faculty offers the unique opportunity to integrate these disciplines in an unprecedented manner. The Faculty brings together not only architecture, landscape, and urban design, but also the recently incorporated visual arts under the same roof. The proposed program approaches a broad scope of intellectual inquiry through an intersectional lens and will be the first program in Canada to address both the shared and unique concerns of the disciplines of architecture, landscape architecture, and urban design. Because of this hybridization of knowledge, and growing awareness of the potential of the combinatory and complex modes of design thinking as a contributor to knowledge production, the program will be uniquely positioned to support both the disciplines and the professions through experimental modes of inquiry that will yield new insights into the past, present, and future development of the built environment.

Faculty from diverse areas of interest complement each other and have opportunities to collaborate thanks to their shared interest in design. The University of Toronto is home to over 220 urbanist scholars working in many different divisions to address design problems. This includes faculty in the Department of Geography and Planning, Graduate Department of Art, and the Munk School of Global Affairs, among others. This context provides a rich environment for students who wish to explore the boundaries of their disciplines and learn from faculty in diverse but related fields.

Among the main the goals of the proposed Ph.D. program is to advance research and scholarship addressing the social, environmental, historical, physical, and technical questions of design and the built environment. Whether focusing on the displacement of coastal dwellers as a result of projected sea level rises, refugee crises produced by political unrest, or cities in need as water becomes an increasingly scarce resource, it is apparent that the engagements of architecture, landscape architecture, urban design, and other allied fields with global challenges are increasingly complex and warrant critical thinking and ethical action guided by innovative advanced research.

The momentum for the proposed program comes from student demand, changes in the profession, and industry need. The creation of a doctoral program was conceived as an integral part of the Daniels Faculty's Academic Plan since 1998 when Daniels transitioned its long-established undergraduate professional programs (the longest standing in Canada) into graduate programs. Since this time, the demand for furthering faculty and student research beyond a strictly professional focus and the need for advanced study have steadily increased. The Faculty regularly receives inquiries from its own graduates and those from other

competitive programs about the possibility of pursuing advanced specialized design research at the University of Toronto to better equip them to address changes in the profession.

Accordingly, within industry, there is increased evidence of the need and demand for advanced research related to decision-making, the design process, and the broader cultural implications of these activities. This is apparent in the range of employment opportunities for recent Ph.D. graduates in the design disciplines from other institutions, a broad spectrum that has included leadership roles at museums and other cultural institutions; non-profit organizations dedicated to shaping public policy; government; finance; and the consumer market. The rapid evolution of design-related technologies and new questions about the social and ethical responsibilities of the design professions has resulted in dedicated units within leading professional design firms (e.g., Foster + Partners, Perkins + Will, SOM, and Gensler) that are conducting research which may arguably be better pursued within universities or in collaboration with universities. This research has the potential to transform the nature of professional practice and would benefit from advanced training that lies beyond the scope of the typical professional Masters. Firms at the forefront of this evolution are increasingly seeking employees with both a professional degree and a Ph.D. in a design-related discipline.

Within design Ph.D. programs, there is a "current trend towards dramatic expansion," as noted by Douglas Noble in his 2009 essay *Directions for Doctoral Education in Architecture in North America*[1]. Noble states "there were less than 200 graduates in the first 20 years of formal architecture Ph.D.s. By 1984, there were an estimated 300 students enrolled, and the growth spike was already being observed. In 2008, there are nearly 600 students in mainstream programs, and almost 100 are graduating each year." This expansion has included the introduction of programs and streams that fall outside of the traditional Ph.D. in the history and theory of the design disciplines, such as the Ph.D. in Computation and Energy at Princeton University's School of Architecture; the expansion of the longstanding Ph.D. program at the University of Michigan to include concentrations in Building Technology and Design Studies; a Ph.D. in Sustainable Urbanism established at Washington University in St. Louis; a relatively new Ph.D. program at Yale University's School of Architecture that places a unique emphasis upon professional knowledge; a new track within the Harvard University Graduate School of Design's Ph.D. program in Architectural Technology; and many others. These programs all note that their graduates are desirable in the job market and successfully find fulfilling positions post-graduation.

Canadian schools have to date not undertaken an expansion in design-oriented doctoral studies comparable to the United States or the European context. There are currently four Ph.D. programs throughout Canada that are housed within professional design schools (McGill University, University of Montreal, University of Manitoba, and Carleton University) but they are perceived as being quite specialized, either in the direction of History/Theory Studies (McGill, U. Montreal), or Planning (Manitoba). Carleton University has just established a Doctor of Philosophy in Architecture housed in its Faculty of Graduate and Postdoctoral Affairs, which also has a history/theory orientation. Significantly, there are no opportunities to pursue doctoral level study pertaining to landscape architecture in Canada.

The increasing, albeit nascent presence of dedicated research units within leading professional design firms, the number of Canadian design students seeking doctoral credentials abroad, and the increasing expectation within design academia for a doctoral degree in order to be considered for a tenure-stream position, all suggest that there is an ever-increasing academic and professional demand to be met by the Ph.D. program proposed by the Daniels. Against this background, the Faculty's academic planning over the past two years has focused on the discussions, and division and university-wide consultations necessary to frame and mount a Ph.D. program, including a series of dedicated committees, faculty searches for

[1] Noble, D. (2009). "Directions for Doctoral Education in Architecture in North America." In Dehlinger and Dehlinger (eds.) *Architecture – Design Methods – Inca Structures*. Kassel: Kassel University Press.

tenure stream and/or tenured positions, and the appointment of a director-designate to lead the process of creating the Ph.D. program. As is comprehensively outlined in the attached Ph.D. proposal, the Daniels Faculty is now well equipped with the expertise, resources, and scholarly setting to offer a unique, multi-disciplinary, and internationally ranked Ph.D. program in Architecture, Landscape, and Design.

2 Effective Date

September 1, 2019.

3 Program Rationale

The Ph.D. program aims to advance scholarship and skills beyond the disciplinary boundaries of the individual design professions. A primary goal of the program is to contribute to emerging forms of design and scholarly practice that address the complex issues confronting the built environment today. For example, global urbanization has put pressure on the design disciplines to develop new approaches to the acquisition and analysis of evidence, to develop new tools for understanding the effects of increased urban density, population, and environmental degradation upon built form, and to consider alternate means for disseminating findings. While questions of ecology, environment health, and the biological, political and cultural issues brought about by urbanization are found at all levels of study across the university curriculum, we argue that those with expertise in built form and physical methods gained through academic training in architecture, landscape architecture, and urban design will, in collaboration with other disciplines, make significant contributions to scholarship, discourse, and practice. To do this we need to prepare a future generation beyond their professional credentials, and to research and participate in broader discussions outside of specific design disciplines.

3.1 How Program Addresses the Current State of the Discipline

The John H. Daniels Faculty of Architecture, Landscape Architecture, and Design offers both undergraduate and graduate degree programs:

Undergraduate

Specialist in Architectural Studies, H.B.A. with the following streams:

- Design of Architecture, Landscape, and Urbanism (13.0 FCE)
- History and Theory of Architecture, Landscape, and Urbanism (13.0 FCE)
- Technology of Architecture, Landscape, and Urbanism (13.0 FCE)
- Comprehensive (10.0 FCE)

Major in Architectural Studies, H.B.A.

Specialist in Visual Studies, H.B.A. with the following streams:

- Studies
- Critical Practices

Major in Visual Studies, H.B.A.

Minor in Visual Studies

Graduate

Master of Architecture

Master of Landscape Architecture

Master of Urban Design

Master of Visual Studies with the following fields:

- Studio
- Curatorial

The Honours Bachelor of Arts in Architectural Studies has three streams providing further specialization in Design, Technology, and History and Theory of Architecture, Landscape, and Urbanism. The program also includes a Comprehensive Specialist for those students who wish to have more room in their course of study to pursue other fields across the University, and a major for students in the Visual Studies program. Those in the Honours Bachelor of Visual Studies program can choose to major in the field, or specialize in either Studio or Critical Practices. The Master of Visual Studies has fields of study in Curatorial Studies and Studio.

Since initiating the Master's programs more than two decades ago, the demand for furthering faculty and student research beyond a strictly professional focus to address the need for advanced study has steadily increased. The Faculty is well equipped with the expertise, resources, and scholarly setting to mount an internationally ranked Ph.D. program. This is further enhanced by the participation of cross-appointed faculty members from cognate disciplines at the University of Toronto who have interests and expertise in design and will contribute to the unique interdisciplinary character of the program.

The Daniels Faculty is also home to leading research centres, including the Global Cities Institute, the GRIT Lab (Green Roof Innovation Testing), and the Centre for Landscape Research. The Global Cities Institute is a renowned research centre that brings together a rapidly expanding global network of scholars, city leaders, design and planning professionals, key international organizations, foundations, and industry innovators dedicated to securing a better future for cities. The Global Cities Institute convenes collaborative, cross-disciplinary research that bridges the fields of urban governance, design, technology, and economics. The new Daniels Building also hosts a second research facility for the GRIT Lab, which is the only one of its kind in Canada testing the environmental performance associated with green roofs, green walls, and solar photovoltaic technologies. The Centre for Landscape Research provides a support structure and a culture of research aimed at enhancing the knowledge base of the profession of landscape architecture and is committed to multidisciplinary research. The Faculty is also in the process of establishing the Institute for Architecture + Health Innovation, and is a participant in the development of the University of Toronto School of Cities, a new collaboration of urban researchers drawn from across the three campuses. Faculty engaged in these institutions will bring their research to bear in the Ph.D. program, and students in the program will be enriched by access to the events and resource collaborations sponsored by those institutes.

The proposed Ph.D. program at the Daniels Faculty is unique in that it goes beyond the history and theory focus of many Ph.D. in architecture programs to offer an integrated approach with landscape. Its focus is cross-disciplinary study and collaboration that is not found in comparator programs. The only relevant comparator in Canada is at the masters level instead of the doctoral level. The University of British Columbia offers a post-professional, research-oriented Master of Advanced Studies in Landscape Architecture (M.A.S.L.A.) that typically requires two additional years of study. Programs offering advanced study in landscape architecture at peer institutions such as the University of California at Berkeley and Harvard University are located

in faculties that, like the Daniels, include architecture, landscape architecture, and urban design. However, these tend to be more specialized and do not offer the integrated approach Daniels is proposing. The program at the University of Michigan is located within the School of Natural Resources and the Environment with limited ties to the University's architecture faculty. The University of Illinois and the University of Oregon have well-established and highly regarded doctoral programs in landscape architecture, but are not considered peer institutions. These are also, as with the example of Berkeley, narrowly focused programs of study. The program in Illinois is focused on history and theory, and Oregon concentrates on ecological planning. Our proposed program will be the first of its kind in Canada and will raise the profile of landscape architecture within the professional world and within academia by integrating it within the study of architecture and design at the doctoral level. The program will enable research in landscape and related topics that will engage advanced study in architecture and urban design. It will begin to meet the demand for research that addresses problems across the design disciplines including environmental and ecological quality from historical, theoretical, and cultural perspectives.

It has increasingly become apparent that a broader range of research opportunities in the design disciplines means that a professional degree is no longer adequate for advanced research. As noted in Section 1, there has been a "dramatic expansion" in design Ph.D. programs within North America in recent years[2]. The first program was established at the University of Wisconsin-Milwaukee in 1997 and many others are now being offered in the United States, with only four identified in Canada. New programs at European schools such as the Technical University at Delft, the Berlage Institute, the Bartlett School at University College London and the Università Iuav di Venezia have also been created to address this demand, accommodating both Canadian and other international students. Canadian schools have to date not undertaken an expansion in design-oriented doctoral studies comparable to the United States or European contexts, and therefore are not meeting the demand from both Canadian and international students (Appendix F).

In addition to the statistical evidence supporting our proposal, there are qualitative factors beyond the advance of research that suggest the need and demand for such a program. The proposed Daniels Ph.D. program aims to prepare graduates to participate in research-informed practices that require skills and expertise over and above those of the professional qualifications offered by the existing Daniels Faculty graduate programs. Advanced research, for example, that addresses patterns of urbanization or explores the history and design of healthy environments requires the breadth, depth, and rigor of doctoral level study that engages both traditional scholarship and the operative nature of design practice. Questions of research and scholarship now, perhaps more than ever, demand a critical integrity that brings cultural inquiry to bear upon questions about design of the built environment. We expect that a graduate from the Daniels Faculty Ph.D. program will be prepared with the skills and capacity to communicate across expertise of various types. These include, for example, opportunities to advise local government on economical and sustainable public housing development within an urban area, to work with NGOs on issues of healthy environments around the world, or to teach rigorous design studios that produce innovative pedagogical models for training of architects, landscape architects, and urban designers.

3.2 Mode of Delivery

[2] Noble, D. (2009). "Directions for Doctoral Education in Architecture in North America." In Dehlinger and Dehlinger (eds.) *Architecture – Design Methods – Inca Structures*. Kassel: Kassel University Press.

The program will be delivered through courses, colloquia, seminars, faculty-student mentoring, workshops, comprehensive examinations, and a written thesis of adequate scope. Students will develop the capacity to interrogate and assess primary evidence in a variety of forms, including empirical, textual, contextual, or other modes of data gathering. Students will be supported by their individual supervisors and by the Ph.D. Program Director.

Students will be required to complete 6.0 FCE, including four Ph.D. courses (2.0 FCE) and 4.0 FCE in electives, which will be selected by the student in consultation with their supervisor. The required Ph.D. courses include Doctoral Research Colloquium, Theories and Methods, Research Practicum, and Preparation for Thesis. These courses will play important roles in acquainting students with the breadth of approaches to specialized study in the design disciplines while also producing a sense of common purpose among a cohort of students whose backgrounds, experiences, and interests are expected to be quite diverse, and will prepare students for thesis research. While being exposed to this intellectual diversity, students will continue to focus on their chosen areas of research and will not be expected to master all of the design disciplines. This format will support the program learning outcomes in the following degree level expectations: Depth and Breadth of Knowledge, Research and Scholarship, Professional Capacity/Autonomy, and Level of Communication Skills.

3.3 Consistency with the Mission of the University and Division

Doctoral-level training in architecture, landscape, and urban design will equip our graduates for leadership roles in an international context. Some graduates are expected to go on to traditional academic careers, while others will take on positions in a variety of industries that will directly affect professional practice. Training students in new methodologies at the interface of architecture, landscape, and urban design will provide them with a competitive edge in bringing innovative research knowledge into practice. These objectives are aligned with the University of Toronto's mission to be an "internationally significant research university, with undergraduate, graduate and professional programs of excellent quality." Additionally, the program will support the University of Toronto's Institutional Strategic Research Plan. One of the seven thematic areas of the Plan is "BUILD: Community and Livable Societies," which encourages research that addresses the built and natural environments, housing, and other contributors to quality of life. The Ph.D. program will provide an excellent education to doctoral students, expand the research contributions of the Daniels Faculty, and will be a welcome addition to the established and renowned undergraduate and graduate programs within the Faculty.

This new program is also closely aligned with objectives outlined through the Faculty's strategic academic planning. The Academic Plan prioritizes the establishment of a new Ph.D. program as part of the Faculty's objective to leverage its excellence in research and graduate education, providing a platform for advanced study and teaching and that will connect with both our professional degree programs at the graduate level and the undergraduate programs in architecture and visual studies. The plan also emphasizes the need to expand the collaborative relationships of the school with NGOs, industry, the professions, and other cognate departments and disciplines at UofT. It is anticipated that the interdisciplinary and speculative work pursued within the Ph.D. program will infuse, where appropriate, the pedagogy of both the professional graduate degree programs and the undergraduate programs in architecture and visual studies at the Daniels Faculty.

3.4 Distinctiveness

3.4.1 Distinguishing features of the program

This program will train students whose research falls both within and in-between the disciplines of architecture, landscape architecture, and urban design. It will include advanced exploration of the various methodologies of each discipline ranging from theoretical to applied research and producing graduates that can both advance the field of conventional academic scholarship while also creating new models of research-based practice that can be implemented in real world settings.

One key measure of success for the program will be in the impact of its graduates in various sectors of employment. Our graduates will be engaged in traditional academic scholarship and teaching upon graduation and will also be attractive candidates for full-time employment in industry, non-profit organizations, cultural institutions, and government.

3.4.2 Distinction from other programs [CANADIAN + US]

There are no Ph.D. programs in the design disciplines at the University of Toronto. Through research and shared coursework, the proposed doctoral program is expected to have a productive relationship with our existing graduate professional degree programs.

The unique contribution of the proposed Ph.D. in Architecture, Landscape, and Design is the manner in which the program will approach knowledge, research, and methods of analysis. In preparing this proposal we have undertaken extensive research into Ph.D. programs at professional schools in North America and at European universities and polytechnic institutes. There are no other doctoral programs in the Canadian context based on a design-oriented approach to research. While being necessarily informed by the methods and materials of cognate disciplines (such as art history, geography, or engineering), this approach asks questions from the perspective of architecture, landscape architecture, and urban design.

There are currently four Ph.D. programs throughout Canada that are housed within professional design schools, but they are perceived as being quite specialized. Students enrolled in the internationally recognized Ph.D. program at McGill University focus on architectural history, typically addressing pre- and early 20th century topics in architecture. Université de Montréal offers a French language program that focuses on history and theory.

Doctoral studies at the University of Manitoba are intra-disciplinary in nature but tend to focus on issues of planning because of the historical strength of the planning faculty. The relatively new doctoral program at Carleton University places emphasis upon professional experience and is focused on the history and historiography of modern architecture and architectural practice. Our faculty members edit and contribute to international design journals, participate in international architecture biennales, collaborate with outside scholars and practitioners, and are regularly invited to give guest lectures at institutions around the world.

The Daniels program will prepare students to address the challenges facing architecture, landscape architecture, and urban design in the 21st century by going beyond the individual disciplinary lines and exploiting the synergies between these fields, as well as bridging the traditional divide between practice and theory.

4 Need and Demand

There is a clear demand for a new Ph.D. in Architecture, Landscape, and Design from three main perspectives:

First, there is a shortage of academics in Canada with design Ph.D.s. This shortage limits the design-based research conducted in Canada and the ability to support students wishing to pursue advanced research degrees in design. As well, there is an increasing expectation within academia that candidates hold a doctoral degree in order to be considered for a tenure- stream position.

Second, there is increased demand for highly qualified individuals with expertise in architecture, landscape architecture, and urban design that can contribute to new forms of practice, ranging from creative professional practices to positions in government. This demand stems from various sectors of the design professions as well as allied industries, government agencies, and organizations that have increasingly recognized that the study of architecture, landscape architecture, and urban design is a form of cultural knowledge that includes historical, technical, and engineering-based evidence necessary for understanding complex issues across the built and natural environments. These disciplines are critically engaged with the forces of urbanization and technological change, the challenges of environmental sustainability, and the struggle for cultural expression. With the advent of digital tools, fabrication methods, and the vast availability of data, we are witnessing greater demand for sophisticated research in these areas in academic institutions but also in industry and professional practice. Given our existing strengths in urbanism, data visualization, and computation, our Faculty is well poised to cultivate research that will drive innovation in these areas.

Of particular note is the fact that there are currently no opportunities for doctoral-level study that encompass landscape architecture within the study of other design disciplines. This is an increasingly significant area of research given the inevitability of climate change, the challenge of building toward a sustainable future, and the multivalent concerns engaged in the design, planning, and management of urban, rural, and natural environments.

Third, the Daniels Faculty already receives a number of inquiries from both domestic and international students (including our own students in the professional Master's programs) who are interested in pursuing advanced research at the doctoral level. A number of recent Daniels graduates have gone on to pursue advanced research, including within Canada at McGill University, and at other international institutions including Cornell University, the Harvard Graduate School of Design, the University of Michigan, and the Architectural Association School of Architecture. Daniels Master of Architecture 2014 graduate Elliott Sturtevant held a curatorial position at the Canadian Centre for Architecture post-graduation before entering the Columbia University Graduate School of Architecture to pursue a Ph.D.. He currently studies the relationships between the architectural professions and corporations in the late 19th and early 20th centuries. Elliott noted that the instruction he received at Daniels, along with the contacts provided by faculty members, contributed to his success in gaining offers of admission to all four American architecture Ph.D. programs he applied to. Beyond Daniels graduates, there is interest from design students across Canada in advanced research. Graduates of other Canadian design programs have gone on to pursue Ph.D.s at Columbia University, Princeton University, and the Harvard Graduate School of Design, among other institutions.

Students with design Ph.D.s can potentially be employed in roles including (but not limited to): urban data visualization; research units within industry and the profession; curation; consulting positions within government; and traditional academic positions. There is now an expanded

sector of exhibitions and publications in which design Ph.D. graduates can find employment. Examples include the various architecture biennials, including the Venice Biennale of Architecture, the Chicago Architecture Biennial, the Seoul Biennale of Architecture and Urbanism, the London Design Biennale, and the London Festival of Architecture. Additionally, a new kind of gallery has emerged to feature exclusively architectural works, including Storefront for Art and Architecture in New York City, the Canadian Centre for Architecture, the Museum of Finnish Architecture, the German Architecture Museum, the Building Centre in London, and the Danish Architecture Centre, among others. Larger museums are also increasingly hiring curators responsible for architectural exhibitions, including the Museum of Modern Art in New York City, the Getty in Los Angeles, and the Museum für Moderne Kunst in Frankfurt. While print publication may have waned, there are websites such as *e-flux Architecture* that require contributions of people with advanced degrees in architecture. Graduates of design Ph.D. programs have gone on to hold curatorial positions at the Museum of Modern Art, Columbia University Graduate School of Architecture, the National Gallery of Art, the Rhode Island School of Design Museum, and The Art Institute of Chicago, among other institutions. The recent Frank Lloyd Wright retrospective at the Museum of Modern Art involved extensive contributions from Ph.D. in Architecture graduates. Additionally, Ph.D. in Architecture graduates currently hold editorial positions (such as the editor of Canadian Architect) and research residencies, including at McGill University. Graduates are increasingly able to compete for and receive fellowships at such institutions as The Getty Research Institute, The Clark, as well as humanities institutes at various North American universities.

In addition to domestic students and our own students wishing to continue their studies, the Ph.D. program expects to attract highly qualified international students with research interests that align with those of the faculty. The diversity of our recent faculty hires in addition to the international stature of their research ensures that there will be an interested audience in such a program. Data from our own professional Master's degree programs shows a continued upward trend in international student enrolment; in the past five years the percentage of international graduate students has increased from 10% to 20%. The University of Toronto also recently announced that as of Fall 2018 international Ph.D. students will pay domestic tuition fees, which will make the institution more competitive in attracting international students. In the first five years of the program, we expect the percentage of international students applying and admitted to the proposed Ph.D. program to be around 25% and may increase gradually as knowledge of the program and the Faculty's research initiatives grows.

5 Enrolment

Table 1 presents the enrolment projections for the Ph.D. in Architecture, Landscape, and Design. We project enrolments of 5 in the first year with a gradual increase to approximately 20 students per year (steady state) in year 4. Enrolments in the first years of the program are based on annual interest expressed by our current graduate students in remaining at the Faculty to pursue advanced research and, also, inquiries received about possible post- doctoral study at the Faculty both from students within Canada and internationally (estimated to be approximately 25% based on other graduate programs within the Faculty).

Table 1: Graduate Enrolment Projections

Year in program	2019-2020	2020-2021	2021-2022	2022-2023*	2023-2024*
Year 1	5	5	5	5	5
Year 2		5	5	5	5
Year 3			5	5	5
Year 4				5	5

Total	5	10	15	20	20

*steady state

6 Admission Requirements

Below are the admissions requirements for the program as they will appear in the University of Toronto School of Graduate Studies Calendar (see also Appendix B). The majority of the applicant pool will have a background in design, and therefore they will be entering into the program with substantial (that is, intermediate to advanced) knowledge of the discipline.

Minimum Admission Requirements
Applicants are admitted under the general regulations of the School of Graduate Studies.

Applicants must also satisfy the admission requirements below:

- Applicants should have appropriate academic credentials (a master's degree or equivalent in Architecture, Landscape Architecture, Fine Arts, Engineering, Environmental Design or, exceptionally, in a related field) with an average grade of at least A-. A Master of Architecture or Master of Landscape Architecture first professional degree or Master of Fine Arts is preferred, but not required.
- In addition to meeting qualifying criteria, candidates are required as part of the application to submit a writing sample in the form of a substantial research paper or publication
- Recommendation from three referees
- Two-page proposal that indicates a topic of research within a design discipline, possible sub-field(s) (if desired), and potential supervisors. Although letters of commitment from faculty members are not required, the proposed topic must be congruent with the interests and expertise of at least one member of the Ph.D. Standing Committee.
- A portfolio of creative work may also be requested where it is relevant to the applicant's proposed area of research and the degree to which it may require technical skills typically gained in a professional degree program. For example, this could pertain to an applicant whose proposal includes producing renderings. Questions about whether or not to include a portfolio in an application should be directed to the Program Director or the applicant's prospective supervisor prior to the application deadline.

According to SGS General Regulation 4.3, English-Language Proficiency (ELP), students must be able to communicate effectively in English to study at the University of Toronto. Proficiency in the English language must be demonstrated by all applicants educated outside Canada whose primary language is not English. This is a requirement of admission and should be met before application, but must be met before the deadline to register.

This requirement may be satisfied using one of the English-language proficiency tests below. Test results that are older than two years at the time of application cannot be accepted. In these circumstances, the applicant must retake the English-language proficiency test. Minimum scores are indicated; however, many graduate units require a higher score.

- Paper-based TOEFL exam: 637 overall and a minimum of 5 on the Test of Written English.
- Internet-based TOEFL exam: 110 overall and 26 on the writing/speaking component.
- Proof of English language proficiency (93/120 on the paper exam and 22/30 on the internet-based exam on the writing and speaking components).

The process of assigning a supervisor will involve the admissions committee carefully reviewing applications to ensure that sufficient faculty expertise is present to support the student's specific research questions. Of course, an appropriate faculty member must be available (based on existing teaching and supervisory loads) to supervise the student for admission to be granted. The admissions committee will obtain commitment from the potential supervisor before admitting an applicant, and the applicant will be informed of this in the letter of offer.

7 Program Requirements

Please see the proposed Calendar Copy in Appendix B

The Ph.D. Program in Architecture, Landscape, and Design requirements include:

- course work (6.0 FCE, including four required Ph.D. courses and 4.0 FCE of electives selected by the student in consultation with their supervisor)
- a two-part comprehensive exam
- successful defense of a thesis proposal
- written thesis
- successful doctoral final oral examination

A student's supervisor and the Director of Graduate Studies may determine that the student needs to demonstrate other competencies crucial to conducting research in the thesis area. This may include, for example, competence in another language. If this is the case, the student will be required to enroll in a relevant language course and pass the final language exam within that course to demonstrate their competency.

Students will pursue a program of study that will ensure general knowledge of the subject of their thesis, familiarity with scholarly methods of research, and an ability to organize and present research. The majority of students will enter the program with a background in design, and will thus already possess substantial knowledge of the disciplines. Students are not expected to master all of the design disciplines. However, they will be familiarized with an extensive range of subjects and methodologies throughout the program, and will develop deep knowledge of their specific discipline and at least one additional area as part of their research. Successful candidates must complete a four-year program and be in residence during the first two years of the program. During this time, they are expected to engage in research, public presentation of their research, and, where possible, to publish. While the program is designed to be completed within four years, the School of Graduate Studies regulations allow students six years to complete a Ph.D. degree program.

The following requirements, including course work, the comprehensive exam, the thesis proposal, and the thesis itself, are designed as key milestones and markers of success throughout the program that build upon one another. The course work, comprehensive exam, and thesis proposal provide scaffolding to support the student's successful research and writing processes throughout the thesis. This structure, facilitated through regular meetings between the student and their supervisor and (upon complete of the comprehensive exam) the supervisory committee[3], and the oversight of the Program Director, is designed to support students in progressing through the program within the anticipated timeframe of four years.

[3] As per University of Toronto SGS Guidelines, the supervisory committee includes the student's supervisor and two additional SGS faculty members from either within or outside of the Daniels Faculty.

Course Work
All students in the Ph.D. program will be required to complete a minimum of 6.0 FCE, including four required Ph.D. courses and 4.0 FCE of electives (8 half-credit courses), which will be selected by the student in consultation with their supervisor. Course work is expected to be completed no later than the end of the second year of study.

The program includes the following required courses:

(ALD 4030H 0.5 FCE) Doctoral Research Colloquium (Letter Grade)
Research in the fields of architecture, landscape architecture, and urban design, takes many forms and produces distinct areas of inquiry. This course brings together all Ph.D. students to encourage an intradisciplinary discussion of their unique research methods and to support cohort-building and a strong sense of community amongst students. The course will be taught by thesis supervisors in the proposed Ph.D. program.

(ALD 4040H 0.5 FCE) Theories and Methods (Letter Grade)
In this course, Ph.D. students will focus more narrowly on the unique methods of their chosen area of study. They will explore theories and methods that have guided each field in the design disciplines.

(ALD 4050H 0.5 FCE) Research Practicum (Credit/No Credit)
The practicum generally results in a long research paper. This requirement enables students to conduct independent research on a limited scale at the level of quality expected for a thesis, although the resulting paper is much shorter in length. The research should be comparable to that which results in a publishable article.

Based on a consultation with the student's supervisor, the practicum may take on one of several forms, including but not limited to:

- A self-contained paper or empirical study of publishable quality that may or may not be a component of thesis work.
- The development of a theoretical model upon which the thesis is to be based.
- A proposal for pilot research in the student's thesis area that includes a focused literature review, research design, and protocol.

(ALD 4060H 0.5 FCE) Preparation for Thesis (Credit/No Credit) Independent thesis research in preparation for thesis proposal.

The remaining course requirements are electives to be selected from advanced (3000 and 4000 series) graduate level courses offered at the Daniels or other Faculties. These include:

(Please note that not all elective courses are offered every year.)

ARC 3600H	Selected Topics in the History and Theory of Architecture and Health
ARC 3200H	Selected Topics in Advanced Computer Applications
ARC 3031H	Analysis of Architectural Form
ARC 3100H	Selected Topics in Urban Design
ARC 3300H	Selected Topics in Architectural History and Theory
ARC 3700H	Selected Topics in Architecture
ARC 4500H	Selected Topics in Professional Practice
ARC 3400H	Selected Topics in Architecture and Technology
ARC 3500H	Selected Topics in Sustainable Design
VIS 3001H	Advanced Readings in Visual Studies
VIS 3002H	Advanced Readings in Curatorial Studies
VIS 3003H	Special Topics in Art and Culture

LAN 3900H Selected Topics in Landscape History, Theory, and Criticism (will be offered as of fall 2018)

Depending on their field of study, students may also take advanced graduate courses in cognate disciplines across the University of Toronto pending the approval of the Faculty and in consultation with their supervisors.

Whereas the Province's Quality Assurance Framework requires that students complete a minimum of 2/3 courses at the graduate level, the University of Toronto requires graduate students to complete all of their course requirements from amongst graduate level courses. This proposed program complies with this requirement.

Explanation of the Proposed Course Requirements

The above required courses ground a student's core experience in the doctoral program and provide the student cohort with a common learning experience. This pedagogical approach will expose the student to methods of research and analysis that will provide intersections between the cultural-historical and the technical-professional knowledge that are not afforded in other academic disciplines with claims upon the built environment. This is grounded upon the recent addition of new faculty who are licensed professionals *and* hold doctoral degrees (in architecture, landscape, and planning). The colloquium will also be a forum for interdisciplinary exchange, helping students to make linkages beyond their area of research. It is expected that students in the program will conduct their own independent research with the guidance of their primary advisors, but the colloquium will provide a space for the formation of a social cohort while also serving as a testing ground for research in progress.

These courses support the development of depth and breadth of knowledge in the student's discipline and chosen sub-field(s), expose students to topics and methodologies of other disciplines, and provide students with the opportunity to acquire the skills necessary to pursue doctoral research and write their theses. Doctoral study oriented toward the research and writing of a thesis is grounded upon independent, original primary research. The Ph.D. in Architecture, Landscape, and Design will adhere to this standard.

Upon recommendation of their supervisor, a student may be required to have reading knowledge of a foreign language necessary for research. A student may also be required, upon the recommendation of the supervisor, to gain competency in or the understanding of methods of analysis in another discipline (statistics or a computer language, for example).

The following tables outline a typical pathway of completion:

Year 1: Fall	Year 1: Winter	Year1: Summer
ALD 4030H: Doctoral Research Colloquium	ALD 4040H: Theories and Methods	Comprehensive Exam Part I
Elective Seminar	Elective Seminar	
Elective Seminar	Elective Seminar	

Year 2: Fall	Year 2: Winter	Year 2: Summer

ALD 4050H: Research Practicum	Comprehensive Exam Part II	ALD 4060H: Preparation for Thesis
Elective Seminar	Elective Seminar	
Elective Seminar	Elective Seminar	

Years 3 - 4
Thesis

Comprehensive Examination

All Ph.D. students are required to complete a two-part comprehensive examination normally before their second summer of study. The successful completion of the examination is required in order to achieve Ph.D. candidacy. A two-part comprehensive examination is required by many comparable programs that the Daniels Faculty will compete against (Harvard, Princeton, MIT, and Columbia, for example) and will be crucial to making an argument for our graduates' employability within academia or in other sectors. The specific nature and scope of the two parts of the exam are to be determined in consultation with the student's supervisor.

The first part of the exam, normally to be completed in the summer of the first year, is to achieve *breadth* in the chosen field of study so that the student can teach and conduct research in a larger chosen field within the design disciplines. This will usually involve preparing an annotated bibliography in consultation with the supervisor in the early summer of the student's first year of study, and writing the exam at the end of the summer. The first part of the exam will be composed of a written response to three questions, to be answered during a three-hour writing session that takes place on-site at the J. H. Daniels Faculty.

The second part of the comprehensive exam, normally to be completed during the second semester of the second year of study, is to achieve depth in a sub-field, within the Faculty or beyond, so that the student can master the context for the advanced research that they plan to undertake for their thesis. This exam may be administered by a faculty member other than the supervisor, to be determined by the student in consultation with their supervisor. This second part can take one of two formats:

- a second annotated bibliography to achieve depth in a sub-section of the chosen field of study
- a course syllabus with readings and outlines of lectures, themes for tutorial discussions, as well as a minimum of three lectures drawn from across the syllabus

Both parts of the examination are marked on a pass/fail basis. An oral examination will follow the completion of the second part of the exam. The oral examination will last no more than 90 minutes. A second attempt of the comprehensive examinations will be allowed within six months, only on the recommendation of the student's supervisor. If the student fails a second time, their registration will be terminated. Students must pass both parts of the comprehensive examinations before permission to submit a thesis proposal will be granted.

While most students are expected to specialize in one field (for example, architectural history) of the design disciplines represented at the Daniels Faculty, the program is designed to encourage students to cross boundaries between these fields. As noted earlier, this is enabled through the program's unique interdisciplinary structure, which draws on expertise from faculty members in the design disciplines housed within the Daniels Faculty, as well as faculty members from cognate disciplines across the University of Toronto. The comprehensive exam is purposefully structured in two parts to accommodate this possibility and is meant to be used strategically. For example, a student who is interested in questions of computation in the history of architectural design will have the unique opportunity in this program to complete one part of her exam in history and theory and another in computational technologies.

Thesis Proposal

As noted above, the second part of the comprehensive exam prepares the student for the thesis proposal and research. Following the completion of the comprehensive exam, the student's supervisory committee will be formed. This will take place no later than the summer of the second year of study, in order to allow the committee to advise on the development of the student's thesis proposal.

The student's thesis proposal should outline the main argument, rationale supporting the prospective thesis, a summary of existing research on the topic, a case for the originality of the research, and a schedule for research activities. The proposal will be circulated among the supervisory committee for comment and approval. The student will also formally present their proposal to the supervisory committee and potential additional faculty members for discussion and comment. No later than the beginning of the third year of study, an approved proposal signed by all members of the supervisory committee and by the Program Director must be submitted to the Dean's Office. A student's thesis research formally begins with the acceptance of the thesis proposal. The student is required to meet with their supervisory committee within three months of submitting the thesis proposal to discuss progress.

Achieving Candidacy

Doctoral candidacy is achieved when all requirements except for the thesis are met. This includes all course work, the successful completion of the comprehensive examination, and the acceptance of the student's proposal. The candidate will then proceed to researching and writing the thesis. Students are expected to achieve candidacy at the beginning of the third year of study, and no later than the end of the third year.

Thesis

The student and supervisor(s) should meet regularly. The student is required to meet at least once a year with their thesis supervisory committee.

By the end of the fourth year, the student should complete a thesis based on original research. A thesis is a piece of scholarly writing. The work upon which the thesis is based must be conducted under the direction of one or more members of the faculty of the School of Graduate Studies.

The student will defend the thesis at a final SGS final oral examination.

Please see Appendix E for the University of Toronto School of Graduate Studies General Regulations (8 Thesis and Graduate Student Supervision) the Degree Regulations (12 Doctoral) for further information on policies and procedures.

8 Degree Level Expectations, Program Learning Outcomes and Program Structure

Identify the specific Learning Outcomes for the proposed program for each of the DLEs and describe the elements in the program's requirements that support these.

Table 2: Doctoral DLEs

DOCTORAL DEGREE LEVEL EXPECTATIONS (based on the Ontario Council of Academic Vice-Presidents (OCAV) DLEs)	DOCTORAL PROGRAM LEARNING OBJECTIVES AND OUTCOMES	HOW THE PROGRAM DESIGN AND REQUIREMENTS SUPPORTS THE ATTAINMENT OF STUDENT LEARNING OUTCOMES
EXPECTATIONS: *This Ph.D. in Architecture, Landscape, and Design is awarded to students who will be able demonstrate the following:*		
Depth and Breadth of Knowledge A thorough understanding of a substantial body of knowledge that is at the forefront of their academic discipline or area of professional practice.	Depth and breadth of knowledge is defined in the Ph.D. in Architecture, Landscape, and Design as a thorough understanding of a substantial body of knowledge that is at the forefront of their academic discipline and area of professional expertise including, where appropriate for the subject of study, relevant knowledge drawn from other areas of scholarship. This is reflected in students who are able to: **Analyze/Synthesize Literature** Synthesize and critique a broad range of literature on the design disciplines and other disciplines specific to their research. Comprehensively and critically review literature associated with their research topic.	The program design and requirements that ensure these student outcomes for depth and breadth of knowledge are: The Doctoral Research Colloquium (ALD 4030 H) will hone students' ability to translate their knowledge into an effective research program, to communicate research findings, collaborate, explore issues from different disciplinary perspectives, and share knowledge on the current state of research in the design disciplines. This is achieved through the demonstration of the ability to formulate a sophisticated research agenda and clear methodological approach that can then be communicated to peers with expertise in other areas.

DOCTORAL DEGREE LEVEL EXPECTATIONS (based on the Ontario Council of Academic Vice-Presidents (OCAV) DLEs)	DOCTORAL PROGRAM LEARNING OBJECTIVES AND OUTCOMES	HOW THE PROGRAM DESIGN AND REQUIREMENTS SUPPORTS THE ATTAINMENT OF STUDENT LEARNING OUTCOMES
	Synthesize and integrate findings from research into scholarly activities Combine pre-existing bodies of knowledge with new questions that push disciplinary boundaries. Demonstrate a Critical Understanding of Discipline Demonstrate a thorough and critical understanding of the history, theory, techniques, and practices of the design disciplines, in one or more areas. Understand and appreciate the complexity of the design and analysis of the built environment. Address the integrative nature of architecture, landscape architecture, and urban design by acknowledging the intra-disciplinary formation and inter-disciplinary relations which continuously inform the knowledge base and provide for new developments. Identify and appraise controversies in their field of research. Debate various types of knowledge and application of methods within the design disciplines and other relevant disciplines. To be able to debate various types of knowledge in public forums.	Two core doctoral courses (Theories and Methods and Research Practicum) will equip students with: 1) Knowledge of current issues in the historical, theoretical, technical, and practical dimensions of the design disciplines. 2) A thorough understanding of modes of inquiry and methods of research assessment in the design disciplines. Theories and Methods is structured as an in-depth examination of the methodologies unique to each field of study. A two-part comprehensive examination will determine that students have the breadth of knowledge and ability to synthesize knowledge from within and beyond the design disciplines, along with depth of understanding within a chosen field. The completion of the thesis will provide students with a thorough and up-to-date understanding of the concepts, research areas, and scholarship germane to the design disciplines.

DOCTORAL DEGREE LEVEL EXPECTATIONS (based on the Ontario Council of Academic Vice-Presidents (OCAV) DLEs)	DOCTORAL PROGRAM LEARNING OBJECTIVES AND OUTCOMES	HOW THE PROGRAM DESIGN AND REQUIREMENTS SUPPORTS THE ATTAINMENT OF STUDENT LEARNING OUTCOMES
Research and Scholarship a) The ability to conceptualize, design, and implement research for the generation of new knowledge, applications, or understanding at the forefront of the discipline, and to adjust the research design or methodology in the light of unforeseen problems; b) The ability to make informed judgments on complex issues in specialist fields, sometimes requiring new methods; and c) The ability to produce original research, or other advanced scholarship, of a quality to satisfy peer review, and to merit publication.	Research and Scholarship is defined in the Ph.D. in Architecture, Landscape, and Design as the ability to conceptualize, design, and implement research for the generation of new knowledge, applications, or understanding at the forefront of architecture, landscape architecture, and urban design. It includes the ability to adjust the research design or methodology in light of unforeseen problems, the ability to make informed judgments on complex issues in specialist fields that may require new methods, and the ability to produce original research or other advanced scholarship of a quality to satisfy peer review, and to merit publication. This is reflected in students who are able to: **Create Original Research** Design original research according to standards and quality required to satisfy peer review Make use of research materials, to be able to analyze data as the basis of original academic work. Write a thesis featuring a sustained argument predicated on new research findings that clearly address critical issues and make an original contribution to the design disciplines. Produce seminar presentations and research papers on significant issues, reflecting their knowledge of the design disciplines and,	The program design and requirements that ensure these student outcomes for research and scholarship are: The core required courses are designed to equip students with research and analytical skills, modelling exemplary critical methods and assessing current issues within the study of architecture, landscape, and urban design. These courses require students to, in some cases, conduct field work and collect data, and in all cases to write major research papers, which will be discussed within the context of the course before the student submits a final version for assessment. The courses present a variety of ways for students to measure how their own work might intersect with leading scholarship in the design disciplines. The required Doctoral Research Colloquium (ALD 4030H) will provide students with a forum to test out their research programs, and assist them in revising those programs by submitting draughts of their work to faculty and students enrolled in the seminar. Participation in graduate level courses in cognate disciplines across the University will enable students to develop the skills necessary to translate and communicate disciplinary expertise beyond design. The doctoral thesis presents the student's main contribution to new scholarship and the student's most sustained and demanding

DOCTORAL DEGREE LEVEL EXPECTATIONS (based on the Ontario Council of Academic Vice-Presidents (OCAV) DLEs)	DOCTORAL PROGRAM LEARNING OBJECTIVES AND OUTCOMES	HOW THE PROGRAM DESIGN AND REQUIREMENTS SUPPORTS THE ATTAINMENT OF STUDENT LEARNING OUTCOMES
	ultimately producing substantial and original work in the form of a doctoral thesis. Develop their research programs with a view toward advancing knowledge within the chosen field of study. Contribute new ideas, theories, skills, techniques, tools, and/or practices to the disciplines.	research endeavour. To ensure that students are sufficiently prepared to embark on the independent research trajectory that writing a thesis entails, the required core doctoral seminars (ALD 4XXX Y and ALD 4XXX Y) have been designed to train students to become effective and discerning thinkers and writers.
Level of Application of Knowledge The capacity to: a) undertake pure and/or applied research at an advanced level; and b) contribute to the development of academic or professional skills, techniques, tools, practices, ideas, theories, approaches and/or materials.	Level of Application of Knowledge is defined in the Ph.D. in Architecture, Landscape, and Design as the capacity to undertake pure and/or applied research at an advanced level; and to contribute to the development of academic or professional skills, techniques, tools, practices, ideas, theories, approaches, and/or materials. This is reflected in students who are able to: Undertake pure scholarly research and/or applied research at an advanced level Contribute to the development of academic or professional skills, techniques, tools, practices, ideas, theories, and/or approaches.	The program design and requirements that ensure these student outcomes for application of knowledge are: The course work requires the writing of academic papers and presentations that will help students develop particular ideas and refine their research programs. The contents and requirements of the two core courses will ensure that students possess advanced knowledge of research methods and a historical and critical knowledge of the disciplines. This knowledge will inform and elevate their own research and written work. In addition to the valuable education students will gain by crafting seminar papers, they will also learn to tailor those papers for use in public presentations and at conferences through discussions in the doctoral research colloquium and peer review.

DOCTORAL DEGREE LEVEL EXPECTATIONS (based on the Ontario Council of Academic Vice-Presidents (OCAV) DLEs)	DOCTORAL PROGRAM LEARNING OBJECTIVES AND OUTCOMES	HOW THE PROGRAM DESIGN AND REQUIREMENTS SUPPORTS THE ATTAINMENT OF STUDENT LEARNING OUTCOMES
		The writing of the thesis will entail the translation of knowledge acquired through the research process and/or data collected through field research into a carefully structured and sustained argument. The completed doctoral thesis will demonstrate that the student has become an expert in a particular aspect of his/her field of study.
Professional Capacity/ Autonomy a) The qualities and transferable skills necessary for employment requiring the exercise of personal responsibility and largely autonomous initiative in complex situations; b) The intellectual independence to be academically and professionally engaged and current; c) The ethical behaviour consistent with academic integrity and the use of appropriate guidelines and procedures for responsible conduct of research; and d) The ability to evaluate the broader implications of applying knowledge to particular contexts.	Professional Capacity/Autonomy is defined in the Ph.D. in Architecture, Landscape, and Design as the ability to translate knowledge gained in the program to a professional setting, whether academic or otherwise. This is reflected in students who are able to: **Understand the Context and Limitations of the Literature and Their Contributions to It** Recognize the limitations of their own work and discipline, the complexity of knowledge, and the potential contributions of other interpretations, methods, and disciplines to their work. Articulate and assess the broader implications of their research and explain what is at stake within and beyond the particular contexts of the disciplines of architecture, landscape architecture and urban design. Evaluate the strengths and limitations of a range of approaches to research in relation to research in the design disciplines.	The program design and requirements that ensure these student outcomes for professional capacity/autonomy are: The core required seminar ALD 4030 Y Doctoral Research Colloquium focuses on research methodologies in the various design disciplines. This seminar will aid students in learning the protocols and ethics attached to a wide range of professional activities. All core courses are designed to promote independent thinking and knowledge of the current state of the design disciplines and will stand the student in good stead when s/he engages with other professional contexts. In addition, participation in the doctoral research colloquium will encourage students to assist one another in developing research programs, will help students learn how to incorporate the suggestions of others, to interact positively and responsibly with their peers, and to defend their ideas while taking into account how others understand them. These are significant workplace skills.

DOCTORAL DEGREE LEVEL EXPECTATIONS (based on the Ontario Council of Academic Vice-Presidents (OCAV) DLEs)	DOCTORAL PROGRAM LEARNING OBJECTIVES AND OUTCOMES	HOW THE PROGRAM DESIGN AND REQUIREMENTS SUPPORTS THE ATTAINMENT OF STUDENT LEARNING OUTCOMES
	Recognize when and how to seek opportunities to collaborate with others to build knowledge. **Lead or Model Professional Behaviour** Demonstrate teaching and learning strategies applied to specific instances. Demonstrate leadership within their chosen discipline Model and facilitate the development of scholarship in novice designers and researchers within their field of expertise, a skill that will be enhanced through teaching engagement with the students in the professional degree and undergraduate programs. Demonstrate ethical behaviour consistent with academic integrity and the responsible conduct of research. Communicate complex ideas, issues, arguments and research findings clearly and effectively in both oral and written formats in a manner that is accessible and appropriate to a variety of audiences. Express complex ideas derived from their own research to the professional standards of the design disciplines.	Crafting a viable thesis topic will aid the student in learning how to address the demands of his/her committee. Given that the writing of the doctoral thesis is largely an independent endeavour, the student will learn how to become self-reliant and to develop her/his own initiative during the preparation and the writing process. Once engaged in writing the thesis, the student will become adept in meeting deadlines, learning how to do research in settings outside the home university, and engaging with other professionals who might aid with the research. Throughout this process, the student will be guided by the supervisor and supervisory committee. The goal is to guide the student to become an independent scholar and a researcher who has developed a wide range of skills that will help her/him function in a variety of workplace settings.
Level of Communication Skills The ability to communicate complex and/or ambiguous ideas, issues and conclusions clearly and effectively.	Level of Communications Skills is defined in the Ph.D. in Architecture, Landscape, and Design as the command of complex ideas and arguments as expressed through verbally-based presentations and written work.	The program design and requirements that ensure these student outcomes for communication skills are:

DOCTORAL DEGREE LEVEL EXPECTATIONS (based on the Ontario Council of Academic Vice-Presidents (OCAV) DLEs)	DOCTORAL PROGRAM LEARNING OBJECTIVES AND OUTCOMES	HOW THE PROGRAM DESIGN AND REQUIREMENTS SUPPORTS THE ATTAINMENT OF STUDENT LEARNING OUTCOMES
	This is reflected in students who are able to: Communicate complex ideas, issues, arguments and research findings clearly and effectively in both oral and written formats in a manner that is accessible and appropriate to a variety of audiences. Express complex ideas derived from their own research to the professional standards of the design disciplines. Debate various types of knowledge and application of methods within the design disciplines and other relevant disciplines. To be able to debate various types of knowledge in public forums.	Because the program course work requires students to submit polished written work and to pose questions and frame responses within a seminar format, the course of study ensures the development of communication skills. Students will be encouraged to deliver papers at conferences, to ensure that their communication skills within a public forum equal those evident within their written work. The required two-part comprehensive examination leading up to the thesis, is designed to enhance the student's communication skills and capacity to defend and/or explain an argument beyond the level already established through course work. The process of writing that the doctoral thesis will help the student develop sophisticated writing skills necessary to convey the complexity of the ideas animating their thesis.
Awareness of Limits of Knowledge An appreciation of the limitations of one's own work and discipline, of the complexity of knowledge, and of the potential contributions of other interpretations, methods, and disciplines.	Level of Awareness of Limits of Knowledge is defined in the Ph.D. in Architecture, Landscape, and Design as recognizing that the design disciplines are integrally related and are in a state of constant change; as such, the aims of research need to continually be redefined. This is reflected in students who are able to:	The program design and requirements that ensure these student outcomes for awareness of limits of knowledge are: The design of the team taught ALD 4040H Theories and Methods course addresses the changing nature of academic thought by concentrating on modes of analysis and problems arising from interdisciplinary

DOCTORAL DEGREE LEVEL EXPECTATIONS (based on the Ontario Council of Academic Vice-Presidents (OCAV) DLEs)	DOCTORAL PROGRAM LEARNING OBJECTIVES AND OUTCOMES	HOW THE PROGRAM DESIGN AND REQUIREMENTS SUPPORTS THE ATTAINMENT OF STUDENT LEARNING OUTCOMES
Competence in the research process by applying an existing body of knowledge in the critical analysis of a new question or of a specific problem or issue in a new setting.	Recognize the limitations of their own work and discipline, the complexity of knowledge, and the potential contributions of other interpretations, methods, and disciplines to their work. Recognize when and how to seek opportunities to collaborate with others to build knowledge. Address the integrative nature of architecture, landscape architecture, and urban design by acknowledging the intra-disciplinary formation and inter-disciplinary relations which continuously inform the knowledge base and provide for new developments. Understand and appreciate the complexity of the design and analysis of the built environment. Combine pre-existing bodies of knowledge with new questions that push disciplinary boundaries.	research. This course introduces students to the conditions which influence the continual redefinition of a design discipline through intellectual exchange with other disciplines and the world beyond academia. The core required courses as well as doctoral level courses taken in other disciplines, where students present their ideas and research to their peers, will enable students to test and learn the limitations of their knowledge. The preparation prior to the research and writing of the thesis will require students to build competence while gaining an appreciation of the complexity of knowledge across the disciplines of architecture, landscape architecture, and urban design.

9 Assessment of Learning

9.1 Appropriateness of Methods of Evaluation

Student performance in the program will be assessed in coursework through a variety of methods including essays, oral presentations, and examinations. Students will receive letter grades for their performance in each course.

Students will engage in course work that requires them to write essays and to deliver in-class oral presentations of their research. Both aspects will further the development of research skills, critical thinking and the analytical skills necessary for sophisticated communication and argumentation. Students will sharpen their abilities to formulate questions and to respond to challenges to their research while acquiring organizational skills, gaining command of materials, and mastering the art of public persuasion. Written requirements enable students to learn how to communicate in prose and to form coherent arguments while accruing knowledge for future scholarship within and beyond academia.

A student's command of knowledge will be assessed through the two-part comprehensive examination. This structure ensures that each student acquires sufficient knowledge within a larger chosen field drawn from the design disciplines and depth in a sub-section of the chosen field of study related to a specific area of research. The exam will assess the student's ability to answer specific questions with synthetic responses. Successful comprehensive examinations produce students who are able to demonstrate their knowledge and focus their expertise. These examinations ensure that students are able to defend ideas and methods, and are trained to meet the demands of employment whether within or beyond academia. Both parts of the examination are marked on a pass/fail basis. Please refer to Section 7 for further details on assessment.

The students will produce a written thesis based on original research. They will have organized and undertaken an independent research program in consultation with faculty, peers and others. This research will be transformed into a sustained piece of academic writing in fulfillment of the thesis requirement. The undertaking of research and writing of a thesis requires students to engage methods, to undertake independent research, and to mount clearly articulated arguments that contribute new findings to the field. The thesis also requires a student to face limitations of their knowledge and of the limitations of the design disciplines. The method of assessment of the thesis is laid out in the School of Graduate Studies General Regulation 8 Thesis and Graduate Student Supervision and in particular 8.3 Doctoral Final Oral Examination. Please see Appendix E for the specific Regulations.

9.2 Program Assessment

The Program Director will evaluate the program's success using a number of measures, including:

1. Annual program reports submitted to Daniels Faculty Council, which outlines the extent to which the goals and objectives are being met in the delivery of the courses of study, the program content, the grading and evaluation system, and the requirements for graduation.
2. Annual review of regular course evaluations that assess the instruction quality as well as content and delivery modes.

3. Annual survey of graduates to determine their impact in various sectors of employment and graduate placement.
4. Speaking with employers of graduates to ensure that students are being well prepared for their careers.
5. Setting up an advisory board to ensure that the programs stays relevant to professional practice, industry demands, and academic scholarship.
6. Keeping an alumni network to learn from their experiences within the program and where the program can improve in terms of both career preparation and content.
7. Participating in the Canadian Graduate and Professional Study Survey, including general student satisfaction questions and ratings of graduate programs.
8. The program will undergo a review as part of the University of Toronto Quality Assurance process at least every 8 years.
9. Student time to completion rates
10. Student retention rates
11. Ratio of applications to offers
12. Ratio of offers to acceptances
13. Student and faculty honours and awards
14. Student and faculty citations

1.

10 Consultation

Given the nature of the increasingly complex challenges facing the built environment, the Ph.D. program at Daniels will be necessarily engaged with the research being conducted by cognate Faculties and institutions and centres, including but not limited to the Department of Civil Engineering, the Institute for the History and Philosophy of Science and Technology, the Faculty of Forestry, the Faculty of Information, the Faculty of Law, the Department of Geography and Planning, the Graduate Department of Art, the Munk School of Global Affairs, the Department of Computer Science, and the Dalla Lana School of Public Health.

In preparing this proposal, Daniels faculty met with a number of Deans, Chairs, Directors, and faculty members. The overall reaction to the proposal was enthusiastic, and all representatives were willing to accommodate our Ph.D. students should they want to take courses outside of the Daniels Faculty, especially given the small scale of the program. Additionally, a number of faculty members expressed interest in participating in the program as full members of the faculty complement, including serving as student supervisors and leading Ph.D. courses. This interest is in response to the highly interdisciplinary nature of the program and its rootedness in design, within which many faculty members from outside Daniels focus their research and teaching. Following expressed interest from faculty members, conversations were held with their respective department chairs to receive approval and ensure that the faculty members will be freed from the appropriate amount of existing teaching and administrative responsibilities to fully participate in this Ph.D. program. These faculty members have subsequently been given non-budgetary cross-appointments as graduate faculty members of the Daniels Faculty, which grants them full permission to serve in this capacity.

List of Deans, Chairs and Directors Consulted

Faculty of Arts and Science
Vice Dean, Graduate Education: Dwayne Benjamin (dwayne.benjamin@utoronto.ca)

Department of Civil Engineering
Chair: Brent Sleep (sleep@ecf.utoronto.ca)
Faculty Member: Marianne Touchie (marianne.touchie@utoronto.ca)

Institute for the History and Philosophy of Science and Technology
Director: Chen-Pang Yeang (cheeping.yeang@utoronto.ca)

Faculty of Forestry
Dean: Rob Wright (r.wright@utoronto.ca)

iSchool (Faculty of Information)
Dean: Wendy Duff (wendy.duff@utoronto.ca)
Associate Dean, Academic: Kelly Lyons (kelly.lyons@utoronto.ca)

Faculty of Law
Associate Dean, Graduate Program: Mariana Mota Prado (mariana.prado@utoronto.ca)
Assistant Dean: Sara Flaherty (sara.faherty@utoronto.ca)
Faculty Member: Simon Stern (simon.stern@utoronto.ca)

Department of Computer Science
Associate Chair, Graduate Studies: Angela Demeke Brown (gradchair@cs.utoronto.ca)

Department of Geography and Planning
Chair, Department of Geography and Planning: Virginia Maclaren (maclaren@geog.utorontoc.ca)
Former Chair, Program in Planning: Paul Hess (hess@geog.utoronto.ca)
Faculty Members Cross-appointed to Daniels Graduate Faculty:
Matti Siemiatycki (siemiatycki@geog.utoronto.ca)
Paul Hess (hess@geog.utoronto.ca)

Graduate Department of Art
Chair: Carl Knappett (art.chair@utoronto.ca)
Faculty Member: Joseph Clarke (joseph.clarke@utoronto.ca)
Faculty Member: Heba Mostafa (h.mostafa@utoronto.ca)
Faculty Members Cross-appointed to Daniels Graduate Faculty:
Christy Anderson (christy.anderson@utoronto.ca)
Joseph Clarke (joseph.clarke@utoronto.ca)
Heba Mostafa (h.mostafa@utoronto.ca)

Munk School of Global Affairs
Director: Randall Hansen (r.hansen@utoronto.ca)
Faculty Member Cross-appointed to Daniels Graduate Faculty:
John Robinson (johnb.robinson@utoronto.ca)

Dalla Lana School of Public Health
Interim Dean: Adalsteinn Brown (dean.dlsph@utoronto.ca)
Institute of Health Policy, Management, and Evaluation
Faculty Member: Whitney Berta (whit.berta@utoronto.ca)

11 Resources:

11.1 Faculty Complement

The academic foundation for this proposed program rests on the need for advanced scholarship and research at the intersection of the design disciplines, and the expertise of

faculty at the University of Toronto working in this area. This program provides an opportunity to bring together faculty members from Daniels and other cognate units across the university with shared interests.

Members of the faculty have published extensively with academic publishers and in peer-reviewed journals. They have lectured widely in Canada and beyond, and their work is widely known in international contexts. The expertise of the faculty ranges from history and theory to computation and fabrication to urban visualization, ecology, health and design, and sustainable building technologies. Most Ph.D. programs in North America were established at a time when it seemed desirable to keep these fields in separate silos. The unique strength of this program will be the ability to mentor research projects at the intersection of these fields. The convergences between the work and interests of faculty members will be particularly important. For example, the synergy between the interests of faculty in the history and theory field and those in computation and fabrication makes the program ideally positioned to mentor students who are interested in the histories of computational technologies going back to the Renaissance. Or, under the supervision of faculty with expertise in health and design and in urbanism, students will be able to explore questions of public health at the scale of cities, a field of inquiry that is not possible in comparable institutions. In short, while each faculty member's contribution is crucial, the program's uniqueness will be the intersectionality afforded by the convergences in faculty expertise.

Faculty members are fully engaged and have been anticipating this program for years. Those who are based in other units bring their expertise and their enthusiasm for collaboration, along with commitments from their respective program chairs and directors to release them from existing responsibilities to be able to commit the necessary time to the Ph.D. program. Based on this demonstrated intellectual and resource commitment by all involved faculty members, this program is easily sustainable. We have closely reviewed existing teaching assignments and have determined that faculty members from Daniels can be relieved of current teaching loads to allow them to commit between 0.5 and 1.125 FCE to the Ph.D. program annually. This calculation is based on the assumption that tenure-stream faculty will be able to dedicate less time. The majority of this FCE will stem from relief of teaching undergraduate courses, which will easily be covered by other faculty members as Daniels continues to evolve its Bachelor of Arts, Architectural Studies program. Faculty from outside Daniels are expected to commit approximately 0.5 FCE to the Ph.D. program.

Additionally, capacity at the Daniels Faculty continues to grow as pre-tenure faculty go through tenure review as new faculty are hired. Two searches for tenure-stream or tenured faculty positions are underway now. Additional hires are anticipated in the future. The Ph.D. program will remain a priority within the Faculty and we expect that new faculty will be active participants in the program with commitments in line with what has been described above for pre-tenure and tenured faculty.

The curricula vitae for the professors who will be the core participants in this program are included in the appendix and demonstrate their significant and collective expertise. The faculty complement was generated strategically to ensure overlapping research interests that would create opportunities for collaboration and allow students to create supervisory committees appropriate for their thesis topic. Existing synergies in the research areas of faculty include acoustics (Dr. Akiyama, Dr. Peters, and Dr. Clarke), media (Dr. Harwood, Dr. Lobsinger, and Dr. Akiyama), public health (Dr. Verderber and Dr. Anderson), and smart cities (Dr. Peters and Dr. Siemiatycki), among others

Beyond the teaching and supervision provided by faculty members, a Ph.D. Program Director will offer administrative leadership and additional support for students and will liaise with the School of Graduate Studies. The Ph.D. courses will be developed by the Ph.D. Program Director in 2018-19, in consultation with relevant faculty.

Table 3: Faculty Complement

Name	**Home Department / Unit** (who holds primary budgetary appointment)	**University Rank**	**Graduate Faculty Membership Status** (e.g., Associate/ Full privileges) and Unit	**Commitment to other programs** (please list other programs in which the person routinely teaches / supervises)	**Nature of contribution to this program** Course Instructor (CI), Thesis Supervision (TS), Clinical or practice supervisor (C/PS).
Tenured					
Christy Anderson	Graduate Department of Art	Professor	Full: Graduate Department of Art, John H. Daniels Architecture, Landscape and Design	MA, Ph.D. Art History	CI, TS
Ted Kesik	John H. Daniels Faculty of Architecture, Landscape, and Design	Full Professor	Full: John H. Daniels Architecture, Landscape and Design	M.Arch	CI, TS
John Robinson	Munk School of Global Affairs	Professor	Full: Geography and Planning, Global Affairs, John H. Daniels Architecture, Landscape and Design	MGA, MScPl	CI, TS

Name	**Home Department / Unit** (who holds primary budgetary appointment)	**University Rank**	**Graduate Faculty Membership Status** (e.g., Associate/ Full privileges) and Unit	**Commitment to other programs** (please list other programs in which the person routinely teaches / supervises)	**Nature of contribution to this program** Course Instructor (CI), Thesis Supervision (TS), Clinical or practice supervisor (C/PS).
Stephen Verderber	John H. Daniels Faculty of Architecture, Landscape, and Design	Full Professor	Full: John H. Daniels Architecture, Landscape and Design	M.Arch	CI, TS
Zeynep Celik Alexander	John H. Daniels Faculty of Architecture, Landscape, and Design	Associate Professor	Full: John H. Daniels Architecture, Landscape and Design	M.Arch, BAAS	CI, TS
Georges Farhat	John H. Daniels Faculty of Architecture, Landscape, and Design	Associate Professor	Full: John H. Daniels Architecture, Landscape and Design	MLA, BAAS	CI, TS
John Harwood	John H. Daniels Faculty of Architecture, Landscape, and Design	Associate Professor	Full: John H. Daniels Faculty of Architecture, Landscape, and Design	M.Arch, BAAS	CI, TS

Name	**Home Department / Unit** (who holds primary budgetary appointment)	**University Rank**	**Graduate Faculty Membership Status** (e.g., Associate/ Full privileges) and Unit	**Commitment to other programs** (please list other programs in which the person routinely teaches / supervises)	**Nature of contribution to this program** Course Instructor (CI), Thesis Supervision (TS), Clinical or practice supervisor (C/PS).
Paul Hess	Department of Geography and Planning	Associate Professor	Full: Geography and Planning, John H. Daniels Architecture, Landscape and Design	Ph.D. Planning, MScPl	CI, TS
Mary Louise Lobsinger	John H. Daniels Faculty of Architecture, Landscape, and Design	Associate Professor	Full: John H. Daniels Architecture, Landscape and Design	M.Arch, BAAS	CI, TS
Patricia McCarney	John H. Daniels Faculty of Architecture, Landscape, and Design	Associate Professor	Full: Political Science, John H. Daniels Architecture, Landscape and Design	MA Political Science	CI, TS
Matti Siemiatycki	Department of Geography and Planning	Associate Professor	Full: Geography and Planning, John H. Daniels Architecture, Landscape and Design	MScPl	CI, TS
Tenure-Stream					

Name	**Home Department / Unit** (who holds primary budgetary appointment)	**University Rank**	**Graduate Faculty Membership Status** (e.g., Associate/ Full privileges) and Unit	**Commitment to other programs** (please list other programs in which the person routinely teaches / supervises)	**Nature of contribution to this program** Course Instructor (CI), Thesis Supervision (TS), Clinical or practice supervisor (C/PS).
Mitchell Akiyama	John H. Daniels Faculty of Architecture, Landscape, and Design	Assistant Professor	Associate: John H. Daniels Architecture, Landscape and Design	BAVS, MVS	CI
Joseph Clarke	Graduate Department of Art	Assistant Professor	Full: Graduate Department of History Associate: John H. Daniels Architecture, Landscape and Design	MA, Ph.D. Art History	CI

Name	**Home Department / Unit** (who holds primary budgetary appointment)	**University Rank**	**Graduate Faculty Membership Status** (e.g., Associate/ Full privileges) and Unit	**Commitment to other programs** (please list other programs in which the person routinely teaches / supervises)	**Nature of contribution to this program** Course Instructor (CI), Thesis Supervision (TS), Clinical or practice supervisor (C/PS).
Jennifer Drake	Department of Civil Engineering and John H. Daniels Faculty of Architecture, Landscape, and Design	Assistant Professor	Full: Civil Engineering Associate: John H. Daniels Architecture, Landscape and Design	MLA, BASc and MEng Civil Engineering	CI
Heba Mostafa	History of Art, Graduate Department of Art	Assistant Professor	Associate: John H. Daniels Architecture, Landscape and Design	MA, Ph.D. Art History	CI
Brady Peters	John H. Daniels Faculty of Architecture, Landscape, and Design	Assistant Professor	Associate: John H. Daniels Architecture, Landscape and Design	M.Arch	CI

11.2 Learning Resources

Please see the following Appendices:

Appendix [C]: Library statement confirming the adequacy of library holdings and support for student learning

Appendix [D]: Standard statement concerning student support services

11.3 Financial Support for Graduate Students

Describe the financial assistance that will be available to students in the program, and discuss its adequacy relative to the number of students and nature of the program

As a leading research institution, the University of Toronto depends largely on our success in recruiting outstanding graduate students and enabling them to realize their potential. This means providing financial resources so that students can focus on their studies and complete their degrees in a timely manner.

Towards this aim, the Daniels Faculty of Architecture, Landscape, and Design provides Ph.D. students with a base funding commitment of $17,000 plus tuition and fees. This funding commitment is valid for a maximum of 4 years.

Students receive their funding commitment in annual funding packages. These packages may be composed of a variety of funding sources, including:

- The University of Toronto Fellowship (UTF)
- Research Stipends and Research Assistantships
- Teaching Assistantships, in accordance with CUPE Collective Agreement
- Internal Awards and Grants
- External funding sources* (e.g., federal Tri-Agency awards and provincial scholarships)

International students receive support at a higher level in recognition of the costs associated with the differential in fees (e.g., UHIP). On an annual basis, students will receive a funding letter outlining the composition, timing, and disbursement of their funding package.

To be eligible for this funding commitment, students are required to:

- Be engaged in full-time studies** for the academic year,
- Complete program requirements in a timely manner, and
- Remain in good standing, as defined in the SGS Calendar and monitored by the graduate unit.

Students who withdraw or are terminated mid-session will have their funding package re-assessed, as per the Faculty refund policy.

This funding commitment does not prevent students from taking more time to complete their degree. Support for such students, however, is not guaranteed. Funding beyond the fourth year of the doctoral program is at the discretion of the graduate unit and/or supervisor, and may be available through various sources, including Teaching Assistantships, an Ontario Graduate Scholarship (OGS), and the University Doctoral Completion Award (DCA). Criteria include:

academic merit and quality of research, the availability of funds, and, if appropriate, special features of the research program that require more time than usual.

**Depending on the size of the external award, scholarships can partially or fully cover a student's funding package. In general, scholarships of $10,000 or more are counted towards the student's funding package; however, awards of lesser value are not. For recipients of major external scholarships, top-ups will be provided of half the value of the award received (to a maximum of $10,000).*

***Students who are not registered for the full academic year—e.g. on approved leave—will have their funding revised to reflect their enrolment status*.

11.4 Space/Infrastructure

Facilities supporting the Ph.D. program shall conform to the University of Toronto minimum space standards, and enabling technologies shall reflect state-of-the-art equipment and software commensurate with the University of Toronto's status as Canada's leading research institution.

The Daniels Faculty has designed and implemented a room specifically for Ph.D. student use in the Faculty's new building at One Spadina Crescent. At 90 square metres, this room will accommodate shared office space for all Ph.D. students, including workstations with secure, lockable storage space and telephones with long-distance calling. It will also include a lounge with comfortable furnishings, kitchenette, fridge, microwave, coffee machine, etc. for the exclusive use of doctoral students.

In addition to the office and lounge space for Ph.D. students on the second floor, students will have full access to other school facilities. This includes the computation and fabrication facilities, the computer lab, meeting/seminar space with projection equipment, a colour laser printer and large format scanner, and 24-hour access to the reading room of the library. Ph.D. courses will be held at One Spadina.

12 Quality and Other Indicators

The expertise of the faculty involved in the Ph.D. program ranges over a number of topics. The interdisciplinary nature of this program will allow students to access and learn from faculty across boundaries while maintaining a grounding in design. As noted in the previous section, the intersections between the work and interests of faculty members separate this program from other design Ph.D. offerings. Renowned faculty members from the areas of architectural history and theory, computation and fabrication, technology, environmental studies, urban planning, urban governance, health and design, urbanism, and beyond will converge to offer learning opportunities unmatched by other institutions.

The curricula vitae for the professors who will be the core participants in this program are included in the appendix and demonstrate their significant and collective expertise.

The design disciplines serve diverse communities, and we strive to reflect this diversity in our student body and faculty complement. The Daniels Faculty believes that the academic

environment is enhanced through the respectful sharing of ideas and experiences amongst a broad range of people. Faculty and students come from diverse backgrounds, locations, and disciplines. Additionally, the courses and research projects within the Faculty cover a diverse range of topics and offer students the opportunity to cross disciplinary boundaries and share knowledge.

The Faculty strives to be an equitable and inclusive community, rich with diversity and committed to achieving a working, teaching, and learning environment that is free of discrimination and harassment. The Daniels Faculty has a Committee on Diversity and Equity that regularly monitors our commitment to fostering a community that embraces freedom of speech and expression, academic freedom, and freedom of research.

13 Governance Process

	Levels of Approval Required
Consultation with Provost	
Decanal and Provostial Sign-Off	
	Faculty/Divisional Governance
Submission to Provost's Office	
	AP&P
	Academic Board
	Executive Committee of Governing Council
Program may begin advertising as long as any material includes the clear statement that "No offer of admissions will be made to the program pending final approval by the Quality Council and the Ministry of Colleges Training and University (where the latter is required)."	
	Ontario Quality Council
	Submitted to MAESD (in case of new graduate degrees and programs, new diplomas)

Appendix A: Courses

Courses marked with ** indicate those being developed specifically for this program. Not all courses are offered every year, but will be offered at least every other year, and some members of the faculty may be on leave and unavailable as supervisors. The 4000-level courses are open to Ph.D. students only.

ALD4030H (0.5 FCE): Doctoral Research Colloquium (0.5 FCE) **
Research in the fields of architecture, landscape architecture, and urban design, and takes many forms and produces distinct areas of inquiry. This course brings together all Ph.D. students to encourage an intradisciplinary discussion of their unique research methods and to support cohort-building and a strong sense of community amongst students. The course will be taught by thesis supervisors in the proposed Ph.D. program.
Letter grade.

ALD4040H: Theories and Methods (0.5 FCE) **
In this course Ph.D. students will focus more narrowly on the unique methods of their chosen field of study. They will joined by other Daniels Faculty graduate students to explore theories and methods that have guided each field in the design disciplines.
Letter grade.

ALD4050H: Research Practicum (0.5 FCE) **
The practicum generally results in a long research paper. This requirement enables students to conduct independent research on a limited scale at the level of quality expected for a thesis, although the resulting paper is much shorter in length. The research should be comparable to that which results in a publishable article. Based on a consultation with their advisor, the practicum may take on one of several forms, including but not limited to:

- A self-contained paper or empirical study of publishable quality that may or may not be a component of thesis work.
- The development of a theoretical model upon which the thesis is to be based.
- A proposal for pilot research in the student's thesis area that includes a focused literature review, research design, and protocol.

Credit / No Credit.

ALD4060H: Preparation for Thesis (0.5 FCE) **
Independent thesis research in preparation for the general exams or thesis proposal.
Credit / No Credit.

The remaining course requirements are electives to be selected from advanced (3000 or 4000 series) graduate level courses offered at the Daniels or advanced graduate courses in cognate disciplines across the University of Toronto pending the approval of the Faculty. The student's program of study will be determined in consultation with their supervisor.

Not all elective courses are offered every year.

ARC 3600H Selected Topics in the History and Theory of Architecture and Health
ARC 3200H Selected Topics in Advanced Computer Applications
ARC 3031H Analysis of Architectural Form
ARC 3100H Selected Topics in Urban Design
ARC 3300H Selected Topics in Architectural History and Theory
ARC 3700H Selected Topics in Architecture
ARC 4500H Selected Topics in Professional Practice
ARC 3400H Selected Topics in Architecture and Technology
ARC 3500H Selected Topics in Sustainable Design
VIS 3001H Advanced Readings in Visual Studies
VIS 3002H Advanced Readings in Curatorial Studies
VIS 3003H Special Topics in Art and Culture
LAN 3900H Selected Topics in Landscape History and Theory, and Criticism (will be offered as of fall 2018)

Appendix B: Graduate Calendar Copy

Faculty Affiliation

Architecture, Landscape, and Design

Overview

The Faculty of Architecture, Landscape, and Design offers professional graduate programs in areas characterized by exceptional change. Globalization and the convergence of new media, new materials, and new building technologies have led to significant economic, technological, and aesthetic shifts. As a leading school of architecture, landscape, and design in North America, the Faculty is responding to these changing realities.

The greater Toronto region serves as a dynamic laboratory for critical studies and the exploration of design alternatives of international significance. Students also have access to Toronto's large professional design community. Students and faculty are incredibly cosmopolitan in sensibility, hailing from every part of the world, with their work crossing geographic and cultural boundaries. The city's multicultural networks and international connections make the Faculty a powerful place to start a career.

The Faculty has grown exceptionally in recent years with the hiring of new faculty and the revamping of its master's programs. With architecture, landscape architecture, urban design, and visual studies under the same roof, the Faculty benefits from rich collaborations and crossover between like-minded disciplines.

The growth has led to the building of a new facility which will double the Faculty's size and create a new and unprecedented centre at the University of Toronto for education, research, and public outreach on architecture, urbanism, and the visual arts.

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Canada

Architecture, Landscape, and Design

Doctor of Philosophy

The Doctor of Philosophy (Ph.D.) program in Architecture, Landscape, and Design engages students in advanced research from an intra-disciplinary approach to architecture, landscape, and urban design,. The program addresses cultural, social, environmental, historical, and technological questions of the art and design disciplines and the built environment. The program is intended for students entering careers that demand a syncretic approach to research in design and related disciplines.

Minimum Admission Requirements

- An appropriate master's degree with an average grade of at least A-. A professional degree in a design discipline is highly desirable, but applicants with a master's degree in a related discipline in the humanities and social sciences may be considered. An additional specialized program of study may be proposed for successful applicants without professional training.
- Writing sample in the form of a substantial research paper or publication
- Recommendation from three referees
- Two-page proposal that indicates a topic of research within a design discipline, possible sub-field(s) (if desired), and potential supervisors. Although letters of commitment from faculty members are not required, the proposed topic must be congruent with the interests and expertise of at least one member of the Ph.D. Standing Committee. The admissions committee will obtain commitment from the potential supervisor before admitting an applicant, and the applicant will be informed of this in the letter of offer.
- A portfolio of creative work may also be requested where it is relevant to the applicant's proposed area of research and the degree to which it may require technical skills typically gained in a professional degree program. For example, this could pertain to an applicant whose proposal includes producing renderings. Questions about whether or not to include a portfolio in an application should be directed to the Program Director or the applicant's prospective supervisor prior to the application deadline.

Program Requirements

Full-time program normally begins in September.
All students in the Ph.D. program will be required to complete a minimum of 4.0 FCE and four required Ph.D. courses (8 half-credit courses in addition to four required Ph.D. courses). Areas of study may require courses which will be selected by the student in consultation with their supervisor.

1. ALD4030H: Doctoral Research Colloquium (0.5 FCE)
2. ALD4040H: Theories and Methods (0.5 FCE)
3. ALD4050H: Research Practicum
4. ALD4060H: Preparation for Thesis

The remaining course requirements are electives to be selected from advanced (3000 and 4000 series) graduate level courses offered at the Daniels.

A student's supervisor and the Director of Graduate Studies may determine that the student needs to demonstrate other competencies crucial to conducting research in the thesis area. This may include, for example, competence in another language. If this is the case, the student will be required to enroll in a relevant language course and pass the final language exam within that course to demonstrate their competency.

Comprehensive Examinations

All Ph.D. students are required to complete a two-part comprehensive examination normally before their second summer of study. The successful completion of the examinations is required in order to achieve Ph.D. candidacy.

The comprehensive examination consists of two parts, whose specific nature and scope are to be determined in consultation with the student's supervisor. The first part of the exam, normally to be completed in the summer of the first year, is to achieve breadth in the chosen field of study so that the student can teach and conduct research within a larger chosen field within the design disciplines. This will usually involve preparing an annotated bibliography in consultation with the supervisor in the early summer, and writing the exam at the end of the summer. The first part of the exam will be composed of a written response to three questions, to be answered during a three-hour writing session that takes place on-site at the J. H. Daniels Faculty.

The second part of the comprehensive exam, normally to be completed during the second semester of the second year of study, is to achieve depth in a sub-field, within the Faculty or beyond, so that the student can master the context for the advanced research that they plan to undertake for their thesis. This exam may be administered by a faculty member other than the supervisor, to be determined by the student in consultation with their supervisor. This second part can take one of two formats:

- a second annotated bibliography to achieve depth in a sub-section of the chosen field of study
- a course syllabus with readings and outlines of lectures, themes for tutorial discussions, as well as a minimum of three lectures drawn from across the syllabus

Both parts of the examination are marked on a pass/fail basis. An oral examination will follow the completion of the second part of the exam. The oral examination will last no more than 90 minutes.

A second attempt of the comprehensive examinations will be allowed within six months, only on the recommendation of the student's supervisor. If the student fails again, they will be terminated. The student must pass both parts of the comprehensive examinations before permission to submit a thesis proposal will be granted.

Thesis

- Following the completion of the comprehensive exam, the student's supervisory committee will be formed. This will take place no later than the summer of the second year of study, in order to allow the committee to advise on the development of the student's thesis proposal.

- No later than the end of the second session of the second year of study, the student must submit to the director of the Ph.D. program a thesis proposal that has been approved by the student's supervisory committee.
- The doctoral candidate will then proceed to researching and writing the thesis.
- The student is required to meet with their thesis supervisory committee within three months of submitting the thesis proposal; thereafter, the candidate is required to meet at least once a year with the supervisory committee.
- By the end of the fourth year, the candidate should complete a thesis based on original research. The thesis should make a significant contribution to the field. The supervisory committee must approve the completed thesis before it is submitted for examination.
- The candidate defends the thesis at a doctoral final oral examination.

Program Length
4 years full-time

Time Limit
6 years full-time

Ph.D. Courses

Core Courses
The following graduate courses will be offered subject to faculty resources. Not all courses are offered every year, and some members of the graduate faculty may be on leave and unavailable as supervisors. Please consult the Faculty Graduate Office. The 2000-level courses normally are open to Ph.D. students only.

ALD4030H	Doctoral Research Colloquium
ALD4040H	Theories and Methods
ALD4050H	Research Practicum
ALD4060H	Preparation for Thesis

Elective Courses
Not all elective courses are offered every year. Please check the timetable on the website for current listings available from the summer. Elective courses are to be selected from advanced (3000 and 4000 series) graduate level courses offered at the Daniels or other Faculties. These include:

ARC 3600H	Selected Topics in the History and Theory of Architecture and Health
ARC 3200H	Selected Topics in Advanced Computer Applications
ARC 3031H	Analysis of Architectural Form
ARC 3100H	Selected Topics in Urban Design
ARC 3300H	Selected Topics in Architectural History and Theory

ARC 3700H	Selected Topics in Architecture
ARC 4500H	Selected Topics in Professional Practice
ARC 3400H	Selected Topics in Architecture and Technology
ARC 3500H	Selected Topics in Sustainable Design
VIS 3001H	Advanced Readings in Visual Studies
VIS 3002H	Advanced Readings in Curatorial Studies
VIS 3003H	Special Topics in Art and Culture
LAN 3900H	Selected Topics in Landscape History and Theory, and Criticism (will be offered As of fall 2018)

Appendix C: Library Statement

University of Toronto Libraries Report for Proposed Ph.D. in Architecture, Landscape and Design, John H. Daniels Faculty of Architecture, Landscape, and Design, University of Toronto, December 2017

Context: The University of Toronto Library (UTL) system is the largest academic library in Canada and is currently ranked 6th among academic research libraries in North America[4]. The UTL has an annual acquisition budget of $31 million. Its research and special collections comprise over 12 million print volumes, 5.6 million microforms, over 17,000 journal subscriptions, and rich collections of manuscripts, films, and cartographic materials. The system provides access to more than 1.9 million electronic books, journals, and primary source materials[5]. Numerous, wide-ranging collections, facilities and staff expertise reflect the breadth of research and instructional programs at the University, and attract unique donations of books and manuscripts from around the world, which in turn draw scholars for research and graduate work.

Major North American Research Libraries[6]					
	2011-2012	**2012-2013**	**2013-2014**	**2014-2015**	**2015-2016**
ARL RANK	**UNIVERSITY**	**UNIVERSITY**	**UNIVERSITY**	**UNIVERSITY**	**UNIVERSITY**
1	Harvard	Harvard	Harvard	Harvard	Harvard
2	Yale	Yale	Yale	Yale	Yale
3	**Toronto (3rd)**	**Toronto (3rd)**	**Toronto (3rd)**	Columbia	Michigan
4	Columbia	Columbia	Columbia	**Toronto (4th)**	Columbia
5	Michigan	Michigan	Michigan	Michigan	New York
6					**Toronto (6th)**

[4] Chronicle of Higher Education (2017). Spending by University Libraries, 2015-16. *Almanac of Higher Education 2017–2018*, LXIII (43), 64.

[5] Figures as of 2015 taken from UTL's 2016 Annual Report. http://www.library.utoronto.ca/library/aboutlibraries/annualreport/2016/AnnualReportUTL2016.pdf

[6] Chronicle of Higher Education (2017). Spending by University Libraries, 2015-16. *Almanac of Higher Education 2017–2018*, LXIII (43), 64.

Top 5 Canadian Universities in the ARL Ranking of Major North American Research Libraries				
2011-2012	**2012-2013**	**2013-2014**	**2014-2015**	**2015-2016**
RANK/ UNIVERSITY	**RANK/ UNIVERSITY**	**RANK/ UNIVERSITY**	**RANK/ UNIVERSITY**	**RANK/ UNIVERSITY**
3/Toronto	**3/Toronto**	**3/Toronto**	**4/Toronto**	**6/Toronto**
10/British Columbia	18/Alberta	22/British Columbia	27/Alberta	31/Alberta
15/Alberta	24/British Columbia	26/Alberta	31/British Columbia	35/British Columbia
18/McGill	30/McGill	35/McGill	43/McGill	42/McGill
32/Montreal	35/Montreal	36/Montreal	49/Calgary	63/Calgary

Space and Access Services: The UTL's 44 libraries are divided into four administrative groups: Central, Departmental/local, Campus (UTM & UTSC) and Federated and Affiliated College Libraries. The UTL provides a variety of individual and group study spaces for students. Study space and computer facilities are available twenty four hours, five days per week at one location, Robarts Library, with additional extended hours during study and exam periods at both UTSC and UTM. Web-based services and electronic materials are accessible at all times from campus or remote locations. The John H. Daniels Faculty of Architecture, Landscape, and Design's Eberhard Zeidler Library is open 68 hours a week during the academic year and provides study space and access to over 35,000 volumes focused on contemporary architecture, landscape architecture, and urban design. A collection for architecture is also held at Robarts Library, which houses the main Humanities and Social Sciences collection. Web-based services and electronic materials are accessible at all times from campus or remote locations, through the U of T based Scholars Portal and other leading edge digital services.

Teaching, Learning & Research Support: Libraries play an important role in the linking of teaching and research in the University. To this end, information literacy instruction is offered to assist in meeting the Architecture, Landscape Architecture, and Urban Design degree level expectations in the ability to gather, evaluate and interpret information. Librarians collaborate with instructors on assignment design, provide student research consultations, and offer just-in-time student research help in person, by phone, or through online chat. Librarians are also available to support curriculum mapping initiatives. Special initiatives, such as the Libraries Undergraduate Research Prize, and an annual forum for student journal editors, extend information literacy beyond the classroom. These services align with the Association of College and Research Libraries (ACRL) *Framework for Information Literacy for Higher Education*.[7]

Program Specific Instructional Support: Instruction occurs at a variety of levels for Architecture, Landscape Architecture, and Urban Design students and is provided for graduate students by

[7] 5 Association of College & Research Libraries. Framework for Information Literacy for Higher Education. ACRL, 2016. http://www.ala.org/acrl/sites/ala.org.acrl/files/content/issues/infolit/Framework_ILHE.pdf

the faculty liaison librarian for Architecture, Landscape, and Urban Design. The Eberhard Zeidler Library facilitates formal instruction integrated into the class schedule and hands-on tutorials related to course assignments. These include ARC1031 *Historical Perspectives on Topics in Architecture* and LAN1031 *History, Theory, and Criticism I*, both of which are required introductory graduate courses. Course- specific classes have included URD1035 *Landscape and Infrastructure in Regional Planning: from Encounter to Conflation* and LAN2037 *Contemporary Landscape Theory*. The Library, through its liaison librarian, customizes feeds of library resources which appear prominently in Portal/Blackboard course pages, maintains the Research Guide on Architecture, Landscape, and Design, and creates video tutorials specifically to guide Architecture students through using the Avery Index to Architectural Periodicals.

Recently, the faculty liaison librarian also took part in a faculty workshop concerning assignment design and resources in collaboration with the Daniels writing centre coordinator and learning strategist.

Collections: Many college and campus libraries collect materials that may support the Architecture, Landscape Architecture, and Urban Design program. The specialized collections of the Eberhard Zeidler Library are supported by the significant resources of Robarts Library, the Map and Data Library, Thomas Fisher Rare Book Library, Earth Sciences Library, Gerstein Library, and the Engineering and Computer Science Library. Collections are purchased in all formats to meet the variety of preferences and styles of our current students and faculty. The University of Toronto Library is committed to collecting both print and electronic materials in support of the Architecture, Landscape Architecture, and Urban Design program at the University of Toronto.

Journals: The Library endeavors to acquire the most significant journals for Architectural Studies; this is done by consulting with faculty who help ensure the University of Toronto Library subscribes to the most important journals in their field. The AASL (Association of Architecture School Librarians) compiled a list of core journal titles for architecture libraries in North America, which was last updated in 2017.

The Library subscribes to 43 of the 48 listed titles. While these journals are identified as core, it is also understood that factors such as curriculum and geographic location will account for some variation in an institution's need for certain titles. We are committed to providing online, remote access to journals in Architectural Studies where possible. AD (Architectural Design), Architect (AIA), Grey Room, and Journal of Green Building are examples of relevant titles now available as e-journals.

Monographs: The UTL maintains comprehensive book approval plans with 51 book vendors worldwide. These plans ensure that the Library receives academic monographs from publishers all over the world in an efficient manner. In support of the Architecture, Landscape Architecture, and Urban Design program, we specifically receive books through plans with YBP and Worldwide Art Books. Individual librarian selectors also select unique and interesting scholarly material overlooked by approval plans. These include title-by-title selections by the Eberhard Zeidler Librarian in the areas of architecture, landscape architecture, urban design; contributions to the collections of the Thomas Fisher Rare Book Library; special requests from faculty; and individual e-books and e-book packages, including complete collections of e-books from the following publishers: Oxford University Press, Cambridge University Press, major US university presses and Canadian university presses.

Preservation, Digitization, and Open Access: The UTL supports open access to scholarly communication and research information through its institutional research repository (known as T-Space), its Downsview print repository, its open journal services, subscriptions to open access publications, and support for preservation of research materials in all formats. In addition to acquiring materials in support of the Architecture, Landscape Architecture, and Urban Design program, the Library has digitized its monograph holdings published before 1923. These books are available without charge to any Internet user.

Key Databases: UTL has active subscriptions to all the key databases that support research and study in Architecture, Landscape Architecture, and Urban Design. Among these are: Avery Index to Architectural Periodicals, Design and Applied Arts Index (DAAI), JSTOR, and Art Full Text.

Special Collection Highlight: To support program commitments in Architecture, the Library acquired a subscription to the OnArchitecture database, which currently offers a selection of 150 videos of buildings, installations and interviews with the world's most distinguished contemporary architects/authors.

Other Library-departmental engagement: The faculty librarian is an active member of the John H. Daniels Faculty of Architecture, Landscape, and Design's Faculty Council.
Prepared by: Lorissa Kinna, Librarian, December 1, 2017

Submitted by: Larry Alford, Chief Librarian, University of Toronto Libraries, December 4, 2017

Appendix D: Student Support Services

Student service information for Quality Assurance Framework [St. George Campus]
All University of Toronto undergraduate and graduate students have access to student services on all three campuses, Mississauga, St. George (downtown Toronto), and Scarborough, regardless of their 'home campus'. The services and co-curricular educational opportunities provide a complement to the formal curriculum by engaging and challenging students to reach their full potential as learners, leaders and citizens. At the University of Toronto (St. George Campus) these services are organized by Student Life Programs and Services, the academic division registrar offices, and the School of Graduate Studies, and support the success of our students from the time they are admitted through degree completion and beyond.

Students have access to comprehensive **physical and mental health care** on campus including a medical clinic, travel medicine services, immunization, contraception and sexual health education. Counselling and treatment options for psychological and emotional concerns include psychotherapy, group therapy and pharmacotherapy, as well as specialized assault counseling services.

Housing needs, including off-campus housing listings and resources for students living independently, are met through the Student Housing Service.

Coaching and education in the development of key **learning skills** – from time management to overcoming exam anxiety – is provided through the Academic Success Centre. The ASC also partners with faculty to integrate success strategies and support into the curriculum.

Students' career exploration and employment services are provided through a **Career Centre** offering resume and interview coaching, workshops, career resources, on and off-campus employment and volunteer listings, job shadowing, and career counseling.
Specialized services are provided for **international students** (orientation, advising, cross-cultural counselling), students with **disabilities** (academic accommodations, advising), students with **children or other family responsibilities** (advising, resources, subsidized child care), **aboriginal students** (academic support, financial counselling) and **lesbian, gay, bisexual and transgender** students (counselling, referrals, equity outreach and engagement).

Participation in **campus life** and **experiential learning** are facilitated through Hart House (clubs, committees, events), the Centre for Community Partnerships (service learning), the Multifaith Centre (interfaith dialogue, events), and the Office of Student Life (leadership development, orientation, recognition and support for student groups, activities.) **Sport and recreational facilities and programs** are provided to all students through both Hart House and the Faculty of Kinesiology and Physical Education.

The Office of the Registrar and Student Services within the Daniels Faculty offers assistance in the following areas:

- Academic and general advising and guidance
- Student counselling and resource referral
- Degree and program requirements
- Course registration and enrolment
- Fee payment or fee deferral
- Financial counselling/grant applications
- Petitions/appeals

The Writing Centre at the John H. Daniels Faculty of Architecture, Landscape, and Design is a resource for all Daniels students seeking assistance with academic writing, research, and related academic skills. The Writing Centre currently offers consultation-based writing instruction. Consultations may involve a wide range of approaches to academic thinking, research, and writing, including (but not limited to):

- Assessing general writing strengths and weaknesses
- Mechanics, usage, grammar, and style
- Pre-writing and Brainstorming
- Citing and Integrating Sources (Chicago Manual of Style)
- Developing a Thesis
- Rhetoric and argumentation
- Formal analysis and other types of writing
- Outlines, paragraphs, topic sentences, intro and conclusions
- Revising and editing skills

The Daniels Faculty also has a staff Learning Strategist who is available to all graduate and undergraduate students to support the development of their study skills and academic strategies. The Faculty also has an embedded Social Worker, an embedded International Transition Advisor, and an embedded Career Educator to support students.

Ph.D. students will be guided by their individual supervisors, however support will also be provided by the Ph.D. Program Director. Should any concerns arise between a student and her or his supervisor, the Program Director will be accessible to the student.

School of Graduate Studies, Student Services [all campuses]
All graduate students at the University of Toronto have access to registrarial services and co-curricular programs at the School of Graduate Studies that assist students in meeting their academic goals.

Administrative staff at the School of Graduate Studies (SGS) provide registrarial services to graduate students including but not limited to recruitment, admission, orientation, registration, fees, program progress, awards/financial assistance and graduation.

The **Grad Room** is an accessible space on the St. George campus which provides University of Toronto graduate students with a lounge area and a multi-purpose space for academic, social and professional graduate student programming.

Grad Room is home to the **Graduate Professional Skills Program** (GPS). GPS is a non-academic program presented by SGS consisting of a variety of offerings that provide doctoral stream students a range of opportunities for professional skills development. The program focuses on skills beyond those conventionally learned within a disciplinary program, skills that may be critical to success in the wide range of careers that graduates enter, both within and outside academe. GPS aims to help students communicate effectively, plan and manage their time, be entrepreneurial, understand and apply ethical practices, and work effectively in teams and as leaders.

The Office of **English Language and Writing Support** (ELWS) provides graduate students with advanced training in academic writing and speaking. By emphasizing professional development rather than remediation, ELWS helps students cultivate the ability to diagnose and address the weaknesses in their oral and written work. ELWS offers four types of instruction designed to target the needs of both native and non-native speakers of English: non-credit courses, single-session workshops, individual writing consultations, and website resources.

Appendix E: SGS Thesis Related Regulations

Extract from the School of Graduate Studies 2017-18 Calendar: General Regulations (8)

8 Thesis and Graduate Student Supervision

8.1 Thesis Topic and Supervision
A thesis is a piece of scholarly writing. In those degree programs for which a thesis is part of the requirements, the work upon which the thesis is based must be conducted under the direction of one or more members of the faculty of the School of Graduate Studies.

Students must choose a thesis topic for which the graduate unit in which they are registered is able to provide adequate supervision.

A student's choice of thesis topic, as well as their choice of supervisor from among the graduate faculty members available in the graduate unit and supervisory committee, is subject to the approval of the Graduate chair, director, or dean in the graduate unit in which the student is registered.

8.2 Doctoral and Master's Supervision
While the special, collaborative relationship between student and supervisor serves as a foundation for graduate education, particularly at the doctoral level, the primary responsibility for graduate programs and their supervision rests with the graduate unit. The chair, director, or dean of the graduate unit has the principal obligation and authority for exercising these responsibilities, in accordance with the Constitution of the School of Graduate Studies, and, therefore, for implementing the academic and procedural standards established in the School of Graduate Studies.

Although this calendar outlines procedures to be followed in the supervision of doctoral and master's students, it is clear that these have general applicability for all graduate students to some degree. It is essential that students have access to information relevant to their graduate program of studies, in all domains.

Thus, each graduate unit will provide students with documentation that provides details of all procedures involved with graduate training, a list of members of the graduate faculty with relevant information concerning their participation, fields of expertise and supervision, and access to the SGS Graduate Supervision Guidelines.

In addition, updated statements must be made available to students on a regular basis. These will include the availability of financial assistance, and relevant information to affected students about the expected absences of their supervisor(s) and/or advisor(s).

Any graduate student who believes that their graduate unit is not following the supervision guidelines may inform their graduate unit or the School of Graduate Studies.

The academic experience is greatly enhanced if members of the academic faculty, in addition to the direct supervisor, are readily and formally available for consultation and discussion with the

graduate student. Therefore, an individual thesis supervisory committee or, as an alternative, an area supervisory committee, should be struck as early as possible for each graduate student, and certainly from the commencement of thesis supervision.

The graduate unit is responsible for adopting a procedure for monitoring the progress of doctoral students registered in its programs. Consistent with the SGS Graduate Supervision Guidelines, the procedure must contain, at minimum, a supervisory committee that:

1. consists of the supervisor, chosen from among the graduate faculty members of the graduate unit in which the student is registered, and at least two graduate faculty members who hold a graduate faculty membership;
2. if a co-supervisor is identified, must also hold a graduate faculty membership in the student's graduate unit;
3. meets with the student at least once per year to assess the student's progress in the program and to provide advice on future work; and
4. submits a report detailing its observations of the student's progress and its recommendations.

Further, the student must be given the opportunity to respond to the supervisory committee's report and recommendations and to append a response to the committee's report. Copies of the report must be given to the student and filed with the graduate unit.

8.3 Doctoral Final Oral Examination

All doctoral students must defend a thesis at a Final Oral Examination organized by the graduate unit with the cooperation of the School of Graduate Studies, as follows:

1. The candidate shall defend the thesis at a Final Oral Examination organized by the graduate unit with the cooperation of SGS. The process of scheduling the examination, allowing time for professional appraisal, can be expected to take at least eight weeks at the best of times, and candidates should discuss the timing with the graduate administration of their unit. Candidates should also ascertain whether their unit imposes regulations over and above the minimal conditions required by SGS.
2. The graduate unit will notify SGS eight weeks prior to the examination when the thesis is ready to go forward for examination. In the absence of any particular local procedure, the candidate's supervising committee will advise SGS that the thesis is ready to proceed. In rare cases, a thesis may proceed to examination without the approval of the supervising committee; candidates who wish to proceed without such approval should contact SGS.
3. The thesis will be sent to an appraiser external to the University of Toronto, appointed by SGS on the recommendation of the graduate unit. (The supervisor of the thesis will propose a list of names of possible external appraisers to the graduate coordinator or chair, who will choose one and send the recommendation to SGS for approval. The graduate unit will certify that the external appraiser has an arm's-length relationship to the candidate and supervisor.) The external appraiser must be a recognized expert on the subject of the thesis and must be external to the University as well as to its affiliated teaching hospitals and research institutes. Such an individual must be an associate or full professor at the home institution or, if the individual comes from outside the academic sector, must possess the qualifications to be appointed to an academic position at this level. Arrangements with external appraisers are the responsibility of the

graduate unit. In particular, the graduate unit must allow the external appraiser sufficient time to act. The graduate unit must have a copy of the thesis delivered to the appraiser at least six weeks, and preferably longer, in advance of the examination date. Appraisals must be submitted to SGS at least two weeks in advance of the examination date; if they are not, the examination may have to be rescheduled. The graduate unit must also ensure that copies of the thesis are made available to all other voting members of the examination committee at least four weeks in advance of the examination date.

4. An examination committee, appointed by SGS on the recommendation of the graduate unit, will conduct the Final Oral Examination. The examination committee must include at least four, but no more than six, voting members: one to three of the voting members will have served on the candidate's supervisory committee, and at least two voting members will not have been closely involved in the supervision of the thesis. Eligible for inclusion in the latter group are the external appraiser (in person or by audio connection), members of the graduate faculty of the candidate's graduate unit, and members of the graduate faculty of other departments, centres, or institutes of the University. The examination committee may include, in addition, up to two non-voting members, who will be members of the graduate faculty of the candidate's graduate unit or members of the graduate faculty of another graduate unit of the University. A quorum is four voting members, two of whom must not have been closely involved in the supervision of the thesis. Graduate units must ascertain in advance the willingness of the persons named to act. SGS may modify the composition of the examination committee to fit exceptional circumstances.
5. SGS will appoint a non-voting chair to the examination committee. The chair will be a full member or member emeritus of the graduate faculty, holding no appointment to the graduate faculty of the candidate's graduate unit.
6. The graduate unit is responsible for scheduling the examination, booking a room, and making appropriate technical arrangements.
7. The graduate unit must submit to SGS, via ROSI, a Certificate of Completion together with the nomination form confirming completion of all other academic requirements, such as language and field requirements; an abstract of the thesis, in English, not longer than 350 words; and a copy of the examination program.
8. The graduate unit will send a copy of the external appraisal of the thesis to SGS as soon as it is received. The graduate unit is responsible for the distribution of copies of the external appraisal to the candidate (two weeks before the examination) and members of the examination committee. It should not be distributed beyond that group and the relevant administrative officers before the examination. The candidate is to be instructed not to communicate with the external appraiser/examiner until the examination is under way.
9. Members of the graduate faculty are entitled to attend the examination, and with the permission of the chair, they may ask questions of the candidate, but they must withdraw before the committee's discussion and vote. A qualified observer may attend, subject to the same restrictions, if the graduate unit has received approval for such attendance in writing beforehand from SGS, Programs. Otherwise, the examination is closed to the public. The vote at the examination takes into account both the thesis and the oral defence itself.
10. The examination committee represents the SGS Graduate Education Council and through it the University. It is therefore responsible for the standard of the doctoral

degree in this University. Graduate unit examinations held immediately in advance of the final oral must not therefore interfere with attendance at, or thoroughness of, the final examination. The committee must evaluate the external appraisal of the thesis, which is to be considered only as an individual opinion to be employed as the committee sees fit. It must examine the candidate on the content and implications of the thesis. Where someone other than the candidate is a co-author of any portion of the thesis, the examination committee must be satisfied that the candidate's personal contribution to the thesis is sufficient to fulfil the requirements of the doctoral degree. In addition to determining the adequacy of the thesis, the committee must satisfy itself that the thesis document meets the proper standards of scholarship. The committee possesses the full authority of the School of Graduate Studies with respect to the examination.

11. A quorum for the final examination is four voting members, two of whom must not have been closely involved in the thesis, plus the examination committee chair, who has no vote. Voting shall be by signed ballot, and the names of the examiners and their respective votes shall be read to the examination committee by the chair. If a quorum is not present, the chair must delay the examination to obtain a quorum or may postpone the examination to another date.
12. The candidate passes on the first examination:
    a. if the decision is unanimous;
    b. or if there is not more than one negative vote or abstention.

If there is more than one negative vote or abstention, adjournment is mandatory. In the event of adjournment, the examination committee must provide the candidate, as soon as possible, with a written statement that indicates the reasons for adjournment and the committee's requirements for the reconvened oral examination. In addition, the examination committee must decide the approximate date of the reconvened examination. The time between the adjourned examination and the reconvened examination should be as short as circumstances will permit and in no case shall exceed one year.

At the reconvened examination, no new committee members shall be added, except for necessary replacements. It is the obligation of the examiners to attend the reconvened examination.

The candidate passes on the reconvened examination:
a. if the decision is unanimous;
b. or if there is not more than one negative vote or abstention.

No further adjournment will be allowed. If a candidate is not recommended for the degree by the committee in charge of the second examination, the candidate is ineligible for further doctoral candidacy at the University. The examination committee must provide the candidate, as soon as possible, with a written statement that explains clearly and directly why the examiners found the candidate's performance unsatisfactory on the written and/ or oral components of the examination, as may be relevant. The candidate’s registration in the graduate program will be terminated.

1. If minor corrections in style are a condition of acceptance of the thesis, the candidate must complete the corrections within one month of the date of the examination, and

the supervisor will inform the candidate of the necessary corrections. The supervisor must notify the School of Graduate Studies directly in writing that the required corrections have been made by the candidate, with a copy of the correspondence sent to the graduate coordinator of the graduate unit, before the candidate is recommended for the degree.

2. If minor modifications are a condition of acceptance of the thesis, the chair of the examination committee will appoint a subcommittee of the examination committee (to be approved by the examination committee) to supervise the proposed modifications. One member of the subcommittee is designated by the chair, with the approval of the examination committee, as the convenor. The convenor will be responsible for the preparation of a statement detailing the modifications required. Modifications must be completed within three months of the date of the oral examination. The members of the subcommittee will report on the acceptability of the completed modifications to the convenor. If all members of the subcommittee approve the completed modification, the candidate will be passed without the necessity of reconvening the examination committee. The convenor of the subcommittee must certify in writing to the School of Graduate Studies, within three months of the original examination, that the modifications have or have not been satisfactorily completed. If one or more members of the subcommittee do not approve the completed modifications, the Final Oral Examination must be reconvened within a year of the date of the original examination.
3. The examination committee must decide the nature of minor modifications, but it is intended that minor modifications should be more than corrections in style and less than major changes in the thesis. A typical example of minor modifications might be clarification of textual material or qualification of research findings and conclusions.

For further details, students should consult the Producing Your Thesis section of the SGS website.

8.4 Submission of Theses

One electronic copy of the final approved version of the defended thesis (master's or doctoral) must be submitted to SGS through the digital research repository for the University of Toronto community.

The format of the submitted thesis must comply with the School of Graduate Studies guidelines.

SGS requires that every doctoral thesis be published substantially as it is accepted. The preservation and public dissemination of original thesis research is a principle to which the University, as a publicly funded institute of higher education, is strongly committed. Unrestricted release of theses means permanent worldwide access through the Internet. Students retain copyright on the thesis as the thesis author. However, in exceptional cases, the author, in consultation with the thesis supervisor and with the approval of the chair of the graduate unit, shall have the right to postpone distribution and publication for a period up to two years from the date of acceptance of the thesis. In exceptional circumstances and on written petition to the Dean of the School of Graduate Studies, the period might be extended, but in no case for more than five years from the date of acceptance of the thesis unless approved by the SGS Graduate Education Council.

All theses will be submitted to the national thesis program at Library and Archives Canada, and theses will be made publicly available on the Theses Canada Portal. This program makes theses available to ProQuest, which in turn makes theses available for purchase on its ProQuest Dissertations and Theses Database and includes the catalogue records in its bibliographic services.

Thesis submission initiates the request for graduation. A bound printed copy of the doctoral thesis in its final form may be required by the candidate's graduate unit. Candidates should consult their unit to determine the format, number, and distribution of such copies.

Students must agree to the Library and Archives Canada Theses Non-exclusive License when making an electronic submission; any necessary copyright permissions will be uploaded to the digital research repository at this time.

Specific formatting guidelines must be followed so that theses conform to the requirements of SGS and for the publication of the thesis. Theses that do not conform to these formatting guidelines will not be accepted. For more information about required fees, forms, copyright, thesis formatting, and other related matters, visit the Producing Your Thesis section of the SGS website.

8.4.1 Doctoral Thesis
Prior to the Final Oral Examination, required copies of the doctoral thesis must be submitted by the candidate to the graduate unit. The candidate should consult the graduate coordinator regarding requirements and deadlines for submission of material.
The graduate unit is responsible for ensuring that one copy of the thesis is brought to the Final Oral Examination.

Following successful completion of the Final Oral Examination, an electronic copy of the final approved version of the thesis and the required form(s) must be submitted to SGS (see section 8.4 Submission of Theses).

Confirmation in writing that any corrections or modifications deemed necessary after the defence must also be received by SGS (see General Regulations section 8.3 Doctoral Final Oral Examination).

Extract from the School of Graduate Studies 2017-18 Calendar: Degree Regulations (12)

12.1.2.8 Thesis
The candidate, through the graduate unit, shall present a thesis embodying the results of original investigation, conducted by the candidate, on the approved topic from the major field. The thesis, which is a piece of scholarly writing, shall constitute a significant contribution to the knowledge of the field and must be based on research conducted while registered for the Ph.D. program.

A thesis should have a coherent topic with an introduction presenting the general theme of the research and a conclusion summarizing and integrating the major findings. Nonetheless, it may contain a collection of several papers. The collection of papers may be expanded or supplemented by unpublished material, scholarly notes, and necessary appendices. In all theses,

pagination should be continuous; there should be a common table of contents and an integrated bibliography for the whole thesis. A thesis must be prepared in a standard format (see National Library guidelines and Guidelines for the Preparation of Theses).

The thesis should normally be written in English, but with the permission of the School of Graduate Studies, a graduate unit may permit or require students in that unit to write the thesis in French.

In Division I, the Humanities, permission may be given for a thesis to be written in a language other than English or French when the language has been approved for use in theses by the graduate unit concerned. Before such permission can be granted, the graduate unit chair must certify in writing to the School of Graduate Studies that the candidate has passed a supervised essay type examination, written in English, which demonstrates the candidate's proficiency in writing correct and idiomatic English prose. A supplementary abstract of about 5,000 words in English or French must form part of a thesis that is written in a language other than English or French. No language other than English or French may be used for the conduct of Doctoral Final Oral Examinations.

See also General Regulations sections 8.2 Doctoral and Master's Supervision and 8.4 Submission of Theses.

12.1.2.9 Final Oral Examination
All students must defend a thesis at a Final Oral Examination organized by the graduate unit with the cooperation of SGS. See General Regulations section 8.3 Doctoral Final Oral Examination for detailed requirements and deadlines.

Appendix F: Comparator Design-Oriented Doctoral Programs

Canadian Context:

Institution	Faculty/ Unit	Degree Program	Domestic Tuition (CAD)	Program Length	Curriculum	Comments
McGill University	Peter Guo-Hua Fu School of Architecture	Ph.D. in Architecture	Fall: $2,326.21 Winter: $1,824.88	3-years (2-years with McGill M.Arch.).	History & Theory of Architecture M.Arch requirements: four seminars in architectural history and theory, auditing of two lectures, one seminar in critical writing, two elective courses, and two courses run by supervisor: project preparation course and a final project course. Ph.D.: Thesis proposal, final proposal and literature review, thesis progress reports 1 & 2	Applicants must hold McGill M.Arch or equivalent

Institution	Faculty/ Unit	Degree Program	Domestic Tuition (CAD)	Program Length	Curriculum	Comments
					Urban Design & Housing: two seminars in contemporary theory & research methods, one studio course, one research methods course, two electives, and two courses run by supervisor: project preparation and research report Ph.D.: Thesis proposal, final proposal and literature review, thesis progress reports 1 & 2	
University of Montreal	Faculty of Planning	Ph.D. in Architecture	$3,701 per term (Canadian students), $1,195 per term (Quebec students)	Minimum of 6 full-time terms including summer, and maximum of 15 full-time terms	3 seminars, 1 professional forum, 3 electives, comprehensive exam end of 2nd year, thesis proposal, and thesis	M.Arch or equivalent required, fluent in French and English

Institution	Faculty/ Unit	Degree Program	Domestic Tuition (CAD)	Program Length	Curriculum	Comments
University of Manitoba	Faculty of Architecture	Ph.D. in Design and Planning	$4,654.54 per year for years 1 & 2, $749.62 per year for year 3 and subsequent years	3-6 years	4 courses in the first year of study, including one theory course, one methods course. Candidacy exam (written paper and oral presentation), thesis proposal, thesis, and thesis exam.	Master's in architecture or related discipline
Carleton University	Azrieli School of Architecture and Urbanism	Ph.D. in Architecture	$8,059.56 first year, $7,927.56 upper years	4 years	Fed from Carleton MAS program, which requires 6 credits	Focus on the history and historiography of modern architecture and architectural practice from the Renaissance to the twentieth century.

American Context:

Institution	Faculty/ Unit	Degree Program	Domestic Tuition, per year, out of state (CAD)	Program Length	Curriculum	Comments
University of Wisconsin-Milwaukee	School of Architecture & Urban Planning	Ph.D. in Architecture	$28,890	Three areas of study: Environmental Design Research; Buildings-Landscapes-Cultures; and, Sustainability, Resources and Technology.	With M.Arch: 27 credits, including 12 in core courses, 9 in area of concentration, 9 in minor area, and 3 for intermediate research project. Without M.Arch: 54 credits. Doctoral preliminary exams (three written components and one oral review), thesis proposal, and thesis.	Admission: M. Arch or Master's in related field, portfolio.

Institution	Faculty/ Unit	Degree Program	Domestic Tuition, per year, out of state (CAD)	Program Length	Curriculum	Comments
Harvard University	Graduate School of Design	Ph.D. in Architecture, Landscape Architecture, Urban Planning, or Architectural Technology	$57,053 per year for first two years, $14,836 per year for third and fourth years	3 year minimum	16 courses, including one course each semester for Ph.D. students. After 8 courses students are eligible for the Masters degree. General exams, thesis proposals, and thesis.	Admission: Min BA or B.Sc., though professional degree in architecture, landscape, or planning is recommended.
UCLA	Faculty of Architecture & Urban Design	Ph.D. in Architecture	$40,629	6 years	6 courses over two years in writing, teaching and researching. 5 additional courses within the dept. to support major, and 3 electives outside dept to support minor. Research paper, comps exam (oral and written), qualifying exam (thesis proposal), thesis, and defense.	Admission: M. Arch. or Master's in related field.

Institution	Faculty/ Unit	Degree Program	Domestic Tuition, per year, out of state (CAD)	Program Length	Curriculum	Comments
MIT	Department of Architecture	Building Technology	$52,746	2-years with M.Sc., 5-years with B.Sc.	5 courses in major (including a Building Technology Seminar, and 3 electives. Qualifying paper, general exam, thesis proposal, thesis. Qualifying paper, qualifying exam, thesis.	Admission: Degree in engineering, science or architecture
		Computation	$52,746	2–5 years	12 courses, including Proseminar in Computation. General exam, thesis proposal, thesis, and defense.	Admission: Degree in architecture or related field, portfolio required
		History, Theory and Criticism of Architecture or Art	$52,746	5 years	12 courses, including Methods Seminar, subjects in major and minor, and paper and exam prep courses. Qualifying paper, major exam, minor exam, thesis proposal, thesis.	One additional placement for the Islamic Architecture and Urbanism concentration.

Institution	Faculty/ Unit	Degree Program	Domestic Tuition, per year, out of state (CAD)	Program Length	Curriculum	Comments
Carnegie Mellon University	School of Design	Ph.D. in Transition Design	$71, 626	4 years	12 courses in the first year. Research topic proposal, thesis.	For those wishing to become academics.
		Professional Doctorate	$26,820	3 years	All coursework, culminating in a final research project.	For those wishing to continue practice, by distance program.
Columbia University	Graduate School of Architecture	Ph.D. in Architecture	$97,472	4 years	13 courses in the first two years (including a doctoral colloquia and five seminars). Oral exam, thesis proposal, thesis .	Focused on architectural history and theory.

Institution	Faculty/ Unit	Degree Program	Domestic Tuition, per year, out of state (CAD)	Program Length	Curriculum	Comments
University of Pennsylvania	School of Design	Ph.D. in Architecture	$42,917	4 years	20 courses (though if entering from a Master's degree students may only be required to take 8-12). Two language exams, a qualifying exam, a preliminary exam, teaching experience, thesis.	Focus on theory, technology and representation.
University of Nebraska-Lincoln	Durham School of Architectural Engineering & Construction	Ph.D. in Architectural Engineering	$32,965	Maximum 8 years	42 credits (approx.. 15 courses) of coursework. Comprehensive exam, research, thesis.	

Institution	Faculty/ Unit	Degree Program	Domestic Tuition, per year, out of state (CAD)	Program Length	Curriculum	Comments
Texas A&M University	College of Architecture	Ph.D. in Architecture	$35,550	5 years	64 credits, including Research Ideologies for Architecture, Foundations of Research, Writing for Publications, and Graduate Seminar. Qualifying exam, proposal defense, preliminary exam (written and oral), thesis.	
Illinois Institute of Technology	College of Architecture	Ph.D. in Architecture	$39,572	4 years	12 courses in the first two years. Qualifying exam, program of study, comprehensive exam, thesis proposal, thesis.	Areas of focus: History, Theory and Criticism; and, Technologies of the Built Environment
University of Oregon	School of Architecture & Environment	Ph.D. in Architecture Ph.D. in Landscape Architecture	$27,591	3 years	16 courses. Thesis prospectus comprehensive exams (oral and written), thesis.	

Institution	Faculty/ Unit	Degree Program	Domestic Tuition, per year, out of state (CAD)	Program Length	Curriculum	Comments
Cornell University	Department of Architecture	Ph.D. in History of Architecture and Urban Development	$37,675	5-7 years	8 courses during the first year. Qualifying exam, admission to doctoral candidacy exam, B-Exam (focused on research topic), thesis.	Admission: Master's or Bachelor's applicants accepted.
Clemson University	School of Architecture	Ph.D. in Planning, Design and the Built Environment	$30,551			Interdisciplinary degree led by the College of Architecture, Arts & Humanities. Led by one faculty member, little information available.

Institution	Faculty/ Unit	Degree Program	Domestic Tuition, per year, out of state (CAD)	Program Length	Curriculum	Comments
University of Oklahoma	College of Architecture	Ph.D. in Planning, Design and Construction	$21,495	4 years	5 courses, including History and Theories of Planning, Design and Construction, and Research Methods. Advisory conference report, general exam, thesis proposal, thesis .	

Institution	Faculty/ Unit	Degree Program	Domestic Tuition, per year, out of state (CAD)	Program Length	Curriculum	Comments
Texas Tech University	College of Architecture	Ph.D. in Land-Use Planning, Management and Design	$21,387	3 years	8 core courses, including Systems of Architectural Inquiry, and additional electives. Comprehensive exams, thesis.	Four tracks: Environmental / Natural Resource Management; Planning, Community Planning and Design; Public Policy Administration; and, Historic Preservation.
University of Hawaii	School of Architecture	Doctorate of Architecture (professional)	$31,305	3 years	Coursework- based doctorate.	Integrates coursework and professional office experience

Institution	Faculty/ Unit	Degree Program	Domestic Tuition, per year, out of state (CAD)	Program Length	Curriculum	Comments
University of Michigan	Taubman College	Ph.D. in Architecture	$60,709	5-6 years	40 credits of coursework in major and minor. Doctoral exams, thesis proposal, thesis. Teaching training is included.	Admission: Professional degree in architecture required
University of Illinois	School of Architecture	Ph.D. Program in Landscape Architecture and Architecture	$34,457	4 years	64 credit hours of coursework, including a minimum of 8 elective credit hours. Major and minor fields. Preliminary exam, thesis.	Three areas of specialization: Social and Cultural Factors in Design; History and Theory; and, Technology and Environment

Institution	Faculty/ Unit	Degree Program	Domestic Tuition, per year, out of state (CAD)	Program Length	Curriculum	Comments
University of Florida	College of Design, Construction & Planning	Ph.D. in Design, Construction and Planning	$38,485	4-6 years	4 courses. Thesis proposal, qualifying exams (written and oral), thesis (option for this to be three papers).	
University of Texas at Austin	School of Architecture	Ph.D. in Architecture	$31,532	4-5	Two years of coursework (9 credits per semester). Qualifying exam, thesis proposal, thesis.	Concentrations: History of Architecture and Landscape Architecture; Historic Preservation; and, Sustainability

Institution	Faculty/ Unit	Degree Program	Domestic Tuition, per year, out of state (CAD)	Program Length	Curriculum	Comments
Rensselaer Polytechnic Institute	School of Architecture	Ph.D. in Architectural Sciences	$59,558		10 courses. Comprehensive exam, thesis.	Concentrations: Architectural Acoustics; Built Ecologies; and, Lighting.
University of California - Berkeley	College of Environment al Design	Ph.D. in Architecture	$43,247	4 years	Coursework determined with supervisor, but must include research methods and a minimum of 9 faculty credits and 12 elective credits. Qualifying exams (written and oral), thesis.	Concentrations: Building Science; Technology and Sustainability; and, History, Theory and Society

Institution	Faculty/ Unit	Degree Program	Domestic Tuition, per year, out of state (CAD)	Program Length	Curriculum	Comments
Pennsylvania State University	Stuckeman School	Ph.D. in Architecture	$45,384	8 years maximum	6 courses in the first year, including 4 electives. Candidacy exam, comprehensive exam, thesis proposal, thesis.	Research clusters: Culture, Society, Space; Design Computing; Material Matters; and Sustainability

European Context:

Institution	Faculty/ Unit	Degree Program	Domestic Tuition	Program Length	Curriculum	Comments
University College London	Bartlett School of Architecture	MPhil/Ph.D. in Architectural Design / Architectural History and Theory	$8,534 (EU students), $33,683 (international)	3 years (5 years part time)	First year coursework as MPhil students, second year and beyond research. No comps exam, thesis research proposal submission for approval, thesis	Admission: minimum of a Bachelor's Degree and Master's Degree in a relevant subject
		MPhil/Ph.D. in Architectural Space and Computation	$8,534 (EU students), $33,683 (international)	3 years (5 years part time)	4-8 half courses in Spatial Design or Architectural Computation in first year, no comps exam, thesis research proposal submission for approval, thesis	Admission: minimum of a Bachelor's Degree and Master's Degree in a relevant subject
		MPhil/Ph.D. in Architecture and Digital Theory	$8,534 (EU students), $33,683 (international)	3 years (5 years part time)	First year coursework as MPhil students, second year and beyond research. No comps exam, thesis research proposal submission for approval, thesis	Admission: minimum of a Bachelor's Degree and Master's Degree in a relevant subject

Institution	Faculty/ Unit	Degree Program	Domestic Tuition	Program Length	Curriculum	Comments
University of Strathclyde	Department of Architecture	MPhil/Ph.D. in Architecture	$26,559 (non-EU). Many fully-funded Ph.D. positions available.	MPhil courses for one year, Ph.D. studies for 3 years	Enrolment in Postgraduate Certificate in Researcher Professional Development, followed by research and thesis.	Research groups: Architecture Design & Conservation; Architecture & Urbanism in the Global South; Built Environment Education & Architectural Pedagogy; Construction Law; Cultural & Historic Studies; Innovative Construction Technologies & Building Information Management; Sustainable Design & Technology; and, Urban Design

Institution	Faculty/ Unit	Degree Program	Domestic Tuition	Program Length	Curriculum	Comments
University of Edinburgh	Edinburgh College of Art, School of Architecture and Landscape Architecture	MPhil/Ph.D. in Architecture	$30,452 (non-EU)	3 years	Required seminars and courses in research training. Research leading to thesis.	Research areas: Architectural Conservation; Architectural History, Theory and Criticism; Design-led Research and Studio Practice; and, Technology, Environment and Sustainability
		Ph.D. in Architecture by Design			Thesis consists of both design and written work.	
University of Bath	Faculty of Engineering & Design	MPhil/Ph.D. in Architecture and Civil Engineering	$7,443 (EU), $33,497 (non-EU)	MPhil 1-3 years, Ph.D. 3-6 years	Confirmation exam (written and oral) at end of first year, followed by research and thesis.	Students join as a member of one of the following research centres: BRE Centre for Innovative Construction Materials; Centre for Advanced Studies in Architecture; Centre for the Engineering and Design of Environments; and, Research Unit for Water, Environment and Infrastructure Resilience

Institution	Faculty/ Unit	Degree Program	Domestic Tuition	Program Length	Curriculum	Comments
Oxford Brookes University	School of Architecture	MPhil/Ph.D. in Architecture	$7,267 (EU), $23,228 (non-EU)	MPhil 1-3 years, Ph.D. 2-4 years	MPhil coursework, followed by Ph.D. thesis proposal and thesis.	Research groups: Architectural Engineering; Low Carbon Building; Place, Culture and Identity; Centre for Development and Emergency Practice; Design, Theory and Practice
University of Nottingham	Faculty of Engineering	Ph.D. in Architecture (Science) Ph.D. in Architecture (Social Science)	$7,259 (EU), $35,555 (non-EU)	3 years	Research- based	Admission: Master's required in a relevant subject
Newcastle University	Architecture, Built Environment, and Planning	MPhil/Ph.D. in Architecture, Planning and Landscape	$8,103 (EU), $26,337 (non-EU)	3 years (6 years part time)	Once MPhil courses are completed (or equivalent), the Ph.D. is research-based	

Institution	Faculty/ Unit	Degree Program	Domestic Tuition	Program Length	Curriculum	Comments
Liverpool John Moores University	Department of the Built Environment	MPhil/Ph.D. in Architecture	$7,639 (EU), $24,395 (non-EU)	1 year for MPhil, 3-4 years for Ph.D.	MPhil courses, written and oral exams in second year, final thesis.	Areas of research: Sustainable Technologies; Planning and Development; Construction and Facilities Management; Renewable Energies and Recycling; Economics and Sustainability
Technical University at Delft	Architecture and the Built Environment	Ph.D. in Architecture and the Built Environment	$3,018 (EU), $22,821 (no-EU)	4 years	6-8 half courses, go/no-go mtg in lieu of comps exam, thesis	Research clusters: The Architectural Project and its Foundations; Computation & Performance; Design & History; Geoinformation Technology & Governance; Green Building Innovation; Housing in a Changing Society; Innovations in Management of the Built Environment; Urban and Regional Studies; Urbanism

Institution	Faculty/ Unit	Degree Program	Domestic Tuition	Program Length	Curriculum	Comments
Berlage Institute		"City as a Project" Ph.D. Program	$6,395	3 years	Individual tutorials with supervisor, monthly two- day seminars with guest scholars, annual colloquium, teaching, annual research check-ins, and final exam.	Part-time program
Universitaiuav di Venezia	School of Doctorate Studies	Ph.D. in Architecture, City and Design	Approx. $4,500		Research-based.	Areas of research: Architectural Composition; Design Sciences; History of Architecture and Urban Planning; Innovation for Building and Cultural Heritage; New Technologies and Information for the Region and Environment; Regional Planning and Public Policy; and, Urbanism.

Institution	Faculty/ Unit	Degree Program	Domestic Tuition	Program Length	Curriculum	Comments
Politecnico di Milano		Ph.D. in Architectural, Urban and Interior Design Ph.D. in Architecture, Built Environment and Construction Engineering	Fee waived	3 years	35 credits (20 of which must be in the dept), followed by research and thesis.	
Budapest University of Technology and Economics	Faculty of Architecture	Ph.D. in Architecture Engineering	$6,772 (EU and non-EU)	4 years	Independent research under personal supervision	Students can either pursue a Doctor of Liberal Arts in the Doctoral School of Architecture, or a scientific Ph.D. at the Csonka Pal Graduate School.

Institution	Faculty/ Unit	Degree Program	Domestic Tuition	Program Length	Curriculum	Comments
Czech Technical University	Faculty of Architecture	Ph.D. in Architecture and Urbanism	$4,058 (EU and non-EU)	4 years	Professional courses for the first year of study (including core and elective courses). Two student workshops, regular evaluation by committee, thesis proposal, final thesis.	Studies in English or Czech. Areas of research: Architecture Theory and Design; Urban Design and Spatial Planning; History of Architecture and Monument Conservation; Industrial Design; and Architecture, Building and Technology

Appendix G: External Appraisal Report

New Program Proposal
Appraisal Report

Name of Proposed Program:	Architecture, Landscape, and Design
Degree Name and Short Form:	Doctor of Philosophy, Ph.D.
Faculty / Academic Division:	John H. Daniels Faculty of Architecture, Landscape, and Design
Faculty / Academic Division Contact:	Dean Richard Sommer
External Appraisers:	Michelle Addington, Dean, University of Texas at Austin School of Architecture Hashim Sarkis, Dean, MIT School of Architecture + Planning
Appraisal Visit Date:	March 12, 2018
Report Date:	April 3, 2018

Program evaluation criteria

1. Objectives

- *Consistency of the program with the institution's mission and unit's academic plans*
- *Clarity and appropriateness of the program's requirements and associated learning outcomes in addressing the academic division's graduate Degree Level Expectations*
- *Appropriateness of the degree or diploma nomenclature*

Issues and questions regarding the Built Environment are among the most pressing concerns facing contemporary society. From the uncertainty and risk presented by climate change, to rapid urbanization in developing countries, to maintaining equity as demographics shift, to the application of big data and related technologies in urban environments, these critical areas require a multi-domain, multi-contextual approach that the affiliated disciplines of the Built Environment are among the few possessing the breadth and depth to bring to bear the appropriate knowledge and trans-disciplinary coordination. As the University of Toronto plans and implements its Institutional Strategic Research Plan, it is likely that many of the initiatives will not only situate within

the purview of the Built Environment but will also depend upon advanced scholars in the area. The new PhD program in Architecture, Landscape, and Design will bring enhanced levels of inquiry, expertise, and collaboration that will directly align with the institution's as well as the unit's research objectives. In addition, the respective disciplines to be addressed by the new PhD program are underserved by advanced scholars. Given that the terminal degree in many of the practice based disciplines is at the Master level, there is a dearth of PhD level researchers and faculty to provide much needed leadership in academic programs at universities across the country. The program would serve to elevate the credentials and quality of faculty available to teach and lead research in many of the areas most critical to the disciplines' and University's mission. The program would also help create much needed connection between the research centers of the university and its academic programs, bridging between pedagogy and research.

The outcomes as laid out are ambitious and comprehensive, and are clearly indicative that the program aims to bring a level of rigor commensurate with what is evident in the top PhD programs in Architectural History, but is currently lacking in many of the existing programs addressing questions of practice and/or questions that are interdisciplinary in nature. This objective demonstrates the intention to produce a program that is both ground breaking as well as necessary for shoring up critical areas of weakness in similar PhD programs. While the overarching program objectives are evident and appropriate, the individual student learning expectations may not functionally lead to the achievement of the objectives. This issue foregrounds in the section titled **Depth and Breadth of Knowledge**. For example, students are expected to "Demonstrate a thorough and critical understanding of the history, theory, techniques, and practices of the design disciplines" and the program intends to support this through providing courses for students to attain "1) Knowledge of current issues in the historical, theoretical, technical, and practical dimensions of the design disciplines and 2) A thorough understanding of modes of inquiry and methods of research assessment in the design disciplines." This is asking that students possess an extraordinary depth and breadth across a field that in itself is comprised of widely varying methods and disciplines. While the desire of the program is to build a coherent body of "design" research, no such coherence currently exists, and there are no faculty role models who demonstrate the sweep of critical depth and breadth that the program is asking of its graduates to demonstrate. Ambitions for the program do not have to be embodied in each and every individual, rather they should require that there is greater clarity as to how the program will be organized in order to produce coherence as the current structure is more supportive of a collection of independent one-offs. This is not a criticism of the program *per se*, as its current proposed organization meets the standards and expectations of the existing PhD programs in Architecture at top tier universities, but it does suggest that the program should further articulate the relationship between proposed courses, learning outcomes, and program objectives.

The degree nomenclature not only matches well with the current degree offerings at the Daniels Faculty of Architecture, but is particularly suitable at communicating the program scope to external universities while nevertheless maintaining a general consistency with the current nomenclature that can be found in competitor programs. The degree name also reflects a much needed interdisciplinary approach which other programs lack and the need to combine methods and scales in order to be able to effectively address the new kinds of problems that the built environment is facing today.

2. Admission requirements

- *Appropriateness of the program's admission requirements for the learning outcomes established for completion of the program*
- *Appropriateness of any alternative requirements for admission into the program such as minimum grade point average or additional languages or portfolios, along with how the program recognizes prior work or learning experience*

As stated above, the learning outcomes are overly ambitious for an individual student as their attainment would require that applicants be polymaths who have already mastered a substantial portion of the content. If learning outcomes can be restructured to be more in line with what other programs expect, then the basic requirements that are listed match those of the top tier programs with the exception of the number of recommendations—most schools require a minimum of three. Missing from the list is clarity on primary advisor commitment and potential committee members. While the listed requirement states that the "topic must be congruent with the interests and expertise of at least one member of the PhD Standing Committee," this does not indicate whether said member must agree to work with the applicant. Many schools require a written commitment from at least one member indicating their willingness to supervise the applicant, some schools require the same of two members. While these requirements are not always listed as part of the application instructions, they would still be part of the internal documentation.

The inclusion of a statement on when a portfolio might be required is appropriate and also the norm for many programs, particularly given the openness of speculative design methods. The TOEFL score guidelines seem adequate in regard to the total scores, but surprisingly low for the minimum acceptable writing/speaking scores. The scores are not commensurate with the expectations of top tier universities and are particularly problematic given the content breadth that students will encounter. In addition, the type of academic preparation, beyond the previously earned degrees, that students need to excel in the program should be addressed. For example, given that the first part of the comprehensive exam takes place after the first year, the program should consider whether certain fields of study may require additional coursework or studies before admission can be granted.

3. Structure

- *Appropriateness of the program's structure and regulations to meet specified program learning outcomes and Degree Level Expectations*
- *Rationale for program length in order to ensure that the program requirements can be reasonably completed within the proposed time period*
- *The extent to which the program structure and delivery methods reflect universal design principles and/or how the potential need to provide mental or physical health accommodations has been considered in the development of this program.*

Again, as stated in the first section, the stated learning outcomes are not self-evident from the structure and courses. The two courses that purport to bring the knowledge of current issues and understanding of modes of inquiry are the Doctoral Research Colloquium and Theories and Methods. The first does provide a snapshot into what individual faculty and students are doing, and the second is a survey of methods that then quickly positions students into singular and normative methods. The existence of a colloquium for students with varying topics and fields of study may not de facto lead into a comprehensive and rigorous view of the sweep of encountered disciplines, but serves as a strong platform for introducing students to the critical questions emerging in their respective fields. While the survey of methods course may not be enough on its own to provide the necessary training in appropriate methods, it does foreground the particular difficulty faced by the design disciplines in which there is no prevailing method. History/Theory students are usually steered toward historiography, whereas other students, particularly those addressing more applied topics, have tended to cobble together ad hoc methods. The intention of the program is to begin to construct a more rigorous hybridization of methods for these students, and it could serve in a leadership role for other universities to emulate. Even if this intention is not fully realized by the two part methods approach built into the curriculum, the overall program structure and identified courses still align well with existing PhD programs in Architecture.

The program length is similar to that found in accelerated PhD programs where students come in with additional preparation, but should be adequate if there is appropriate faculty advising and mentoring coupled with clear milestones and deliverables.

A wide range of support structures, systems and personnel are available at both the University and the Daniels Faculty. Indeed, it is highly unusual, and quite commendable, that a School of Architecture should have in-house resources of the scope and scale that Daniels provides for its students. Furthermore, even though the program is small, its structure builds the students into a more robust cohort that ensures that no one will be likely to slip through the cracks.

4. Program Content

- *Ways in which the curriculum address the current state of the discipline or area of study*
- *Identification of any identified unique curriculum or program innovations or creative components and their appropriateness*
- *For research-focused graduate programs: Clarity of the nature and suitability of the major research requirements for degree completion*

- *Evidence that each graduate student in the program is required to take all of the course requirements from among graduate level courses*

The objectives of the program reflect and directly target the current state of the design disciplines, in regard to both the extents of the content as well as the complex inter-disciplinarity of the methods. Sample topic areas listed in the program document represent not only some of the most difficult questions facing society today, but also questions where the design disciplines should be playing a major role. Most of these questions are inherently inter-disciplinary and involve multiple research partners and multiple constituents, i.e. "refugee crises produced by political unrest, cities in need as water becomes an increasingly scarce resource." The curriculum as designed, however, privileges independent work, and its "interdisciplinary colloquium" is primarily intended for students within the program to communicate with each other rather than for students to build the interdisciplinary collaborations and networks needed to address contemporary topics. A Landscape Architecture student working on the impact of water scarcity will need a varied network of researchers from fields as diverse as hydrology and public policy. That diversity, and the mix of disciplines, far exceeds that contained within the expertise of the design disciplines, even insofar as the design disciplines are certainly exposed to a broad swath. The program does not preclude students from building these networks, indeed, it is its overarching objective, but the curriculum, as currently described, depends upon coincidental linkages to emerge in discussion rather than developing an armature for enabling students to construct the necessary linkages. This said, it should be noted that the program has reached out to faculty in multiple surrounding disciplines to serve integral roles within the program; these individuals could be instrumental in helping students build the appropriate disciplinary networks.

The complement of faculty from other Schools and Departments does embody the program's overarching objectives to be inter-disciplinary. There is robust representation from the disciplines that come to bear when many of the critical issues facing the urban environment are addressed. While most PhD programs in Architecture encourage faculty from other disciplines to serve on committees, and there are a number of programs that have joint governance with other faculties, particularly with Art History, it is unprecedented for a program to include such a diverse complement of faculty in its standing committee. This is a unique aspect of the program and also suggests that the program has the capacity to link the curriculum to the learning objectives.

The major research requirements are well documented and clear for the required courses, comprehensive exam and thesis proposal. Given the tight time length of the program, students should be directed toward courses that directly impact their topics. This requirement is clearly documented in the descriptions of both the required and elective courses. These courses are much more likely to be in disciplines outside the Daniels Faculty. The thesis is described as "a piece of scholarly writing." This overprivileges theses that are History/Theory based and indicates that other types of

research, such as experimentation, and other forms of dissemination, such as data sets, are subordinate.

5. Mode of Delivery

- *Appropriateness of the proposed mode(s) of delivery (distance learning, compressed part-time, online, mixed-mode or non-standard forms of delivery, flex-time options) to meet the intended program learning outcomes and Degree Level Expectations*

The mode of delivery is appropriate and commensurate with other top tier programs.

6. Assessment of Teaching and Learning

- *Appropriateness of the proposed methods for the assessment of student achievement of the intended program learning outcomes and Degree Level Expectations*
- *Completeness of plans for documenting and demonstrating the level of performance of students, consistent with the academic division's statement of its Degree Level Expectations*

Methods of assessment are normative in comparison to similar established programs.

Several measures were listed in the program brief regarding the overall assessment of the program, but didn't specifically address individual student performance. Milestones, other than the exams, and the criteria for meeting them need to be articulated.

7. Resources

- *Adequacy of the administrative unit's planned utilization of existing human, physical and financial resources, and any institutional commitment to supplement those resources to support the program*
- *Participation of a sufficient number and quality of faculty who are competent to teach and/or supervise in the program*
- *Adequacy of resources to sustain the quality of scholarship and research activities of graduate students, including library support, information technology support, and laboratory access*
- *Faculty have recent the research or professional/clinical expertise needed to sustain the program, promote innovation and foster an appropriate intellectual climate*
- *Where appropriate to the program, financial assistance for students will be sufficient to ensure adequate quality and numbers of students*
- *Supervisory load distribution and the qualifications and appointment status of supervisors*

The availability of tenured faculty with PhD degrees in the Daniels faculty might seem low with respect to the projected size of the program, even with anticipated promotions. However, the program, as designed, is built as a truly inter-disciplinary program with governance and advising shared by faculty in other parts of the University. The faculty complement including the other schools and departments is much larger, and their participation and advising commitment had been carefully considered and negotiated. The plans for Daniel's faculty in regard to teaching relief is manageable and demonstrates the administration's support to the management of the program.

The faculty complement, including faculty from other disciplines is large enough, but may be too diverse to enable a critical mass of research other than in questions related

to urbanism and history/theory. The quality of the faculty is excellent, and includes world renowned scholars as well as up and coming thinkers.

The University's libraries are among the finest in the world, and the unit's physical facilities are outstanding. Student support structures and systems, as discussed earlier, are excellent. The unit has a good track record of providing physical resources, such as test beds and fabrication equipment, to support research.

As noted above, the faculty are excellent in their respective areas, but there may not be the needed coverage in topics the students are interested in pursuing.

The financial commitment to the students is adequate, and the supervisory load distribution and the qualifications and appointment status of supervisors is appropriate and well-conceived.

The breadth of the faculty areas of research housed in one program and the presence of faculty from other schools as part of the program's committee could be a major asset in the sense that it encourages interdisciplinary partnerships initiated by the students, creating a unique role for the students to define new fields of inquiry around their topics.

8. Quality and Other Indicators

- *Quality of the faculty (e.g., qualifications, research, innovation and scholarly record; appropriateness of collective faculty expertise to contribute substantively to the proposed program)*
- *Program structure and faculty research that will ensure the intellectual quality of the student experience*
- *The extent to which the program has integrated any elements that enhance the diversity of its curriculum, students or teaching staff.*

As discussed in previous section, the faculty is excellent in their respective areas, and the collective faculty expertise is strong in history/theory, in urban environments, ecology, and in building technology.

The program has been designed to encourage and support a greater degree of faculty engagement than seen in many competitor programs, which should enhance the intellectual quality.

The curriculum and expected courses, as currently outlined do not explicitly address diversity, but the stated objectives as well as the example topics do open up the canon to questions that are more relevant and inclusive of diversity. The faculty diversity appears to be reasonable, and in the case of assistant professors, excellent, regarding POC, but women are still moderately underrepresented at ranks with the exception of Associate Professor and Adjuncts. Nevertheless, the balance has shown steady improvement and outpaces that of many top tier programs.

Appendix H: Administrative Response

April 10, 2018

To: Sioban Nelson
Vice-Provost, Academic Programs
University of Toronto

Re: Response to Appraisal Report for New Ph.D. in Architecture, Landscape, and Design

Dear Sioban,

I am pleased to provide my administrative response to the external appraisal of the proposed Ph.D. in the John H. Daniels Faculty of Architecture, Landscape, and Design at the University of Toronto. The appraisal visit took place on March 12, 2018, and I wish to express my appreciation to Dean Michelle Addington of the University of Texas at Austin and Dean Hashim Sarkis of the Massachusetts Institute of Technology for their thorough appraisal report.

My colleagues and I were happy to receive the appraisers' encouraging comments in support of the program. Their interpretation of the program's ambitious objectives and the alignment of those objectives with the goals of the Daniels Faculty confirmed that the proposal accurately communicates our broad intentions. The appraisers reinforced that there is a need for a program such as ours to address pressing concerns in relation to the built environment, to produce much needed Ph.D.-trained researchers and faculty, to forge greater connections between research and pedagogy, and to contribute to rigorous design scholarship. Their findings have confirmed our contention that the program will attract bright students and yield graduates who will make valuable contributions to the design disciplines and professions. The appraisers also expressed confidence in our faculty complement to successfully mount and sustain the program. They noted the high quality of their research and the unique ability of the diverse complement to address the current interdisciplinary state of design research and practice.

At a finer grain, the appraisers stated that the program's name aptly reflects its "interdisciplinarity" (more on this below) and commented on the suitability of the program length, comparing its organization to that of other Ph.D. programs in architecture schools at top-tier universities. I also appreciated the appraisers' acknowledgements of the extensive support structures, systems, library resources, facilities, and personnel at the Daniels Faculty, which are rare for an architecture school. We have built up these capacities over time, and are now proud to be able to offer such substantial facilities and human resources in the Faculty's new home at One Spadina, and to engage our students and faculty in a vigorous and challenging intellectual community.

In addition to highlighting the innovative aspects of the proposal, the appraisal report also offered important recommendations on areas of improvement. The appraisers posed questions regarding the depth and breadth required of students, wondering if the objective for students to "demonstrate a thorough and critical understanding of the history, theory, techniques, and practices of the design disciplines" may be too broad and potentially unachievable. I would like to offer some context and a clarification to address these concerns. Interdisciplinarity (the relationship of the design fields with disciplines beyond) and intradisciplinarity (the relationship of the design fields to one another—such as architecture, landscape, and urbanism, for example—or the relationship of sub-fields within the design fields—history/theory and engineering, for example) are contested terms in design schools, and many in the discipline use the terms in different, seemingly conflicting ways. In the proposed program, we are hoping to achieve both—albeit in modest ways. First, our carefully built faculty complement draws on units beyond the Daniels Faculty: art history, geography and planning, engineering, etc. Second, the program is designed to afford "intradisciplinarity": not only within landscape and architecture, for example, but also between history/theory and building science. This does not mean that students will be expected to master all of these goals. Applicants to our Ph.D. program that hold a professional (three-year) Master

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of Architecture or Master of Landscape Architecture degree will be given preference, and all applicants will be required to hold a master's degree or equivalent in Architecture, Landscape Architecture, Fine Arts, Engineering, Environmental Design or, exceptionally, in a related field. This means that the students in the program, especially those with professional degrees with these educational backgrounds will have already had broad exposure to the technologies, histories, and social factors at play in the design of the built environment. Nevertheless, students will not be expected to become experts in *all* areas within the design disciplines represented at the Daniels Faculty.

The appraisers applauded the interdisciplinary opportunities afforded by the program, and requested more explicit information on how students will achieve this. The program provides students with the opportunity to engage with other disciplines (interdisciplinarity in the sense I explain above) or with one or more sub-field(s) (intradisciplinarity in the sense I explain above), if they so choose. From the outset of the program, students will be exposed to different design methodologies, debates, and areas of research through required courses, electives, supervision, engagement with fellow students, the comprehensive exam, proposal development, and thesis research. More specifically, the Colloquium will allow for disciplinary linkages to be made in the very first semester of study. The comprehensive exam is purposefully structured in two parts to accommodate possible interdisciplinary and intradisciplinary interests and is meant to be used strategically. We agree with the appraisers that greater detail would be helpful, and have modified the proposal to specify that the breadth part of the exam will be administered by the student's supervisor, however the depth part of the exam may be taken within the Faculty or beyond. The second part of the exam for depth, in other words, will be the opportunity to cross the boundaries of the field or the discipline. The student, in consultation with the supervisor, may select an appropriate faculty member in another discipline or a relevant sub-field to administer the depth exam.

The appraisal report made a number of recommendations regarding admission requirements to the Ph.D. The appraisers noted that applicants are not asked to provide written commitment from a potential supervisor. After some deliberation during development of the PhD proposal, the Daniels Faculty chose not to require this of applicants, although this policy does not preclude students from contacting faculty members informally before the admission process. In response to the appraisers' comments, and to encourage applicants to consider an appropriate area of research, we have revised the proposal to require that within the two-page proposal the applicant also identify a primary discipline, possible sub-field(s), and potential supervisors. The process of assigning a supervisor will involve the admissions committee carefully reviewing applications, including the two-page proposal, to ensure that sufficient faculty expertise is present to support the student's specific research questions. Of course, an appropriate faculty member must be available (based on existing teaching and supervisory loads) to supervise the student for admission to be granted. The admissions committee will obtain commitment from the potential supervisor before admitting an applicant, and the applicant will be informed of this in the letter of offer. Through the supervisory role, which begins the summer prior to program commencement, students will be advised on appropriate selection of coursework and guided reading to address any gaps in background knowledge while ensuring timely completion of the comprehensive exam. We have revised the proposal to include these details, along with modifying the process for committee formation. The proposal now stipulates that students will work with their primary supervisors until the completion of their comprehensive examination, at which point the supervisory committee will be formed, typically consisting of faculty members from Daniels and beyond. We also agree with the appraisers that the admission requirements should include a request for three letters of recommendation and the proposal has been revised to reflect this. Additionally, we have raised the TOEFL score requirements in response to comments from the appraisers and the proposal now stipulates scores that are aligned with the requirements of similar Ph.D. programs at peer institutions.

Although the appraisers were impressed by the qualifications of the faculty complement, uncertainty was expressed around the ability of faculty to support students' potentially interdisciplinary research areas. Our faculty complement was strategically generated to ensure overlapping research interests, to nurture opportunities for collaboration, and to allow students to create committees appropriate for their thesis

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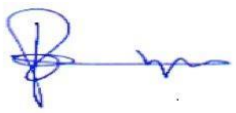
topic. We have modified the proposal to draw attention to existing synergies in the research areas of our faculty, such as acoustics (Akiyama, Peters, Clarke), media (Harwood, Lobsinger, Akiyama), public health (Verderber, Anderson), and smart cities (Peters, Siemiatycki), among others. As noted above, we have also clarified that the admissions committee will match students to appropriate supervisors at the point of admission, based on their statement of research interest. Regarding faculty diversity, we agree that more women are needed at the Assistant Professor, and Full Professor ranks. The Faculty has made great improvements in the representation of women and visible minorities in recent years. In fact, it has made the biggest shift toward gender equity among UofT divisions and has achieved an overall gender balance near parity. We will actively focus on continuing this trend through the promotion and hiring of new tenure-stream faculty members with Ph.D. credentials (currently underway, and planned in coming years).

Lastly, we agree with the appraisers that the thesis can be based on a variety of research, but we wish to clarify that the University of Toronto School of Graduate Studies doctoral degree regulation on the thesis (12.1.2.8) characterizes the thesis as “a piece of scholarly writing, [that] shall constitute a significant contribution to the knowledge of the field and must be based on research conducted while registered for the Ph.D. program.” This does not preclude other types of research, but refers to the standard format that will gather together research and be assessed by the Final Examination Committee. It is also the standard format for the preservation and public dissemination of the dissertation.

We are extremely thankful to Dean Addington and Dean Sarkis for their time and insights. Their appraisal has affirmed our ambitions, and helped to strengthen the proposal in critical ways, ensuring that it accurately reflects our vision for the Ph.D. in Architecture, Landscape, and Design.

Sincerely,



Richard Sommer
Dean,
Professor of Architecture and Urbanism

UNIVERSITY OF TORONTO
JOHN H. DANIELS FACULTY OF
ARCHITECTURE, LANDSCAPE, AND DESIGN

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Appendix I: Endorsement of the Vice-Provost, Academic Programs

UNIVERSITY OF TORONTO

OFFICE OF THE VICE-PROVOST,
ACADEMIC PROGRAMS

April 10, 2018

Richard Sommer
Dean, John H. Daniels Faculty of Architecture, Landscape, and Design
University of Toronto

Re: Appraisal Report, Proposed Doctor of Philosophy in Architecture, Landscape, and Design

Dear Richard,

I am very pleased to receive the appraisal of the proposed PhD in Architecture, Landscape, and Design. Your administrative response to the appraisal nicely summarizes the report and highlights the specific suggestions made by the appraisers.

The appraisers had a number of questions on how students would meet the learning outcomes of the proposed PhD, given the interdisciplinary nature of the program. In your response you confirm that students will not be expected to become experts in all areas within the design disciplines, and have clarified the program goals with respect to interdisciplinarity and intradisciplinarity. You also describe the program elements that will support these goals, such as coursework, the comprehensive exams and the composition of the thesis committee. I note that the proposal has been changed to more clearly reflect this. Your administrative response also clarifies support for interdisciplinary and intradisciplinary research topics will be considered during the admission process to ensure appropriate supervisory coverage.

The appraisal report made suggestions for the admissions process, such as, requiring 3 rather than 2 letters of recommendation, and increasing the English language requirements when proof of English-language proficiency is required. In your response you have incorporated these suggestions.

I will be very pleased to recommend this new PhD program to governance for approval, following approval at the Divisional level.

Sincerely,

Sioban Nelson
Vice-Provost, Academic Programs
cc.

Adriana Arredondo, Office Manager and Executive Assistant to the Dean, John H. Daniels Faculty of Architecture, Landscape, and Design

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Kate Nelishcher, Assistant Dean, Academic and Outreach Programs, John H. Daniels Faculty of Architecture, Landscape, and Design
Joshua Barker, Dean, Graduate Studies and Vice-Provost, Graduate Research and Education
Daniella Mallinick, Director, Academic Programs, Planning and Quality Assurance, Office of the Vice-Provost, Academic Programs
Jennifer Francisco, Coordinator, Academic Change, Office of the Vice-Provost, Academic Programs