UNIVERSITY COUNCIL

ACADEMIC PROGRAMS COMMITTEE

FOR INFORMATION ONLY

PRESENTED BY: Terry Wotherspoon, chair, Academic Programs Committee

DATE OF MEETING: October 19, 2017

SUBJECT: APC endorsement of Architecture Programs (B.Des. in Architecture and the M.Arch**.**

COUNCIL ACTION: For information only

CONTEXT AND BACKGROUND:

The Academic Programs Committee was asked to review and support the approval of two new academic programs in architecture – a Bachelor of Design (B.Des.) in Architecture and a Master of Architecture (M.Arch.). APC reviewed and discussed the proposals at their September 13 and October 4 meetings.

Committee members were impressed with the vision, scope and academic merits of the proposal, but the committee was unable to recommend that Council approve the academic programs while significant questions of resourcing and physical location are outstanding. It recognizes that in order to proceed with the work required to resolve some of the resource questions, concrete support is needed for the academic programs. Therefore, at its October 4, 2017 meeting, APC unanimously passed the following motion:

> *That the academic programs committee supports in principle the Bachelor of Design (B.Des.) in Architecture and the Master of Architecture (M.Arch.) programs, but will need to see the proposals for the academic programs again once the question of resourcing has been answered in order to recommend that Council approve them.*

DISCUSSION SUMMARY:

Program Justification
The rationale and objectives or the program are clearly stated in the proposal. The programs will constitute a professional program in architecture as defined by the Canadian Architectural Certification Board (CACB). Saskatchewan is currently the only

province in Canada west of the Maritimes that does not have a School of Architecture, and the province has fewer resident architects per capita than nearly every other province in the country.

Nature of the Program
The proposed two degree model allows the program to target a broad and diverse range of students. This two degree model is common in Canada. While the M.Arch is required for licensure as an architect, some students choose to complete only the undergraduate degree in preparation for a number of alternative career possibilities.

The undergraduate and graduate programs would provide innovative teaching in the field of design, a new field for the U of S. The B.Des. in Architecture will introduce the fundamental skills and concepts needed for building design, while the M.Arch. will reinforce these skills and bring students to a level of knowledge and competence required for a professional Architect.

The proposed architecture programs would be housed in the yet-to-be-approved School of Architecture and Visual Design, which would be a department in the College of Arts and Science and would incorporate the current department of Art and Art History. This art-based approach to architecture, although relatively common in Europe, would be unique in Canada and would be a distinct competitive advantage for the U of S's architecture programs. The program would also partner with other existing units and programs on campus, including Engineering and Regional and Urban Planning, to ensure that students have an appropriate depth and breadth of knowledge and experience.

The proposal for the B.Des. in Architecture and the M.Arch., which is attached, provides extensive detail about the academic programs being proposed.

Discussion at APC
The committee is highly supportive of the programs as presented and finds they have academic merit. The curriculum is well-developed and was thoroughly outlined and presented in the proposal. The committee, additionally, is excited about the interdisciplinary aspirations of these degree programs, given the strong links between architecture and the fine arts as well as with disciplines like engineering.

Committee members had extensive discussions about various aspects of the proposal, including several issues that have been clarified in the proposal or taken into consideration by the proponents. Concerns were raised about resourcing for the proposed programs, particularly given the financial situation the U of S finds itself in currently. Though the committee recognizes that the ongoing operating costs outlined in the proposal are relatively modest given the size and intensity of the program (just over $3,000,000 per year to operate both the B.Des. and M.Arch. program), there are significant start-up costs associated with the programs, including hiring 11 new faculty members, building or retrofitting an appropriate space, and acquiring the needed equipment and technical support. There were additional concerns about the potential off-campus location for the School of Architecture and Visual Design, which would house the academic programs, particularly with respect to how the interdisciplinary aspirations of the programs would be realized with an off-campus location and how it would impact student experience, engagement and access to Uof S services.

The committee supports the efforts to include Indigenous knowledge and local design principles in the academic programs, particularly in the B.Des. in Architecture, though the committee would like to see more consideration given to how Indigenous design would be covered in the M.Arch program.

APC looks forward to reviewing the proposals for the B.Des. in Architecture and the M.Arch programs once the questions of resourcing and location are resolved in order to reach a stage in which it is able to recommend that Council approve them.

ATTACHMENTS:

1. Proposal for Academic or Curricular Change: Bachelor of Design (B.Des.) in Architecture and the Master of Architecture (M.Arch.)
   - Appendices for proposal for a Professional Program in Architecture at the University of Saskatchewan

UNIVERSITY OF SASKATCHEWAN	**Proposal for Academic or Curricular Change**

PROPOSAL IDENTIFICATION

Title of proposal: Architecture

Degree(s):   Bachelor of Design (B.Des.) - Architecture
              Master of Architecture (M.Arch.)

Field(s) of Specialization: Architecture

Level(s) of Concentration (undergraduate): Four-year

Degree College: Arts and Science
                College of Graduate and Postdoctoral Studies

Department: Art and Art History

Contact person(s) (name, telephone, fax, e-mail):

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Proposed date of implementation: B.Des. – September 2019
                                       M.Arch. – September 2023

Proposal Document

Introduction: A professional Program in Architecture

Our vision is of a Saskatchewan with a thriving culture of architecture and design, in which the quality of place is an important value, and in which individuals and communities are empowered to create great places in which to live, work and play.

Equally, we see a University of Saskatchewan in which the power of design and design thinking is available to students and researchers in all disciplines; to further, strengthen or supplement their research, to enhance their ability to find solutions to tomorrow's problems, and to make their education even more relevant to today's world.

This proposed new programs, Bachelor of Design (Architecture) and Master of Architecture, being put forward concurrently, constitute a *professional program in Architecture* as defined by the Canadian Architectural Certification Board (CACB). Saskatchewan is the only province in Canada west of the Maritimes that does not currently have a School of Architecture. Not coincidentally, Saskatchewan has far fewer resident architects per capita than any other province, with the exception of Newfoundland and Labrador. In addition, Saskatchewan is the only province in Canada in which more architects living outside the province are licenced to practice than those based within the province. Non-resident architects outnumber resident architects - and they do so by a factor of approximately 3.5:1 (and growing rapidly). The direct economic effects of the shortage of architects in the province are clear, with architectural fees (in addition to sub-consultant fees, income taxes, and so on) consistently flowing out of Saskatchewan.

In addition to helping to resolve this financial issue, there are a number of indirect benefits to the Province and the University of founding a school of architecture. To the Province, a School of Architecture would provide new career and personal development opportunities to its young people. It would also assist the development of communities in the Province, including First Nations and Métis communities by fostering interest in and knowledge about design and the quality of place. Further, it would help economically in assisting in the development and growth of a design industry in Saskatchewan. And perhaps most importantly, it would allow the Province to be designed and built by Saskatchewanians.

For the University, a School of Architecture would provide innovative teaching in a field that is currently almost absent (design), at a time when that field is becoming more and more prominent in society as a whole. Such teaching could also be of value to the University as a whole, and not just to the professional programs in the School, offering expertise in design education to diverse Colleges and disciplines. The School would also contribute significantly to the discovery mandate of the University, especially those aspects of discovery that relate to the University's focus on a Sense of Place. And by building and maintaining a significant range of outreach activities, the School will help to bring the University and the community together.

As described in detail in the Notice of Intent document (NOI, SAVA-5-SAVA-6), appended to this application, the proposed programs will be a strong contributor to the University in achieving its strategic objectives as described in the Third Integrated Plan as well as being supportive of the priorities and aspirations outlined in the Foundational Documents. The professional program is constructed around the

values of: a sense of place; the value of collaboration and of community; the importance of making; an entrepreneurial spirit; and a meaningful engagement with Indigenous Ways of Knowing.

The two degree programs proposed at this time will operate in a layered model: while the B.Des. introduces most concepts and focuses on fundamental skill development needed for the design of buildings, the M.Arch. reinforces these skills to bring them to a level of professional competence, deepening conceptual knowledge, developing research skills, and moving beyond building design to a consideration of the skills and knowledge needed as a professional Architect. In Canada, the majority of professional programs in architecture follow this two-degree model. Although the M.Arch. degree is required for Architectural licensure, some students choose to complete only the undergraduate portion, in preparation for a number of career possibilities other than licensed architect (described below).

The adoption of the proposed two-degree model, and within that a "2+2" model for the B.Des. portion[1], allows the program to target a broad and diverse range of student demographics: students coming directly from High School; students transferring from another program at the University of Saskatchewan or elsewhere; students with a certificate from a College program (an articulation agreement is being developed with Saskatchewan Polytechnic); students with university degrees in fields other than architecture; and students with undergraduate degrees in architecture from other institutions in Canada or abroad. The program has been designed to be friendly to mature applicants or those who are returning to university studies after a break. The program has also been designed with a clear focus on community development and a foregrounding of Indigenous Knowledge in the undergraduate degree, which we believe will be attractive to Aboriginal students and supportive of First Nations and Métis community development in the Province. Meanwhile, the graduate program has been designed to be attractive to both local and international students, with its focus areas in sustainable extreme climate design, community development and advanced construction technologies.

As stated above, this will be the only professional program in Architecture in Saskatchewan, and the only program at the undergraduate level west of Winnipeg[2]. Of the eleven existing programs in Canada, the most similar are those at Dalhousie University and the University of Manitoba. The University of Saskatchewan program is distinguished by its foregrounding of Indigenous Knowledge, its focus on community, and its strong relationship to technology and to the Architectural profession. The program will be one of five co-op programs in Canada and will be differentiated from the programs in Ontario and Quebec (7 in total) by its ability to admit students as transfers from other disciplines into the middle of the undergraduate degree[3]. For a thorough discussion of Architectural education in Canada, please refer to the Notice of Intent (*Appendix B: Notice of Intent for a School of Architecture at the University of Saskatchewan*).

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[1] A 2+2 model refers to two years of general education, primarily in the Arts and Sciences, followed by two years of professional education in Architecture. Within Canada, this model is also followed by the Archtiecture programs at Dalhousie University and the University of Manitoba.
[2] The University of British Columbia and the University of Calgary both have three-year stand-alone Master of Architecture programs.
[3] The University of Waterloo, Carleton University, Ryerson University, McGill University, Université de Montréal and Université Laval programs all admit students directly into architecture studio from High School or CEGEP.

Program administration
Both programs (B.Des. and M.Arch.) will be situated within the Department of Art and Art History. A concurrent proposal is being developed to reorganize that Department as the School of Architecture and Visual Art.

Admissions requirements and process

The Bachelor of Design (B.Des.) Degree

The B.Des. program has been constructed to allow a number of different admission streams, as outlined below.

Admission from High School
> Students entering from High School will be admitted to the College of Arts & Science, using the standard admission requirements.
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> Students will apply to the program after completion of a minimum of 60 credit units. Students will be selected based on responses on an application form, C.W.A., and a portfolio of the student's creative work, and possibly an interview.
>
> Students may be conditionally accepted to the program earlier in their studies, based on High School/University grades, a portfolio of creative work, on a Declaration of Intent, and possibly an interview. We anticipate that approximately 10 spaces will be held for students in their first year, and another 15 for students in their second year. Such students will be required to maintain an appropriate C.W.A. prior to final admission. This process will help recruitment to the U of S program to be competitive with other Canadian programs which admit students directly from High School.

Applicants with the Diploma in Architectural Technologies (Building Science) from Saskatchewan Polytechnic
> The program will seek to establish an articulation agreement with Saskatchewan Polytechnic to allow holders of the Diploma in Architectural Technologies (Building Science) to complete the Bachelor of Design degree in two years.

Master of Architecture

The proposed M.Arch. program has also been designed with multiple admission streams in order to allow a diverse groups of students and to reach as many potential applicants as possible.

Applicants with an undergraduate degree in architecture

Applicants with a previous undergraduate degree in architecture ***that forms part of a professional program in architecture[4]*** will be eligible for admission to the 6-semester M.Arch. (4 academic terms plus 2 co-op work terms). Applicants from programs other than the University of Saskatchewan B.Des. may be required to complete additional undergraduate coursework (maximum 9 credits) in order to ensure accreditation requirements are met.

Requirements:

- University of Saskatchewan Bachelor of Design in Architecture, or the equivalent from a Canadian or foreign institution. The degree name may vary from institution to institution. Examples of appropriate degrees include but are not limited to:
    - Bachelor of Architecture
    - Bachelor of Architectural Studies
    - Bachelor of Architectural Science
    - Bachelor of Design in Architecture
    - Bachelor of Environmental Design in Architecture
    - Bachelor of Science in Architecture
- A cumulative weighted average of at least 70% (U of S grade system equivalent) in the last two years of full-time study (e.g. 60 credit units U of S equivalent).
- Demonstrated ability for independent thought, advanced study, and research in architecture as demonstrated by submission of a portfolio of academic and professional work.
- Proof of English language proficiency may be required for international applicants whose previous education was in a language other than English.

Applicants with an undergraduate degree in a discipline other than architecture

Applicants with a degree in another discipline will be considered as applicants to the B.Des. program and will be undergraduate students. Applicants with a degree in another discipline will normally receive sufficient transfer credits to complete the B.Des. program in two years.

Program Objectives

The Notice of Intent describes the objectives for the Architecture Program (B.Des. + M.Arch.) as a whole.

Bachelor of Design

Within this structure, the primary objectives of the B.Des. program are to prepare students for professional studies in Architecture at the graduate level, while ensuring that students who elect not to continue in graduate studies have a range of skills and knowledge that will be sufficient preparation for a

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[4] Included in this category from within Canada are the Bachelor of Environmental Design degree from the University of Manitoba; the Bachelor of Architectural Studies degrees from Laurentian University, the University of Waterloo, and Carleton University; the Bachelor of Architectural Science degree from Ryerson University; the Bachelor of Science in Architecture degrees from McGill University, the Université de Montreal, and Université Laval; and the Bachelor of Environmental Design Studies at Dalhousie University. There are many equivalent programs outside of Canada.

number of roles in industry (described below). In order to accomplish these objectives, a number of program objectives have been identified.

- To develop a broad understanding of the discipline of architecture, including its history, its theoretical literature, and its modes of practice.
- To develop an understanding of Indigenous knowledge and world-views in relation to the study of place and environment.
- To develop an intermediate level of skill in design, and particularly in the design of buildings, as well as an understanding of what constitutes an intentional design process.
- To develop an understanding of the technical and process-related aspects of building design and construction.
- To develop a broad expertise in the tools of design, both analog (traditional) and digital.
- To develop skills in written and oral communication as related to the discipline of architecture, as well as critical thinking and analysis.
- To understand the role of community development in relation to architecture and the role of the architect as advocate for diverse communities, and to develop skills needed to further this collaboration and advocacy.

Master of Architecture

The primary objectives of the Master of Architecture program are to prepare students who are already skilled designers of buildings for architectural internship, and for the role of professional architect in the Saskatchewan and Canadian contexts, while supporting the needs of the profession and the Province through relevant research in architecture. In order to accomplish these goals, the following program objectives have been identified.

- To develop an understanding of research practices in architecture.
- To conduct design-based research in specific areas of need in Saskatchewan, as determined by the program; initially, in sustainable design for extreme climates; community-centred design; and intelligent building design.
- To further develop design skills and skills with design tools to a high level, particularly in the design of buildings.
- To develop a clear understanding of the role of the architect in terms of leadership, citizenry and advocacy.
- To develop the skills needed to manage architectural projects and to develop an architectural practice; to develop entrepreneurial and business skills for a rapidly changing future.

Uniqueness within Canada and within the University of Saskatchewan

The program will be the only professional program in Architecture in Canada west of Winnipeg to include an undergraduate component and the only program west of Ontario to offer a co-operative education component. It will be one of two programs in Canada to offer a significant integration of Indigenous knowledge. As a result, the program is likely to be of significant interest to incoming first-time University students from Alberta and British Columbia as well as Saskatchewan. Within the University, the B.Des. will be the first program in Design (not including Engineering programs), filling a significant gap in the University's offerings.

Other significant unique features are addressed below and in the Notice of Intent. For more information about Architectural education in Canada, please see the Notice of Intent.

Collaborative curricular responsibility

The collaborative spirit that has underpinned the design of the program is proposed to extend into curricular management, with content-area experts from a number of disciplines sharing in the responsibility for maintaining – and in some instances delivering – the curriculum. These relationships are described in the Notice of Intent and will continue to develop as the program matures. To date, we have had positive responses in principle for curricular collaboration based on cross-appointments from the College of Engineering and the School for Environment and Sustainability.

Studio

The B.Des. program includes four semesters of architectural design studio, with two more in the M.Arch. Following standards for Schools of Architecture in Canada and requirements established by the CACB, these courses are proposed to offer twelve hours of instruction per week, with a maximum ratio of fifteen students per instructor. The studio is typically staffed 50% by tenure or tenure-track faculty, and 50% by sessional instructors. The studios will be weighted at 6 credits per semester.

Summer Semester

The B.Des. program includes a required summer semester, in order to facilitate the Co-op program (see below) as well as to enable a design-build studio which will include work outdoors.

Focus on Practice and community

In comparison with other professional programs in Architecture in Canada, the B.Des. program has a clear focus on community development and on developing the skills and knowledge needed by an architect in order to work with various communities.

Indigenization

Connected with the focus on community, the program takes a strong focus on Indigenous Ways of Knowing and how they can allow us to understand architecture and community issues. The program will be a leader in Canada in this area and a leader on campus in bringing Indigeneity into the front of mind and practice.

Co-op (B.Des. and M.Arch.)

The B.Des. program will include one required semester of co-operative education. This is in preparation for the two additional semesters required within the Master of Architecture program, which will allow that program (and hence the professional program in architecture) to meet the requirements of the Canadian Association for Co-operative Education (CAFCE). It will be the first CAFCE-certified program at the University of Saskatchewan.

Focus on design for extreme climates, community-centred design, and advanced manufacturing technologies in design and construction (M.Arch.)

The Master of Architecture degree is designed to study in depth several areas of particular concern to the Province of Saskatchewan. While these may change as conditions change, the three areas listed above have been identified as primary areas of study. This work will be mainly conducted through the studio.

For more information on the unique characteristics of the program, please see the Notice of Intent.

Anticipated demand and enrolment assumptions

We propose an enrolment target of 45 students per annum in the Bachelor of Design program, of which roughly 15 students will have previous degrees and hence, effectively, enter directly into the third year of the program. We expect to meet that target in the first year (2018). We also propose an enrolment target of 45 students per year into the Master of Architecture program. Context and background for these proposals are provided below.

Demand has been anticipated based on a demographic market analysis and appears to be sufficient for the enrolment targets for both programs. The assumptions made in developing this model are as follows.

1. Accreditation Ratios: the CACB requires a maximum ratio of students to faculty *in the design studio* of 15:1. Operationally, this ratio is understood as an average across all studios in the professional program. As a result programs are developed on a model that assumes multiples of 15 in an average class.
2. Cohort size: experience shows that a class size of four sections (60) is ideal in allowing a balance of "critical mass" and "manageability". Schools in Canada vary in size from two sections (M.Arch., Ryerson) to eight sections (B.Arch.Sci., Ryerson) with most programs at either three, four or five sections (45, 60 or 75 students per cohort).
3. Undergraduate and Graduate ratios: Most schools have approximately equally sized undergraduate and graduate classes. The main exception is Ryerson, noted above; in the Ryerson case the M.Arch. was intentionally designed as a small program in a recognition of the traditional multiple career paths of Ryerson B.Arch.Sci. graduates within the design and construction fields. As a result, the Ryerson program has no entry pathway for students transferring from other disciplines, for example.
4. Demographics: Saskatchewan produces roughly 12,000 high school graduates in a given year. The Ontario experience (150,000 high school graduates; roughly 1700 architecture applications) suggests that those 12,000 Saskatchewan graduates should result in approximately 135 applications to the B.Des. program annually. However, we note that the University of Manitoba reports 380 applications in the most recent year of reporting, with high school graduation numbers nearly equal to Saskatchewan. This is evidence that students do not necessarily stay within their province. In Western Canada (west of Ontario), there were a total of approximately 100,000 high school graduates, with a potential pool of architecture applicants, using the numbers above, of approximately 1135 per annum, and (currently) only one undergraduate program in architecture (Manitoba).
   In developing enrolment targets, we have used the conservative position of assuming that all Saskatchewan applications will come to U of S, and no applicants from other provinces – that is, we have been using a number of 135 applications per annum. In our opinion, this number is highly conservative. Matriculation rates across the country vary from 1 in 3 to 1 in 6; we are assuming a rate of 1 in 4 in our modelling.

   In addition, there will be a handful of students who transfer from other disciplines at U of S into architecture in Year Three of their studies. We are assuming for the purposes of our model six such students per year. Finally, there is expectation of a number of students entering from the Architectural Technology program at Saskatchewan Polytechnic; again, we are assuming six

such students per year.

Graduate numbers are more difficult to determine as students come from many different places. We can note for example that UBC reports 380 applicants for 48 spots annually among applicants with first degrees outside of architecture. We are carrying the again conservative number of 95 applicants (based on the population ratio of BC to Saskatchewan) and a matriculation rate of 1 in 4.

For students entering the M.Arch. directly, we anticipate a small number of applications – perhaps 40 per year – with again a matriculation rate of 1 in 4. Most of these applicants, at least in the early years, will be from outside of Canada.

We recognize that these demographic analyses have wide areas of uncertainty and expect that the enrolment targets will be refined over a number of years of operation. In producing our model we have therefore tried to be consistently conservative.

5. Attrition: we have made a number of educated guesses as to attrition rates, based on experience at other institutions. As the program has a number of unique characteristics, however, a large degree of uncertainty will remain.
After year one (first experience with university) we anticipate an attrition of 10%. After year two, before the start of the specifically architecture courses, we anticipate an attrition of 5%.

After year three, in which students first have design studio, we anticipate a further 10% attrition among students who realize this is the wrong field for them. Among students transferring from Saskatchewan Polytechnic we have carried a 5% attrition at this stage.

Among students admitted into architecture in year one, we are carrying a 20% attrition between the B.Des. and M.Arch.; some students will decide to enter the workforce while others will pursue graduate education elsewhere. Among students who enter in year three (transferring from other degrees) we anticipate a smaller attrition of 5%.

Experience shows that attrition at other points in a program in architecture is very low.

These numbers are summarized in the chart below.

	B.Des. 1	B.Des. 2	B.Des. 3	B.Des. 4	M.Arch. 1	M.Arch. 2
Entering from High School	33.75	30.4	28.9	26.0	20.8	19.8
Transferring from other U of S programs			6	5.4	5.1	4.8
Transferring from SaskPoly			6	5.7	5.4	5.1
Transferring from other degrees			23.75	21.4	20.3	19.3
Direct M.Arch. Entrants					10	9.5
Total Matriculants as per model	**33.75**	**30.4**	**64.65**	**58.5**	**61.6**	**58.5**

6. Conclusions: although the (already conservative) model suggests that a four-section program might be achievable, the Working Group and Steering Committee agree that a three-section program is more appropriate, at least during the early phases of the program development and while assumptions are being tested.

Job Opportunities

The Notice of Intent discusses employment opportunities for graduates of the professional program in Architecture. Graduates of the B.Des. who choose not to go on to the M.Arch. degree will also have significantly enhanced career opportunities. These include:

- Designer or technologist within an architectural office.
- Project manager in development or construction firms.
- Administrative and management positions in development or construction firms.
- Independent designer of small building projects.
- Designer in related fields (interior design, furniture design, industrial design, game design, etc.).
- Administrative careers in municipal, regional or provincial governments (for example, building officials, plans examiners, project planners, project managers, heritage professionals).
- Administrative careers in private companies and public institutions (Education, health care, etc.) related to building planning, building design and space management.
- Community housing advocate.
- Further education in related design fields (Interior Design, Landscape Architecture, etc.).
- Graduates of the B.Des. degree will also be eligible to complete their M.Arch. degree at other institutions in Canada and abroad.

Relationship of program to research

The Notice of Intent discusses the typical forms of discovery activities undertaken by faculty in Architecture, and it is the expectation that new faculty will engage in a rich and diverse set of such activities. While it is too early to discuss specifics (as faculty have not been hired), new faculty who are active researchers in the main themes of the B.Des. – community engagement, Indigenous knowledge, design|build, and design methods – will be sought out.

The Master of Architecture has a more direct connection to research. We have organized the program around a Design|Research thesis, and expect students to undertake their thesis in an area of particular concern to the program and the Province.

Curriculum Design

Process and consultation

The curriculum has been designed through a process that involved a number of consultations with a broad collection of individuals from the U of S and elsewhere that constituted our Architecture Program Working Group. Oversight Committee and Working Group members are listed below. To date we have held three sessions with the Working Group, and many meetings of the Oversight Committee.

Oversight Committee Membership 2016

Andrew Wallace	U of S Facilities; Committee Chair, U of S
Paul Blaser	Saskatchewan Association of Architects; Committee Chair, SAA
Colin Tennent	U of S Facilities
Susan Shantz	Department of Art and Art History
Bruce Sparling	College of Engineering

Ryan Walker	Regional and Urban Planning
Dave Edwards	Saskatchewan Association of Architects
Bob Burnyeat	Saskatchewan Association of Architects
Alexis Dahl	Programs Office, College of Arts and Science
Colin Ripley	RVTR, Project Director; Ryerson University

Working Group Membership 2016

Jon Bath	Department of Art and Art History
Don Bergstrom	Interim Dean, College of Engineering
Peta Bonham-Smith	Acting Dean, College of Arts and Science
Trever Crowe	Associate Dean, College of Graduate Studies and Research
Candice Dahl	University Library
Kevin Flynn	Chair, Academic Programs Committee of Council
John Graham	Department of Art and Art History
Randy Grauer	General Manager of Community Services, City of Saskatoon
Jill Gunn	Chair, Regional and Urban Planning
Rob Innes	Indigenous Studies
Paul Jones	School of Environment and Sustainability
Chris Kailing	Regina Advocates for Design
Paul Koopman	Koopman Architects
Ann March	March Schaffel Architects Ltd.
Charles Olfert	AODBT Architecture + Interior Design
Maureen Reed	Assistant Director, SENS
Laird Ritchie	Ledcor Inc.
Robyn Robertson	Etta Design Office
Jim Siemens	Oxbow Architects
Toddi Steelman	Director, SENS
Brian Storey	Community Member
Rod Stutt	Program Head, Architectural Technologies, SaskPoly
Candace Wasacase-Lafferty	Director, Aboriginal Initiatives
Stephanie Yong	Director, the Wilson Catalyst Centre
Victoria Yong-Hing	OPEN Projects
Jamie Youck	P3Architecture Partnership

Session 1: Over two days, we formulated the overall objectives and structure for the Professional Program and defined first draft Learning Objectives. This session also looked into forms of discovery and outreach appropriate to the program. Following the session, the proposals were tested in the form of the NOI, and degree-specific objectives and sub-objectives were drafted. For further information, please see *Appendix B, Notice of Intent*.

Session 2: Over another two days, we refined the Learning Objectives, mapped the objectives (and sub-objectives) semester by semester over a four-year timeline, and then proposed groupings of courses that resolved the proposed mappings. Sample working documents are available in *Appendix C: Working Group Documents*. Following this meeting, the proposed courses were re-organized into a program (B.Des. and M.Arch.) that fits the model proposed in the NOI. The resulting course list was reviewed by the Architecture Program Steering Committee and several external educators for content consistency, and by the College of Arts and Science (Alexis Dahl) and the College of Graduate Studies and Research (Trever Crowe) for conformance with College policies. Initial course outlines (calendar descriptions, weekly schedule and readings) were developed.

Session 3: Again over two days, the Working Group reviewed the overall curriculum structure as well as individual initial course outlines. Subsequently, curricular modifications have been made and course outlines completed. Several external educators have provided assistance in particular content areas of the curriculum. For the resulting program flow in graphic format, please see *Appendix D: Program Flow Diagram*.

Following the third consultation session, we had discussions with the College of Engineering, with SENS, and with Regional and Urban Planning regarding particular portions of the proposal. Course and program development have been informed by input from a number of content-area experts within architectural education in order to clarify particular aspects of the programs:

Terri Meyer Boake	University of Waterloo	Architectural Technology
Jake Chakasim	Laurentian University	Indigenous Architecture
Scott Sörli	University of Toronto Ryerson University University of Waterloo	Design Studio Sequence
Vincent Hui	Ryerson University	Digital Technologies Co-op Programs

Following this series of consultations we developed initial course outlines for all proposed program courses (see *Appendix H: Initial Course Outlines)*.

Objectives and Sub-objectives

The Notice of Intent defines a series of seven Student Learning Objectives for the Professional program in Architecture. Through the consultative process, Learning Objectives were refined and objectives specific to the B.Des. program were developed. Given the layered two-degree model, the seven Learning Objectives for the B.Des. are related to those for the professional program, but set out specific expectations for the first degree.

By the end the Bachelor of Design (Architecture) Degree, students will:

- Make basic use of the tools and techniques typical of contemporary design and a defined design process in order to design buildings of a moderate level of programmatic and technical complexity and other architectural projects. The graduate will be able to produce representations of the proposed design that will illustrate the conceptual ideas, spatial and programmatic relationships, and general technical and material considerations. (Design)
- Understand the relationship between design and its broader cultural context, including Indigenous cultures. Analyze buildings, communities and other design projects formally and in their social, environmental and political contexts. Communicate this analysis through writing, speaking and graphic media. Understand in broad strokes the development of Architectural history and theory. (Culture)
- Understand the basic principles underlying building systems and components, including structural, environmental and material systems, as well as the impact of those systems on the overall building design. (Technology)
- Understand the organization of the construction industry in Canada, its goals and aims, and the role of the Architect within that structure. Be aware of the basic methods used to manage resources (time, people, money, materials) within the industry. (Practice)
- Undertake collaborative projects with colleagues, community partners, institutions and individuals. Understand the principles of team effectiveness and leadership. Recognize the role of the design professions in community and environmental stewardship. (Collaboration)
- Understand the role of the design professions in relation to the important issues facing the province of Saskatchewan in its global context. Understand Indigenous knowledge as it applies to architecture and design. Act with reciprocity, reconciliation, honour and strive to support a sense of place and well being. (Local and Indigenous Knowledge)

By the end of the Master of Architecture degree, students will:

• Design: employ intentional and well-developed design processes and articulate their theoretical bases, and in so doing, make use of the tools and techniques typical of architectural design, including new and emerging technologies. Prepare designs for reasonably complex buildings and other architectural projects. Produce representations of the design for multiple purposes, including for construction.
• Culture: understand the larger theoretical, social, cultural, political, economic, technological and environmental contexts of architecture and the impact of ideas on its development. Graduates will also be able to undertake critical forms of research and analysis, and communicate about architecture within this broad range of contexts through writing, speaking, and graphic multi-media.
• Technologies: actively participate in the analysis design and integration of building technologies and understand the principles involved in the design of the various systems, the impacts of these systems on the design of a building as a whole, and the roles, requirements and priorities of the full range of specialists involved in the design and construction process.
• Practice: apply skills in business, management and entrepreneurship to the development of career and project opportunities in architecture. Understand the organization of the construction industry and the role(s) of the architect in that industry; engage with the legal and ethical issues involved in professional practice in architecture.
• Collaboration: collaborate with members of society, and take on leadership positions, in matters related to the production and stewardship of our communities and environment; fully integrate public engagement into the practice of architecture.

• Local and Indigenous Knowledge: act in all of the above with a deep understanding of and engagement in the particular circumstances, issues and concerns of Saskatchewan, including a meaningful engagement with the concerns of Indigenous people of Saskatchewan, while understanding its relationship to increasingly globalized pressures.

Completed charts, mapping the objectives and sub-objectives against the proposed course lists for both programs, are available in *Appendix E: Completed Program Mappings*.

Alignment with accreditation requirements

The proposed curriculum for the professional program in architecture has also been mapped against the CACB's Student Performance Criteria, to ensure conformance with the requirements for professional accreditation. As the Student Performance Criteria are currently under review, and since the new program will have its first accreditation report and visit after the new SPCs have come into effect, the existing draft of the new SPCs has been used in this analysis. It is anticipated that a final version of the new SPCs will be available by late summer 2017, at which point this analysis will be reviewed. We can be confident, though, that changes will be minimal. Please see *Appendix F: CACB Program Mapping*.

The Canadian Architectural Certification Board (CACB). which accredits architectural programs in Canada, does not distinguish between the undergraduate and graduate programs, but considers them as parts of a single Professional Program in Architecture. It is the Professional Program that is accredited. As a result, the accreditation requirements apply to both the undergraduate and graduate programs, and the two programs will need to work together to achieve accreditation.

Accreditation cannot be achieved until the program has graduates whose work can be reviewed. As a result, we anticipate that the program will become a Candidate School in 2020 and achieve Initial Accreditation in 2024.

Modes of Delivery

Bachelor of Design (B. Des.)

The proposed B.Des. program is structured as two years of general study, with few required courses, followed by two years of highly structured coursework in the discipline. The two years of general study ensure a comprehensive breadth of education.

The two structured years are centred around the Design Studio, which students take in every term. The Studio is common to all schools of architecture in Canada. In structure, the studio comprises twelve hours per week of instruction in small groups: the CACB mandates a student:instructor ratio in studio of not larger than 15:1. Studio is formed around design projects, in which students apply knowledge gained in other areas of the curriculum and develop their skills and methods as designers. Studios offer considerable opportunities for experiential learning, making use of Kolb's cycle of iterative experience and reflection[5]. Within the B.Des. program, the third and fourth studios provide particular opportunities for experiential learning, in the form of design|build and working with real communities.

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[5] Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development* (Vol. 1). Englewood Cliffs, NJ: Prentice-Hall.

Studio is complemented by a number of lecture courses in architectural technologies, architectural culture, and professional practice. These courses are highly structured in order to meet the demands of CACB accreditation in an efficient manner and in order to complement the studio sequence. Finally, students will be required to complete one co-op work term.

Due to this structure, the program provides ample opportunities for synthesis, analysis, application, critical thinking and problem solving. Studio, at root, is based in a program of complex problem-solving, and involves the application of critical design methodologies to holistic problems. In a typical studio project, students will be required to go through a process of research, analysis, synthesis, application, reflection (including self-reflection), and iteration.

Master of Architecture

The first two academic terms of the Master of Architecture are structured similarly to the Bachelor of Design, with Studio complemented by a series of lecture or workshop courses in technology, history/theory of architecture, and professional practice in architecture. Students are also required to complete two co-op work terms during the M.Arch., before beginning their thesis work.

The final two academic terms are structured as a Design|Research Thesis.

Design|Research Thesis

The Design|Research Thesis in the Master of Architecture program is the culmination of a student's professional studies in Architecture. It comes out of a dual tradition of long-standing history. On the one hand, the Thesis stands in the tradition of the medieval guilds and the Masterpiece, the work of art or craft that was judged to be of sufficient quality and skill to elevate its creator to the role of Master.

On the other hand, it comes out of the lineage of the academic thesis, also of medieval origin – the moment at which the young scholar stands in front of those who have been his or her teachers to defend, no longer as student but as colleague, a position grounded in knowledge and research.

The Thesis is a single work comprised of a written and a design component. One could think of it as a report illustrated with design work, or a design project supported by explanatory text. In either case, the two components must work together to create a single entity.

Regardless of how the Thesis is framed, a student is required to demonstrate mastery of the various skills and abilities that have been developed over the course of the Professional Program and that are commonly used in professional practice in architecture.

Calendar Description (if required): Working closely with a faculty supervisor, students will carry out independent research on an approved topic within the field of architecture, resulting in the development of a thesis report and subsequently a critical project. The student will be required to publicly present the thesis report, which forms the critical, historical, and theoretical basis for the Thesis. A comprehensive review of literature and relevant works will form a core component of this report. The thesis project must be grounded in architectural praxis, but is not limited to the design of a building. The thesis culminates in a public juried presentation of Theses.

Thesis Committees

Each student will have a Master's Advisory Committee made up of the following three members:
> Advisory Chair - Shall be the Graduate Program Director or designate.
> Supervisor - A member of the faculty of the CGPS (adjunct professors included) but cannot be a Professional Affiliate.
> Second Reader - Must be a member of the faculty of CGPS, an adjunct professor, a Professional Affiliate or be granted permission by the Dean, CGPS.

Students are expected to meet with their Supervisors on a regular basis, nominally once per week. Meetings with the Second Reader will typically be less frequent, while the Advisory Chair is normally involved only at formal milestones. Committees are to be formed before the end of the first semester of the M.Arch.

Thesis Milestones

Each student will be required to complete a series of milestone presentations, all of which are conducted as public presentations, as part of the thesis work. Students who are unsuccessful in any milestone will require additional time - at least an additional semester - to complete the program.
> Thesis Proposal - students are required to present a proposal for their thesis work to their advisory committee no later than the end of the second semester. The proposal is a brief document (approximately five pages in length) that situates the proposal within a body of literature and practice, offers a theoretical position in relation to the topic, and proposes a coherent methodology and process.
> Interim Presentation - Near the end of Semester 3, students will present their work-in-progress to their Advisory Committee and will submit a draft of the written components of the work.
> Substantial Performance - Mid-way through Semester 4, students will be required to provide evidence that the work is sufficiently advanced to proceed to a defence. Normally this evidence is to be provided in the form of a presentation of the work.
> Thesis Defence - Normally takes place at the end of Semester 4, culminating in an exhibition of the work.

Examination Committees

The Examination Commitee, or jury in architectural language, will be comprised of the Advisory Committee plus one or (normally) two external examiners. Typically, one external examiner will be an academic in architecture from another University, while the other will be a leading practitioner. Approval of CGPS is required for all external examiners outside of the U of S.

Submission of Thesis

The Supervisor is responsible for verifying that all comments and corrections arising from the defense have been addressed before the Thesis is submitted. The thesis must follow the requirements of CGPS in terms of format, etc.

The Learning Charter
The five Learning Goals listed in the *Learning Charter* map very readily to the proposed programs.

Discovery Goals:	• Critical and creative thinking is central to architecture and to the proposed program, especially but not only in the studio. • Students will work in both structured and unstructured scenarios. Studio work in particular is largely experiential, individual or in large or small groups. Attention is paid to methodologies of collaboration. • In studio and in coursework, students are presented with multiple perspectives on architecture. Self-learning and entrepreneurial learning is encouraged.
Knowledge Goals:	• On graduation, students will have a knowledge of the profession; a comprehensive understanding of architecture as a discipline; and the technical and design abilities to design buildings. • In the studio, students will be presented with projects on which other disciplines come to bear. In the course on collaboration, they will learn how to work with multiple stakeholders. • Through studios, and especially through the critical method, students will learn how to apply their knowledge ethically. This is reinforced by discussions of the ethical responsibilities of the professional architect.
Integrity Goals:	• The ethical expectations of the professional architect are discussed, as are ethics when working with communities and diverse stakeholders. • Ethical issues often come to the fore in design projects in the studio, especially around issues involving the environment or communities. An engagement with Indigenous Knowledge will assist students to understand that there are many ways of understanding. • The limits of the architect's knowledge are stressed in relation to that of other professionals and community stakeholders.
Skills Goals:	• Communications – written, graphic and spoken – are stressed in studio and in the courses on the history and theory of architecture. A basic course in English is required in the first two years. • Skills of basic research – finding and using information – are stressed in the studio courses and in the courses in architectural history and theory. • Graduates will be highly technologically literate. A series of digital technology workshops have been built into each of the studios.
Citizenship Goals:	• Students are exposed to diverse knowledge structures as well as how to work with diverse stakeholders. • The leadership role of the architect is stressed in the various courses on collaboration, community design, design|build. • The expectation that the architect will contribute to society is stressed. Students are provided with discrete opportunities to contribute to society within the program, especially in the *Building Community* and *Design|Build* studios.

Metrics for success

There are many metrics that can be used to evaluate the success of a program in architecture over a short or long term. Below are the principle metrics that we expect to use in future program evaluations.

Application statistics. By 2024 (once accreditation is achieved) we would expect steady-state application numbers from High School of 150 students per year. For the M.Arch., we expect 50 applicants with previous degrees, and ten applicants with previous degrees in architecture, per year.

Graduation statistics. The first graduates of the B.Des. will be in 2022. By the third graduating class, in 2024, we expect 90% of initial matriculants to graduate. The first M.Arch. graduates will be in 2024; again by the third graduating class, we would expect 90% of M.Arch. matriculants to graduate, 80% within the normal two-year period.

Acceptances to M.Arch. programs. Beginning in 2022, we will be able to track the number of students accepted into M.Arch. programs at the University of Saskatchewan and elsewhere. For the M.Arch. program, we will be able to evaluate after accreditation is achieved the number of applicants from other architecture schools. A success in this last measure would be ten applicants per year once a steady state is achieved.

Accreditation. By 2025 the professional program in architecture should be able to receive its Initial CACB Accreditation. As part of this process, a visiting team will present a clear discussion of program strengths and weaknesses. Preliminary visits providing a developmental review are anticipated to take place in 2021 and 2023.

Co-op numbers and feedback. The first co-op students will be on work terms in the fall of 2021, and we will have the opportunity to evaluate employer feedback. The goal in 2021 will be to have all eligible students placed in co-op, and by 2026 to have more potential employers than co-op students. By 2026 we will also anticipate return employers from outside of Saskatchewan. In a longer term we expect students will undertake work terms outside of Canada, as an important part of our student mobility strategy.

Licensure of graduates. The first M.Arch. graduates should be eligible for licensure around 2028. By 2032 we should have steady-state licensure numbers to track. A success in comparison to other schools in Canada would be around 50% of graduates eventually becoming licensed.

Practice Leaders. Eventually, of course, the real measure of success of an architecture program is the work produced by its graduates who have become leaders in the profession. We should start to see those effects during the early 2040s.

Community Engagement. Also by 2026, we will be able to evaluate the number of University-community partnerships that we undertake each year (although this is difficult to quantify). We will also be able to identify the number of community members who attend events (lectures, exhibitions) produced by the program.

Rankings. By 2030 (five years after accreditation) our goal would be to see the professional program ranked in the top 100 Schools in North America by startclass.com/DesignIntelligence or an equivalent. By 2035 our goal would be to be in the top 100 in the QS World Rankings and top 30 in North America by startclass.com/DesignIntelligence.

Program of study
For a graphic representation of the program proposal, please see *Appendix D, Program Flow Diagram*.

Catalogue Description

This degree program examines the discipline of architecture. Students will develop a broad knowledge of the cultural and community aspects of architectural design, as well as technical and design skills needed for engagement with the design of buildings and other aspects of the built environment. Graduates will be prepared for a broad range of careers in the design and construction industry.
When combined with a Master of Architecture degree, this program prepares students for professional practice in Architecture.

The following text is required by the Canadian Architectural Certification Board to be included on the program website and in all promotional materials:

In Canada, all provincial/territorial associations/institutes/orders recommend a degree from an accredited professional degree program as a prerequisite for licensure. The Canadian Architectural Certification Board (CACB), which is the sole agency authorized to accredit Canadian professional degree programs in architecture, recognizes two types of accredited degrees: the Master of Architecture (M.Arch) and the Bachelor of Architecture (B.Arch.). A program may be granted a six-year, three-year, or two-year term of accreditation, depending on its degree of conformance with established educational standards. Master's degree programs may consist of a pre-professional undergraduate degree and a professional graduate degree, which, when earned sequentially, comprise an accredited professional education. However, the pre-professional degree is not, by itself, recognized as an accredited degree. The CACB grants candidacy status to new programs that have developed viable plans for achieving initial accreditation. Candidacy status indicates that a program should be accredited within six years of achieving candidacy, if its plan is properly implemented.

Program Requirements

Please see *Appendix A: Course Catalogue Descriptions* for more information.

Note: This program requires a total of 132 C.U. rather than the standard 120 C.U. The reason for the additional credit units is the presence of studio in the program, and the proposal that studio is weighted as 6 credit units per term, rather than the normal 3 credit units. In other words, the program has the same number of courses as a normal 120 C.U. program, but four of those courses have a heavier weight. This is a norm in architecture programs in Canada, although not mandated. In general, though, studio is weighted at .5 credits per hour of instruction. In Canada, one undergraduate program in Architecture requires 120 C.U., while the others require between 128 C.U. and 174 C.U.

The Bachelor of Design programs will follow the residency requirements and graduation standards approved for Four-year programs (Bachelor of Arts Four-year, Bachelor of Arts & Science Four-year, Bachelor of Music Four-year, and Bachelor of Science Four-Year) within the College of Arts and Science.

Bachelor of Design (B.Des.) - Architecture
Requirement 1 – Academic Requirement (30 credit units)
No more than 12 credit units from one subject may be used to fulfill this requirement.

- INDG 107.3 – Introduction to Canadian Indigenous Studies

- Choose 3 credit units from the following:
    - 100-level ENG courses

- o 100-level HIST courses
- o INTS 203.3 – Cultivating Humanity
- o LING 251.3 – Intercultural Communication
- o PHIL 115.3 - Introductory Indigenous Philosophy
- o PHIL 120.3 – Knowledge Mind and Existence
- o PHIL 133.3 – Introduction to Ethics and Values

- Choose 24 credit units academic coursework, including at least 3 credit units from each of the following areas (See requirement E1 in the BFA in Studio Art program to see the list of courses under each heading):

  Fine Arts
  Humanities
  Languages
  Science
  Social Science

- Courses may also be chosen from the following list, but there is no requirement to do so:

  Courses with No Program Type
  - INCC 201.3 – Dynamics of Community Involvement
  - INCC 280.3 – Human Dimensions of Natural Hazards
  - INTS 110.3 – The Art and Science of Almost Everything
  - INTS 203.3 – Cultivating Humanity
  - NRTH 101.3 – Introduction to Circumpolar World

Requirement 2 – Cognate Requirement (3 credit units)

- ENVS 201.3

Requirement 3 – Major Requirement (72 credit units)

- Basic Design – 6 credit units

  INTS 111.3
  ARCD 111.3 – Introduction to Architecture

- Design Studio – 24 credit units

  ARCD 311.6 Studio: Design with the Land
  ARCD 321.6 Studio: Design and Making
  ARCD 411.6 Studio: Design Build Studio
  ARCD 421.6 Studio: Building Community

- Architectural Technology – 21 credit units

  ARCD 312.3 Building Technology I
  ARCD 322.3 Building Technology II
  ARCD 313.3 Ecological Design
  ARCD 412.3 Structural Principles
  ARCD 413.3 Construction I
  ARCD 422.3 Environmental Systems
  ARCD 423.3 Construction II

- Architectural History & Theory – 12 credit units

    ARCD 314.3 Indigenous and Vernacular Architectures
    ARCD 324.3 Architectural Principles in the Modern World
    ARCD 414.3 Architectural Thought and Practice after WWII
    ARCD 424.3 Contemporary Concerns in Architecture

- Architectural Practice – 9 credit units

    ARCD 325.3 The Construction Industry
    ARCD 415.3 Collaborative Methods
    ARCD 425.3 Design and Community
    ARCD 401.0 Architectural Design Co-op Placement

Requirement 4 – Electives (27 credit units)

Arts and Science courses, or those from other Colleges which have been approved for Arts and Science credit, complete the requirements for 132 credit unit Four-year program. Of the 132 credit units required at least 72 must be at the 200-level or higher.

Master of Architecture

Students must maintain continuous registration in ARCD 990

- A minimum of 39 credit units total
- GSR 960.0
- GSR 961.0 if research involves human subjects
- GSR 962.0 if research involves animals subjects
- ARCD 901.0 Co-operative Education in Architecture II
- ARCD 902.0 Co-operative Education in Architecture III
- ARCD 990.0 Architecture Lecture Series
- ARCD 994.0 Design|Research Thesis in Architecture
- 12 credits studio:
    o ARCD 811.6 Studio in Architectural Research
    o ARCD 821.6 Comprehensive Design Studio
- 21 credits core courses:
    o ARCD 814.3 Research Practices in Architecture
    o ARCD 824.3 Urban Systems
    o ARCD 812.3 Structures II
    o ARCD 822.3 Integrated Systems
    o ARCD 815.3 Professional Practice in Architecture
    o ARCD 825.3 Architectural Project Management
    o ARCD 845.3 Business Practices in Architecture
- 6 credit units electives at the 800-level or senior undergraduate, as approved by Supervisor

The Relationship between Art and Architecture

This proposal is for a new program located within the Department of Art and Art History, which is to be reorganized as the School of Architecture and Visual Art (operating as a Department within the College of Arts and Science). This will be a unique situation nationally: in Canada, half of the Schools of Architecture sit within Colleges of Engineering, while the other half are essentially independent Colleges of Architecture.

However, although architects have to understand technical issues like structures and HVAC systems, and we have a developed a program that we believe will be technically very strong, the questions architecture asks and its modes of operation are more akin to the arts. This is not to say that architecture focuses on aesthetics – far from it – but rather than architecture deals with complex open-ended questions rather than the often precisely framed questions of engineering or science. For architects, technology is not an end goal, but one of a number of tools that will be used to address a given problem; a building's structure is like the stretcher frame for a painter's canvas, or maybe more like the art of mixing colours – important, necessary, but not sufficient. Indeed, there have been a number of critics of late modern architecture who laid the blame for the perceived sterility and rigidity of late 20th century cities and buildings on the adoption of an overly technical approach to architecture and urban design.

In fact, historically, architecture has been considered to be one of the arts. The two most important Schools of Architecture in history – the Ecole des Beaux-Arts and the Bauhaus – were both art schools, as is the currently number one ranked architecture program in the world – at the Royal College of Art in London. Indeed, outside of Canada, architecture programs within or part of art schools are not uncommon – we could think of the School of the Art Institute of Chicago, the California College of the Arts, the Savannah College of Art and Design – three of the most innovative (including technically innovative) emerging programs in architecture in the United States.

Experience shows that when Schools of Architecture are within Colleges of Engineering, the arrangement is purely administrative – a marriage of convenience. There is often little, if any, collaboration between architecture and engineering, either in research or in teaching. For example, at Ryerson University, Engineering students do not take architecture courses, and vice versa. Curricular issues within architecture are not discussed at College-level committees, but approved directly by the Dean (who only questions on financial grounds) and passed on to University-level committees. Tenure and promotion committees at the College level tend to rubber-stamp Departmental committee decisions – or alternatively reject them out of hand - because the engineers recognize that they don't know enough about the research culture in architecture to make reasonable decisions. Researchers in architecture get little support from the College – largely because they don't have NSERC grants.

While engineering and architecture share a superficial form – they are both professional disciplines with strong accrediting bodies – they do not share a mandate, disciplinary practices, or pedagogic traditions. In these three ways, architecture has much more kinship with the arts:

- A mandate to respond to difficult questions (around the built environment) through the making of things.
- Disciplinary practices based primarily in drawing; primary research funding sources of the Canada Council for the Arts and SSHRC; an emphasis on exhibition and books over journal papers.
- A pedagogic tradition based in Studio education.

There are a number of practical reasons why Art and Architecture might make sense at the University of Saskatchewan. First, Art and Art History already offers a number of courses in History of Architecture; the recent retirement of Keith Bell, who taught those courses, opens an opportunity to develop a suite of

courses that would serve both areas. Second, the Department of Art and Art History already has a growing interest in design, with new courses added recently in Design and in Visual Culture, spearheaded by recent hire Jon Bath. Third, Art and Art History already offers studio courses; although these are not architecture studios, they could provide useful context and cross-over; likewise, art students may be able to benefit from the architecture studios. Art and Art History also has two faculty members with architectural experience (John Graham and Alison Norlen); as a result, there is already a core of staff in the new unit (School of Architecture and Visual Arts) with architectural expertise who will be very helpful in the start-up phase, while Architecture is staffing up, and will be crucial in developing cross-unit collaborations in teaching and research in the long run.

However, there is a strategic reason for the connection between Art and Art History and Architecture that is in my mind even stronger. While the architecture program itself could frankly sit almost anywhere at the University – in Arts and Science, in Engineering, as part of SENS, as an independent School, even possibly in the Edwards School – this proposal allows us to leverage the creation of a program in architecture to produce something even bigger and more exciting – the School of Architecture and Visual Arts. In a recent email, Ryan Walker from Regional and Urban Planning at U of S explained it like this:

> *It's interesting – two very distinct but related items: 1) an architecture program – the province needs one, the university wants one, good stuff in its [own] right no matter what its container; and 2) a School of Architecture and Visual Arts – a great space focused on making, visual arts, architecture, downtown, a facility that fosters creative collisions across the visual arts and architecture, and that has a high in-reach potential (a term I first heard from Colin Ripley a while back), etc. Separate but related items. One appeals to a strong industry and education case – need for a new architecture program in province. The other appeals to a whole variety of creative city, downtown revitalization, visual arts facility, architecture facility, university's role in the civic life of the city…etc., etc. To me, the second is far more interesting than the first. To others, the first is more interesting than the second.*

So the School of Architecture and Visual Arts is good for architecture, but it's also good – potentially transformative – for Art and Art History. And as a result, good for the University.

Impact on the Department of Art and Art History

The Department of Art & Art History wholeheartedly supports a merger with the School of Architecture initiative to form a new School of Architecture and Visual Art. Given the synergies between both disciplines, the department views the merger as a natural fit, advantageous to both areas, and one with more obvious benefits than risks. From the department's point of view, the merger will, first of all, increase the overall size of the department thus protecting core studio and scholarly programs which will feed into the two new degree programs. This immediately provides more attractiveness and options for both incoming/potential students as well as students already enrolled in an undergraduate studio or art history degree program. The department has been interested in seeing the addition of applied design courses (Jon Bath – new design course offered 2016) and this trend will be strengthened with the addition of the undergraduate B.Des. (Arch) degree. A strong overlap, in fact, between the undergraduate studio degree (BFA) and the new undergraduate B.Des. (Arch) will strengthen both programs in the early years. The two new degree programs will likewise strengthen resources and curriculum in the area of Art/Architecture historical research and programming which will be required for the new architectural degrees. Again, sharing of courses and faculty is seen as potentially strengthening both the BA (Art History) and B.Des. (Arch) programs and provide a stronger future for complement planning in that area. The University's priority on Indigenous engagement is embedded in and important to the

Architecture proposal and this, as well, is seen as strengthening possibilities for aboriginal content and curriculum in the all of the department's degree programs.

The potential risk of the merger, as seen by the department, is that current Art & Art History degree programs could become a "poor cousin" to the Architecture programs that have professional requirements for certification and possibly dominate future complement and curricular planning at the expense of existing studio and art history programs. However, the department recognizes that strong core programs in studio and art history are essential to the new degree programs as well as the existing ones. The other risk the department sees is that, if housed in separate facilities, the new School could become a union by way of administrative structure only and the benefits of the merger, especially to students, could be undermined. Some degree of shared space would encourage interdisciplinarity and help create the ethos of a "school" which, otherwise, will be lacking. Ultimately, however, the department sees the creation of the School of Architecture and Visual Arts and the development of a professional program in Architecture as an important broadening of the overall conversation of art, design, architecture and culture in Saskatchewan.

Tim Nowlin, Head, Department of Art and Art History

Impact on other Academic Programs

The program is proposed around an interdisciplinary and collaborative model with several other divisions on campus being involved in the delivery of the course being proposed. Consultation with these divisions is ongoing and has included to date consultations with Regional and Urban Planning, the College of Engineering, the School of Environment and Sustainability, and the Edwards School of Business. We are working on a model that will involve collaborative program delivery through cross-appointment mechanisms. Statements of support can be found in *Appendix I: Letters of Support.*

Resources

Budgetary Information
Note: this information reflects current budget assumptions as of February 10, 2017 and will be updated as further information becomes available. This information represents the program costs and revenues at steady state (2024-25 and following).

Resources required
Resources required for a professional program in architecture are described in full in the Notice of Intent. A summary is provided here. As this is a new program, all resources are considered at this point to be new resources. No courses or programs are proposed to be eliminated. Where instructional staff from other units teach in the program, in order to promote interdisciplinarity, additional resources are being proposed for those units. For more information and a summary of this information in tabular form, as produced by the program's financial officer, as well as the TABBS model output, please see *Appendix G: Financial tables*.

Instructional costs
The two programs together will require 11.5 FTE of instructional costs.
The Bachelor of Design program requires 6.75 instructional FTE. We expect that 2.0 of these FTE will be part-time or sessional instructors, in line with practices in Schools of Architecture across Canada. Up to 2.0 FTE of the total may be cross-appointed with the College of Engineering, and 1.0 FTE with the Regional and Urban Planning program. There are additional possibilities for cross-appointments with SENS and with the Edwards School of Business. Discussions are ongoing about the form such relationships might take.

The M.Arch. program will require 4.75 FTE of instructional costs. All faculty teaching in the M.Arch. will be members of the Graduate faculty. Up to 1.0 of these 6.25 FTE may take the form of cross-appointed faculty.

Tenure-stream faculty in schools of architecture in Canada typically teach 4 courses – 2 studios and 2 lecture courses – per academic year, in addition to supervising a number of graduate theses.

In addition to these FTEs, 0.5 FTE for an Architecture Librarian will be shared with the M.Arch. program. $40,000 per annum has been budgeted for Teaching Assistants, again in line with practices in other schools.

Administrative Staff
The programs will be overseen by Program Directors who will report to the Director of the School. Total administrative and technical staff (machine shop, IT) of five will be shared by the two programs.

Facilities
The two architecture programs together will require approximately 2600 square meters of net space for offices, classrooms, labs and studios. A Feasibility Study is now underway to investigate the degree to which these funds can be raised from the private sector, as well as to identify transitional strategies for space during a start-up phase.

Miscellaneous Operating Costs

In addition to normal maintenance costs allocated in the TABBS system, we have budgeted $40,000 for library acquisitions and $100,000 for ICT expenditures per annum, for the two programs together.

Student Financial Aid

We have included in our budget $180,000 for financial aid for graduate students. The Fundraising Feasibility Study will also be evaluating the potential to raise amounts for the purpose of graduate and undergraduate financial aid.

Total Costs

The total direct costs to run the two programs, as provided by the TABBS model, are just over $3,000,000 per annum, with total direct+indirect cost at just over $4,200,000. Given the degree of interrelationship of facilities and technical staff, as well as the interwoven nature of the two degrees, it is difficult to separate the finances of the two programs. A rough estimate has costs for the Bachelor of Design at $2,500,000 and for the Master of Architecture at $1,600,000.

Program Tuition

Tuition during the first two years of general education will be billed at standard College of Arts and Science per credit tuition. In years three and four, the undergraduate ARCD courses will be billed at rates to achieve an overall tuition of $6,000 per full study term (lecture courses will be billed at a lower rate, and studio courses at a higher rate), and the undergraduate co-op course will be billed to achieve an overall rate of approximately $1,000 per term. Graduate tuition will be $6000 per study term, and the standard graduate term tuition (currently $1,313) for co-op terms.

Enrolment and tuition revenues

We propose an enrolment target of 45 students per annum in the last two years of the Bachelor of Design program, of which roughly 15 students will have previous degrees and hence, effectively, enter directly into the third year of the program. We expect to meet that target in the first year (2020). For a discussion of the context and background for enrolment targets, please see pages 8-10 above.

Total revenues at target enrolment are $1,080,000 for the core program delivery in the final two years of the Bachelor of Design degree. As distribution and breadth elective requirements all occur in the first two years of general education, they are not accounted for here. Tuition revenues for the M.Arch. degree at target enrolment are $1,080,000. The total tuition revenue proposed for the two programs is $2,160,000. There will be an additional revenue from co-op fees of $135,000 per year.
Operating grant: the TABBS model recognizes an annual operating grant increase, based on the SUFM algorithms, of $2.31 million per year, all else being equal. This number is encumbered by a number of caveats, including the time various time lags in the SUFM model and the ability for other changes at UofS, UofR or in the Provincial budget to affect the numbers. However, at maturity, this allows us to estimate total revenues at approximately $4,500,000 per annum.

Program Independence

Given the full operating grant increase as shown by the TABBS model, the program is expected to be self-supporting at the proposed enrolment levels. Due to the studio model of instruction, the program finances are relatively inelastic in terms of enrolment growth or decline.

Start-up costs

The program will have significant start-up costs including rental of temporary space, hiring costs, and initial equipment costs. These amounts are still being investigated. In addition, as the program will phase in over a four-year period, we anticipate both revenues and expenses to reach a steady state in the 2024-25 academic year.

College Statements

TO: Terry Wotherspoon, Chair, Academic Programs Committee

FROM: Gordon DesBrisay, Vice Dean Academic

DATE: August 25, 2017

RE: B.Des (Arch) Program Recommendation

The Bachelor of Design (Architecture) program and undergraduate ARCD course proposals were circulated to all faculty members in Arts and Science through the Arts and Science College Course and Program Challenge on November 9, 2016, and were approved by the Academic Programs Committee (B.A., B.F.A., B.Mus.) on February 2, 2017.

When that College APC recommended the B.Des (Arch) program and associated courses to the Faculty Council of Arts and Science, it took the unusual step of accompanying its recommendation with a statement regarding resource concerns normally outside the remit of the committee:

> *The Academic Programs Committee (BA, BFA, BMus) recommends this program proposal on its academic merits. Operating budget, space and equipment, faculty complement and other resource implications remain to be determined. As a consequence we were unable to assess their potential impacts on other programs, which is a matter of concern. We commend these issues to Faculty Council for its consideration.*

Faculty Council met and approved the B.Des (Arch) proposal on May 16, 2017. Once again, there was strong support expressed for the academic proposal, coupled with serious concerns surrounding funding (capital and operational) for this project.

Given that the May meeting was the only time that Faculty Council will be asked to vote on this program, its approval, even in the face of so many unanswered resourcing questions, is testament to strong faith in the academic merits of this proposal.

Faculty Council was assured that their financial concerns are shared by the senior leadership of the college, and that implementation of this program will hinge on there being an appropriate funding model for the SAVA project.

UNIVERSITY OF SASKATCHEWAN

Memorandum

To: Academic Programs Committee (APC)

CC: Dr. Martha Smith-Norris, Chair, Graduate Programs Committee, CGPS

From: Dr. Adam Baxter-Jones, Chair, Executive Committee, CGPS

Date: March 22, 2017

Re: M.Arch Program Recommendation

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On March 22, 2017 the Executive Committee of CGPS reviewed the M.Arch Program proposal recommended by the Graduate Programs Committee. Within the proposal there are several unknowns that include program implementation, funding, infrastructure and other resources. Based on academic merit the Executive recommends to APC that the M.Arch Program move forward.

Background:

December 15, 2016	December 2016, the Graduate Programs Committee conducted a thorough review of the M.Arch. proposal;
February 9, 2017	Clarification meeting completed between CGPS Graduate Programs Committee designate, Professor Colin Ripley (Ryerson University), and Director of Programs (Arts & Science, University of Saskatchewan). The outcome was that assurance that the proposed School of Architecture could provide cohesive programming at both the undergraduate and graduate levels;
March 1, 2017	Graduate Programs committee considered the revised M.Arch Program proposal. The motion "to recommend academic approval of the M.Arch program pending clarifications on enrolment and noting that the committee did not consider the resource implications" (Pollak/Eglington);
March 22, 2017	CGPS Executive Committee unanimously passed a motion " the Executive Committee recommends the approval of the new Master of Architecture (M.Arch.) Program conditional upon resources being available. (McIntyre/Ferrari).

The attached appendix provides additional background for consideration. If you have any questions, please contact Dean Adam Baxter-Jones at adam.baxter-jones@usask.ca, or, 966-5759.

Respectfully Submitted to APC 170403

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UNIVERSITY OF SASKATCHEWAN

Memorandum

To: Dr. Adam Baxter-Jones, Chair, CGPS Executive Committee

From: Graduate Programs Committee, CGPS

Date: March 10, 2017

Re: Proposal for a Master of Architecture Program (M.Arch.)

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In December 2016, the Graduate Programs Committee (GPC) conducted a thorough review of the proposal for a M.Arch. program. Following the meeting on December 19, 2016, substantial feedback was provided to the Project Director, Professor Colin Ripley of Ryerson University. The GPC Secretary was in communication with Professor Ripley to discuss options to address questions and concerns that the GPC had identified. The M.Arch. proposal forms part of a larger proposal for a School of Architecture to deliver a Bachelor of Design (B.Des.) program as well as the M.Arch program. As such, on February 9, 2017, Professor Ripley, the GPC Secretary, and the Director of the Programs Office in the College of Arts & Science had a meeting to ensure that the proposed School of Architecture could provide cohesive programming at the undergraduate and graduate levels and allow for maximum flexibility for options to enter the M.Arch. program. The meeting was very successful, and a revised M.Arch. proposal was considered by the GPC on March 1, 2017.

At the March GPC meeting, committee members appreciated the thorough and thoughtful responses to each of the questions and concerns that had been identified. Overall members were pleased with the updated proposal. Members did indicate that more detailed enrolment information would benefit the proposal.

The Graduate Programs Committee passed the following motion:

To recommend academic approval of the M.Arch. program pending clarifications on enrolment and noting that the committee did not consider the resource implications.   Pollak/Eglington   CARRIED Unanimous

Professor Ripley has updated the section "Anticipated demand" to become "Anticipated demand and enrolment assumptions". With this update, the GPC is now asking the Executive Committee to support the academic merit of the proposal and provide a recommendation to the Academic Programs Committee of University Council.

If you have any questions, please contact Kelly Clement at Kelly.clement@usask.ca or 306-966-2229.

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Appendices:

A: Course Calendar Descriptions

B: Notice of Intent

C: Working Group Documents

D: Program Flow Diagram

E: Completed Program Mappings

F: CACB Program Mapping

G: Financial Tables

H: Course Outlines

I: Letters of Support

J. Response from Planning & Priorities Committee of Council

K. Response of the proposer to the Academic Programs Committee (BA, BFA, BMus) – December

L. Response to CGPS Programs Committee

M. Response from Provost's Committee on Integrated Planning

N. Summary Handout