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

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

:ll

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.)

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.

:kc

Proposal for a Professional Program in Architecture at the University of Saskatchewan

- Response to Programs Committee, College of Graduate and Post-Doctoral Studies

Date February 6, 2017
Submitted by: Colin Ripley

Response to Questions from the Programs Committee, College of Graduate and Post-Doctoral Studies
February 6, 2017

Dear members of the Programs Committee,

I would like first to thank the committee for their review of the proposal and for raising questions that are likely to clarify and potentially improve the quality and viability of the proposal. In the following text I have responded directly to the questions posed by the committee. I have also provided a revised copy of the proposal and of the syllabi reflecting these changes.

In addition, I would like at this time to advise the committee of a proposed change in implementation timeline that has come about following meetings with other groups at the University. While we continue to propose a start date of September 2018 for the Architecture program, we have moved the proposed start for the M.Arch. back to 2022 rather than the previous 2020. However, we believe for several reasons that it remains important to have both programs approved at the same time. The proposal has been revised to reflect this change of schedule.

In the proposal, new text is in orange, and text that has been removed is ~~struck through~~. I will also supply a clean copy for the record once the Committee's approval process is complete.

Question One: *Members wondered if the proponents may have invested too much effort trying to make the program unique. It was noted that the focus areas were extreme climates, indigenous architecture, and community centre design. Members wondered why traditional architecture was not part of the proposal.*

Each architetural program in the world, and certainly in Canada, has a unique character or fingerprint. Some programs focus more on issues of culture, or design, or building technology. This difference is well understood by applicants to M.Arch. programs and therefore an important quality for a new program. Although the program is unique in its areas of concentration, it is structured to ensure a complete professional education that covers all of the Student Performance Criteria as expected by the accreditation board.

The three focus areas, as described in the proposal, are **design for extreme climates**, **community-centred design**, and **advanced manufacturing technologies in design and construction**. Please note that community-centred design means a design process that takes into account the needs of various communities and often works with the communities in collaborative and not simply consultative modes. These three areas were developed as the result of a series of consultations with members of the architectectural profession in Saskatchewan, faculty members at U of S, and members of the general public. These three were proposed and accepted by the working group based on their relevance to the particular needs of Saskatchewan combined with their urgent relevance within broader architectural praxis.

The decision to have three areas of concentration is highly pragmatic and is based on the enrollment model. We anticipate three sections of studio, each with a maximum of fifteen students, as regulated by the acccreditation board. With three areas of concentration, each studio section can represent one of the three. Traditional architecture was understood by the working group as a possible area of concentration, but not as urgent at this moment in Saskatchewan as the other three. This could of course change in time.

Question Two: *Members questioned the connection for the proposed program with the Department of Art & Art History as it did not seem obvious. It seemed that the proposed program would focus more on aesthetics rather than structure.*

It's understandable that people would want to know what the relationship is between Art and Architecture and would question the proposed School of Architecture and Visual Art. After all, in Canada, half of the Schools of Architecture sit within Colleges of Engineering, and architecture is often thought of by the public as a branch of engineering.

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; I often tell my students that 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.

It has been my personal experience that when Schools of Architecture are within Colleges of Engineering, the arrangement is purely administrative – a marriage of convenience. That is certainly the case at Ryerson University, where I teach. There is little, if any, collaboration between architecture and engineering, either in research or in teaching. 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. And I could go on, but there is little point.

The reason for this, I believe, is that 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, open 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.

Question Three: There was reference to an "extended Master of Architecture" program, and members were curious about how that would work. It seemed that applicants that had an earned Bachelor of Design degree could enter the master's program and begin master's level programming, while other applicants would begin with the final 2 years of the undergraduate program. The admission requirements for the proposed master's program would need to be clarified. It did not seem to make sense to have a student admitted to a master's program when 2 years of undergraduate coursework would need to be completed. The notion of an "extended" master's program seemed to be suggested as a mechanism to provide assurance of acceptance to the master's program. It was noted that students requiring 2 years of undergraduate coursework should be properly admitted as undergraduate students.

We believe we have resolved the issue satisfactorily. Applicants with previous degrees outside of architecture will be admitted to the final two years of the B.Des. program and will re-apply to the M.Arch. on completion of that program. This issue is handled differently at each institution, and I think this is an acceptable solution.

Question Four: Accreditation was questioned with members wondering if graduate and undergraduate level programming both had accreditation requirements.

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.

Question Five: For the 924 course indicated, it was not clear if that should have been listed as 994 to represent thesis work.

This is a typo and has been corrected.

Question Six: For the 834 course, it seemed to be a literature review for the thesis work. Credited coursework was not to be part of thesis work.

Understood. This course was intended to be a support course for the thesis, which my experience with architecture students tells me would be a good thing. We will remove the course and put the content into the thesis. In addition, we would then move *ARCD 845.3 Business Practices in Architecture* from Semester 4 to Semester 3.

Question Seven: Overall, information was lacking in the course syllabi.

I have reviewed the syllabi once more and made some miscellaneous corrections and clarifications. Any information from the committee about what information is missing would be helpful. As faculty have not yet been hired for this program - and can;t be until this approval process is complete - information about instructors cannot be provided at this time.

However, I would remind the committee that the earliest date that any of these courses will be offered is 2022, and that the instructors will not be hired at U of S for several years. As a result, we anticipate that each of these courses

will be modified, in some cases significantly, before they are actually offered, and we will follow the appropriate processes and approval mechanisms at that time.

Question Eight: For the thesis requirement, information was absent. Much more detail on requirements and advisory committee composition and support was needed.

My apologies, I was led to believe that this would not be required at this stage. In what follows I have tried to outline the requirements and expectations. In general, the thesis will follow the procedures and rules set out by the CGPS, with minor modifications (listed below) to accommodate the specific traditions with architectural education. Please note that the first thesis student will begin in 2024, and all policies will be reviewed with GCPS before that date.

The M.Arch. 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.

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. Normally, 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.

Question Nine: Throughout the proposal some of the nomenclature may have caused misunderstandings, such as research paper versus essay, etc.

I have reviewed the proposal, including the syllabi, to try to clear up any questions of nomenclature. In general the term “essay” was used in the document not to refer to a specific form but as generic term for any primarily textual form. I have replaced it with more specific terms such as “research paper”, “report”, “position paper” or “critical analysis” wherever possible, and have reserved the term “essay” to refer to a speculative form that relies largely on the writer’s opinion rather than critical analysis or research.

Question Ten: Members wanted to see a very concise and specific view of the programmatic requirements.

This list is on page 20 of the Proposal document, and is repeated below:

Master of Architecture

- Students must maintain continuous registration in ARCD 990
- A minimum of 36 credit units total
- GSR 960.0
- GSR 961.0 if research involves human subjects
- GSR 962.0 if research involves animals
- 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:
    - ARCD 811.6 Studio in Architectural Research
    - ARCD 821.6 Comprehensive Design Studio
- 24 credits core courses:
    - ARCD 814.3 Research Practices in Architecture
    - ARCD 824.3 Urban Systems
    - ARCD 812.3 Structures II
    - ARCD 822.3 Integrated Systems
    - ARCD 815.3 Professional Practice in Architecture
    - ARCD 825.3 Architectural Project Management
    - ARCD 845.3 Business Practices in Architecture
- 6 credit units electives at the 800-level or senior undergraduate, as approved by Supervisor

Question Eleven: It was expected that there would be letters of support from the UofS Director of Aboriginal Initiatives and the Saskatchewan Architecture Association. Members were curious about the status of those letters.

I had not requested letters of support from either of those groups, although both have been intensely involved in the design of the program. Both groups (Janelle Unrau, Executive Director, SAA; Candace Wasacase-Lafferty, Director, Aboriginal Intiatives) have promised to provide letters. I have attached the letter from the SAA and will forward the letter from Aboriginal Initiatives when I receive it.

Question Twelve: Members were concerned with the significant resources required to manage the program, and how those resources may be secured.

The University's financial projections show that under the current funding regime, the program will operate with a small annual positive net revenue, as shown in the financial analysis included in the Proposal. We are currently coordinating with the University around start-up and capital costs. Even if approved at this committee, the program will not be launched until these issues are resolved.

Please let me know if I can be of further assistance to the Committee. I would be pleased to meet with the committee if an appropriate date can be found.

Yours,

Colin Ripley

Program Proposal(s) for a Professional Program in Architecture at the University of Saskatchewan

- Combined B.Des. and M.Arch. Proposal
- Appendices

Date November 9, 2016
Revised March 9, 2017
Submitted by: Colin Ripley

Cover image: Potash and Gold. Obtained under Creative Commons license from https://www.flickr.com/photos/justaprairieboy/4830720234/in/photolist-8qJkiN-X6HdR-8mSGPU-3zdTT-2hXYM7.

Contents

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

Combined Program Proposal:
B.Des. (Arch) + M.Arch. (Professional Program in Architecture)

Proposal Identification

Degrees: Bachelor of Design (Architecture) B.Des. (Arch)

Master of Architecture M.Arch.

Level of Concentration (undergraduate): Honours

College: Arts and Science

Department: Art and Art History

Contact persons:

Tim Nowlin

Department Head, Art and Art History
Tel. (306) 966-4200
tim.nowlin@usask.ca

Colin Ripley

Project Director, School of Architecture Initiative
Tel. (647) 333-0858
colin.ripley@usask.ca

Proposed date of implementation: September, 2018 (Bachelor of Design); September 2022 (M.Arch.)

Type of Change

Requiring Approval by Council: New Degree Programs

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 tomorrows 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 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 communities in the Province, including First Nations and Métis communities, in their development 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 (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

[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.

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 C: Notice of Intent for a School of Architecture at the University of Saskatchewan*).

Program administration

Both programs (B.Des. (Architecture) 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.

Rationale for Connection to the Department of Art and Art History
Formation of the School of Architecture and Visual Arts

The proposal to associate the programs with the Department of Art and Art History may be a surprising one to many people. After all, in Canada, half of the Schools of Architecture sit within Colleges of Engineering, and architecture is often thought of by the public as a branch of engineering.

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; I often tell my students that 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 École 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.

It has been my personal experience that when Schools of Architecture are within Colleges of Engineering, the arrangement is purely administrative – a marriage of convenience. That is certainly the case at Ryerson University, where I teach. There is little, if any, collaboration between architecture and engineering, either in research or in teaching. 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. And I could go on, but there is little

[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.

point.

The reason for this, I believe, is that 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, open 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 & Art history[4]

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.

[4] This section has been prepared by Tim Nowlin, Head, Department of Art and Art History.

Admissions requirements and process

The Bachelor of Design (Architecture) Degree

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

Admission from High School

Students applying to the program from High School in Saskatchewan may be admitted into the first year of the B.Des. program and will have the following requirements:

Course requirements: Physics 30

Pre-Calculus 30 or Foundations of Mathematics 30

English 30

Average: A minimum average of 70% is required.

Non-academic requirements:

Applicants will be required to submit a portfolio of their creative work.

Transfer from another University Discipline

Applications will be accepted from students who have completed at least one year of University-level studies (30 credits). Such students will be admitted into the second year of the B.Des. program, and have the following admission requirements:

30 credits of University-level studies

Course requirements: Physics 30 or university-level physics

Pre-Calculus 30 or Foundations of Mathematics 30 or equivalent university-level mathematics

Non-academic requirements:

Applicants will be required to submit a portfolio of their creative work.

Applicants with the Diploma in Architectural Technologies (Building Science) from SaskPoly

The program will seek to establish an articulation agreement with SaskPoly 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***[5] 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. (Arch) 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.

[5] 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 Montréal, and Université Laval; and the Bachelor of Environmental Design Studies at Dalhousie University. There are many equivalent programs outside of Canada.

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.

Program Objectives

The Notice of Intent describes the objectives for the Architecture Program 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 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 context, 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|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, 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 construction and 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 exterior work.

Focus on Practice and community

In comparison with comparator 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.

Coop (B.Des. and M.Arch.)

The B.Des. program will include one required semester of cooperative 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 M.Arch. 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 equal 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 graduates should result in approximately 135 applications to the B.Des. program.

   However, we note that the University of Manitoba reports 380 applications in the most recent year of reporting, with 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, with (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 others – that is, we have been using a number of 135 applications per annum. In my opinion, this number is highly conservative. Matriculation rates 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 Sask Poly; 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 SaskPoly 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 significant 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. Working Group members are listed below and in *Appendix B, Steering Committee and Working Group Membership*[6]. To date we have held three sessions with the Working Group.

Steering 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	Urban and Regional 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

[6] For users of the College of Arts and Science Challenge system, appendices may be obtained by contacting Alexis Dahl, Director of the Programs Office.

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	SENS
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 C, 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 D: 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 E: Program Flow Diagram*.

Following the third consultation session, we have 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 has 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 have developed initial course outlines for all proposed program courses (see *Appendix I: 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:

- Design: 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.
- Culture: 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.
- Technology: 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.
- Practice: 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.
- Collaboration: 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.
- Local and Indigenous Knowledge: 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.

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 F: 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 early in 2017, at which point this analysis will be reviewed. We can be confident, though, that changes will be minimal. Please see *Appendix G: 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 (Architecture)

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. 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.

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. Normally, 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 stake-holders.
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 90 applicants with previous degrees, and 50 applicants with previous degrees in architecture (including foreign degrees), per year (in addition to applicants who have completed the B.Des. at the University of Saskatchewan).

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 in Canada. A success in this last measure would be ten applicants per year once a steady state is achieved.

Accreditation. By 2024 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.

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 by about 2040.

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 2040 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 E, Program Flow Diagram*.

Catalog 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:

> *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 Descriptions* for more information.

Bachelor of Design (B.Des.) - Architecture

Requirement 1 – Academic Requirement (30 credit units)

No more than 6 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:

  CMRS 110.3
  CMRS 111.3
  ENG 110.6
  ENG 111.3
  ENG 112.3
  ENG 113.3
  ENG 114.3
  HIST 110.3
  HIST 111.3
  HIST 115.3
  HIST 120.6
  HIST 121.3
  HIST 122.3
  HIST 125.3
  HIST 135.3
  HIST 145.3
  HIST 151.3
  HIST 152.3
  HIST 155.3
  HIST 165.3
  HIST 170.6
  HIST 175.3
  INTS 101.12
  LIT 100.6
  PHIL 110.6
  PHIL 115.3
  PHIL 120.3
  PHIL 133.3

- 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:
    - ARCD 811.6 Studio in Architectural Research
    - ARCD 821.6 Comprehensive Design Studio
- 21 credits core courses:
    - ARCD 814.3 Research Practices in Architecture
    - ARCD 824.3 Urban Systems
    - ARCD 812.3 Structures II
    - ARCD 822.3 Integrated Systems
    - ARCD 815.3 Professional Practice in Architecture
    - ARCD 825.3 Architectural Project Management
    - ARCD 845.3 Business Practices in Architecture
- 6 credit units electives at the 800-level or senior undergraduate, as approved by Supervisor

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 (2023-24 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 H: 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 programs together will require approximately 4000 square meters of 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.

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 under $3,000,000 per annum, with total direct+indirect cost at just over $4,100,000. 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

The program advisory committee is proposing a non-standard tuition of $6,000 per academic term. In addition there will be a co-op fee of $1000 per co-op term. Tuition during the first two years of general education will be the College of Arts and Science standard tuition.

Enrolment and tuition revenues

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). For a discussion of the context and background for enrolment targets, please see pages 11-13 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 $2.68 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 $4,800,000 per annum.

Program Independence

Given the full operating grant increase as shown by the TABBS model, the program is possibly 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 2023-24 academic year.

Appendix A: Course Calendar Descriptions

Bachelor of Design (Architecture)

ARCD 111.3 Introduction to Architecture

This course provides an introduction to the study of architecture. This survey of architectural history is organized around basic concepts in architecture, including shelter, community, technology, representation and meaning.

Prerequisites: None

ARCD 311.6 Design with the Land

This course requires students to design architectural projects, including small buildings, within a physical, ecological and cultural context. Students will begin to develop an intentional design process as well as their skills with design methods and technologies. The studio will also introduce basic ideas of sustainable design as well as formal, material and constructional considerations. Attention is paid to Indigenous Knowledge and Practices.

Prerequisite: INTS 111.3

ARCD 312.3 Building Technology I

An introduction to the technical framework for design and construction including: regulatory frameworks; building science; sustainable design; principles of structural systems in steel, concrete and wood; excavation and foundation systems; light wood framing; masonry; envelope and roofing assemblies.

Prerequisites: None

ARCD 313.3 Ecological Design

An introduction to the ecological aspects of architectural design. Topics of discussion include: climate and human comfort; vernacular architecture; climatic influences; environmental context; environmental concepts and influences on design; solar geometry; low carbon design; site planning; passive systems; active systems; landscape; microclimates; sustainability; green building rating systems.

Prerequisite: ENVS 201.3

ARCD 314.3 Indigenous Architectural Traditions

This course examines Indigenous architectures of the world, with an emphasis on the indigenous architectural forms of Saskatchewan and Canada. The relationships between Indigenous architectures and Indigenous Ways of Knowing are examined. In addition, the course considers the role of ethics within the development of Indigenous architecture, calling into question the relationship between architectural history and theory and the space of Indigenous architecture, its definitions, redefinition and recognition.

Prerequisite: INDG 107.3

ARCD 321.6 Design and Making

In this studio course, students will continue to develop the design process introduced in previous semesters. Fundamental inputs of ecology, use, identity, materiality and technology will be put to use in the design of structures for human habitation. Techniques of modelling and representation typical of architectural practice will be developed.

Prerequisite: ARCD 311.6 Design with the Land

ARCD 322.3 Building Technology II

A detailed exploration of design and construction practices in steel, concrete, precast concrete and heavy timber. The course will also study high performance building envelopes, curtain wall, cladding systems, glazing systems, new materials and best detailing practices. Introduction to energy performance and low carbon design choices. The focus will shift from small residential projects to a range of larger building types.

Prerequisite: ARCD 312.3 Building Technology I

ARCD 325.3 The Construction Industry

This course introduces students to the study of construction. The role of the construction industry in human culture is discussed, as is the organization of this industry and of the architectural profession in Canada. Laws and regulations pertaining to construction are introduced, as are construction management processes.

Prerequisite: ARCD 111.3 Introduction to Architecture

ARCD 401.0 Co-operative Education in Architecture I

Students an opportunity to undertake a 4-month work term placement with a partner in the architecture, engineering, and construction industry. The co-op program provides students with an opportunity to apply their acquired skills in a professional environment while gaining insights on current architectural praxis. Course enrollment is conditional on the student obtaining and accepting a placement offer from an approved industry partner. Where possible, students will be visited as required by the course coordinator to assess professional experience and progress.

Prerequisite: ARCD 325.3 The Construction Industry

ARCD 411.6 Design|Build Studio

In this studio course, students will design and build a small structure. Working with a client group, which may take the form of a University, non-profit or community organization, students will carry out the design consultation, produce documentation as required, and then physically construct the structure. An understanding of the relationships between construction, materiality, design and use will be foregrounded.

Prerequisite: ARCD 321.6 Design and Making
Co-requisite: ARCD 413.3 Construction I

ARCD 412.3 Structures I

This course will encourage students to explore the principles of structural behavior from a technical and mathematical perspective, including: loading conditions, gravitational, lateral and seismic forces, moments, systems of forces, conditions of equilibrium, and centre of gravity of loads and areas; forces in trusses, simple frame analysis, moment of inertia; concepts of simple stress and strain, shear and bending moments in simple beams, shear and moment diagrams, qualitative deflected shapes, flexural and shearing stresses, deflection related calculations; and the appropriate selection of structural systems for buildings at a preliminary level.

Prerequisite: ARCD 322.3 Building Technology II

ARCD 413.3 Construction I

As a companion course to the parallel Design/Build Studio, students will undertake a detailed exploration of technical topics that pertain to the development of design and construction documents. Content of the course will include: building code review; materials assessment; structural design; best practice envelope design; energy and heat loss analysis; environmental systems; low carbon design targets; sustainable systems and construction coordination. Communication and technical drawing skills will be stressed.

Prerequisites: ARCD 322.3 Building Technology II; 313.3 Ecological Design

Co-requisite: ARCD 411.6 Studio 3: Design Build

ARCD 414.3 Architectural Thought and Practice After the Second World War

This course examines the architectural developments in the last half of the twentieth century. Key texts of the period are presented and discussed in relation to developments in architectural practice.

Prerequisite: ARCD 324.3 Architectural Principles in the Modern World

ARCD 415.3 Collaborative Methods

Through theoretical discussions and practical exercises, students will learn how to be effective participants in team activities, including in leadership positions. Methods of consultation and facilitation design, the role of feedback, and methods of conflict resolution will be discussed and modeled.

Prerequisite: ARCD 325.3 The Construction Industry

ARCD 421.6 Building Community

In this studio course, students will design and document a building of a medium level of complexity that will be of service to a Saskatchewan community. The building design will begin to integrate ideas and concepts from other parts of the curriculum, including a fundamental knowledge of building structures, local codes, environmental sustainability, and ideas of form, use and materiality.

Prerequisite: ARCD 411.6 Design|Build Studio

ARCD 422.3 Environmental Systems

An overview of the integration of environmental systems in buildings. Subjects covered include: environmental parameters; low energy design; passive systems; air and water systems; heating and cooling loads; ventilating and air conditioning systems; plumbing and waste systems; artificial source lighting and daylighting; acoustics; and fire protection criteria and systems. Reference to building codes and standards will be made throughout the course.

Prerequisite: ARCD 413.3 Construction I

ARCD 423.3 Construction II

Construction II is designed to be a companion course to the parallel "Building Community" Design Studio. Students will undertake a comprehensive exploration of technical topics as pertain to the detailed development of the design project. Such topics include: code review; life safety; fire protective design; universal access; material assessment; structural design; best practice envelope design; energy and heat loss analysis; environmental systems; low carbon design targets; sustainable systems (passive and active design); and sustainable rating systems. Construction II will also address some of the new detail issues such as building envelope design, energy modelling, active systems, and possibly a LEED analysis.

Prerequisite: ARCD 413.3 Construction I

ARCD 424.3 Contemporary Concerns in Architecture

This course considers recent developments in architectural thought and discourse. The current situation of architecture as a profession, practice and discipline is discussed. Emerging and disruptive ideas and concerns are brought into play.

Prerequisite: ARCD 414.3 Architectural Thought and Practice After the Second World War

ARCD 425.3 Design and Community

This course examines the role of design within human communities. The role that architecture and related design disciplines have to play in ensuring quality in the built environment is stressed. Types of communities are evaluated, both within Saskatchewan and worldwide, and techniques for advocacy are developed.

Prerequisite: ARCD 415.3 Collaborative Methods

Master of Architecture

ARCD 811.6 Studio in Architectural Research

In this studio course, students will develop an approach to architectural design based in research. Students will be confronted with design problems that will require the implementation of research strategies and to examine the conditions architectural practice, including their own practices and beliefs, in the design of several architectural projects.

Prerequisites: none.

ARCD 812.3 Structures II

Case studies are used to examine the successful conceptual development, structural design, and construction processes of architectural projects, with a particular focus on selecting and designing with structural steel, reinforced concrete and timber systems. Topics are studied using calculations, design aids, rules of thumb and the latest CSA design standards.

Prerequisites: None

ARCD 814.3 Research Practices in Architecture

The various methods and practices of research in architecture are investigated, including archival research, experimental research and design research. Students will be expected to make use of the tools of architectural practice as research methodologies.

Corequisite: 811.6 Studio in Architectural Research

ARCD 815.3 Professional Practice in Architecture

This course examines the current and evolving role of the professional architect within society and within the construction industry. The legal and regulatory framework for architectural practice in Canada is discussed, as are the ethical responsibilities of architects, and the role of the architect as advocate for the built environment.

Prerequisites: none

ARCD 821.6 Comprehensive Design Studio

In this studio students will apply their knowledge of various areas of the curriculum, including their Concentration, to the design of a building that integrates a clearly articulated architectural idea with technical and cultural dependent systems into a coherent building.

Prerequisite: ARCD 811.6 Studio in Architectural Research

ARCD 822.3 Integrated Systems

A companion course to the Comprehensive Design Studio. The course will address questions pertaining to the specific structural, envelope, energy, environmental systems, regulatory framework, site planning, sustainable, low carbon, passive, and life safety systems in the buildings and will culminate in a technical report.

Prerequisites: 812.3 Structures II
Co-requisites: 821.6 Comprehensive Design Studio

ARCD 824.3 Urban Systems

This course provides students with tools needed to select, analyze and plan an urban site, and to design buildings in such a complex environment. Relationships with and reactions to multiple contexts are discussed. Planning and zoning principles are addressed, as are the administrative and political processes for controlling urban development.

Prerequisites: None

ARCD 825.3 Architectural Project Management

This course examines in depth the methods and techniques used by architects for the management of construction projects, including: financial management; time management; and task and team management. Various types of project delivery methods will be examined, along with their associated contractual relationships.

Prerequisites: ARCD 815.3 Professional Practice in Architecture

ARCD 845.3 Business Practices in Architecture

In this course students learn how to organize and manage an architectural practice. Legal issues, human resource practices, financial management practices, marketing and strategic planning are discussed, as are the various forms that a practice can take. Students are required to develop a business plan for an architectural practice.

Prerequisites: ARCD 825.3 Architectural Project Management

ARCD 901.0 Co-operative Education in Architecture II

Students undertake a 4-month work term placement with a partner in the architecture, engineering, and construction industry.

Prerequisite: ARCD 815.3 Professional Practice in Architecture.

ARCD 902.0 Co-operative Education in Architecture III

Students undertake a 4-month work term placement with a partner in the architecture, engineering, and construction industry.

Prerequisite: ARCD 901.0 Co-op Work Term

ARCD 994.0 Design|Research Thesis in Architecture

N/A

ARCD 990.0 Architecture Symposium

This course presents miscellaneous topics of current concern in architecture.

Appendix A:
Course Calendar Descriptions

Bachelor of Design (Architecture)

ARCD 111.3 Introduction to Architecture
This course provides an introduction to the study of architecture. This survey of architectural history is organized around basic concepts in architecture, including shelter, community, technology, representation and meaning.
Prerequisites: None

ARCD 311.6 Design with the Land
This course requires students to design architectural projects, including small buildings, within a physical, ecological and cultural context. Students will begin to develop an intentional design process as well as their skills with design methods and technologies. The studio will also introduce basic ideas of sustainable design as well as formal, material and constructional considerations. Attention is paid to Indigenous Knowledge and Practices.
Prerequisite: INTS 111.3

ARCD 312.3 Building Technology I
An introduction to the technical framework for design and construction including: regulatory frameworks; building science; sustainable design; principles of structural systems in steel, concrete and wood; excavation and foundation systems; light wood framing; masonry; envelope and roofing assemblies.
Prerequisites: None

ARCD 313.3 Ecological Design
An introduction to the ecological aspects of architectural design. Topics of discussion include: climate and human comfort; vernacular architecture; climatic influences; environmental context; environmental concepts and influences on design; solar geometry; low carbon design; site planning; passive systems; active systems; landscape; microclimates; sustainability; green building rating systems.
Prerequisite: ENVS 201.3

ARCD 314.3 Indigenous Architectural Traditions
This course examines Indigenous architectures of the world, with an emphasis on the indigenous architectural forms of Saskatchewan and Canada. The relationships between Indigenous architectures and Indigenous Ways of Knowing are examined. In addition, the course considers the role of ethics within the development of Indigenous architecture, calling into question the relationship between architectural history and theory and the space of Indigenous architecture, its definitions, redefinition and recognition.
Prerequisite: INDG 107.3

ARCD 321.6 Design and Making
In this studio course, students will continue to develop the design process introduced in previous semesters. Fundamental inputs of ecology, use, identity, materiality and technology will be put to use in the design of structures for human habitation. Techniques of modelling and representation typical of architectural practice will be developed.
Prerequisite: ARCD 311.6 Design with the Land

ARCD 322.3 Building Technology II
A detailed exploration of design and construction practices in steel, concrete, precast concrete and heavy timber. The course will also study high performance building envelopes, curtain wall, cladding systems, glazing systems, new materials and best detailing practices. Introduction to energy performance and low carbon design choices.

The focus will shift from small residential projects to a range of larger building types.
Prerequisite: ARCD 312.3 Building Technology I

ARCD 325.3 The Construction Industry
This course introduces students to the study of construction. The role of the construction industry in human culture is discussed, as is the organization of this industry and of the architectural profession in Canada. Laws and regulations pertaining to construction are introduced, as are construction management processes.
Prerequisite: ARCD 111.3 Introduction to Architecture

ARCD 401.0 Co-operative Education in Architecture I
Students an opportunity to undertake a 4-month work term placement with a partner in the architecture, engineering, and construction industry. The co-op program provides students with an opportunity to apply their acquired skills in a professional environment while gaining insights on current architectural praxis. Course enrollment is conditional on the student obtaining and accepting a placement offer from an approved industry partner. Where possible, students will be visited as required by the course coordinator to assess professional experience and progress.
Prerequisite: ARCD 325.3 The Construction Industry

ARCD 411.6 Design|Build Studio
In this studio course, students will design and build a small structure. Working with a client group, which may take the form of a University, non-profit or community organization, students will carry out the design consultation, produce documentation as required, and then physically construct the structure. An understanding of the relationships between construction, materiality, design and use will be foregrounded.
Prerequisite: ARCD 321.6 Design and Making
Co-requisite: ARCD 413.3 Construction I

ARCD 412.3 Structures I
This course will encourage students to explore the principles of structural behavior from a technical and mathematical perspective, including: loading conditions, gravitational, lateral and seismic forces, moments, systems of forces, conditions of equilibrium, and centre of gravity of loads and areas; forces in trusses, simple frame analysis, moment of inertia; concepts of simple stress and strain, shear and bending moments in simple beams, shear and moment diagrams, qualitative deflected shapes, flexural and shearing stresses, deflection related calculations; and the appropriate selection of structural systems for buildings at a preliminary level.
Prerequisite: ARCD 322.3 Building Technology II

ARCD 413.3 Construction I
As a companion course to the parallel Design/Build Studio, students will undertake a detailed exploration of technical topics that pertain to the development of design and construction documents. Content of the course will include: building code review; materials assessment; structural design; best practice envelope design; energy and heat loss analysis; environmental systems; low carbon design targets; sustainable systems and construction coordination. Communication and technical drawing skills will be stressed.
Prerequisites: ARCD 322.3 Building Technology II; 313.3 Ecological Design
Co-requisite: ARCD 411.6 Studio 3: Design Build

ARCD 414.3 Architectural Thought and Practice After the Second World War
This course examines the architectural developments in the last half of the twentieth century. Key texts of the period are presented and discussed in relation to developments in architectural practice.
Prerequisite: ARCD 324.3 Architectural Principles in the Modern World

ARCD 415.3 Collaborative Methods
Through theoretical discussions and practical exercises, students will learn how to be effective participants in team activities, including in leadership positions. Methods of consultation and facilitation design, the role of feedback, and methods of conflict resolution will be discussed and modeled.
Prerequisite: ARCD 325.3 The Construction Industry

ARCD 421.6 Building Community
In this studio course, students will design and document a building of a medium level of complexity that will be of service to a Saskatchewan community. The building design will begin to integrate ideas and concepts from other parts of the curriculum, including a fundamental knowledge of building structures, local codes, environmental sustainability, and ideas of form, use and materiality.

Prerequisite: ARCD 411.6 Design|Build Studio

ARCD 422.3 Environmental Systems
An overview of the integration of environmental systems in buildings. Subjects covered include: environmental parameters; low energy design; passive systems; air and water systems; heating and cooling loads; ventilating and air conditioning systems; plumbing and waste systems; artificial source lighting and daylighting; acoustics; and fire protection criteria and systems. Reference to building codes and standards will be made throughout the course.
Prerequisite: ARCD 413.3 Construction I

ARCD 423.3 Construction II
Construction II is designed to be a companion course to the parallel "Building Community" Design Studio. Students will undertake a comprehensive exploration of technical topics as pertain to the detailed development of the design project. Such topics include: code review; life safety; fire protective design; universal access; material assessment; structural design; best practice envelope design; energy and heat loss analysis; environmental systems; low carbon design targets; sustainable systems (passive and active design); and sustainable rating systems. Construction II will also address some of the new detail issues such as building envelope design, energy modelling, active systems, and possibly a LEED analysis.
Prerequisite: ARCD 413.3 Construction I

ARCD 424.3 Contemporary Concerns in Architecture
This course considers recent developments in architectural thought and discourse. The current situation of architecture as a profession, practice and discipline is discussed. Emerging and disruptive ideas and concerns are brought into play.
Prerequisite: ARCD 414.3 Architectural Thought and Practice After the Second World War

ARCD 425.3 Design and Community
This course examines the role of design within human communities. The role that architecture and related design disciplines have to play in ensuring quality in the built environment is stressed. Types of communities are evaluated, both within Saskatchewan and worldwide, and techniques for advocacy are developed.
Prerequisite: ARCD 415.3 Collaborative Methods

Master of Architecture

ARCD 811.6 Studio in Architectural Research
In this studio course, students will develop an approach to architectural design based in research. Students will be confronted with design problems that will require the implementation of research strategies and to examine the conditions architectural practice, including their own practices and beliefs, in the design of several architectural projects.
Prerequisites: none.

ARCD 812.3 Structures II
Case studies are used to examine the successful conceptual development, structural design, and construction processes of architectural projects, with a particular focus on selecting and designing with structural steel, reinforced concrete and timber systems. Topics are studied using calculations, design aids, rules of thumb and the latest CSA design standards.
Prerequisites: None

ARCD 814.3 Research Practices in Architecture
The various methods and practices of research in architecture are investigated, including archival research, experimental research and design research. Students will be expected to make use of the tools of architectural practice as research methodologies.
Corequisite: 811.6 Studio in Architectural Research

ARCD 815.3 Professional Practice in Architecture
This course examines the current and evolving role of the professional architect within society and within the construction industry. The legal and regulatory framework for architectural practice in Canada is discussed, as are the ethical responsibilities of architects, and the role of the architect as advocate for the built environment.
Prerequisites: none

ARCD 821.6 Comprehensive Design Studio
In this studio students will apply their knowledge of various areas of the curriculum, including their Concentration, to the design of a building that integrates a clearly articulated architectural idea with technical and cultural dependent systems into a coherent building.
Prerequisite: ARCD 811.6 Studio in Architectural Research

ARCD 822.3 Integrated Systems
A companion course to the Comprehensive Design Studio. The course will address questions pertaining to the specific structural, envelope, energy, environmental systems, regulatory framework, site planning, sustainable, low carbon, passive, and life safety systems in the buildings and will culminate in a technical report.
Prerequisites: 812.3 Structures II
Co-requisites: 821.6 Comprehensive Design Studio

ARCD 824.3 Urban Systems
This course provides students with tools needed to select, analyze and plan an urban site, and to design buildings in such a complex environment. Relationships with and reactions to multiple contexts are discussed. Planning and zoning principles are addressed, as are the administrative and political processes for controlling urban development.
Prerequisites: None

ARCD 825.3 Architectural Project Management
This course examines in depth the methods and techniques used by architects for the management of construction projects, including: financial management; time management; and task and team management. Various types of project delivery methods will be examined, along with their associated contractual relationships.
Prerequisites: ARCD 815.3 Professional Practice in Architecture

ARCD 834.3 Architecture Thesis Seminar
This course runs in conjunction with the early phases of the Design Thesis and is designed to assist students as they move from proposal submission (at the start of the course) through literature and precedent review to formulate clear research questions and to develop an appropriate design vehicle and process.
Prerequisite: None

ARCD 845.3 Business Practices in Architecture
In this course students learn how to organize and manage an architectural practice. Legal issues, human resource practices, financial management practices, marketing and strategic planning are discussed, as are the various forms that a practice can take. Students are required to develop a business plan for an architectural practice.
Prerequisites: ARCD 825.3 Architectural Project Management

ARCD 901.0 Co-operative Education in Architecture II
Students undertake a 4-month work term placement with a partner in the architecture, engineering, and construction industry.
Prerequisite: ARCD 815.3 Professional Practice in Architecture.

ARCD 902.0 Co-operative Education in Architecture III
Students undertake a 4-month work term placement with a partner in the architecture, engineering, and construction industry.
Prerequisite: ARCD 901.0 Co-op Work Term

ARCD 924.0 Design|Research Thesis in Architecture
N/A

ARCD 990.0 Architecture Symposium
This course presents miscellaneous topics of current concern in architecture.

Appendix B: Steering Committee and Working Group Memberships

Steering Committee Membership 2016

Current Steering Committee Members	
Andrew Wallace	U of S Facilities; Committee Chair, U of S
Colin Tennent	U of S Facilities
Susan Shantz	Department of Art and Art History
Bruce Sparling	College of Engineering
Ryan Walker	Urban and Regional Planning
Dave Edwards	Saskatchewan Association of Architects
Paul Blaser	Saskatchewan Association of Architects; Committee Chair, SAA
Bob Burnyeat	Saskatchewan Association of Architects
Colin Ripley	RVTR, Project Director
Alexis Dahl	Programs Office, College of Arts and Science

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	SENS
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

Appendix C:
Notice of Intent

Notice of Intent for a School of Architecture at the University of Saskatchewan

- Notice of Intent for the School of Architecture and Visual Art
- Notice of Intent for a Professional Program in Architecture

Date March 15, 2016
Submitted by: Colin Ripley

Cover image: Potash and Gold. Obtained under Creative Commons license from https://www.flickr.com/photos/justaprairieboy/4830720234/in/photolist-8qJkiN-X6HdR-8mSGPU-3zdTT-2hXYM7.

Contents

Executive Summary

This document presents a Notice of Intent for both a new School of Architecture as well as its professional programs: Bachelor of Design (Architecture) (B.Des. (Arch)) and Master of Architeture (M.Arch.). Part One of the document contains the NOI for the School, while Part Two contains the NOI for the new programs and Part Three presents an overview of architectural education in Canada.

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 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 communities in the Province in their development 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 be of value to the University as a whole, and not just to the professional programs in the School. 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.

Administratively, we are proposing that the School of Architecture function as a Department in the College of Arts and Science, with significant formal linkages to other areas in the University.

There are currently eleven accredited schools of architecture in Canada, with a twelfth (Laurentian University) in development. Although there is a range of administrative arrangements, nomenclature and program type, all are known informally as "schools of architecture." Six of the twelve sit in Faculties of Engineering while the other six sit in Faculties of Architecture. In terms of nomenclature, Schools may be Schools, Departments or Programs, but using the official name "School of Architecture," regardless of the formal structure, is likely to prevent confusion at later dates. We are proposing the formation of a new School of Architecture and Visual Art, incorporating the existing Department of Art and Art History.

We are proposing a School and a program that are 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.

Each School of Architecture has its own unique identity. After significant consultations, we believe that this set of values (at least preliminarily) expresses an appropriate (and exciting) identity for a program based in Saskatchewan, and that will allow it to engage with the architectural issues and potential of the Province and its people.

The School will have significant mandates in Discovery and Outreach.

Faculty in Schools of Architecture in Canada today undertake significant discovery activities. While these may evolve over time, we will prioritize discovery agendas that mesh with the values of the University and of the program, and particularly around "A Sense of Place." Faculty may investigate - and seek to have an impact on - the unique environments, ecologies, economies and communities of Saskatchewan, as understood through the lens of architecture. In addition, the School will look to develop and maintain significant productive connections to communities - locally, across the Province, and globally, through mechanisms such as design-build activities, community design charrettes, design advocacy, symposia, workshops, summer camps and so on.

The Professional Program will be accredited by the Canadian Architectural Certification Board (CACB).

Architectural programs in Canada are accredited by the Canadian Architectural Certification Board, which receives its mandate jointly from the Canadian Architectural Licensing Authorities (CALA) and the Council of Canadian University Schools of Architecture (CCUSA). This program will be designed to be CACB-accreditable. CACB has a well-established procedure in place for the accreditation of new programs.

We are proposing a "Hybrid 2+2+2" program model: B.Des.(Arch) + M.Arch.

In Canada, three Schools of Architecture follow a "Stand-alone Masters" model - a three to four year (six to eight term) M.Arch. degree that can accept applicants with Bachelor degrees in any discipline. Seven Schools follow a "4+2" model - a four year undergraduate degree in architecture (B.A.S., B.E.D., B.Arch.Sci., etc) followed by a two-year (four to five term, sometimes including Spring or Supper terms) M.Arch.; the two degrees are understood and evaluated by the CACB as a single professional program. The remaining two schools follow a "Hybrid 2+2+2" program: two years of general studies, two years of undergraduate architecture, and a two-year (four to five term) M.Arch. The addition of a three- to four- term graduate level preparatory course allows the program to mimic, for appropriate applicants, either a "Stand-alone Masters" or a "4+2" program. The Hybrid 2+2+2 program provides multiple pathways into the program, from high school, from other University disciplines, from College diplomas, from completed degrees in other disciplines and from undergraduate degrees in architecture from other institutions (including international institutions).

We are proposing a student intake of 45 students at both undergraduate and graduate levels.

These numbers are likely conservative. Demand for architectural education in Canada is very high and unaffected by the recent economic downturn. Across the country, applications to professional programs outnumber available seats by a factor of approximately 6:1 at the undergraduate and 4:1 at the graduate level, when multiple individual applications are taken into account. Demographic analysis suggests that from Saskatchewan high-school graduates alone, we should reasonably expect about 125 applicants each year. Programs in Architecture vary in size in Canada from a low intake of 30 (M.Arch., Ryerson, Manitoba) to a high of 125 (B.Arch.Sci., Ryerson; B.A.S., Carleton). Attrition between undergraduate and graduate programs will be compensated for by students transferring from undergraduate degrees at other institutions (including international institutions).

The program will have significant co-curricular components, including a Co-op component; study abroad; community engagement and design-build activities.

Co-curricular components of this nature are common among Schools of Architecture in Canada. There are currently three formal Co-op programs; co-op is a major draw among applicants and highly desired by the professional community. Study abroad, community engagement, and design-build flow directly from the values identified above.

We expect a faculty complement of 11 FTE for instruction, and an additional 1.0 FTE for administration.

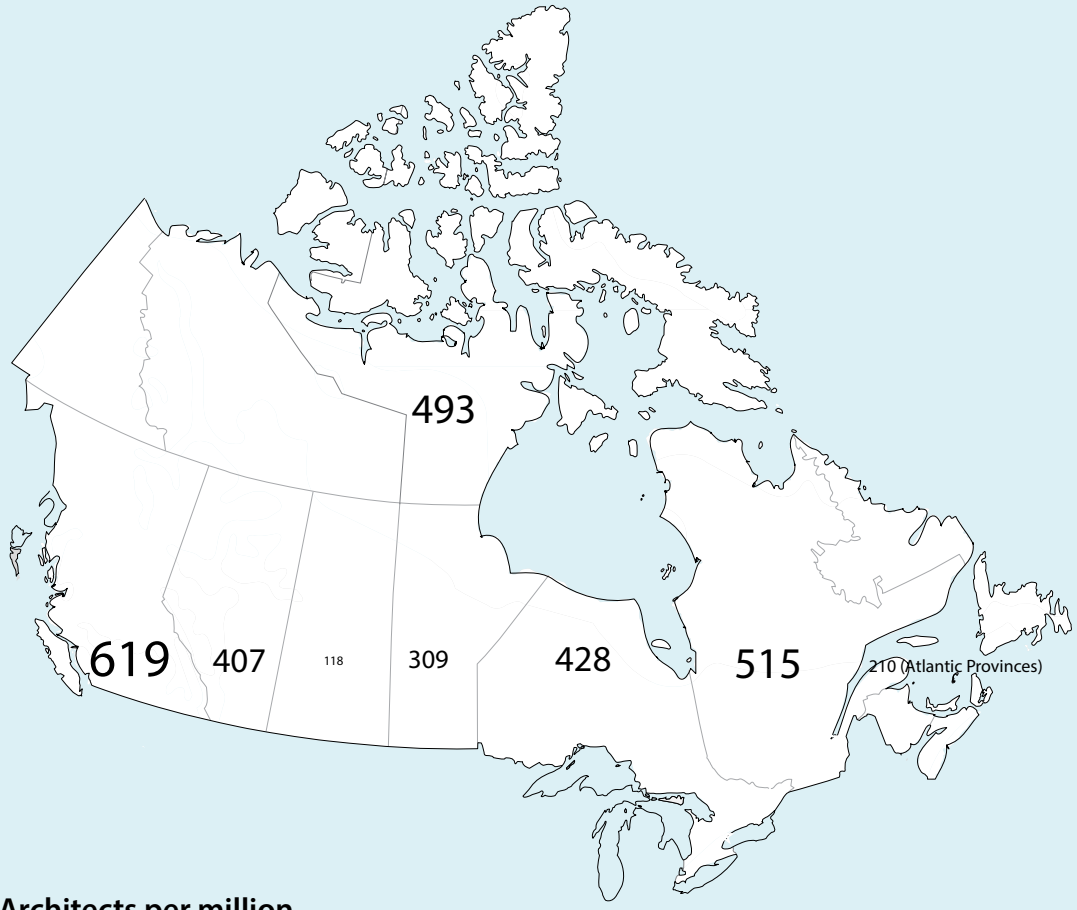
Across Canada, the average student:faculty ratio in Schools of Architecture is 19:1. The small student intake at the University of Saskatchewan will make it less efficient in terms of faculty resource use than the average, with a student:faculty ratio higher than UBC or Calgary but lower than all other English-language schools in Canada. Largely in studio, the School will also make extensive use of sessional instructors drawn from the local professional community.

The School will require about 4000 sm of space in which to operate, and we are proposing to make use of the John Deere Plow Building.

Space needs for professional programs in architecture are large because of the CACB requirements around studio: each student must have a dedicated workspace. The City of Saskatoon has allocated the John Deere Plow Building, about 4300 sm, for the University to be the home of the School of Architecture. A feasibility study has shown that renovation costs will be approximately $20 million.

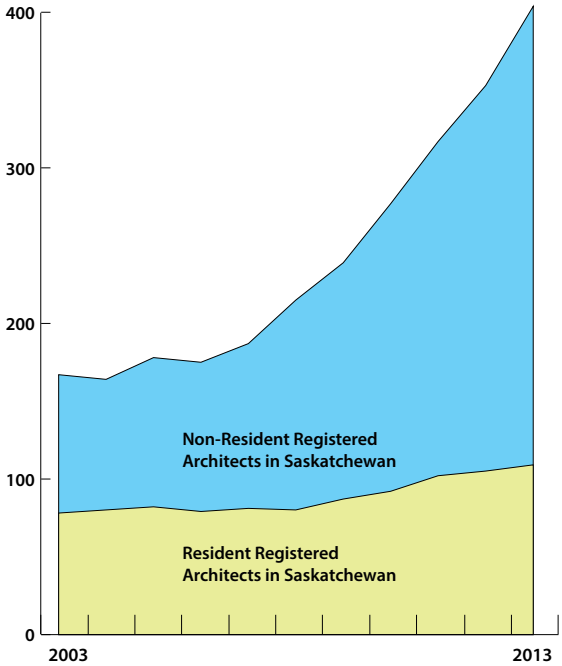
The School will operate on a "direct cost" budget of $3.2 million per year, of which approximately 69% is instructional salaries.

A full budget breakdown is included in the full report. We are estimating total costs at $4.4 million, not including start-up capital costs described above.



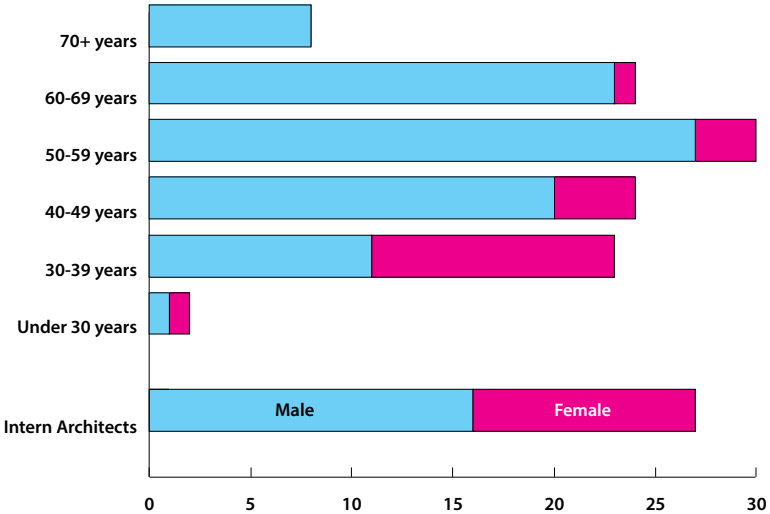
Resident Architects per million population, by Provice, Canada

Data: Statistics Canada, 2006 Census



Resident vs. Non-Resident Architects, Saskatchewan

Data: Saskatchewan Association of Architects



Age and Gender of Resident Architects, Saskatchewan

Data: Saskatchewan Association of Architects

Introduction

Architecture can be difficult to define. It is a profession, founded in technical expertise, shaped by cultural and artistic expression, and guided by a sense of service to the community. It is an academic discipline, devoted to the study of our built environments and their role within the construction and maintenance of society. It is a knowledge-based arm of the construction industry, steeped in innovation and invention, a critical component for economic development. It is a creative discipline that can change the way we see the world and catalyze the development of new creative industries and new cultural forces. It is the buildings that we live, work and play in every day, today and tomorrow, and as populations – in Saskatchewan and globally – gravitate to urban areas, it will become a more important force. It is a discipline and profession that, quite literally, designs the future.

Saskatchewan has the opportunity to ensure this academic, cultural and economic engine flourishes with the establishment of a program in architecture at the University of Saskatchewan.

This Notice of Intent concerns the development of a professionally-accredited program in Architecture, as well as a new academic unit in which it will be housed. Saskatchewan is the only province west of the Maritimes without a school of architecture, and - at least partly as a result - has the second lowest provincial ratio of resident architects per capita in Canada, at about 116 architects per million people, compared to the national average of 428 per million. Even at that, there is a shortage of architects predicted nationally, as more professionals are expected to retire before 2020 than will be replaced. Furthermore, Saskatchewan is the only province in which the number of non-resident architects registered to practice exceeds the number of resident architects. The need for potential students of architecture to move to out-of-province programs and the contracting of services to out-of-province firms are limiting both human development and economic growth.

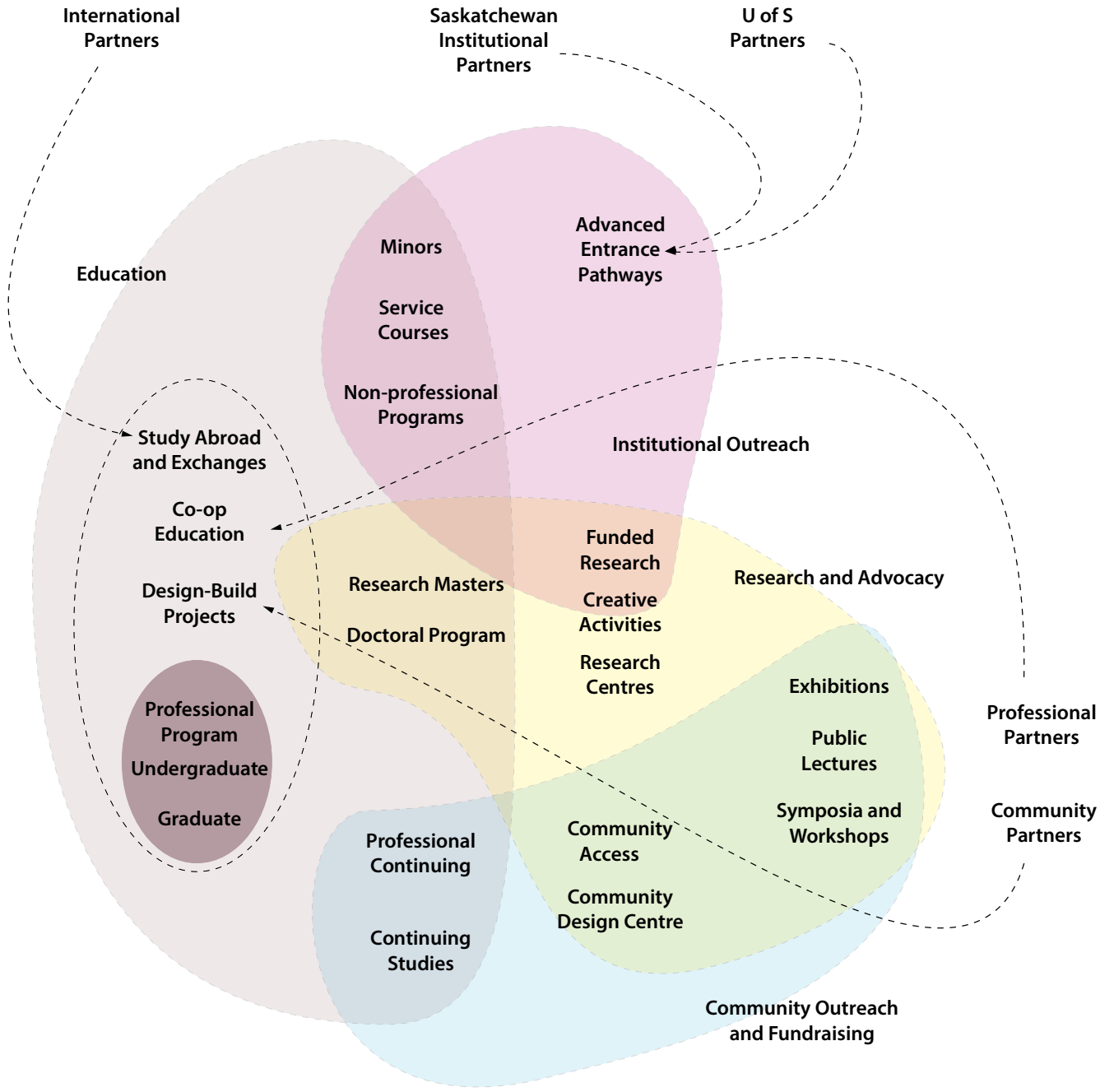
Equally important, Saskatchewan has not had the opportunity to gain from the added cultural and community benefits of architectural education - the development of an awareness of the built environment (and architectural culture), including the imperative for sustainable design; the ability for the program to assist in finding design solutions to community issues, including the issues of underserved and disadvantaged communities and groups; and the (more recent) collaborations between architectural education and other community and business groups in fostering entrepreneurship and innovation, especially around areas of emerging technologies of representation and advanced manufacturing.

Whether, at the end of the day, the new unit that emerges from this process is a Department in a College, a autonomous School, or a Program within an existing Department or School, it will inevitably have the type of complex organization that is typical of architecture units at other universities. For simplicity sake, and because in the end everyone will use this term, we will use the term “School of Architecture,” understood as a generic term, to describe the unit and its programs. It will contain within it a number of programs at the Undergraduate and Graduate level, including the Professional Program discussed in this NOI. It will also have a strong mandate for discovery, and will take community outreach - to the architectural profession, to the construction industry, and to the general public and civic government - as an important third part of its mandate. As such, a university program in architecture mirrors the traditional three-part mandate of a university as a whole: teaching, research, and service.

Benefits of a School of Architecture to the University

In addition to the benefits to the Province’s communities of a new School of Architecture, mentioned above, and the benefits to the architectural profession and the construction industry in the Province in terms of the development of a stronger architectural culture, the presence of a home-grown and educated workforce, and local support for research and innovation, a new School of Architecture will also bring significant benefits for the University.

First, Architecture, as a design-based discipline, has an important place and role within a university. Design-researchers will engage in questions of discovery through design: that is, through holistic and integrative thinking based in representational techniques, often very distinct from and complementary to the analytical approach of researchers in many other disciplines. Architectural researchers are often comfortable working collaboratively across disciplines, and can bring particular skill sets around design thinking, visualisation, and team management to give added value to research teams. Architectural researchers will also lead teams, often again with collaborators, on discovery projects related to the



Anatomy of a School of Architecture

Built Environment, Sustainable Design, Community Development, Institutional Frameworks and Advanced Manufacturing Technologies.

A School of Architecture will also be able to provide service teaching to the University community in areas such as design and visual thinking, as well as providing breadth electives in Architecture to students in other disciplines, enhancing overall design literacy at the University. Some schools of architecture have been successful in exporting the charette model of problem-solving to other areas of their universities.

In addition, a School of Architecture will assist the University in developing even closer connections to its local and provincial communities through its engagement in questions of community development, through a robust program of public outreach events, and through its promotion of the quality of the built environment. In addition, a proposed site for the program in the John Deere Plow Building in downtown Saskatoon will help the University to play a direct role in the economic and cultural development of the city.

Guiding Principles for the School and its programs

Through an intensive series of consultations, we have developed the following five interlinked principles that will continue to inform the development of the School and its programs. We believe that these five principles flow directly from situation, history and future of Saskatchewan and of the University of Saskatchewan.

1. A Sense of Place.
   The School and its programs will be deeply engaged in the environmental, ecological, economic, social and cultural situation of Saskatchewan, while recognizing the national and global networks within which Saskatchewan resides. A strong engagement with the technological needs for building in northern climates will be central to the mandate of the School.

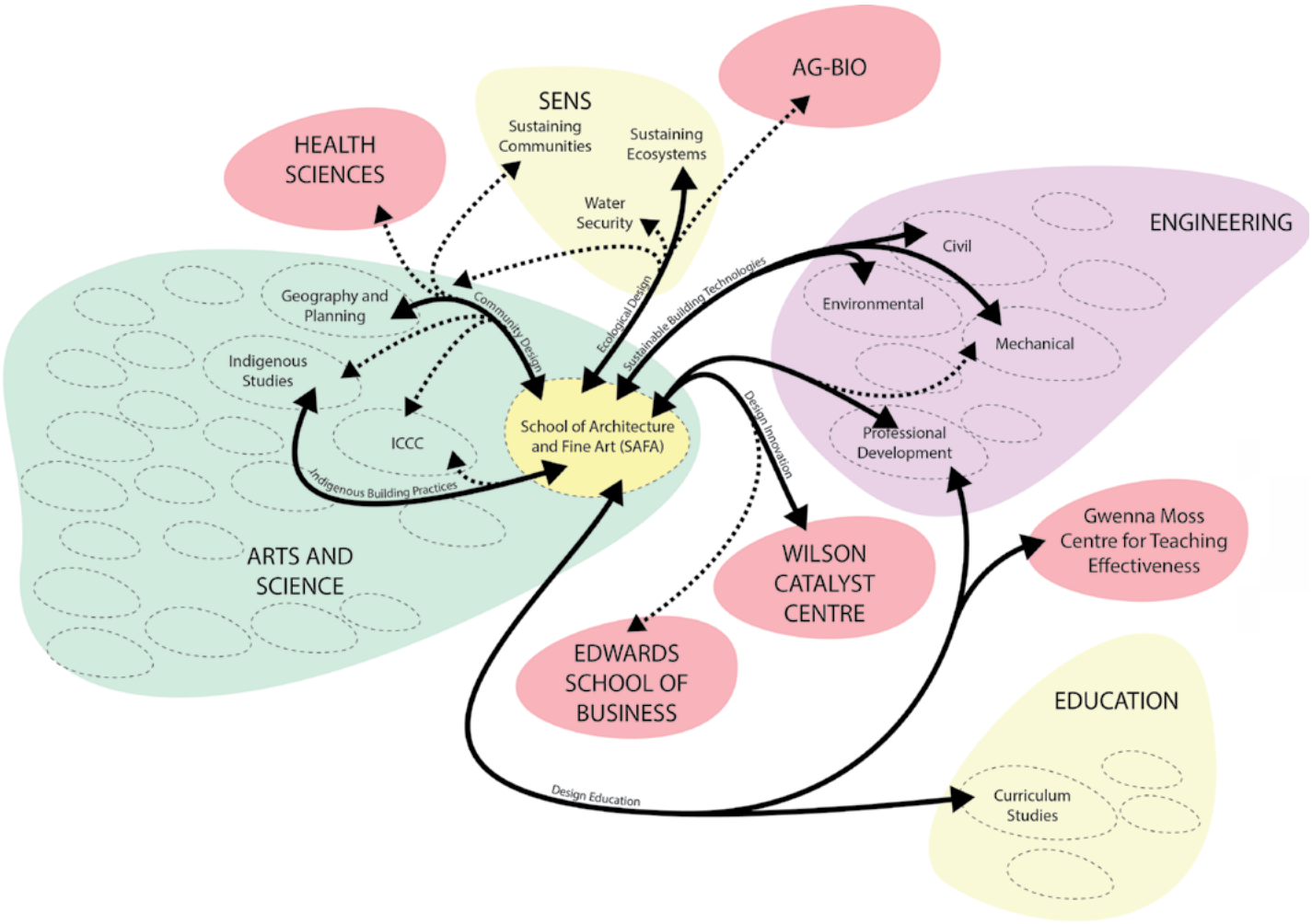
2. Collaboration and community
   In all its mandates (Education, Discovery, and Community) the school will strive to engage in a meaningful way with other disciplines, including disciplines not traditionally considered to be related to architecture. The School and its programs will prioritize collaboration amongst peers, classmates and colleagues, between the University and other parts of the post-secondary education sector in the Province, and with community agencies, non-profit groups, and individuals. The School will strive to support communities - local, provincial, and global - in their development, including actively supporting the growth of a design culture, industry and community in Saskatchewan.

3. The Importance of Making
   The School and its programs will be grounded in the act of making, understood as a means of constructing identity, community and place through engagement with physical materials. The School will incorporate activities such as design-build and other “making” projects at full scale, and ensure that the technical requirements of building are foregrounded.

4. An Entrepreneurial Spirit
   The School and its programs will recognize that both design and community-building are entrepreneurial activities. The School will actively look for opportunities to innovate in fulfilling its three-part mandate and will strive to provide students with the business skills and leadership qualities required to become successful actors in their communities after graduation.

5. Meaningful Engagement with Indigenous Ways of Knowing
   The School and its programs will engage with essential concepts of Indigenous knowledge - the land, community, stories. The School will look for opportunities to connect students and academics with Indigenous communities, and to include Indigenous teachers and elders in its operations.

Notice of Intent:
School of Architecture and Visual Art



Proposed Institutional Linkages,
School of Architecture and Visual Art

Notice of Intent: School of Architecture and Visual Art

1. Name of Department

We propose that the new Department be named "School of Architecture and Visual Art." The term "School" has strong and persistent roots in relation to architectural education. Regardless of the official term used to designate the unit within the University and regardless of its formal organization, it will inevitably be referred to by students, university administration, and the general public as the School of Architecture. We therefore recommend using it as the formal name of the unit in order to avoid confusion and misunderstanding.

We recommend that the School be formed as a reorganization and re-naming of the existing Department of Art and Art History. This arrangement has been agreed to in principle by the faculty in Art and Art History as a result of a vote in a faculty meeting on February 25, 2016. We make the following preliminary notes about this arrangement (please note that all terminology used in what follows is preliminary).

1. The School will operate as a department within the College of Arts and Science. Certain administrative and curricular aspects of the School - admission requirements and processes, tuition levels, accreditation requirements - as well as standards for tenure and possibly promotion, will be different for the School than for other departments in the College (existing expectations for College-level review will be maintained).

2. The School will be led by a single Director, with Associate Directors for Art and Architecture. These titles may need to be revisited to fit within UofS practice.

3. Existing programs in Art and Art History will not be affected by the development of the School.

4. In order to develop and maintain robust connections across the University, we propose organizing several formal "domains" - areas of research, service and teaching. These domains will be developed through initial hiring and through cross-appointments. Domains proposed are:
    - **Sustainable Building Technologies:** in partnership with the College of Engineering, with the mandate to develop building technologies in the context of cold climates. This group will be responsible for program components in technology.
    - **Design Education:** in partnership with the College of Engineering and the College of Education, with the mandate to further design education across the campus and the province, and to develop and implement strategies to respond to the impact of technological development on design education.
    - **Design Innovation:** in partnership with the College of Engineering and the Wilson Catalyst Centre, with the mandate to further innovation in the development of new design processes, tools and methods.
    - **Indigenous Building Practices:** in partnership with the Department of Indigenous Studies, with the mandate to further understand indigenous building practices world-wide and locally, and to engage indigenous students and communities.
    - **Community Design:** in partnership with Regional and Urban Planning, with the mandate to assist communities, locally and globally, in their development through design activities carried out with community groups.
    - **Environmental and Ecological Design:** in partnership with SENS, with the mandate to use the tools of design to further study and provide stewardship for ecological and environmental issues.


discovery
education
community

2. Academic Rationale.

Terms of Reference

Please explain why this department is needed. Provide a brief description of the goals of the department and consistency with institutional priorities as expressed in the Strategic Directions and the Foundational documents. Where relevant, the proposal should also indicate whether the establishment of the department is consistent with the goals of constituent college stated in Integrated College Plans, and whether the creation of the department has been identified as an objective in any Integrated College Plan. This statement should include information about department objectives, need for the department, demand, uniqueness and the expertise of the sponsoring unit. As well there should be a brief discussion of programs that will be developed and delivered by the department. Specify if programs will be transferred to the department or if new programs will be developed, or both.

The School of Architecture is needed in order to house a professionally accredited program in architecture, which is being developed concurrently with this proposal. The development of the proposal for a School of Architecture at the University of Saskatchewan has broad support in the University and in the community, and the process has been a lengthy one (described further in "consultation," below).

Vision, Mission, Mandate and Principles

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.

The mission of the School of Architecture is to work collaboratively with the people of Saskatchewan to design and make a better world. The Saskatchewan School of Architecture will be recognized internationally for its programs in architecture that are rooted in the particular environmental, ecological, economic, social and cultural situation of Saskatchewan, while cognizant of the global networks in which Saskatchewan resides. It will engage in programs of discovery that benefit the people of Saskatchewan and are of value beyond Saskatchewan's borders. It will be a centre for the collaborative production of excellent places.

The School of Architecture will achieve this mission through a three-part mandate:

Education

- Provide an accredited, internationally recognized professional education in Architecture. Incorporate a range of innovative learning experiences including design studio, co-op education, study abroad and design-build projects.
- Strengthen collaboration across the post-secondary education sector in Saskatchewan, including with Saskatchewan Polytechnic.
- Support the economic and personal development of Saskatchewan's indigenous peoples, and engage meaningfully with Indigenous world-views.

Discovery

- Make use of the primary disciplinary competencies of architecture, including the ability to think holistically and integratively about complex systems, to develop research expertise in areas fundamental to the development and well-being of Saskatchewan and its people, and important to a broader global population.
- Develop expertise in relation to the design and production of sustainable buildings and communities in cold climates. Build the capacity for innovation. Foster the development of building products and technologies that are compatible with the region and support Saskatchewan industry.
- Engage collaboratively with colleagues from other areas of the University and with external partners to create new knowledge about, and opportunities for, Saskatchewan.

Community

- Build a high quality environment and make Saskatchewan a place where people want to be; encourage and foster the design and construction of healthier buildings and communities.
- Build a creative class. Schools of Architecture foster the development of industrial and interior design, landscape architecture and urban design.
- Support increased trade, investment and exports through international engagement.

In carrying out this mandate the Saskatchewan School of Architecture will adhere to the following principles:

A Sense of Place: The School and its programs will be deeply engaged in the environmental, ecological, economic, social and cultural situation of Saskatchewan, while recognizing the national and global networks within which Saskatchewan resides. A strong engagement with the technological needs for building in northern climates will be central to the mandate of the School.

Collaboration and community: In all its mandates (Education, Discovery, and Community) the school will strive to engage in a meaningful way with other disciplines, including disciplines not traditionally considered to be related to architecture. The School and its programs will prioritize collaboration amongst peers, classmates and colleagues, between the University and other parts of the post-secondary education sector in the Province, and with community agencies, non-profit groups, and individuals. The School will strive to support communities - local, provincial, and global - in their development, including actively supporting the growth of a design culture, industry and community in Saskatchewan.

The Importance of Making: The School and its programs will be grounded in the act of making, understood as a means of constructing identity, community and place through engagement with physical materials. The School will incorporate activities such as design-build and other "making" projects at full scale, and ensure that the technical requirements of building are foregrounded.

An Entrepreneurial Spirit: The School and its programs will recognize that both design and community-building are entrepreneurial activities. The School will actively look for opportunities to innovate in fulfilling its three-part mandate and will strive to provide students with the business skills and leadership qualities needed to successful actors in their communities after graduation.

A Meaningful Engagement with Indigenous Ways of Knowing: The School and its programs will engage with essential concepts of Indigenous knowledge - the land, community, stories. The School will look for opportunities to connect students and academics with Indigenous communities, and to include Indigenous teachers and elders in its operations.

Consistency with Institutional Priorities

The School of Architecture will be a strong contributor to the University in achieving its strategic goals. The School's mandate will be aligned with priorities set in the Third Integrated Plan:

- Knowledge Creation: the School will have an important mandate to carry out discovery activities. It will focus on issues related to what makes Saskatchewan unique and on initiatives that will help Saskatchewan to grow.
- Innovation in Academic Programs and Services: the School will offer innovative programs, including a professional program in architecture that will be the first in Saskatchewan.
- Aboriginal Engagement: the School will seek to actively promote the economic and personal development of aboriginal communities and students, and will incorporate an indigenous world-view within its programs.
- Culture and Community: the School will promote the quality of place as a central focus of interest, and will support that focus through an integrated set of initiatives that will allow the School to engage reciprocally with the Saskatchewan community.

The School will also be supportive of the priorities and aspirations outlined in the Foundation Documents. It will incorporate a program of community outreach that is integrated with its programs and with its discovery mandate, mutually beneficial to the community and the University, interactive in relationships with communities, and intimately linked to the well-being of the local and provincial communities with which the School will interact (Lectures and exhibitions, community design charrettes, community design centre, design-build activities, design competitions). It will provide an innovative model for education within the context of the University of Saskatchewan through the studio and will focus on developing core skills in students as identified in the Foundational Document on Teaching and Learning; as is the norm for schools of architecture in Canada, and discussed above, it will take an aggressive position in developing experiential learning activities (co op programs, design-build activities, community charrettes, competitions). Its faculty members will carry out a robust mandate for Research, Scholarly and Artistic work focused on key areas related to the problems of the built environment in Saskatchewan and the potential for growth in its creative sector. It will be an active participant in the development of relationships with First Nations and Metis communities and individuals in the province and abroad, and will incorporate a number of international activities and opportunities, as is the norm for schools

of architecture in Canada (student and faculty exchanges, taught-abroad components, international guest lecturers, international discovery activities). It will support the continued development of ICT proficiency on campus through an interest and investment in Advanced Manufacturing Technologies (Digital Fabrication). Finally, it will assist the University in increasing and diversifying enrolment by appealing to multiple potential applicant groups in its programs.

Consistency with College Goals: The development of a School of Architecture and Visual Art was not envisioned in previous strategic planning cycles for the College of Arts and Science. However, the School will contribute significantly to a number of identified college-specific goals as identified in the ***College of Arts and Science Plan for the Third Planning Cycle, 2012-2016***, particularly in the prirority area of ***achieving engagement***. The School in its design and structure will foster interdisciplinarity and academic relationship-building. It will help to strengthen research, scholarly and artistic work capacity through the development of new resources for the University community as well as by bringing multiple disciplines together in broad systemic research thinking. It will assist in making the College attractive to students through the implementation of innovative teaching methodologies including extra-disciplinary courses in design methods and design thinking, and it will help the College to develop a meaningful engagement with indigenous communities.

Programs

The School of Architecture intends to develop and offer a new professional program in Architecture which will be accredited by the Canadian Architectural Certification Board. The Professional Program will be made up of two components: a Bachelor of Design (preliminary degree name) and a Master of Architecture. In order to be eligible for architectural licensure, students will be required to complete the M.Arch. degree. The proposed program is described in preliminary fashion in Part 3 of this document.

Impact and relationships

Please indicate how this proposal relates to other department or college activities and plans, including the impact it will have on other departments' activities, on colleagues, on students and on other departments or colleges outside of the sponsoring college. This section should include a description of the links which are anticipated with individuals, groups or organizations at other institutions or outside the university setting.

The School of Architecture will provide opportunities for interdisciplinary collaboration in both teaching and discovery activities. Faculty from a number of other disciplines, including Engineering, Regional and Urban Planning, and Art and Art History will be invited to participate in teaching within the School, and students in Architecture programs will be required to take courses in other areas of the University. In addition, the School of Architecture intends to offer non-specialist courses for students in other programs and to offer expertise in its core areas of design and design thinking to other departments.

The School will have a working relationship with the program in Architectural Technology at Saskatchewan Polytechnic. We are investigating the possibility of developing an articulation agreement that would allow graduate of the three-year diploma program at Saskatchewan Polytechnic access to the B.Des. (Arch) with advanced standing. We are also investigating the possibility of collaborating with Saskatchewan Polytechnic students and faculty in carrying out design/build activities.

The School initiative has already developed a strong relationship with the Saskatchewan Association of Architects, which has been a partner (including a financial partner) in the development of this proposal.

Consultation

Describe the consultation process followed in putting together this proposal, including letters of support from Dean(s), from faculty who might be involved in the proposed department and others as appropriate.

This proposal is the outcome of a multi-year process of investigation into the possibility of forming a professional program in architecture at the University of Saskatchewan. As this history shows, the program is supported by many elements of the University as well as the Saskatchewan Association of Architects, the construction industry in the province, and the City of Saskatoon. It also has broad support in the general community. The program is timely, given economic and cultural growth in the province; an increased awareness of the environmental impact of building activities, and the need for

sustainable building practices; and the emergence of new building and manufacturing technologies into the industry (and into society at large).

The University of Saskatchewan began examining the creation of a program in architecture in 2009, under the direction of Provost and Vice-President Academic Brett Fairbairn. In 2011, directors from three Canadian schools of architecture were engaged in an extensive peer advisory exercise. The panel consisted of Michael Jemtrud, former Director of the McGill School of Architecture, Frank Fantauzzi, Head of the University of Manitoba Department of Architecture, and Dr. Kendra Schank-Smith, Chair of Ryerson University's Department of Architectural Science. The panel concluded that the program proposed by the Uof S could meet the requirements of the Canadian accrediting body but recommended hiring a director, who could develop a specific program for approval by the U of S Council. In this initial phase of enquiry, a sample academic program was created and costed, the economic impact of the program to the province was studied in detail, and presented in a report, ***Business Case for a Program in Architecture at the University of Saskatchewan***, 2012. In 2011/12, 2012/13 and 2013/14, the initiative was included in the University's Operations Forecast.

In 2010, Saskatoon's City Council offered the John Deere Plow building, a 100 year-old historic downtown warehouse structure, as an in-kind donation to the University for the School of Architecture. A Building Condition Assessment was conducted by Stantec Architecture in late 2011 to examine the physical condition of the building and its systems and to confirm its appropriateness as a home for the architecture program. The findings revealed the building is fundamentally sound in structure, of adequate size and configuration to accommodate the program and is historically significant in the warehouse district of Saskatoon. The John Deere Plow building is still available as a potential home for the school.

The value of a school of architecture to other programs at the U of S was explored through a symposium series sponsored by the U of S in 2013. Three substantive areas of architectural investigation were examined with the assistance of nine internationally renowned architectural academics and practitioners:

- **Material and Technological Innovation:** Nader Tehrani (MIT), Anton Garcia-Abril (MIT), Herb Enns (University of Manitoba);
- **Environment, Community and Culture:** Douglas Cardinal, Architect, Ray Cole (University of British Columbia), Terrance Galvin (Laurentian University).
- **Design Thinking and Pedagogical Innovation:** Katerina Ruedi Ray (Bowling Green State Univ), Clive Knights (Portland State University), Leslie Van Duzer (University of British Columbia).

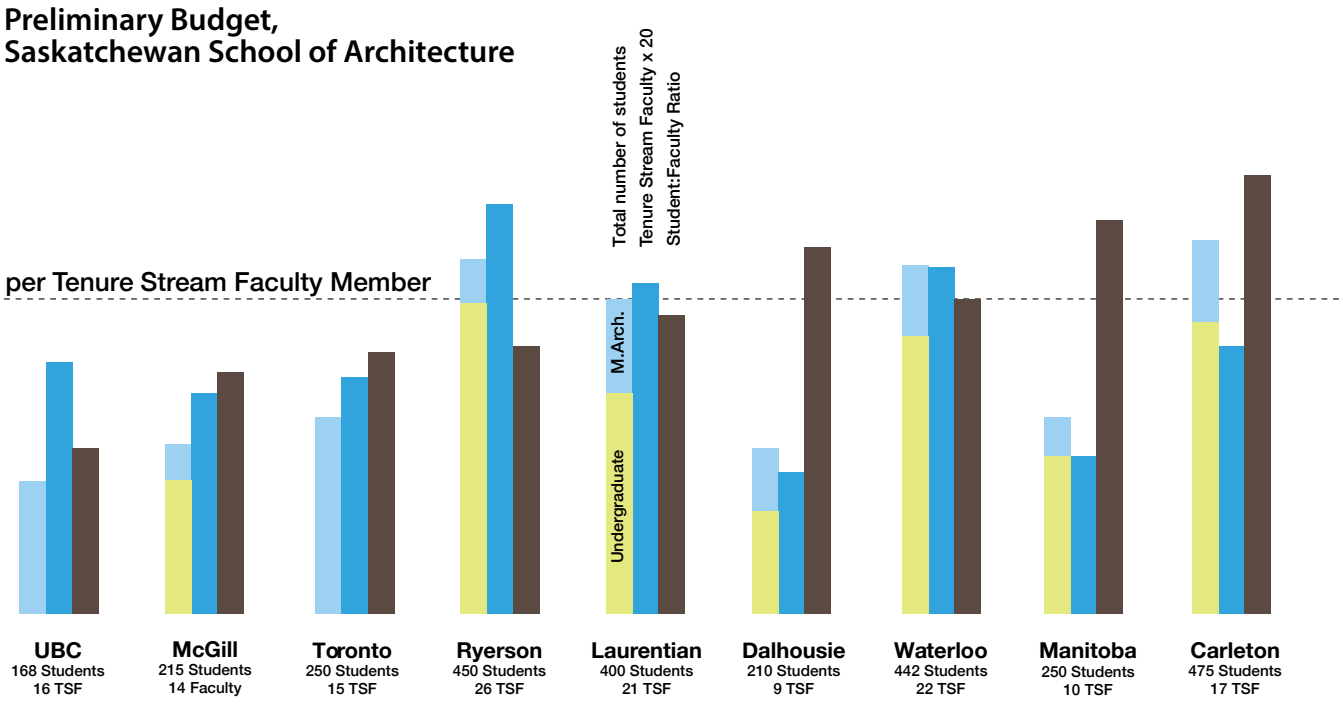
Representatives of many disciplines at the U of S engaged in exploration of potential interconnections and synergies with the discipline of architecture. A report by the Dean of Engineering, Ernie Barber, to the Provost, Brett Fairbairn was written, drawing conclusions from this exercise: Assessing the Opportunity for a New Academic Program in Professional Architecture, October 2013. This report underlined the need for a School of Architecture at the UofS to be structured on an integrative, interdisciplinary model, closely connected to existing programs and departments at the U of S. It also recommended the creation of a new position to lead the School of Architecture initiative.

In December 2014, PCIP approved seed funding for the creation of the position of Project Director. Matching seed funding from the Saskatchewan Association of Architects was achieved in May 2015. In November 2015, a team was selected and engaged to collaborate on a consulting basis in the further development of the School of Architecture proposal, led by Colin Ripley of the architectural firm RVTR. Mr. Ripley is a Professor in the Department of Architectural Science at Ryerson University, and the former Chair of that Department. He is also President of the Canadian Architectural Certification Board.

In December 2015 and January 2016, Mr. Ripley met with numerous individuals[2] at the University in order to discuss the possibility for the School and to begin to determine its organization In the first week of February, 2016, a series of working sessions and open house engagement sessions were held with various stakeholder groups, both internal and external to the University. Over 250 people attended these open house sessions, and over 100 completed an on-line survey.

2 Peter Stoicheff, President; Ernie Barber, Interim Provost; Peta Bonham-Smith, Interim Dean, College of Arts and Sciences; Adam Baxter-Jones, Acting Dean, College of Graduate Studies and Research; Trever Crowe, Associate Dean, College of Graduate Studies and Research; Lisa Kalynchuk, Chair, Priorities and Planning Committee; Academic Programs Committee Executive (Kevin Flynn, Chair; Ganesh Vaidyanathan, Vice-Chair; Patti McDougall, Vice-Provost Teaching & Learning; Russell Isinger, University Registrar; Amanda Storey, University Secretary's Office); Dean of the Library, Vicki Williamson; Library Associate Dean, Charlene Sorensen; Liz Duret, Diversity and Inclusion Consultant; Daphne Taras, Dean, Edwards School of Business; Toddi Steelman, Executive Director, School of Environment and Sustainability; Jill Gunn, Acting Vice-Dean, Programs, College of Arts and Science; Candace Wasacase-Lafferty, Director of Aboriginal Initiatives; John Rigby, Interim Associate Provost, Institutional Planning and Assessment; Faculty from Regional and Urban Planning; Faculty from Art and Art History; Don Bergman, Interim Dean, College of Engineering.

Director (0.5 FTE teaching, 0.5 FTE admin)	1	170,000	170000		
Program Director (0.5 FTE teaching, 0.5 FTE admin)	1	162,000	162000		
Career Faculty salaries and benefits	10	150,000	1500000		
Sessional Lecturers - studio	10	12,000	120000		
Sessional Lecturers - other	3	7500	22500		
Teaching Assistants	16	5000	80000		
Librarian	0.5	130000	65000		
Academic Salaries and Benefits				**$2,119,500.00**	
Staff - Admin Coord/EA	1	85000	85000		
Staff - AA	2	60000	120000		
Technical Staff	2	75000	150000		
Non-Academic Salaries and Benefits				**$355,000.00**	
Graduate Student Stipends			360000	**$360,000.00**	
Direct Non-Salary Operating Costs			350000	**$350,000.00**	
Total Direct Costs					**$3,184,500.00**
Maintenance			100,000		
Library			40000		
ICT			100000		
College-level overhead (15% of operating)			477675		
University overhead (15% of operating)			477675		
Total Overhead					**$1,195,350.00**
Total					**$4,379,850.00**



Student:Faculty Ratios
Professional Programs in Architecture in Canada
Data: Canadian Architect Magazine

Scholarly Work

Identify as specifically as possible particular scholars or groups of researchers who would be employed by or affiliated with the work of the department. This section should describe how the expertise and activities of these scholars will contribute to the work of the department, or enable it to realize its objectives.

We anticipate, preliminarily, that approximately 12 new tenure-stream faculty members will need to be hired in order for the School to offer the professional program in architecture (including Program and School administrative faculty). These faculty members will carry out a broad range of research activities related to the core values of the discipline of architecture and the uniqueness and needs of the Province of Saskatchewan.

Scholarly work will be organized, in the first instance, in relation to the six "domains" listed above.

3. Department Management.

Describe clearly the management structure which will be put in place to administer the department. The Dean who is administratively accountable for the Department should be identified and the mechanisms for reporting should be outlined. A contact person or persons should be identified.

The School of Art and Architecture will be administered by a Director who will be supported by Associate Directors for Art and for Architecture. We further recommend that each of the "domains" be supported by a designated faculty lead (title, if any, TBD). The Director will report to the Dean of Arts and Science.

The Director will be responsible for teaching assignments (in consultation with the Program Directors) and overall budget and be the linkage to the College and above as well as external relations (such as professional relations, accreditation and fundraising). The Director will also be responsible for facilities and staff. The Associate Directors will be more operational, dealing with items such as admissions, scheduling, appeals, curricular development and advising.

Lead domain faculty will report to the Director and may collaborate with Associate Directors on curricular issues if and when appropriate. In some or most cases, the domain leads will have a cross-reporting function to an individual in one or more partner unit(s).

More detailed reporting mechanisms will be developed prior to submitting a full proposal.

4. Resources and Budget.

The process for approval of the creation of departments is intended to ensure that the allocation of University resources to them is made in a way which is consistent with the allocation of resources to other activities within the University, and also that departments have a clear means through which they can access the resources necessary to their effective operation. The budget should include projected faculty and support staff numbers along with an estimate of resources necessary to support the ongoing activities of the department.

Please describe the proposed financial basis for the department. This should include the sources of funding for the department, including whether a re-allocation of funds or in-kind resources from a department, college or the University will be required.

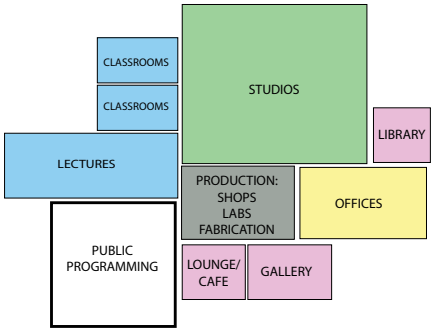
The budget should also include information about space, ICT and other infrastructure support and needs which would be used to establish the department and sources of funding for this. Evidence of consultation with Facilities Management Division regarding physical resource requirements (space, renovations and equipment) should accompany the proposal.

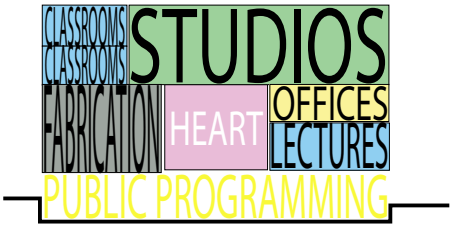
As we are submitting a concurrent application for the establishment of the School's professional program, it is difficult if not impossible to separate the resource implications of the program from those of the School. As a result, in what follows we are discussing the resource needs of the School. Except as noted below, additional resources will be needed in order to found and operate the School and its programs. PCIP has been consulted in these discussions.

Financial Resources (operating): We anticipate a total yearly operating budget of $4.4Million, which breaks down as noted in the chart on the facing page, and as described below. This budget does not include capital costs related to start-up, and will be partially offset by tuition revenues described below.

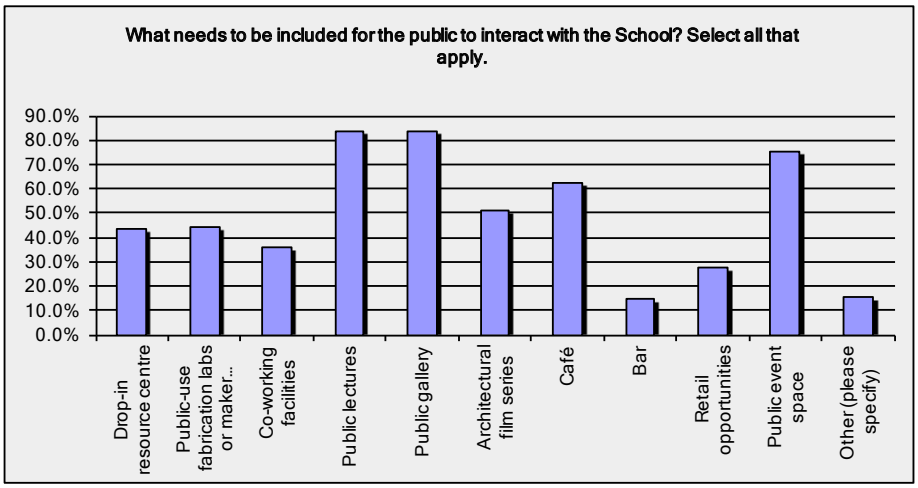
Faculty Resources: The program as outlined in this proposal will require approximately 11 FTE tenure stream faculty members for purposes of teaching and an additional 1.0 FTE for purposes of administration. This number is inclusive of teaching release for the Director and Architecture Program Director. Largely because of the Studio requirements, architecture programs make greater use of sessional instructors than many other disciplines. Across Canada, the stipends paid to studio instructors varies widely, from a minimum of $8000 to a maximum of $17,500 per term, with a median of $12,000; as a result, we believe that an annual budget for sessional instructors of about $120,000 is to be expected. In

John Deere Plow Building
Saskatoon





John Deere Plow Building
Program Diagrams



Survey Reponses: Facilities in the School of Architecture Building

Source: Surveymonkey survey. 90 responses.

most cases these sessional instructors will be practicing architects from the local community.

Staff Resources: We anticipate five full-time staff (Administrator, Admin Assistants, IT Technician, Workshop Technician).

Student Funding: Funding for Master of Architecture students varies from institution to institution across the country. As Professional students, they are sometimes not eligible for funding; however, the availability of funding is often a key issue in attracting students at other institutions. In this preliminary budget we have included an average funding level of $4000 per student, which appears to be a "median" rate of funding across the country.

Space and Equipment: The program will require some 4000 m2 of new space. About 35% of this space will be devoted to studio, and the remainder to offices, administration, classrooms, a large lecture hall, workshops (machine and digital fabrication shops), and other miscellaneous spaces.

The John Deere Building in downtown Saskatoon has been offered to the University by the City of Saskatoon as a home for the new building. The John Deere Building appears to be ample in terms of size, and in a location that can be highly beneficial in terms of making connections to the community, but will need significant renovation and upgrading. Our current estimate is that the building renovation will require some $20 Million.

Library and IT: Additional Library resources will be required. Following a preliminary discussion with the Dean of the Library, we estimate these ongoing costs at $40,000 per year for acquisitions, as well as the addition of one new subject area librarian. IT support will be required but remains unquantified at this point in the process.

Tuition: A non-standard tuition will be recommended for this program. Benchmarking across Canada suggests that a tuition of approximately $8000 per year would remain competitive with other programs (although the closest similar program, University of Manitoba, is among the least expensive in Canada, with a tuition of just over $4000 per annum). A tuition of $8000 per year would generate an anticipated revenue of $1.44 Million.

5. Support.

New departments require formal approval by the faculty of the sponsoring college. Please indicate by inclusion of excerpts from approved minutes what form that support took.

Support should also be sought from the Provost's Committee on Integrated Planning (PCIP).

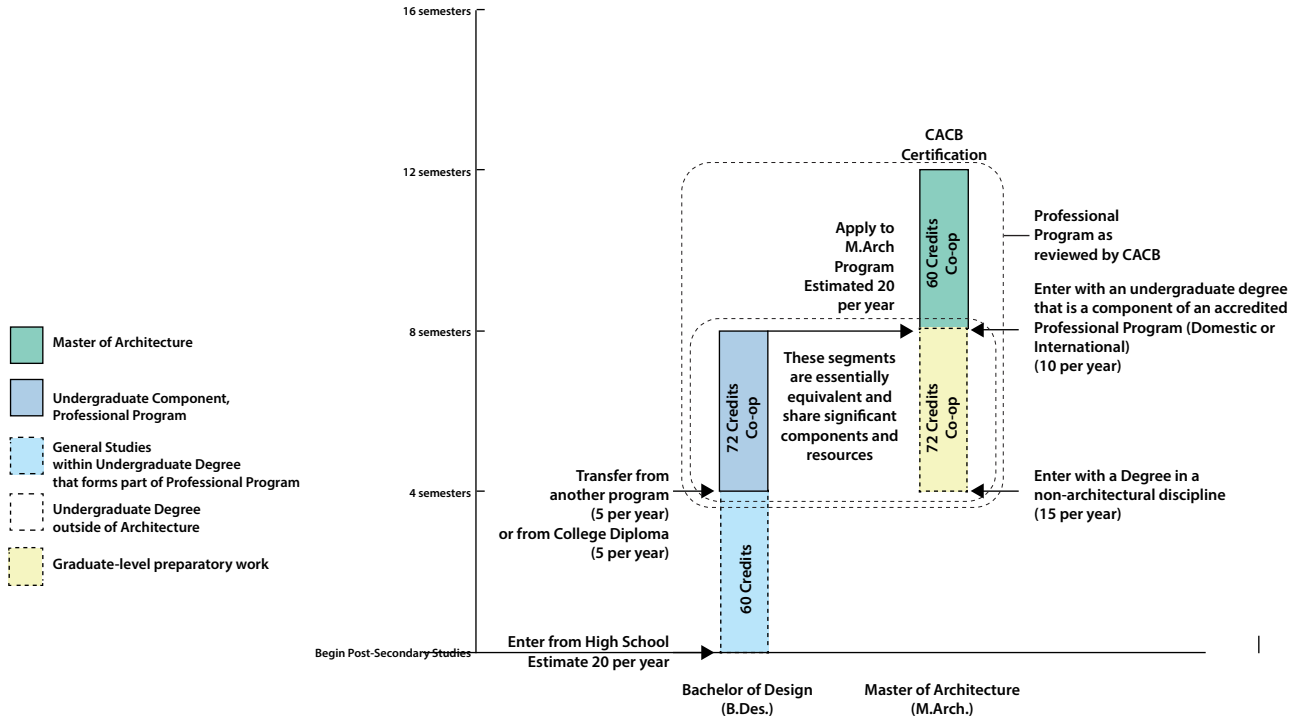
6. Systematic Review.

Once created departments will be subject to the normal review processes of the University.

7. Attachments.

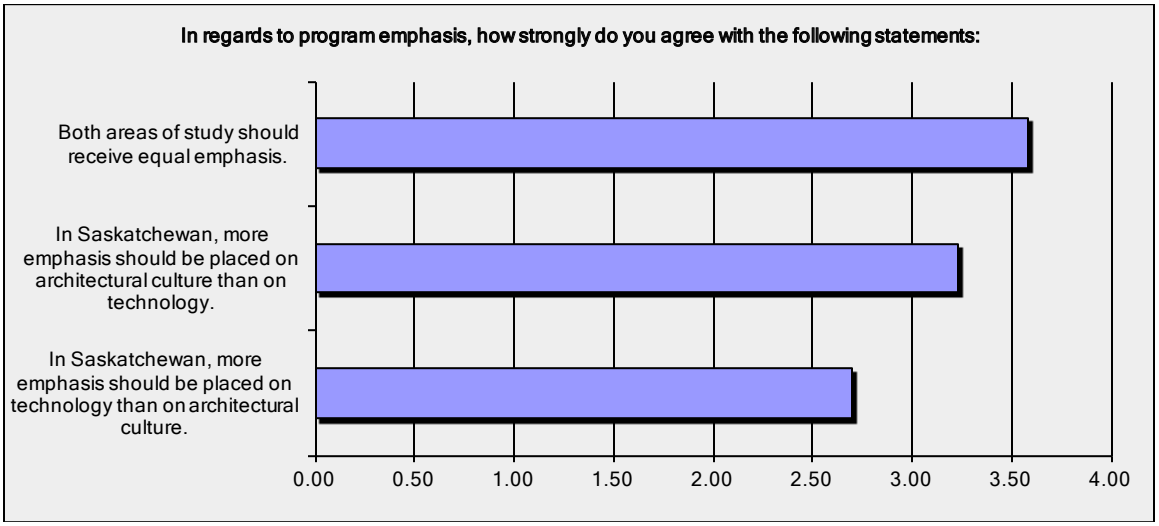
Attached to the Formal Proposal should be a copy of any letters of support, excerpts from approved faculty council minutes, and documentation to support the required consultation with Facilities Management Division.

Notice of Intent:
Professional Program in Architecture
Bachelor of Design (Architecture)
+ Master of Architecture



Preliminary Program Model

Proposed
2+2+2 Hybrid Program



Survey Reponses: Relative importance of Technology and Culture

Source: Surveymonkey survey. 85 responses.

Notice of Intent for a Professional Program in Architecture

A "First Look" Program Model for the School of Architecture at the University of Saskatchewan

Although we are very early in the process, enough clarity has developed that we can suggest a likely overall form for the new Professional Program. To begin with, and despite the complexity it engenders, it appears that a 2+2+2 Hybrid model is the most likely. This model allows entrants with a number of different backgrounds, maximizing in effect the applicant pool. In broad strokes, the program would be made up of two degrees:

- An undergraduate degree, Bachelor of Design in Architecture (tentative degree name) with two years (60 credits) of general studies followed by two years (72 credits)[3] of Professional Studies, incorporating a co-op component; and
- A graduate degree, Master of Architecture, four academic terms in length (60 credits), preceded by a qualifying process of one to two years for holders of non-architectural degrees, incorporating a co-op component.

We therefore imagine a total program of 132 credits, in addition to the 60 credits of General Education. We further imagine a split among program components as follows:

• Design Education	45% to 55%	(60 to 72 credits)
• Building Technologies	20% to 30%	(27 to 39 credits)
• Architectural Culture and Professional Practice	20% to 30%	(27 to 39 credits)
• Professional electives (included in above)	8% to 12%	(12 to 18 credits)

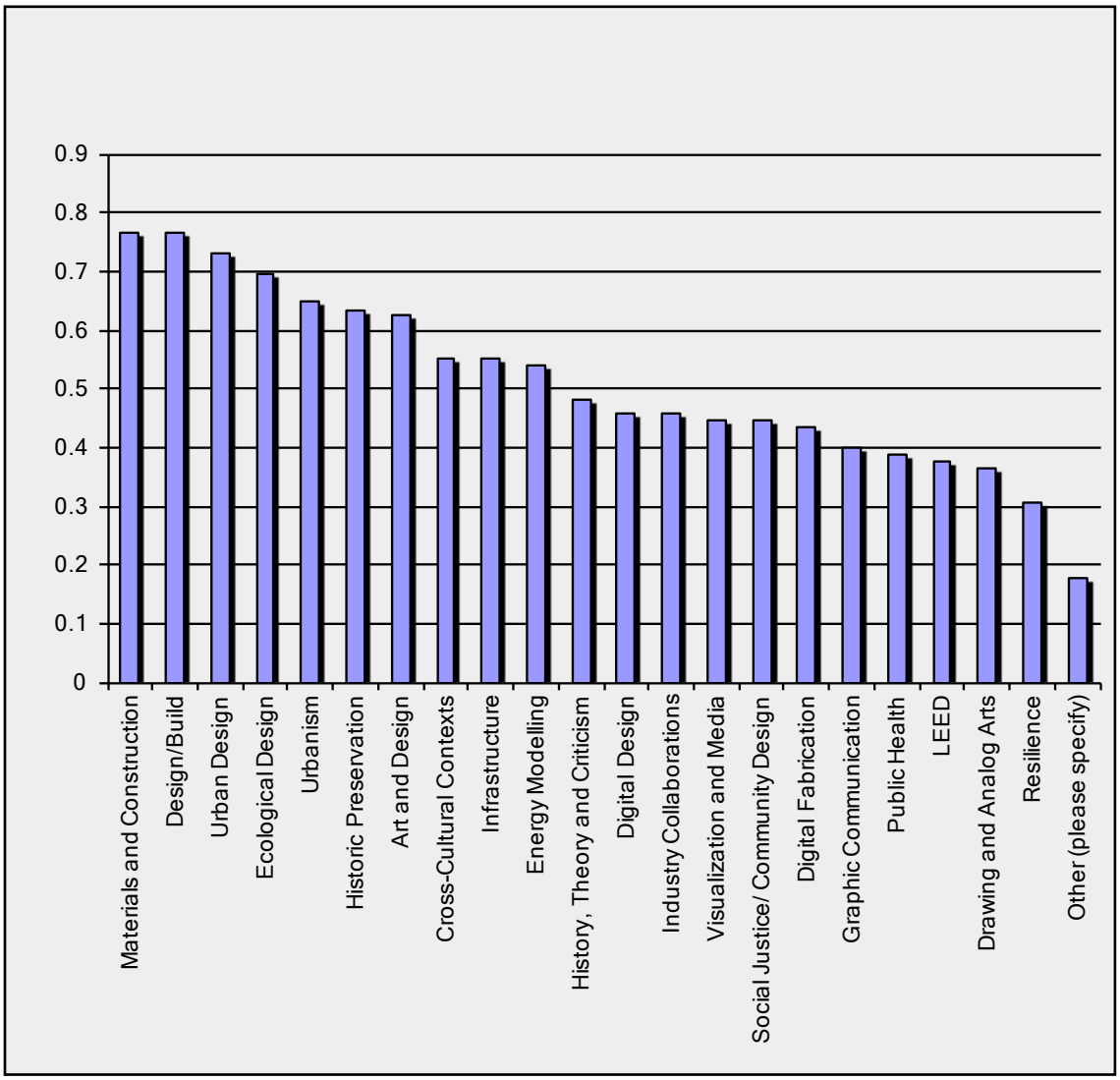
We anticipate that the program will have a rich mixture of co-curricular and experiential learning opportunities, including study abroad, cooperative education, community engagement activities, and design-build projects.

Learning Expectations: Program Goals

On graduation from the professional program in Architecture, students will be able to:

- 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 production, including new and emerging technologies.
- 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 media.
- actively participate in the analysis design and integration of building technologies (in the context of building project) 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.
- build on and apply investigative methods used in the design process, analyse and evaluate the implications of potential design options, and synthesize variables from spatial, material and technological systems into integrated architectural solutions of various scales and levels of complexity.
- apply skills in business, management and entrepreneurship to the development of career and project opportunities in architecture.
- collaborate with other 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.
- 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.

3 The 72-credit program provides for a six-credit studio (typically 12 contact hours per week) as well as four three-credit courses per term. This is in keeping with the comparator programs in Canada (see page AEC-7 in Appendix 1).



Survey Reponses: Areas of Focus for the School of Architecture at the University of Saskatchewan

Source: Surveymonkey survey. 85 responses.

1. Motivation and Support

What is the motivation for proposing this program at this time? What elements of the University and/or society support and/or require this program?

This NOI is the outcome of a multi-year process of investigation into the possibility of forming a professional program in architecture at the University of Saskatchewan. As this history shows, the program is supported by many elements of the University as well as the Saskatchewan Association of Architects, the construction industry in the province, and the City of Saskatoon. It also has broad support in the general community. The program is timely, given economic and cultural growth in the province; an increased awareness of the environmental impact of building activities, and the need for sustainable building practices; and the emergence of new building and manufacturing technologies into the industry (and into society at large).

The University of Saskatchewan began examining the creation of a program in architecture in 2009, under the direction of Provost and Vice-President Academic Brett Fairbairn. In 2011, directors from three Canadian schools of architecture were engaged in an extensive peer advisory exercise. The panel consisted of Michael Jemtrud, former Director of the McGill School of Architecture, Frank Fantauzzi, Head of the University of Manitoba Department of Architecture, and Dr. Kendra Schank-Smith, Chair of Ryerson University's Department of Architectural Science. The panel concluded that the program proposed by the Uof S could meet the requirements of the Canadian accrediting body but recommended hiring a director, who could develop a specific program for approval by the U of S Council. In this initial phase of enquiry, a sample academic program was created and costed, the economic impact of the program to the province was studied in detail, and presented in a report, ***Business Case for a Program in Architecture at the University of Saskatchewan***, 2012. In 2011/12, 2012/13 and 2013/14, the initiative was included in the University's Operations Forecast.

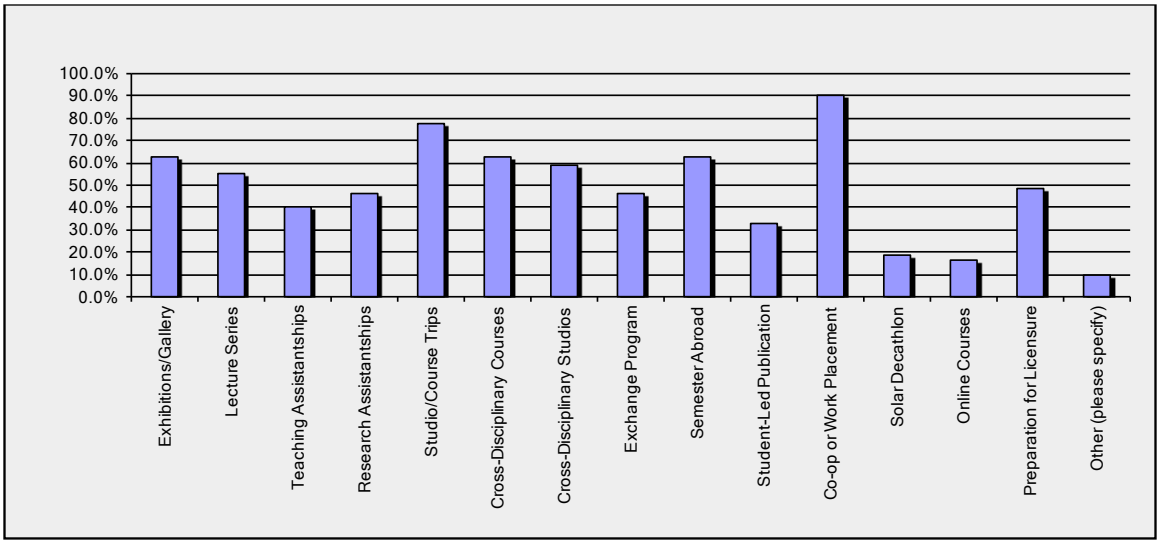
In 2010, Saskatoon's City Council offered the John Deere Plow building, a 100 year-old historic downtown warehouse structure, as an in-kind donation to the University for the School of Architecture. A Building Condition Assessment was conducted by Stantec Architecture in late 2011 to examine the physical condition of the building and its systems and to confirm its appropriateness as a home for the architecture program. The findings revealed the building is fundamentally sound in structure, of adequate size and configuration to accommodate the program and is historically significant in the warehouse district of Saskatoon. The John Deere Plow building is still available as a potential home for the school.

The value of a school of architecture to other programs at the U of S was explored through a symposium series sponsored by the U of S in 2013. Three substantive areas of architectural investigation were examined with the assistance of nine internationally renowned architectural academics and practitioners:

Material and Technological Innovation: Nader Tehrani (MIT), Anton Garcia-Abril (MIT), Herb Enns (University of Manitoba);
Environment, Community and Culture: Douglas Cardinal, Architect, Ray Cole (University of British Columbia), Terrance Galvin (Laurentian University).
Design Thinking and Pedagogical Innovation: Katerina Ruedi Ray (Bowling Green State Univ), Clive Knights (Portland State University), Leslie Van Duzer (University of British Columbia).

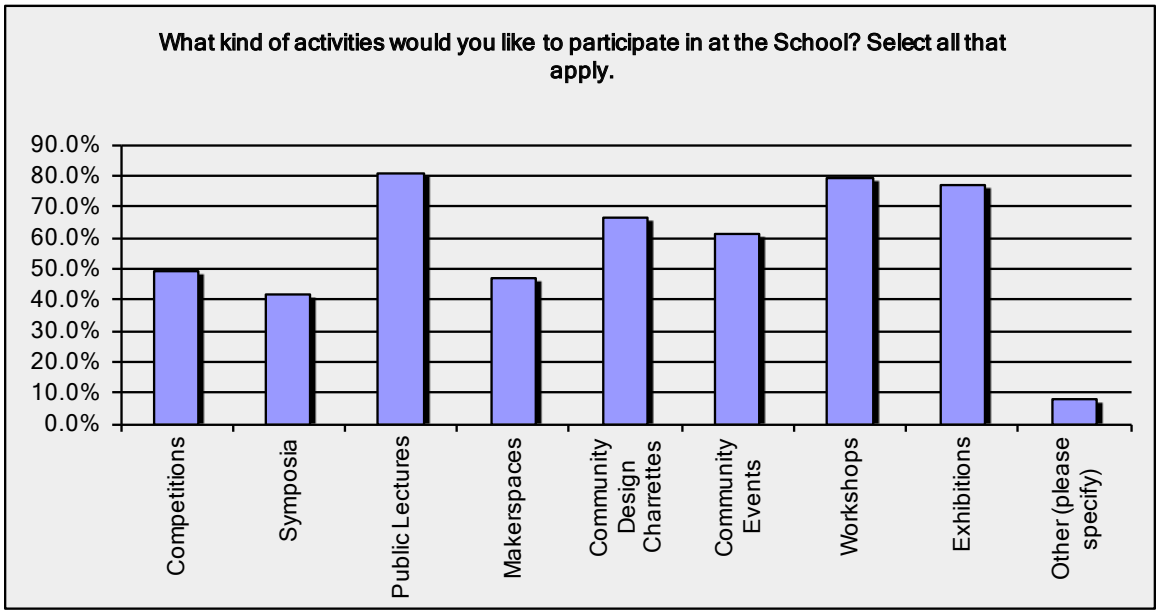
Representatives of many disciplines at the U of S engaged in exploration of potential interconnections and synergies with the discipline of architecture. A report by the Dean of Engineering, Ernie Barber, to the Provost, Brett Fairbairn was written, drawing conclusions from this exercise: Assessing the Opportunity for a New Academic Program in Professional Architecture, October 2013. This report underlined the need for a School of Architecture at the Uof S to be structured on an integrative, interdisciplinary model, closely connected to existing programs and departments at the U of S. It also recommended the creation of a new position to lead the School of Architecture initiative.

In December 2014, PCIP approved seed funding for the creation of the position of Project Director. Matching seed funding from the Saskatchewan Association of Architects was achieved in May 2015. In November 2016, a team was engaged to collaborate on a consulting basis in the further development of the School of Architecture proposal, led by Colin Ripley of the architectural firm RVTR. Mr. Ripley is a Professor in the Department of Architectural Science at Ryerson University, and the former Chair of that Department. He is also President of the Canadian Architectural Certification Board. In the first week of February, 2016, a series of working sessions and open house engagement sessions were held with various stakeholder groups, both internal and external to the University. In the first week of February, 2016, a series of working sessions and open house engagement sessions were held with various stakeholder groups, both internal and external to the University. Over 250 people attended these open house sessions, and over 100 completed an on-line survey.



Survey Reponses: Experiential Learning in the School of Architecture

Source: Surveymonkey survey. 80 Responses.



Survey Reponses: Outreach and Inreach for the School of Architecture

Source: Surveymonkey survey. 77 Responses.

2. Demand and Enrollment

What is the anticipated student demand for the program? Does the program meet a perceived need, particularly within a national context? What is the projected student enrolment in the program initially and over time, and on what evidence is the projection based?

Student demand for this program is anticipated to be high. Based on statistics discussed above for Canada as a whole and applied to the demographic situation of Saskatchewan, it would be reasonable to expect 120 to 150 applicants to the undergraduate program, which could have a yield of 25 to 30 students. We would anticipate however that the draw for the program would be strong for out-of-province students as well, especially as there are no other undergraduate programs in architecture west of Winnipeg, including high-school leavers in Alberta could show a significant increase in possible intake.

In addition, one of the goals of the new program is to provide a pathway into the profession for students graduating with a Diploma in Architectural Technology, notably from Saskatchewan Polytechnic. This could conceivably provide an additional pool of five or so students per year.

As discussed above, it is difficult to estimate the applicant pool for graduates of non-architectural programs into an M.Arch. Although it is clear that there is unfulfilled demand in this segment, the new program will be in direct competition with the University of Calgary (although efforts to differentiate the program may help to ease this problem). In any case, a conservative estimate would suggest 75 to 125 applicants per year in this category.

A third category of applicants is those applying at the graduate level who already have a previous degree in architecture. Within Canada, this refers to students transferring from other CACB-accredited programs; these numbers can be expected to be very small, no more than one or two per year (at Ryerson we typically had no more than three or four of these applicants per year, despite the draw of Toronto). However, there are currently also many domestic students who are recent immigrants to Canada, with degrees in architecture from their home countries. Based on our experience, the University of Saskatchewan could reasonably expect five to fifteen such applicants in a given year.[4]

Finally, there is currently a high demand for Canadian degrees in architecture from foreign nationals, most notably from the middle east (especially Iran and Saudi Arabia). There is a potentially lucrative market for International graduate students in this program.

Preliminarily, we are basing projections on a total enrolment of 180 students - that is, with a cohort of 45 in the first two years of the program (3rd and 4th year undergraduate and graduate "qualifying") and 45 in the last two years of the M.Arch. These might break down by applicants as follows:

First two years of the Professional Program (years 3/4, undergraduate + graduate "qualifying"):

- from high school: 25 students (projected 5:1 application to enrolment ratio)
- from College Diploma: 5 students
- in graduate qualifying: 15 students (projected 5:1 application to enrolment ratio)

Final two years (M.Arch.)[5]:

- Flow-in from B.Des. (Arch) 20 students
- Flow-in from qualifying 15 students
- Domestic foreign-trained 5 students
- International 3 students
- Transfers 2 students

4 These numbers are based on experience from 2007 to 2012 in the Ryerson M.Arch. application process.

5 In essence, attrition after the B.Des. (Arch) is made up for by transfers into the 2-year M.Arch. from abroad and from the other Canadian schools.

3. Consistency with Institutional Priorities

How does this proposal fit with the priorities of the current college or school plan and the University's integrated plan? If the program was not envisioned during the integrated planning process, what circumstances have provided the impetus to offer the program at this time? Are there measurable benefits to offering the program at this time?

The School of Architecture will be a strong contributor to the University in achieving its strategic goals. The School's mandate will be aligned with priorities set in the Third Integrated Plan:

- Knowledge Creation: the School will have an important mandate to carry out discovery activities. It will focus on issues related to what makes Saskatchewan unique and on initiatives that will help Saskatchewan to grow.
- Innovation in Academic Programs and Services: the School will offer innovative programs, including a professional program in architecture that will be the first in Saskatchewan.
- Aboriginal Engagement: the School will seek to actively promote the economic and personal development of aboriginal communities and students, and will incorporate an Indigenous world-view within its programs.
- Culture and Community: the School will promote the quality of place as a central focus of interest, and will support that focus through an integrated set of initiatives that will allow the School to engage reciprocally with the Saskatchewan community.

The School will also be supportive of the priorities and aspirations outlined in the Foundation Documents. It will incorporate a program of community outreach that is integrated with its programs and with its discovery mandate, mutually beneficial to the community and the University, interactive in relationships with communities, and intimately linked to the well-being of the local and provincial communities with which the School will interact (Lectures and exhibitions, community design charrettes, community design centre, design-build activities, design competitions). It will provide an innovative model for education within the context of the University of Saskatchewan through the studio and will focus on developing core skills in students as identified in the Foundational Document on Teaching and Learning; as is the norm for schools of architecture in Canada, and discussed above, it will take an aggressive position in developing experiential learning activities (co op programs, design-build activities, community charrettes, competitions). Its faculty members will carry out a robust mandate for Research, Scholarly and Artistic work focused on key areas related to the problems of the built environment in Saskatchewan and the potential for growth in its creative sector. It will be an active participant in the development of relationships First Nations and Metis communities and individuals in the province and abroad, and will incorporate a number of international activities and opportunities, as is the norm for schools of architecture in Canada (student and faculty exchanges, taught-abroad components, international guest lecturers, international discovery activities). It will support the continued development of ICT proficiency on campus through an interest and investment in Advanced Manufacturing Technologies (Digital Fabrication). Finally, it will assist the University in increasing and diversifying enrolment by appealing to multiple potential applicant groups in its programs.

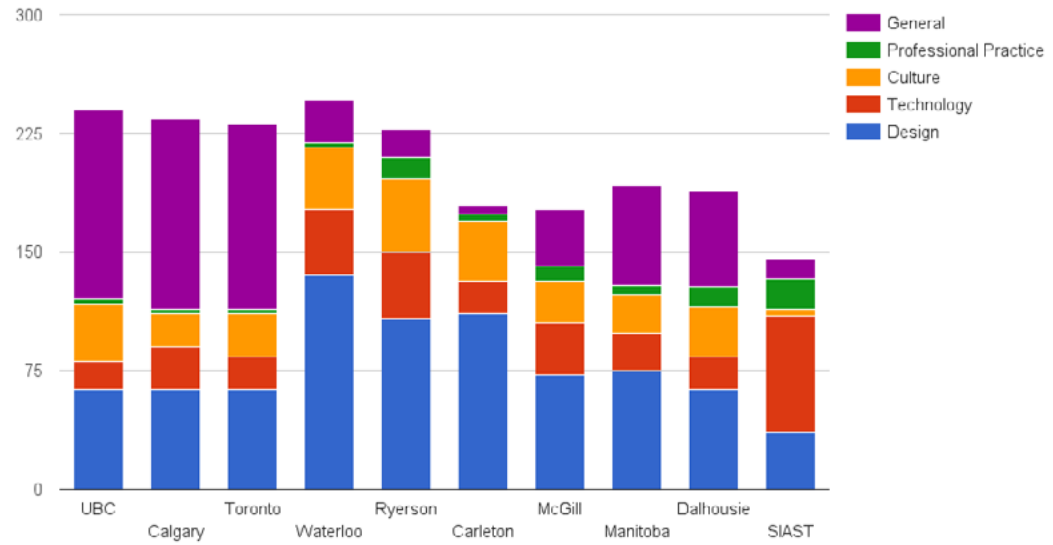
4. Relationships and Impacts

What is the relationship of the proposed program to other programs offered by the college or school and to programs offered elsewhere (interactions, similarities, differences, relative priorities)? What effect will the proposed program have on other similar or related programs, and, in particular, on student enrolment in these programs? Is there justification to proceed regardless of any perceived duplication? Will a program be deleted as a result of offering the new program?

The proposed program does not duplicate or significantly overlap with any other programs in the College or the University, and will be the only accredited architecture program in Saskatchewan. No programs will be deleted as a result of the new program. However, there are a number of programs at the University that have indirect relationships that can be mutually beneficial in terms of curricula or discovery.

Related Programs: The Regional and Urban Planning program shared objectives with architecture in relation to the quality of the built environment, as well as a basis in design, and there is likely to be the possibility of both research collaborations and crossovers in teaching, from both directions. Architecture students need at least an introduction to Urban Planning and Urban Design principles. Similarly, a reciprocal relationship could be developed with programs in Art and Art History; Studio Art and Architecture share a curricular structure in the studio, while it is not unusual for architectural history courses to be taught by Art History department.

Other Contributing Programs: While Architecture and Engineering have very different cultures and curricular structure, Engineering faculty are often called on to teach technical courses in architecture programs. This is especially true of



Program Components
Schoold of Architecture in Canada and
Sask Poly Program in Architectural Techniology

Director (0.5 FTE teaching, 0.5 FTE admin)	1	170,000	170000		
Program Director (0.5 FTE teaching, 0.5 FTE admin)	1	162,000	162000		
Career Faculty salaries and benefits	10	150,000	1500000		
Sessional Lecturers - studio	10	12,000	120000		
Sessional Lecturers - other	3	7500	22500		
Teaching Assistants	16	5000	80000		
Librarian	0.5	130000	65000		
Academic Salaries and Benefits				**$2,119,500.00**	
Staff - Admin Coord/EA	1	85000	85000		
Staff - AA	2	60000	120000		
Technical Staff	2	75000	150000		
Non-Academic Salaries and Benefits				**$355,000.00**	
Graduate Student Stipends			360000	**$360,000.00**	
Direct Non-Salary Operating Costs			350000	**$350,000.00**	
Total Direct Costs					**$3,184,500.00**
Maintenance			100,000		
Library			40000		
ICT			100000		
College-level overhead (15% of operating)			477675		
University overhead (15% of operating)			477675		
Total Overhead					**$1,195,350.00**
Total					**$4,379,850.00**

Preliminary Budget,School of Architecture

Civil, Mechanical, and Environmental Engineering. Conversely, advanced technical courses in Building Science may be of interest to engineering students. Curricular collaborations between architecture and engineering programs are rare and tend to be difficult to maintain because of the cultural differences, but there are some successful precedents.

While not yet explored in detail, there is the potential for interactions or collaborations at the curricular and discovery levels with the following programs at the University of Saskatchewan:

- Archaeology
- College of Medicine (around issues of healthy environments)
- Digital Culture and New Media
- Drama
- Environmental Science
- Indigenous Studies
- Interactive Systems Design
- Interdisciplinary Centre for Culture and Creativity
- Northern Studies
- School of Environment and Sustainability
- Studio Art
- The Wilson Centre for Entrepreneurial Excellence

Programs at other institutions: The program is expected to have a linkage with the Diploma programs in Architectural Technology at Saskatchewan Polytechnic. It must be stressed that the Sask Poly programs are not professionally-accredited programs in architecture and do not lead to architectural licensure. In addition, it should be stressed that Architectural Technology is a different discipline from Architecture, as the chart on the facing page, comparing program content in Schools of Architecture with that in the Sask Poly program makes clear.

Effect on enrollment in other programs: There is likely to be a small effect on enrollment in Regional and Urban Planning and in Studio Art, with a few applicants choosing architectural education instead, once it is available. In addition, a few students will likely choose to transfer into the architecture program from a number of other programs across the University.

5. Resources

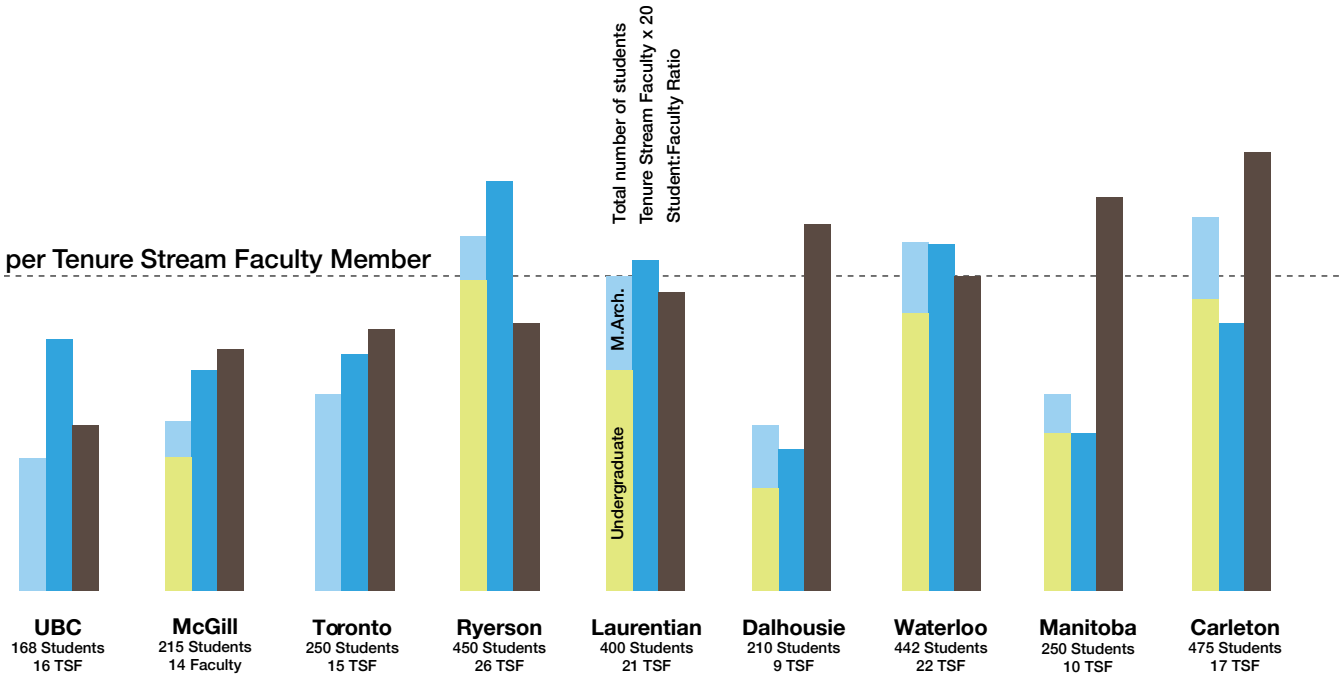
Please describe the resources available and committed to the program, both in terms of one-time costs and ongoing operating costs. Will standard or non-standard tuition be assessed for the program? Does the college or school possess the resources required to implement and support the program (faculty teaching, administrative and other support, student funding, classroom space, infrastructure)? Will additional university resources be required, for example, library resources, IT support? Has the Provost's Committee on Integrated Planning (PCIP) been involved in any discussions related to resources? Please attach a letter of support outlining the resource commitments that have been made to the new program. Please also ensure the required covering letter, as outlined in the preamble, is attached.

As we are submitting a concurrent application for the establishment of the School's professional program, it is difficult if not impossible to separate the resource implications of the program from those of the School. As a result, in what follows we are discussing the resource needs of the School. Except as noted below, additional resources will be needed in order to found and operate the School and its programs. PCIP has been consulted in these discussions.

Financial Resources (operating): We anticipate a total yearly operating budget of $4.4Million, which breaks down as noted in the chart on the facing page, and as described below. This budget does not include capital costs related to start-up, and will be partially offset by tuition revenues described below.

Faculty Resources: The program as outlined in this proposal will require approximately 11 FTE tenure stream faculty members for purposes of teaching and an additional 1.0 FTE for purposes of administration. This number is inclusive of teaching release for the Director and Architecture Program Director. Largely because of the Studio requirements, architecture programs make greater use of sessional instructors than many other disciplines. Across Canada, the stipends paid to studio instructors varies widely, from a minimum of $8000 to a maximum of $17,500 per term, with a median of $12,000; as a result, we believe that an annual budget for sessional instructors of about $120,000 is to be expected. In most cases these sessional instructors will be practicing architects from the local community.

Staff Resources: We anticipate five full-time staff (Administrator, Admin Assistants, IT Technician, Workshop Technician).



Student:Faculty Ratios
Professional Programs in Architecture in Canada
Data: Canadian Architect Magazine

Student Funding: Funding for Master of Architecture students varies from institution to institution across the country. As Professional students, they are sometimes not eligible for funding; however, the availability of funding is often a key issue in attracting students at other institutions. In this preliminary budget we have included an average funding level of $4000 per student, which appears to be a "median" rate of funding across the country.

Space and Equipment: The program will require some 4000 m2 of new space. About 35% of this space will be devoted to studio, and the remainder to offices, administration, classrooms, a large lecture hall, workshops (machine and digital fabrication shops), and other miscellaneous spaces.

The John Deere Building in downtown Saskatoon has been offered to the University by the City of Saskatoon as a home for the new building. The John Deere Building appears to be ample in terms of size, and in a location that can be highly beneficial in terms of making connections to the community, but will need significant renovation and upgrading. Our current estimate is that the building renovation will require some $20 Million.

Library and IT: Additional Library resources will be required. Following a preliminary discussion with the Dean of the Library, we estimate these ongoing costs at $40,000 per year for acquisitions, as well as the addition of one new subject area librarian. IT support will be required but remains unquantified at this point in the process.

Tuition: A non-standard tuition will be recommended for this program. Benchmarking across Canada suggests that a tuition of approximately $8000 per year would remain competitive with other programs (although the closest similar program, University of Manitoba, is among the least expensive in Canada, with a tuition of just over $4000 per annum). A tuition of $8000 per year would generate an anticipated revenue of $1.44 Million.

6. Risk Analysis

Please describe the risks, assumptions, or constraints associated with initiating this new program at this time. Has a risk analysis of this program been conducted, relative to the probable success of the program and those factors that impact on the likelihood of success? What risks are associated with not proceeding with the program at this time?

There are a number of risks associated with initiating this new program, all of which are intertwined. While some of these are of minimal likelihood, others will need to be carefully planned for in this process.

Financial Risks: professional programs in architecture are expensive. The risk of failing to obtain stable external funding to operate the program is substantial both in terms of likelihood and in terms of impact. Both the likelihood and magnitude of this source of risk would be increased by a prolonged economic downturn, continued cuts to the grant from the Provincial government, or a failure to meet tuition/enrolment targets.

Community Risks: an inability to find stable external funding, for whatever reason, is likely to cause increased tensions with other disciplines at the University, particularly if they are able to attribute cuts in their own departments and programs to the costs of this new program. It is likely that there will be some portion of the University community that objects to this initiative on such grounds. On the other hand, there is significant support and demand for this program in the broader community in Saskatoon and in Saskatchewan, and failure to move forward with the program also brings the risk of damaging relationships with various external communities.

Performance Risks: there is a low risk that the program is not able to meet its enrolment targets. Estimates and projections made in this NOI are conservative and should be attainable at program maturity, if not initially. There is an additional risk that the program is unable to achieve CACB accreditation. This risk is minimal and manageable. Provided the University is able to appropriately manage the input conditions - facilities, budget, faculty etc. - there is every reason to expect success with accreditation. No school in Canada has ever failed to achieve accreditation once it has made an application.

Reputational Risks: although there is a risk to the University's reputation if the program is unable to achieve its goals (this risk is small and manageable), there is a larger risk to reputation in not moving forward with the program, due to the lengthy nature of the project and expectations and excitement from both the profession and the community.

Liability Risks: a program in architecture carries with it a number of areas of increased liability as a result of design-build experiences, taught-abroad courses, and so on. These risks are readily managed through the development of Risk Management protocols.

7. Start Date

What is the anticipated start date of the program? What considerations apply to the start date?

We are currently working towards a start date of September, 2017. However, the actual start day may be affected by the final form of program adopted. There are a number of considerations that apply.

- The program has not as of this date received assurances of either stable operating or capital funding. Obtaining funding could delay the start.
- Preliminarily, we propose a "program start" with admission into years 1 and 3 only of the program. This could result in the following schedule:
    - 2017: admission to 1st year "General Studies" component
    - 2017: admission to 3rd year B.Des. fo qualified applicants
    - 2017: admission to M.Arch. with 3 to 4 terms of pre-program requirements
    - 2019: first B.Des. graduates
    - 2019: first admission to M.Arch. with no pre-program requirements
    - 2021: first M.Arch. graduates
    - 2023: full professional accreditation (back-dated to 2021)
- The program needs significant space in which to operate. The renovation of the John Deere Plow Building is expected to take approximately 30 months. If the program starts earlier than completion of the renovations, interim space will need to be found.
- The proposed program is structured with two years of general studies at the beginnning. A program start in 2017 could mean that the first students enter the professional program in their third year, or 2019.
- Consideration should be made for a concurrent start for the third year of the B.Des. (Arch) and the M.Arch. qualifying program.

Attachments

Letters of support:

Dr. Peta Bonham-Smith, Interim Dean, College of Arts and Science

Dr. Donald Bergstron, Interim Dean, College of Engineering

Dr. Toddi Steelman, Executive Director, School of Environment and Sustainability

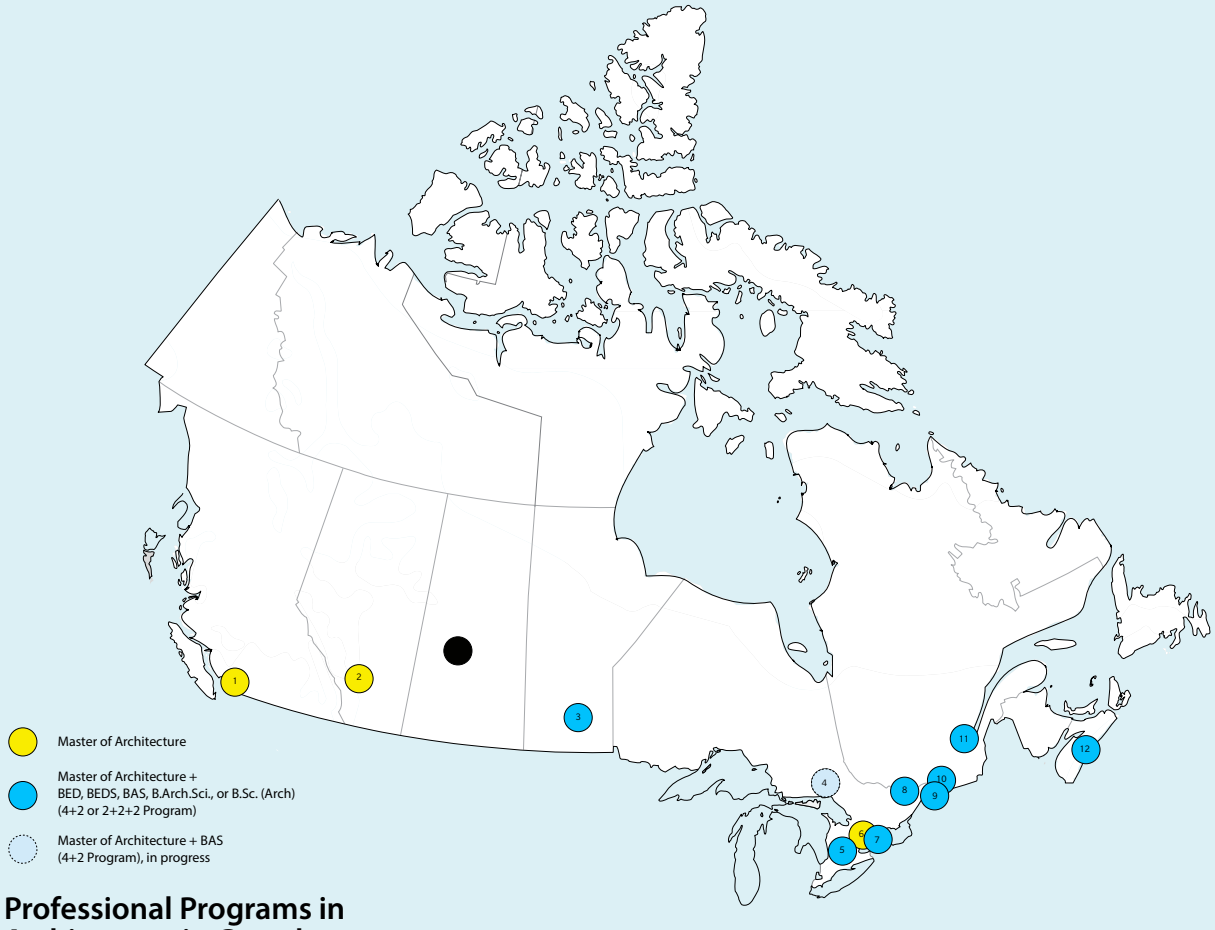
Candace Wasacase-Lafferty, Director, Aboriginal Initiatives (Pending)

Dr. Tim Nowlin, Chair, Department of Art and Art History

Saskatchewan Association of Architects (Pending)

Dr. Stephanie Yong, Director, Wilson Centre for Innovation and Entrepreneurship

Appendix 1:
Architectural Education in Canada



Professional Programs in Architecture in Canada

1. University of British Columbia
   M.Arch. Program,
   School of Architecture and Landscape Architecture,
   Faculty of Applied Science
   (M.Arch.)
2. University of Calgary
   M.Arch. Program
   Faculty of Environmental Design
   (M.Arch.)
3. University of Manitoba
   Department of Architecture
   Faculty of Architecture
   (BED + M.Arch.)
4. Laurentian University (In Preparation)
   School of Architecture
   Faculty of Engineering and Architecture
   (B.A.S. + M.Arch.)
5. University of Waterloo
   School of Architecture
   Faculty of Engineering
   (B.A.S. + M.Arch.)
6. University of Toronto
   M.Arch. Program
   Daniels Faculty of Architecture, Landscape and Design
   (M.Arch.)
7. Ryerson University
   Department of Architectural Science
   Faculty of Engineering and Architectural Science
   (B.Arch.Sci. + M.Arch.)
8. Carleton University
   Azrieli School of Architecture
   Faculty of Engineering and Design
   (B.A.S. + M.Arch.)
9. McGill University
   School of Architecture
   Faculty of Engineering
   (B.Sc. (Arch) + M.Arch.)
10. Universite de Montreal
    Ecole d'architecture
    Faculte de l'amenagement
    (B.Sc. (Arch.) + M.Arch.)
11. Universite Laval
    Ecole d'architecture
    Faculte d'amenagement, d'architecture, et de design
    (B.Sc. (Arch) + M.Arch.)
12. Dalhousie University
    School of Architecture
    Faculty of Architecture and Planning
    (BEDS + M.Arch.)

Part One: Architectural Education in Canada

[Inter-, multi-, cross-, trans-] Disciplinary Education

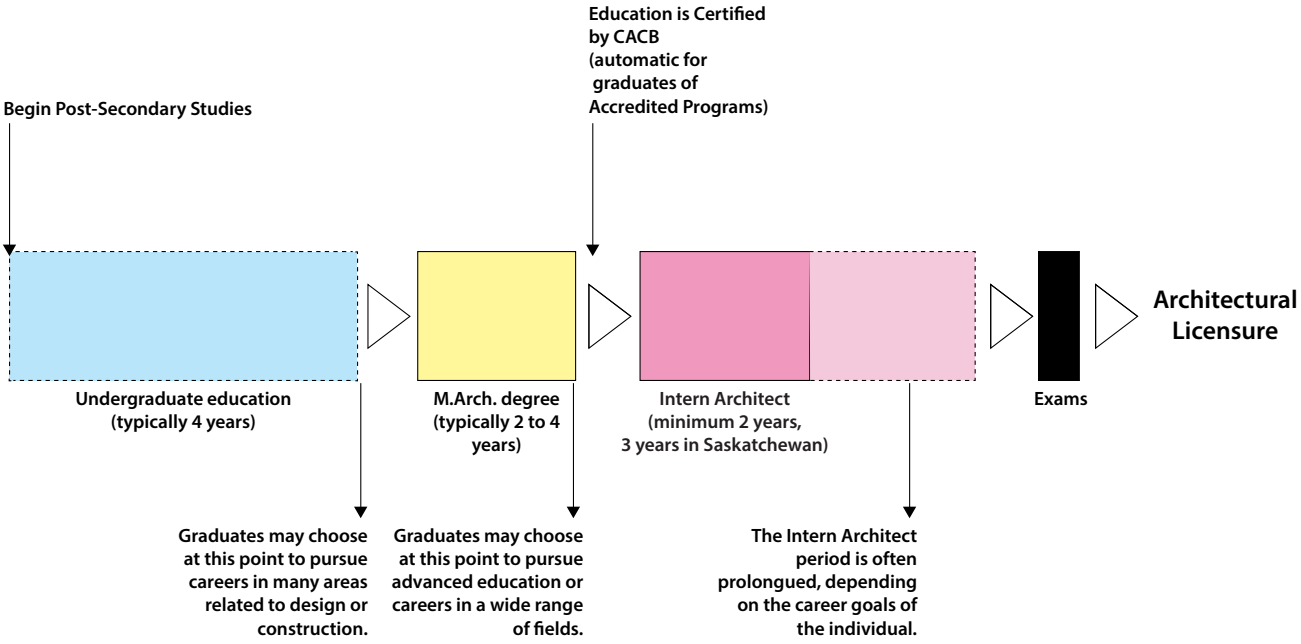
Before discussing architectural education in its current forms, it would be useful to first discuss architecture as a discipline. While it is commonplace to think of architects as designers of buildings - and this statement is true - the discipline of architecture, and therefore architectural education, has a broader scope.

A Primary Concern: First, we could characterise architecture as a discipline as having a single overarching area of concern: ***the qualities and quality of place***, and particularly of the built environment. While an interest in place is shared by a number of other disciplines, including the related design and planning disciplines (Urban Planning, Interior Design) but also diverse disciplines such as sociology, geography, the other arts and literature, and even law and medicine, for architecture this concern with place is central and primary. Architecture moves beyond a study of place to ask how we might actively improve the quality of places meant for human (and sometimes non-human) use.

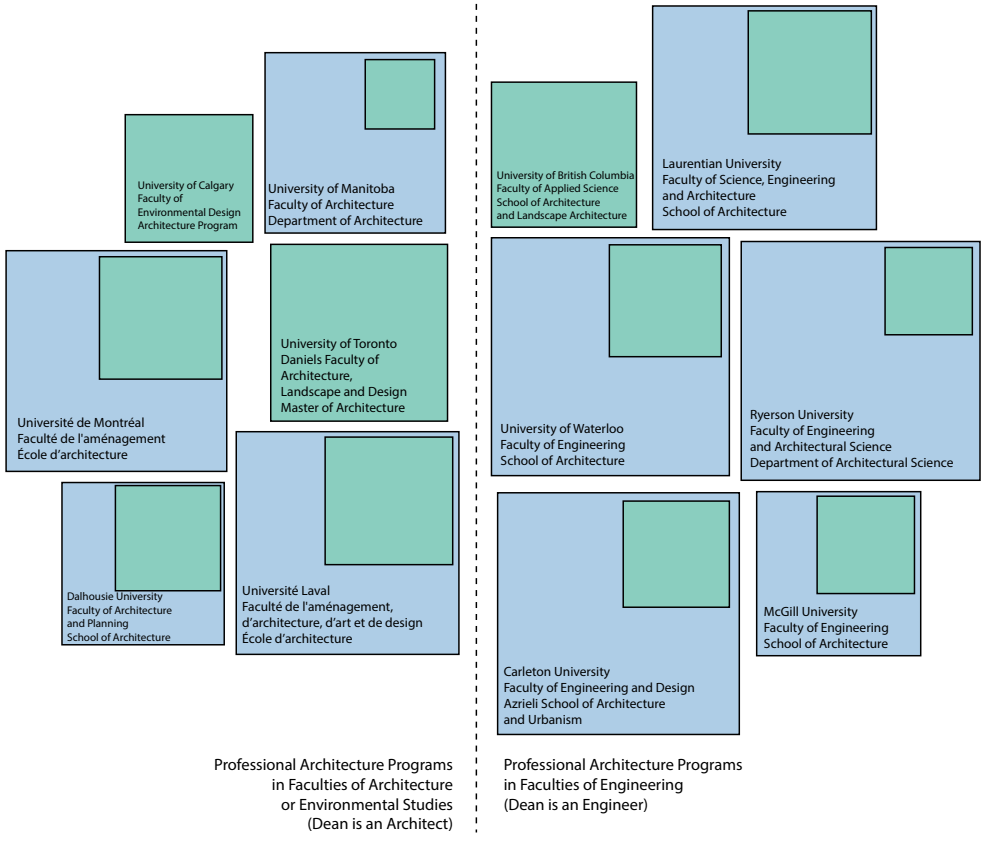
This primary concern allows architecture to often ignore disciplinary boundaries. For example, architects are interested in what other actors - writers, artists, scientists and others - have to say about place, and such extra-disciplinary ideas frequently find their way into architectural education. It is also not uncommon to find scholars from other disciplines, such as literature, philosophy or engineering teaching within a school of architecture. This concern also allows architects to transgress disciplinary boundaries in their work, to design not just buildings but cities, regions, furniture, interiors, books, stage settings, exhibitions, websites, films… This ability to move across disciplines can make make architecture faculty powerful collaborators with other disciplines.

Core Disciplinary Knowledge: Following this line of thinking, the core discipline of architecture is not defined by content - by a knowledge of buildings, for example - but by a set of disciplinary skills and practices. I would argue that there are four main areas of Core Disciplinary Knowledge, and that architects will bring this set of skills and practices to bear on any project they engage with. These are:

- **An expertise in the primary tools of design:** what we would have called, in another generation, drawing and model-making. As a result of technological development, these tools have expanded in their reach to encompass computer graphics, 3d-modelling and rendering, data visualization, computer simulation, parametrics, and so on. Architects understand that the production of visual models is the primary technique of problem identification and solving by design - in fact, that drawing, to use an old term, is design.
- **A strong technical understanding of how things are constructed:** primarily, the architect's knowledge is in the technology of building construction. However, an architect, through training and practice, develops a position in relation to technology that is able to understand, learn about, and make use of technologies in many other areas of endeavour. Furthermore, while we recognize that there are other groups that have a more highly developed understanding of aspects (perhaps all aspects) of even building technology (structure, mechanical and building envelope engineers; building scientists; environmental engineers) architects have the primary responsibility - and skill - for thinking about technology holistically and integrating the work of other specialists.
- **An ability to think in an integrated and holistic manner about whole systems:** in some ways this ability to understand and coordinate interactions between and among systems, to recognize and design complex networks with multiple and often conflicting constraints, is what most distinguishes architects from faculty members in other disciplines. Again, although born from the need to coordinate the complex systems in contemporary buildings, this competency has broad applicability to other areas of work.
- **Capacity and skills in collaboration and leadership:** architects never work alone. Any building project involves many actors: the owner, other stakeholders, local government, design subconsultants, contractors, the building trades. Normally the architect is required to play a leadership role - actually a number of shifting leadership roles - in regards to this large group. As with other core disciplinary skills, this capacity for leadership is easily transferred outside of the confines of building construction. Architectural education is designed, explicitly, to develop these leadership abilities in our students.



Becoming an Architect in Canada



Institutional Structure of Architecture Schools in Canada

Data: Program websites

Accreditation and Institutional Structure

Architectural programs in Canada are accredited by the Canadian Architectural Certification Board, which receives its mandate jointly from the Canadian Architectural Licensing Authorities (CALA) and the Council of Canadian University Schools of Architecture (CCUSA). Graduation from an accredited program is a requirement for entry into professional internship and, eventually, licensure. This program will be designed to be CACB-accreditable. CACB has a well-established procedure in place for the accreditation of new programs.

There are currently eleven accredited Schools of Architecture in Canada, with a twelfth (Laurentian University in Sudbury, Ontario) currently in process. These eleven programs can be seen in the map on page AEC-0. It is interesting to point out that there are currently no undergraduate programs in architecture west of Winnipeg.

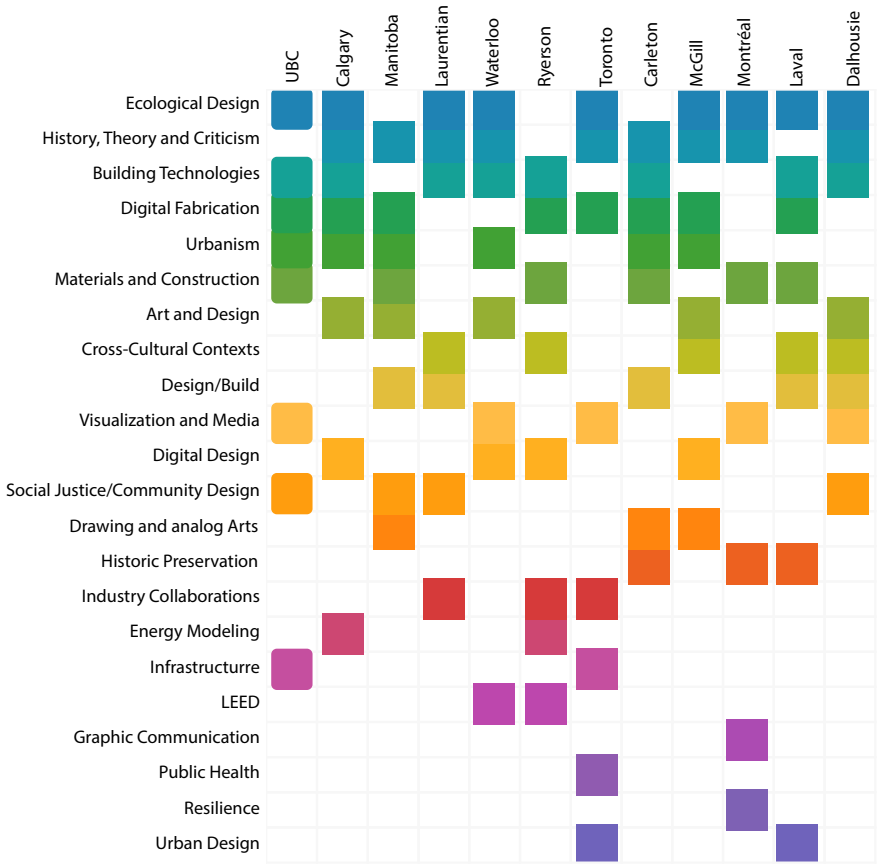
In the analysis that follows we have based our analysis on the nine english-language programs, only for simplicity of data gathering and comprehension. In broad strokes, the situation is not markedly different in the french-language programs.

Within their universities, five of the nine programs sit within Faculties of Engineering (or of Applied Science). Four of these are nominally Schools of Architecture, while Ryerson's unit is the Department of Architectural Science. However, all four function in essence as departments reporting to a Dean of Engineering. This arrangement, in general, appears to work well administratively, although there are occasionally concerns raised (during accreditation visits) that the Schools may not have sufficient autonomy to provide professional education. On the other hand, as architecture is very different from engineering in its culture and in its scholarly traditions, this arrangement can be difficult for architecture faculty, who sometimes have difficulty with engineering norms for tenure and promotion. One ongoing debate at several Schools is the viability of design work - and especially built work - as a scholarly activity.

The other five programs are, in one form or another, parts of Faculties of Architecture (or, in the case of Calgary, the Faculty of Environmental Design). In each case, the Architecture program is "bundled" with programs in similar disciplines: Landscape Architecture, Urban Design, Urban Planning, Interior Design. In some cases the various disciplines are structures as departments within the faculty (so, for example, the University of Manitoba has a Department of Architecture within a Faculty of Architecture); in other cases, they are structured as programs sitting directly under the Dean. While this arrangement has the benefit that architecture and its sister disciplines are able to set their own expectations around discovery activities, tenure and promotion, problems occasionally arise in the relationships between and among the disciplines. In addition, the line between the responsibilities of the Dean and the responsibilities of the Department Head can be difficult to navigate, and can become a significant source of friction - especially since the Dean is often an architect.

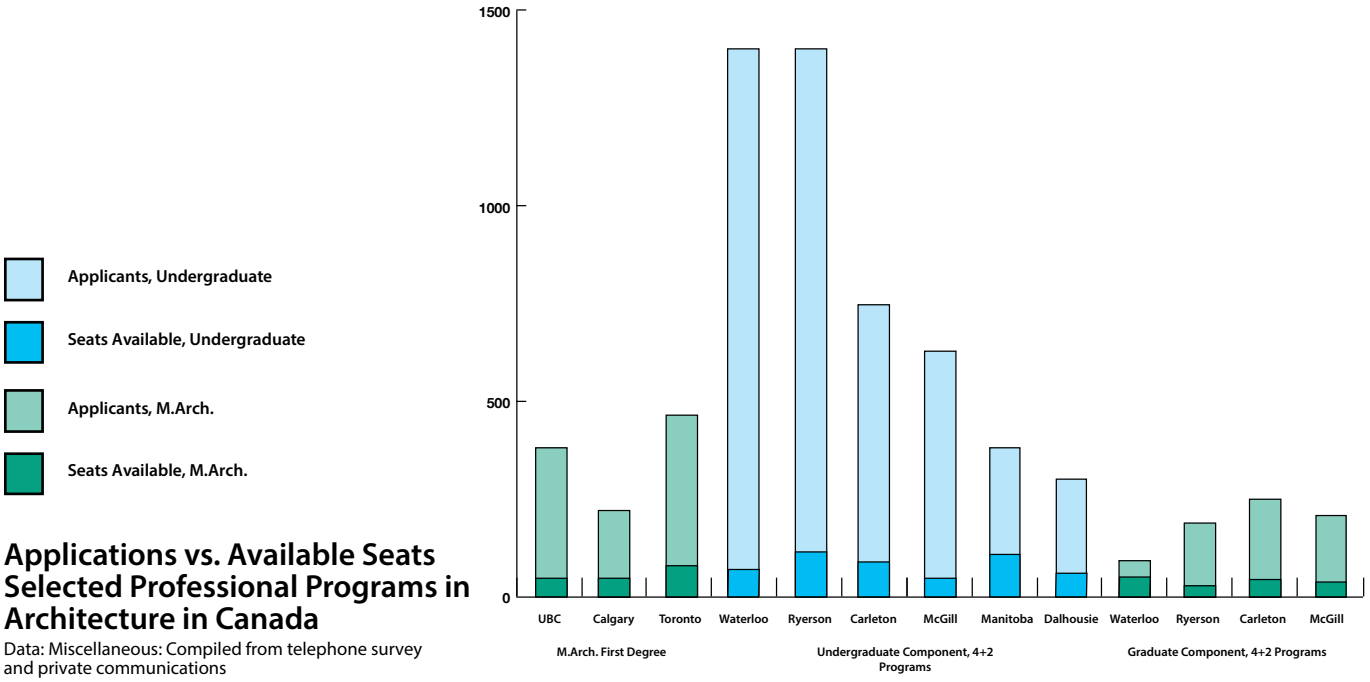
Outside of Canada, architecture programs sit in a variety of locations within their university contexts (or occasionally outside of universities altogether). For example, Temple University's School of Architecture sits as a Department in the Tyler School of Art. At other institutions it forms part of a Faculty of Design or a Faculty of the Built Environment. The overall conclusion from this analysis is that while no particular arrangement is ideal, many are workable; the best place for a School depends largely on local factors. Furthermore, in our experience, the location of a School within its institutional context has little impact on the educational or research culture of the school - that is to say, for example, that a school located in a Faculty of Engineering is not necessarily stronger technically, either in its educational or discovery programs, than a school located elsewhere.

At the University of Saskatoon there are currently several homes being considered for the architecture unit. It could, for example, sit as a department (or a school) within the College of Engineering or the College of Arts and Science. Alternatively, it could sit as an autonomous School, or could be added as a program (or set of programs) to an existing School (most likely the School of Environment and Sustainability) or within an existing department, such as Art and Art History.



Areas of Focus, Professional Programs in Architecture in Canada

Data: Association of Collegiate Schools of Architecture



Applications vs. Available Seats Selected Professional Programs in Architecture in Canada

Data: Miscellaneous: Compiled from telephone survey and private communications

Institutional Identities

Each school in Canada has its own recognizable identity, which is a product of its location, its faculty and its history. This is understood both by the schools and by the CACB as a positive aspect of architectural education in Canada; the schools are encouraged to develop their own mandates and identities and required to report on these positions during the accreditation process. Partly for this reason, the schools do not in general see themselves as in competition with each other, but rather as supportive colleagues. As such, CCUSA has been quite supportive of the Saskatchewan initiative.

Demand for Architectural Education in Canada

Across Canada, demand for professional university programs in architecture is very high. Applications to architecture schools exceed available seats by a significant factor, although it is difficult to obtain precise aggregate numbers as most applicants apply to multiple programs.

At the undergraduate level, we can note that the University of Waterloo receives approximately 1600 applicants each year, for 70 seats, giving a ratio of approximately 23 applicants per available seat. Ryerson University reports similar numbers. At both Ontario schools, students in architecture have among the highest entering GPA from High School of any programs at the university. Meanwhile, McGill University records some 630 applicants for 60 seats. If we assume that the 1600 applicants at Waterloo are applying to all three Ontario undergraduate programs and represent all the Ontario applicants in a given year, this represents roughly 1% of high-school graduates in a given year. McGill's numbers for Quebec are approximately the same, at about 0.85% of graduates from the Province. The University of Manitoba reports 380 applicants, or about 1.6% of the combined high school graduates of Manitoba and Saskatchewan.

A survey conducted by Dr. Mona Holmlund of guidance counselors, administrators and teachers in the 29 provincial school divisions in 2009 found that 226 Saskatchewan high school students expressed interest in pursuing architecture as a profession.[1]

At the graduate level, for applicants without a previous degree in architecture, admission is also very competitive in Canada. The University of Toronto reports 466 applicants in 2014, for 80 seats; the University of British Columbia reports 369 applicants for 50 seats. These more mature applicants are not as constrained to their home province and more willing and able to travel, suggesting that this is more of a national rather than regional pool, so demographic analysis is not as meaningful; however, it is clear that there are many more applicants than there are seats available.

At the undergraduate level, based on the Ontario experience, we could estimate that between 20 and 25% of applicants are viable candidates for a program in architecture. At the graduate level, viability rates are somewhat higher, estimated at between 30% and 40%.

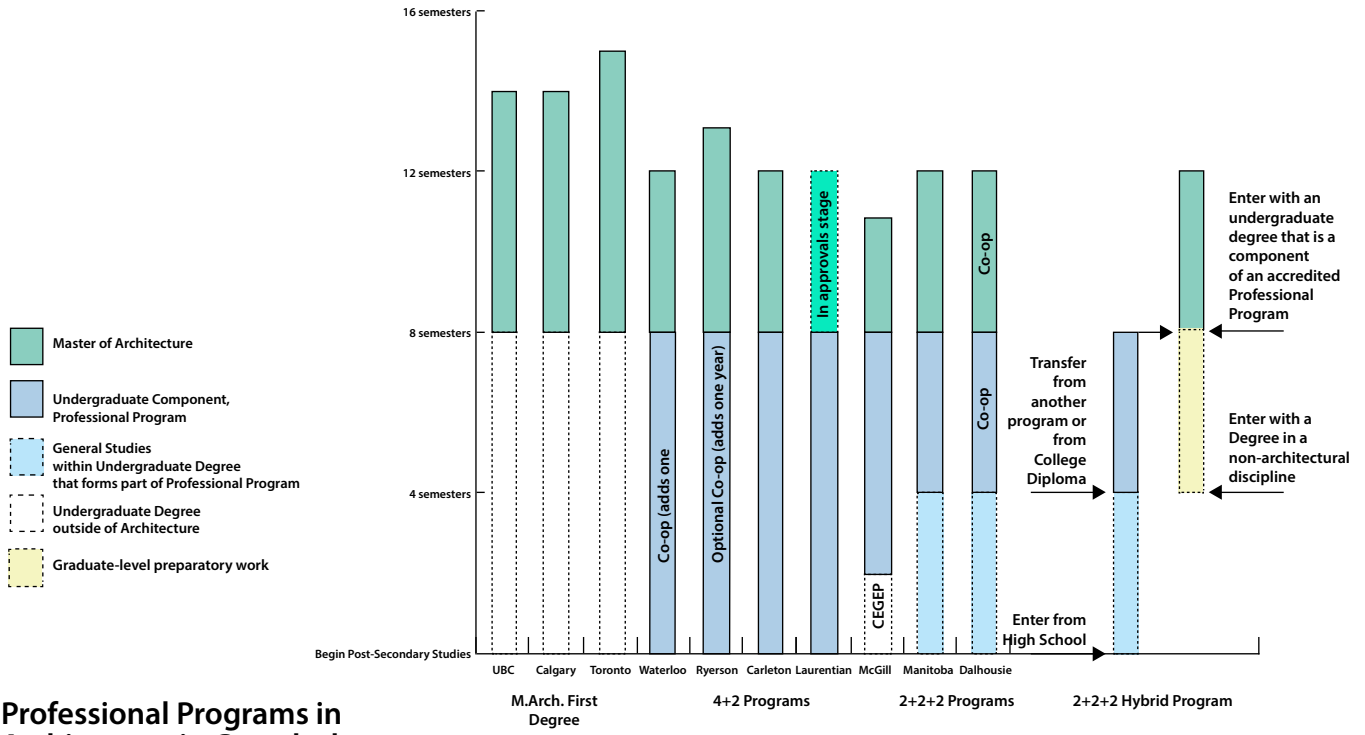
Professional Program Models in Canada

All professional programs in architecture in Canada currently require the completion of a Master of Architecture Degree. This is a relatively recent development: fifteen years ago most programs were still 5-year Bachelor of Architecture degrees. This change has paralleled the development of robust programs of discovery in schools of architecture. Despite the uniformity of the M.Arch., there are two dominant models for program structure (in addition to a third, hybrid model).

4+2 Programs: these programs (six of the nine english-language programs) require the completion of a four-year undergraduate degree in architecture (three years at McGill, following CEGEP) as well as a two-year Master of Architecture. The undergraduate degree can take a variety of nomenclatures (Bachelor of Architectural Studies, Bachelor of Architectural Science, Bachelor of Environmental Design) but is never a Bachelor of Architecture, which is reserved for the (legacy) five-year professional programs. Both degree programs are considered part of the professional program and both are evaluated ***as a single program*** by the CACB.

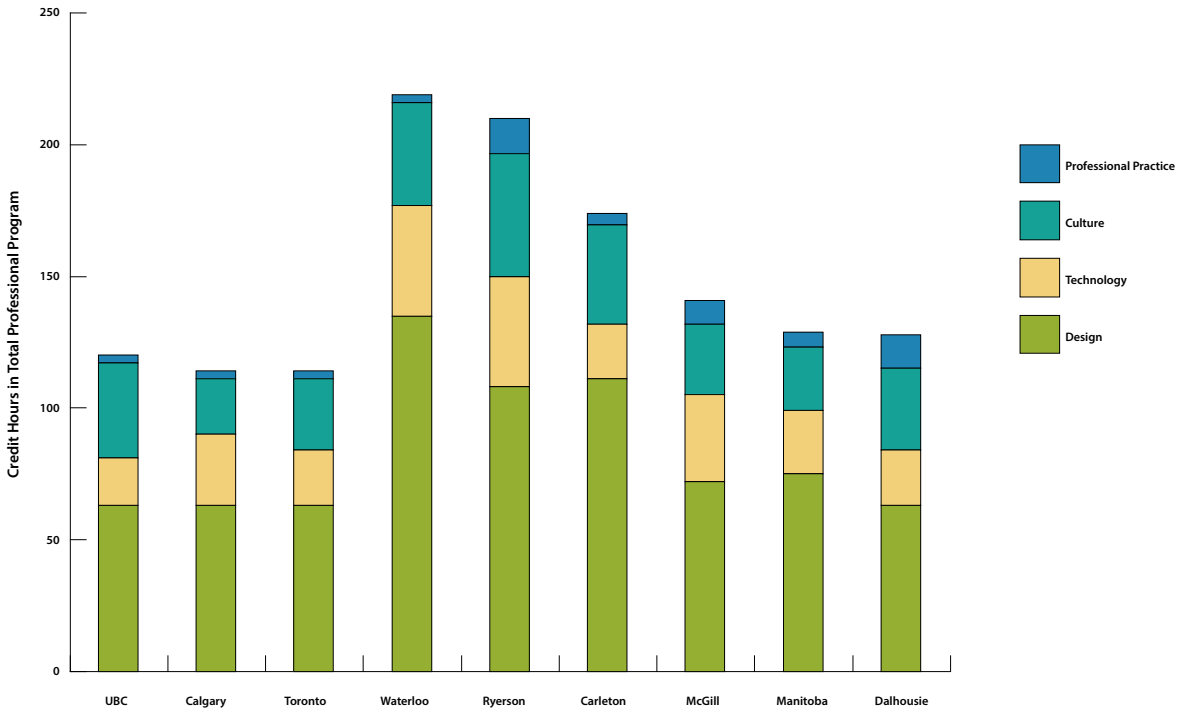
Degree designations: The graduate portion of the Professional Program is always called a Master of Architecture (M.Arch.). However, for programs with an integral undergraduate degree, the degree name is not specified and varies widely across the country: Bachelor of Environmental Design (BED, Manitoba); Bachelor of Architectural Studies (BAS,

1 Mona Holmlund, "Report to the Feasibility Task Force for a Saskatchewan Program in Architecture on an Informal Survey of the Saskatchewan School Divisions", University of Saskatchewan, April 5, 2009



Professional Programs in Architecture in Canada, by Program Type

Data: Program Websites



Analysis of Core Curricula, Professional Programs in Architecture in Canada

Data: Program Websites

Laurentian, Waterloo and Carleton); Bachelor of Architectural Science (B.Arch.Sci., Ryerson); Bachelor of Science in Architecture (B.Sc. (Arch), McGill); and Bachelor of Environmental Design Studies (BEDS, Dalhousie).

Not all graduates of the 4-year undergraduate component of the programs go on to complete an M.Arch. Some continue on into graduate education in other (often related) disciplines, while many others find work in architects' offices, as designers of small buildings that do not require an architect, as designers or project managers within construction companies and developers, or in many other roles in the construction industry and eslewhere in which the fundamental skills of the architect can be put to good use.

Stand-alone Masters Programs: these programs (UBC, Calgary and the University of Toronto) require the completion of a three to 3 ½ year (six to seven term) Master of Architecture degree. A degree in any discipline (acceptable to the School of Graduate Studies) is required for admission. Some of these programs offer advanced standing of one year to applicants with an undergraduate degree in architectural design.

Hybrid Programs: these programs are nominally 4+2 in structure, but require two years of general university education within the undergraduate degree. They might more accurately called 2+2+2 Programs: two years of general studies, two years of undergraduate architecture, two years of graduate architecture (culminating, again, in the M.Arch. degree). Such programs are further complicated by allowing holder of undergrad degrees from other accredited programs to enter the 2-year M.Arch, while allowing holders of non-architectural undergraduate degrees access to an extended M.Arch. (in the case of the University of Manitoba, this takes the form of a two-year post-graduate certificate, offered in parallel with the final two years of the Bachelor of Environmental Design). These programs are popular with institutions in small markets (such as Saskatchewan) as they allow program entry from multiple groups.

Program Components

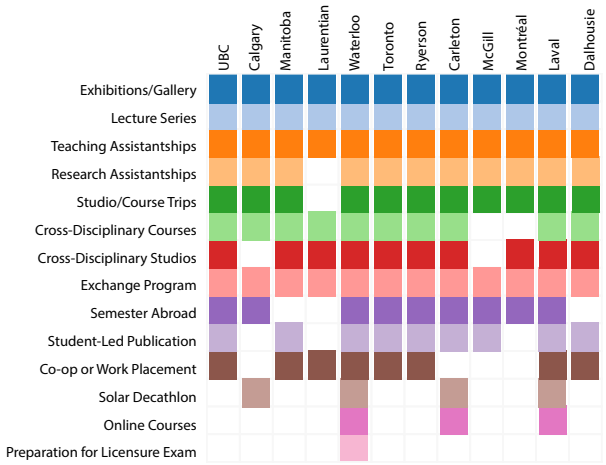
Despite the variety of program models in Canada, all programs share a number of key commonalities. The first and possibly most important of these is that all programs are centred on the ***Studio*** - an uncommon and very powerful, although resource-intensive learning structure. Studio, as defined by the CACB, is both a physical location (the working environment in which each student in the program has a dedicated workspace and meets with faculty instructors) and an academic course. As a course, Studio is structured as nine to sixteen hours per week (usually spread over two to three days per week) of instruction, often one-on-one, by a full-time or adjunct faculty member, with a small group of students (no more than fifteen students per instructor, per CACB guidelines). In the Studio, students will carry out design projects of increasing complexity as they move through the program. Students generally take a Studio course each term. Studio is normally weighted at either six or nine credits per term, or two to three times the weight of a typical lecture course. Studio is a model of participatory, enquiry-based learning that is at the core of any program in architecture.

Studio is complemented by a number - typically four or five per term, resulting in a typical term load at the undergraduate level of 21 or 24 credits - of traditional lecture-based courses in the various areas of study in the curriculum. These courses cover the broad areas of Building Technology and Architectural Culture (including Professional Practice); some programs also have coursework that directly complements the Studio, in topics such as Drawing. Most of these courses are delivered, in most institutions, to the entire cohort of students, normally in a single section.

In addition, there will be a number of discipline-specific electives, most commonly related to areas of Architecture Culture, and most often made available to students in the last years of the program. Finally, as there is an expectation that architecture students achieve a broad as well as deep education, there is a requirement for General Education in the program, often in the form of Liberal Study Electives.

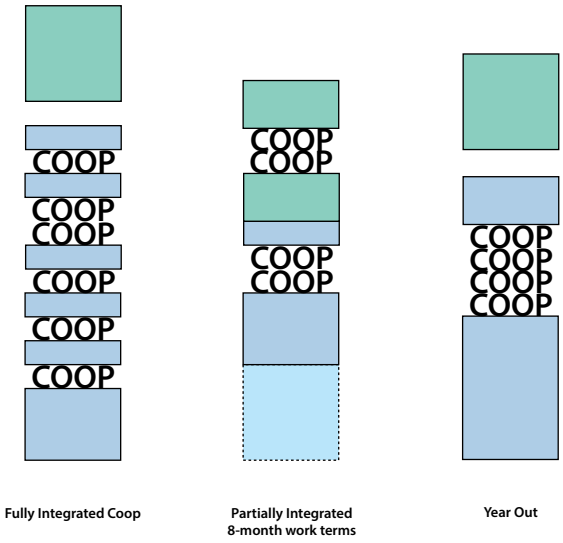
General Education varies widely in Canadian programs, depending to a high degree on the program type. In 4+2 programs, General Education is most commonly delivered through Liberal Study Electives and comprises 5 to 15% of the total program credits. In stand-alone masters programs, General Education is delivered by the first (undergraduate) degree, and is roughly 50% of credits. Hybrid or 2+2+2 programs, not surprisingly, fall in the middle, with roughly 30% General Education.

The other components of the program (those components which are under the control of the School) show up in a mixture that arises largely out of the particular mandate and identity of the program. The ranges for Canadian english-language schools are as follows:



Experiential Learning and Co-curricular activities in Canadian schools

Data: Association of Collegiate Schools of Architecture



Typical Models for Co-op Education in Schools of Architecture

Data: Program Websites

- Design: 49% to 64% (63 to 135 credit hours)
- Building Technology: 12% to 24% (18 to 42 credit hours)
- Architectural Culture: 19% to 35% (13 to 27 credit hours)
- Professional Electives: 5% to 15% (5 to 33 credit hours)

Experiential Learning and Internationalization

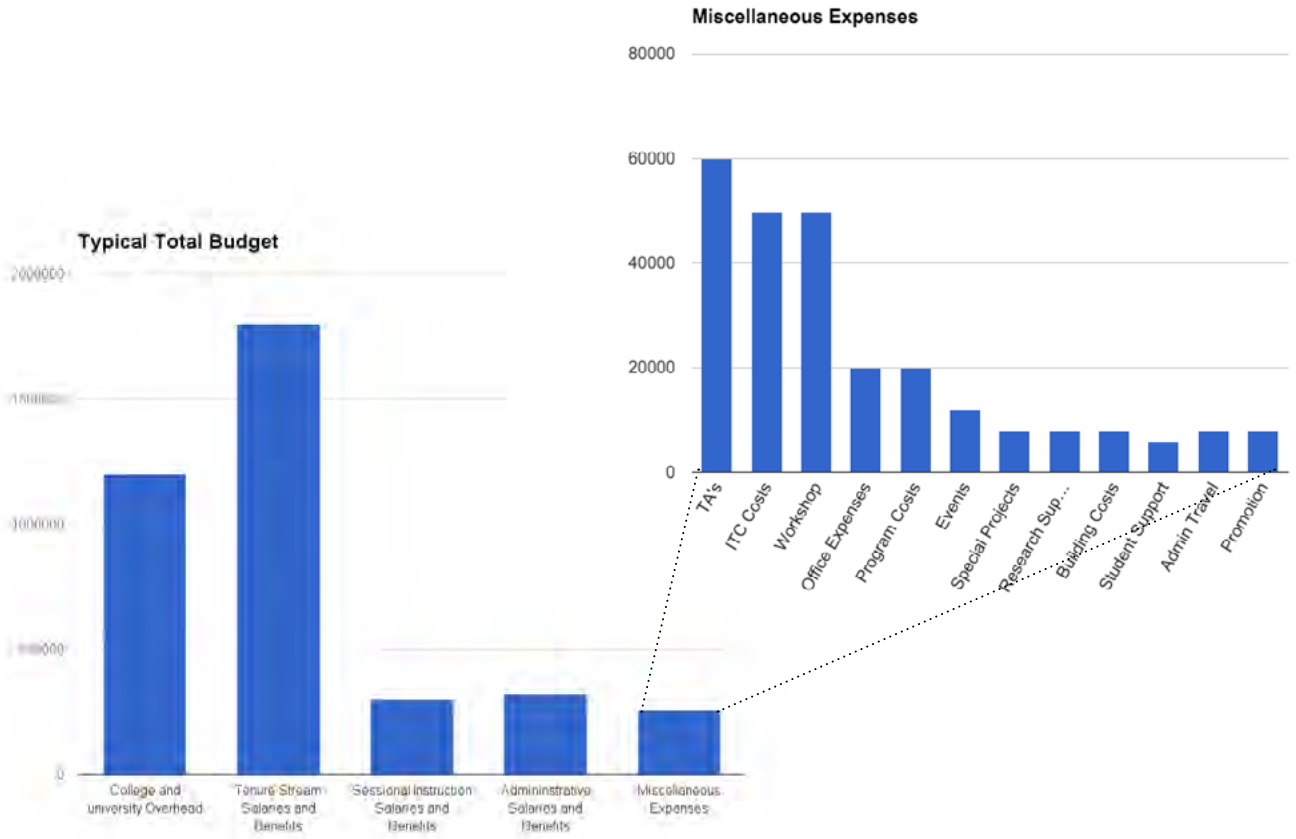
Architecture programs also contain a wide variety of co-, quasi- and extra-curricular components as well as both participatory and experiential learning components. Some of these components include:

- Co-op programs or options
- Student exchange programs
- Taught-abroad programs (most often studio)
- Design-build programs
- Community-based charettes
- Design competitions

Most schools in Canada now include all of the above, to a greater or lesser degree in accordance with their particular mandate. Although Studio already presents a form of experiential learning - or at least participatory enquiry-based learning - there has been significant growth in "real projects," that is, projects in which student designs, often overseen by a faculty member who is also a licensed professional, are presented to real clients and occasionally even built. Community Design Centres carry out architectural work as an experiential learning activity for students either on a pro-bono or deeply discounted fee basis for non-profit and community organizations. In some cases students are engaged in physically building the structures involved. Although the most notable example of this work is the Rural Studio at Auburn University in Alabama, Brian Mackay-Lyon's ***Ghost Lab*** series and the work of Richard Kroeker, both at the Dalhousie School of Architecture.

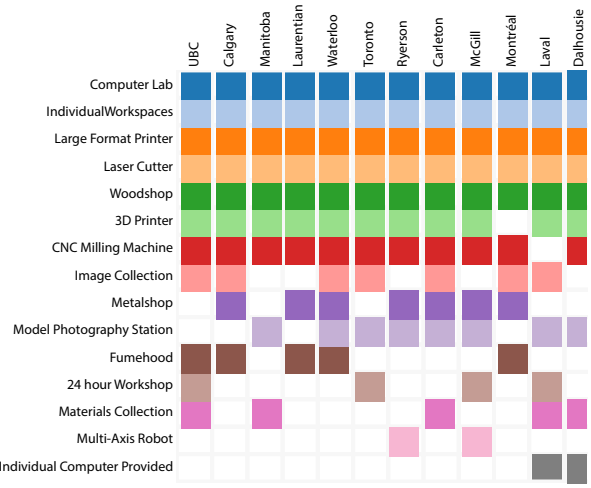
Co-op programs are also important in architectural education, and their graduates are highly desired by the profession. The University of Waterloo has the most established co-op program, fully integrated with the academic program. Co-op programs also exist at Dalhousie University and Ryerson University, although not in as clearly integrated a form.

International experience has been an important part of architectural education since the Grand Tour, a rite of passage for young english gentlemen in the seventeenth and eighteenth centuries - and likely before. All Canadian schools have a program of taught-abroad courses or course components, although the mechanisms vary. The most established is likely the University of Waterloo's Rome Program, established over 40 years ago; almost all students spend a term in Rome in their 4th year. At the University of Manitoba, on the other hand, each Studio group will spend one week travelling - usually but not always to international locations. Ryerson University utilizes a suite of methods, from exchanges to terms abroad, offering travel to a number of different locations each year.



Typical budget breakdown,
Professional Schools of Architecture in Canada

Data: Ryerson University Department of Architectural Science (Modified)



Architecture School Facilities

Data: Association of Collegiate Schools of Architecture

Resource Issues

Despite the variations across schools of architecture in Canada, there is broad uniformity across a number of key issues in relation to resources.

Financial resources: Professional programs in architecture are among the more expensive programs to operate at a typical university. In large part, this is the result of the additional instructional cost inherent in delivering the design studio. At the departmental level - that is, not including College- or University-level overhead, buildings and maintenance, shared library and ICT resources, student services and so on - a typical program will operate on about $13,000 per student per annum. Instructional salaries and benefits are likely to take up some 80% of that amount, with an additional 11% going to administrative staff salaries and benefits. This leaves approximately 8 to 9% of total budget available for miscellaneous discretionary costs. A typical school budget is presented on the facing page.

Faculty resources: Architecture programs across Canada have a median student:faculty ratio (counting tenure stream faculty only) of 19:1. A “normal” teaching load is consistent at all schools in the country, at one studio + one lecture course per term, although there are significant deviations from the norm for individuals at some schools. Schools make significant use of sessional instructors, primarily but not only in studios, with sessional salaries and benefits accounting for perhaps 10-12% of total budget (or 13-16% of total instructional salaries), with sessional instructors responsible for approximately 30% of credits. Across Canada, the stipends paid to studio instructors varies widely, from a minimum of $8000 to a maximum of $17,500 per term, with a median of $12,000.

School leadership: Academic leadership varies significantly from school to school in Canada. The most common model is that the Head of School is a “Director” (or in one case a “Head”, in another a “Chair”, and in another an “Associate Dean”) who reports to a Dean and has responsibility for the budget discussed above. In one instance, however, the Head of School is a Program Director, while the Dean maintains budgetary control; in another, the Head of School is responsible for several disciplines, of which architecture is one. Normally, the Head of School is within the discipline of architecture. Depending on the scale and complexity of the school, the Head will be supported by one or more Program Directors or Assistant Directors. For example, in the case of the Ryerson Department of Architectural Science, there are three Program Directors and two Associate Chairs (Internal and External).

Staff resources: In addition to an office staff of two or three, each school has technical support staff overseeing the workshop and the ICT resources. The advent of digital fabrication has evolved the need for additional technical staff in this area.

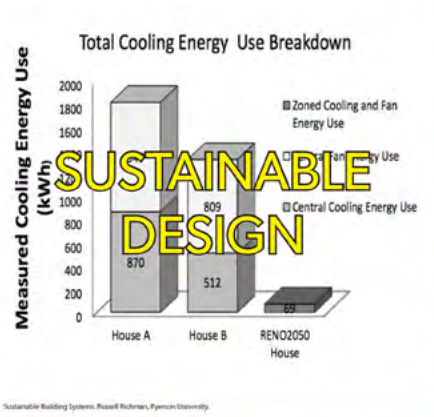
Building and equipment resources: All schools in Canada have significant area designated to studio space, with a dedicated workspace for each student. In fact, this is a requirement of CCB accreditation. Typically, an allocation of 5 to 7.5m2 of floor space per student is made in the studio. All schools also contain within their premises workshops (wood and metal shops), dedicated computer labs, and more recently digital fabrication facilities.

ICT resources: Architectural design is an intensive user of ICT resources. Typically, most students in schools of architecture in Canada do the majority of their work on laptop computers, which they own. Most schools also maintain a small lab of more powerful desktop computers, sometimes with specialized software. Printing facilities, including wide-format printing, are typically available within the school at discounted rates, sometimes managed by student groups. The recent development of digital fabrication, augmented reality and similar technologies has required most schools to develop a “FabLab” with 3d-printers and scanners, laser cutters, robotic arms, and other high-end equipment.

Library resources: Most, but not all schools in Canada have an in-house branch library. However, with the development of the internet, the need for these branch libraries has undoubtedly changed. Currently the accreditation board requires a minimum of 5000 volumes in Library of Congress classification NA, although we expect this requirement to be removed shortly in favour of a performance specification.

Student financial support: Although all schools offer a range of awards and prizes to students, financial support for graduate students in architecture is generally minimal compared to graduate students in other disciplines, as they are treated as professional students rather than research students.


MATERIAL
SYSTEMS


Total Cooling Energy Use Breakdown
Measured Cooling Energy Use (kWh)
2000
1800
1600
1400
1000
800
600
400
200
0
870
809
512
69
House A
House B
RENO2050 House
Zoned Cooling and Fan Energy Use
Central Cooling Energy Use
SUSTAINABLE
DESIGN


ADVANCED
MANUFACTURING

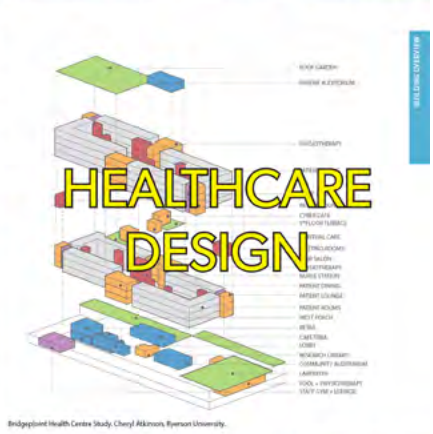

ARCTIC FUTURES


FOOD SECURITY


DIGITAL
FABRICATION


SUSTAINABLE
HOUSING


INFRASTRUCTURE
DESIGN


HEALTHCARE
DESIGN


ECOLOGY
AND SYSTEM
ANALYSIS
_CommuterShed


Architecture
and National Identity:
The Centennial Projects
CANADIAN
ARCHITECTURE


RESPONSIVE
ARCHITECTURE

Discovery Activities in Schools of Architecture

The scope of research undertaken by architecture faculty in Canada and abroad can be surprising. The broad nature of the architectural discipline as well as its ability to move beyond disciplinary boundaries leads to a wide diversity of discovery activities within schools of architecture, concerned in a general sense with the quality of place - and not limited to places that we would more narrowly describe as buildings. Researchers apply the core competencies of the architectural discipline - especially drawing and visualization - to an array of current issues, including ecological, transportation and industrial networks, supply chain logistics, watershed management, disaster management, and so on.

Although research is a relatively new activity in schools of architecture, it is increasing rapidly by measurements of publications and funding. While the list is not exhaustive and categorization difficult, the following will give some idea of the potential scope.

Sustainable Design: This area has become significantly more important in recent years with the recognition of the role that buildings play in sustainability. Most schools have at least one researcher active in this area, in terms of design issues, sustainable materials, or energy efficiency or production. A leading light in this area has been Ray Cole from the University of British Columbia, while an important collaborative project was North House, produced by Team North, with researchers from the University of Waterloo, Ryerson University, and Simon Fraser University, led by Geoffrey Thün. This demonstration house was designed in 2009 to produce significantly more power from solar energy than it would use in a year for all purposes, including heat - in Canada. It is worth noting that Saskatchewan has among the highest annual numbers of sunlight hours in the world.

Emerging Technologies: The development of digital fabrication and other advanced manufacturing technologies is poised to revolutionise the construction industry - and everyday life. Researchers in schools of architecture have been actively working on this issue for over a decade. Leading figures include Branko Kolarevic from the University of Calgary, Michael Jemtrud from McGill, and Vincent Hui from Ryerson. The work of Philip Beesley, from the University of Waterloo, on responsive architectural systems has become very well known internationally.

Regional Design and Mapping Practices: Other researchers are applying the competencies of architectural design practice at the very large scale, investigating - and proposing design possibilities for - watersheds, rivers, and other ecosystems. This work crosses into geography, but is distinguished by its design outcomes. A recent example is the work of RVTR, based in “The great Lakes Megaregion,” and their design and mapping based study of that megaregion, *Infra-|Eco-|Logi-|Urbanism*.

Northern Issues: A number of researchers have been studying design-based solutions for Canada’s north. Leading this work has been the research partnership of Lateral Office, comprised of Lola Sheppard from the University of Waterloo and Mason White from the University of Toronto. This work starts from a mapping-based analysis of the Canadian north and moves to concrete design proposals.

Architecture and Health: How can better buildings and cities increase our health and well-being? A number of researchers are working on this problem, including Cheryl Atkinson from Ryerson, who was part of a team that won a significant amount of funding from CIHR in 2013.

Community Design: Designer-researchers such as Richard Kroeker from Dalhousie University have been using participatory methods to design and build new structures for small communities and community groups. Other researchers have been studying policies and institutions related to the built environment, often working in an advisory role with government.

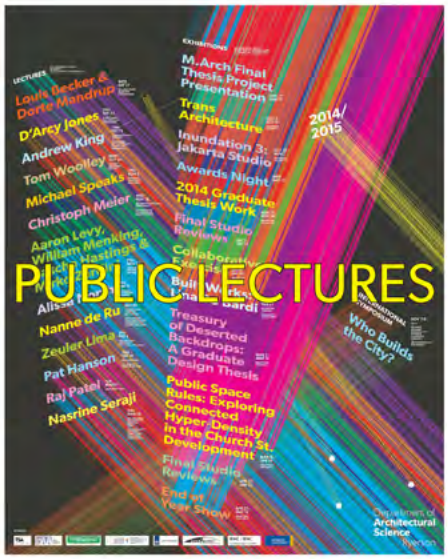
Contemporary Culture: Architecture, as noted, can transcend disciplinary boundaries. Academics in architecture can become important contributors to cultural and critical discourse. Primary examples, while not Canadian, might be Paul Virilio and Mark Wigley.

Architectural History and Theory: Some researchers carry out traditional research into architectural history or theory, leading to the publication of peer-reviewed papers and books as well as other forms, such as exhibitions. For example,

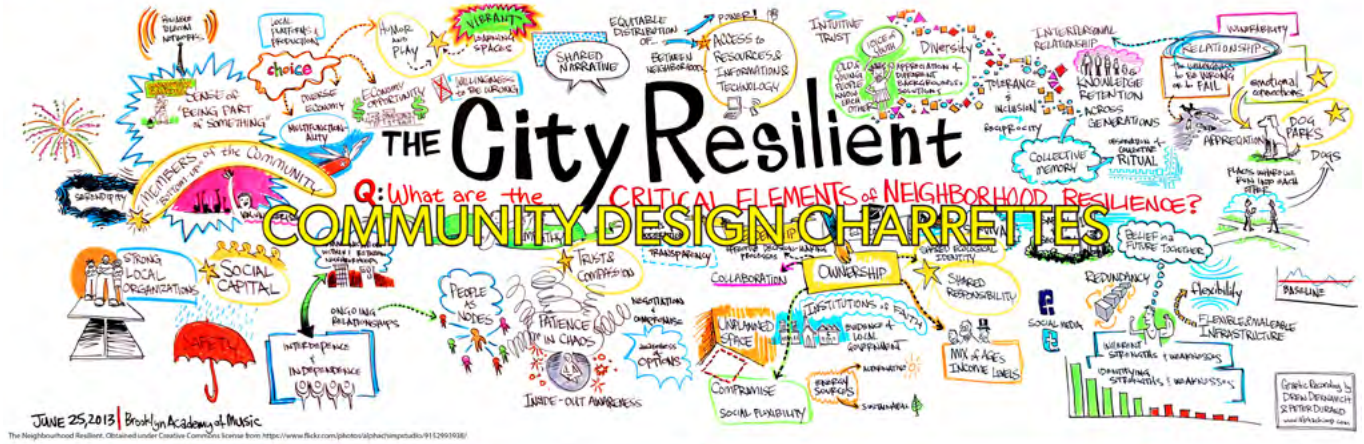

COMPETITIONS


Who Builds the City?
Symposium
SYMPOSIA


·chi·tect*


PUBLIC LECTURES
2014/2015
Who Builds the City?


MAKERSPACES


THE City Resilient
Q: What are the CRITICAL ELEMENTS of NEIGHBORHOOD RESILIENCE?
COMMUNITY DESIGN CHARRETTES
JUNE 25, 2013 | Brooklyn Academy of Music


DESIGN-BUILD


EXHIBITIONS

Marco Polo and Colin Ripley have recently produced a book and exhibition titled ***Landscape and National Identity: The Centennial Projects 50 Years On*** which looks at a series of buildings produced in Canada in celebration of the 1967 and their role in producing a Canadian national identity; Annmarie Adams, from McGill University, has published several books on gender issues in nineteenth-century architecture.

Creative Practice: Many other faculty members, such as Marc Boutin from the University of Calgary, Ann Cormier from the University of Montreal, Patricia Patkau from the University of British Columbia and Brigitte Shim from the University of Toronto have developed their design practices into significant artistic discovery programs, winning numerous major design awards and pushing the boundaries of architectural design in Canada.

These are only a few examples of the work being done by faculty members in Canada's schools of architecture. Researchers write peer-reviewed papers and books, give conference presentations, produce exhibitions, and even design buildings for construction. Researchers at Canadian schools of architecture have been chosen to represent Canada at the Venice Biennale (Marco Polo, John McMinn, Philip Beesley, Lola Sheppard, Mason White, Colin Ripley). They have received grant funding from SSHRC, NSERC, CIHR, the Canada Council for the Arts, Mitacs, CFI and many other agencies. And sometimes they even design buildings.

Community Outreach (and inreach) Activities in Schools of Architecture

Architecture schools in Canada and elsewhere have a strong record of engagement with their various communities, both locally and globally. This mandate for community engagement often dovetails with the educational or discovery mandate, and often takes the form of co-curricular or experiential learning activities. Outreach activities take on numerous forms.

Public Lectures, exhibitions and symposia: Architecture schools in Canada typically will have an organized series of lectures and exhibitions that are open to the general public and that act as attractors, bringing the public into the School. These often involve important practitioners internationally as well as discussions about current issues of local interest.

Charrettes: The schools will often hold community charrettes (group design exercises) in conjunction with community organizations, in which student and faculty expertise is linked to community need.

Design Competitions: Schools will often organize ideas competitions, open to students and others, around current issues of interet to the local community.

"Live projects": Students will engage with real community clients in the design of a project that is intended to be constructred. Although in most cases the student work is early in the design process, occassionally the student work goes on to construction. An extension of this activity is the ***design-build studio***, in which the students literally build the building or structure on behalf of or in collaboration with a community group. There is a tradition in Canada of such projects being connected with a study-abroad mandate, such as the design and construction of a school in Pakistan carried out by Ryerson students under the direction of Ian MacBurnie.

Continuing and general education: Schools will often develop programs for community education, connected with the continuing education mandate of professional organizations, or forgeneral interest.

Makerspaces, incubators and zones: These are facilities set up within the school of architecture that are opened, in some way, to use by the community as a whole. These are most often linked to emerging technologies such as 3d-printing and robotics, and are often connected with a continuing education mandate (for example, in such a model members of the public may need to enroll in a continuing education course in order to have access to facilities).

Architecture Camps: Schools will run camps for elementary and high-school students, most often during the summer period.

Appendix 2:
Letters of Support

March 15, 2016

To: Colin Ripley and University of Saskatchewan community

Re: Letter of Support for School of Architecture and Fine Art

On behalf of the Dean's Executive Committee, I am writing to provide support for the proposed School of Architecture and Fine Art, and its associated proposed academic programs, as described in the Notice of Intent dated March 15, 2016. The School of Architecture and Fine Art would function as a department within the College of Arts & Science.

I am pleased to confirm that the academic rationale, department management, resources and budget, support, and systematic review contained within the NOI are in alignment with the academic, research, scholarly, and artistic work mission of the college, as well as the core tenets of our third integrated plan, namely interdisciplinarity, enagagement, and curriculum renewal. The School's tripartite mandate of education, discovery, and community situated as principal to its academic rationale accord with the priorities of our college, and therefore we support this NOI wholeheartedly.

We look forward to achieving meaningful and creative progress on the School of Architecture and Fine Art within the College of Arts & Science, as this will benefit students, faculty, and professional practioners within Saskatchewan, western Canada and the national landscape.

Sincerely,

Peta Bonham-Smith
Interim Dean and Professor

cc. Dean's Executive Committee

UNIVERSITY OF SASKATCHEWAN
College of Engineering
ENGINEERING.USASK.CA

Office of the Dean, College of Engineering
University of Saskatchewan
57 Campus Drive
Saskatoon, SK S7N 5A9 Canada
Phone: (306) 966-5273 Fax: (306) 966-5205

Prof Colin Ripley
Department of Architectural Science
Ryerson University
cripley@ryerson.ca

March 16, 2016

Re: Letter of Support for School of Architecture at the University of Saskatchewan

Dear Colin:

As Interim Dean of the College of Engineering, I am pleased to offer my strong support for establishing a School of Architecture at the University of Saskatchewan. I believe that a School of Architecture would benefit our college, the university and the province.

Although we have had some interesting discussions about the School, and especially the ways in which it would link to other academic sectors of the university, there is still significant ambiguity about the final configuration. However, notwithstanding this lack of clarity, I do see the School as a timely and significant addition to the academic landscape of our campus. For the College of Engineering, there are many potential synergies and points of meaningful engagement – I will mention only a few:

- Design is a core element of engineering, and one which we would desire to give greater profile in all of our programs. One of the special strengths of architecture is their scholarship related to design, which could significantly enrich our own engagement of it.

- There are many potential research themes where engineering and architecture converge, such as sustainable housing for remote communities and energy efficient buildings for an urban environment. I expect significant synergies to be developed between our faculty members in the development of their respective research programs.

- Both engineering and architecture are professions which engage the challenges of infrastructure development. For a province such as ours which anticipates a long term period of growth and infrastructure development ahead, having a College and School that can provide both technical leadership and professional training to support infrastructure development is essential.

It should be acknowledged that the aspirations/benefits above will not happen merely because a School of Architecture is created at this university. However, it is encouraging that discussions to date have

focused on designing a configuration for the School that will have intentional pathways for the engagement of other academic disciplines on campus, including engineering.

In summary, I would argue that a School of Architecture would be a most appropriate addition to our university and also have significant benefit for our province. On that basis, I offer my strong support for the School and look for the College of Engineering to become a meaningful and engaged partner.

Sincerely,

Donald J Bergstrom, PhD, PEng
Interim Dean
College of Engineering, University of Saskatchewan
Room 3B48, Engineering Building, 57 Campus Dr.
Saskatoon, SK **S7N 5A9**
Tel: (306) **966-5593** Fax: (306) **966-5205**
Email: engr.dean@usask.ca
Web: engineering.usask.ca

UNIVERSITY OF SASKATCHEWAN

Department of Art and Art History

3 Campus Drive, Saskatoon SK
S7N 5A4 Canada
Telephone: (306) 966-4215
Facsimile: (306) 966-2574

March 15, 2016

Peta Bonham-Smith,
Interim Dean, College of Arts & Science

Dear Peta,

On Thursday, February 25, after a discussion with Colin Ripley, the Department of Art & Art History voted unanimously to pursue a partnership or affiliation with the School of Architecture initiative. The department both supports the initiative to create a School of Architecture at the University and views such a potential affiliation as having positive benefits to both the department and the type of model proposed for the architecture initiative at the University of Saskatchewan.

This letter is meant to indicate both our support for the initiative and our intention to pursue an administrative and academic partnership with the School of Architecture, should that become possible.

Best Regards,

Tim Nowlin
Department Head
Art & Art History

cc. Colin Ripley

UNIVERSITY OF SASKATCHEWAN

School of Environment and Sustainability

Room 323, Kirk Hall
117 Science Place
Saskatoon, SK S7N 5C8

Telephone: (306) 966-1985
E-mail: sens.info@usask.ca

March 14, 2016

Colin Ripley
Professor
Department of Architectural Science
Ryerson University

Dear Dr. Ripley:

Re: Letter of Support for the Notice of Intent, The Saskatchewan School of Architecture

The School of Environment and Sustainability (SENS) is pleased to provide this letter of support for the Notice of Intent for the Saskatchewan School of Architecture, to be housed at the University of Saskatchewan. This School would bring an enhanced focus on the built environment, and thus, many opportunities for collaboration between SENS and the Saskatchewan School of Architecture would exist.

Indeed, the scholarly work of the Saskatchewan School of Architecture is proposed to adhere to the triple-bottom line concept that is often employed when discussing sustainability: sustainable communities, sustainable ecologies, and sustainable economies. SENS has already articulated sustaining communities and sustaining ecosystems to be two of its major areas of research focus. While, undoubtedly, each of these areas is very broad, the potential for collaboration between the two Schools is high.

This spirit of collaboration and community is another common point between the two Schools. The Saskatchewan School of Architecture's values also include a sense of place and meaningful engagement with Indigenous ways of knowing. These concepts are also highly valued by SENS, as seen by our focus on interdisciplinary collaborations, our memoranda of understanding with the Redberry Lake Biosphere Reserve and with Beardy's and Okemasis First Nation, and our efforts to introduce multiple ways of knowing into our curriculum.

I look forward to learning about further developments regarding the Saskatchewan School of Architecture. The creation of such a School will open new venues for faculty and student collaboration and will bring new perspectives regarding our built environment to the University of Saskatchewan, further enhancing our understanding of sustainability in the Saskatchewan context.

Sincerely,

Toddi A. Steelman, PhD
Executive Director and Professor

WILSONCENTRE

March 16, 2016

To Whom It May Concern:

The Wilson Centre for Entrepreneurship at the University of Saskatchewan wishes to express its support of the establishment of a School of Architecture at the University of Saskatchewan.

Establishing a School of Architecture at the University of Saskatchewan will be beneficial in many ways. I have had the opportunity to be a part of the working groups for the School of Architecture and interacted with the teams behind the establishment of this type of program and I am very impressed with their commitment, their effort and the progress that has been made.

Having a School of Architecture will be beneficial for a number of reasons:

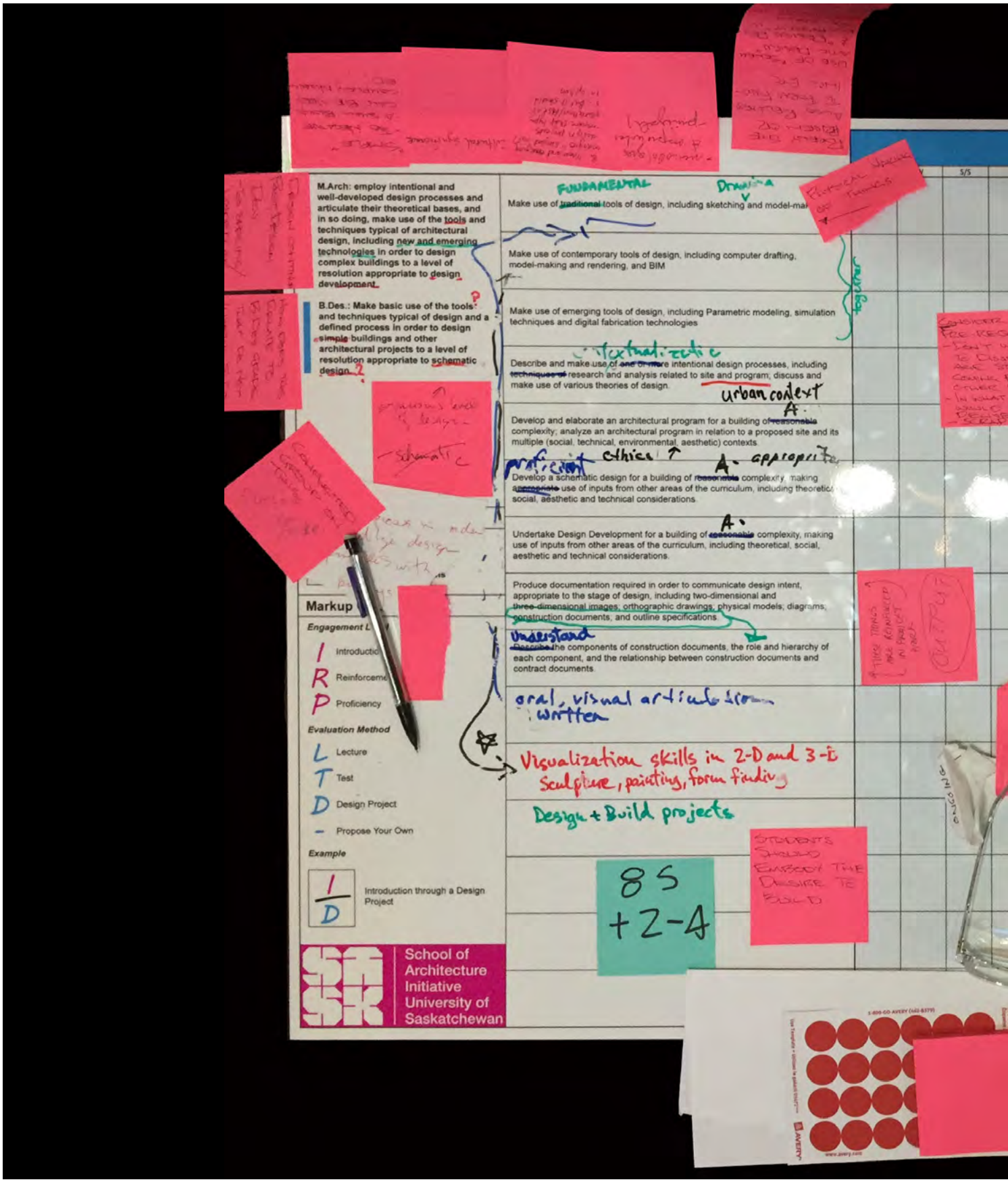
1) Enhance the creative learning aspect at the University of Saskatchewan.
    a. The learning of design and creative thinking has become a prominent method of understanding key concepts that lead to innovative initiatives. The introduction of a School that focuses on this type of thinking will enhance the already existing programs at the University.
2) Build on the Universities' established programming and enhance its interdisciplinary learning.
    a. A School of Architecture will help build on strong existing programs at the University, including programming in the College of Engineering, the Regional and Urban Planning Program and Art and Art History. In addition, the School of Architecture looks to create a unique Indigenous Architecture aspect to its programming, supporting a positive Aboriginal Environment and creating a unique offering for the University of Saskatchewan.
3) Contribute to a growing community and prosperous province to allow for more opportunities.
    a. Creating this type of a School will increase the number of students choosing to study at University of Saskatchewan, leading those who have come to have a vested interest in the Saskatchewan that will help the growth and economic success of the province.

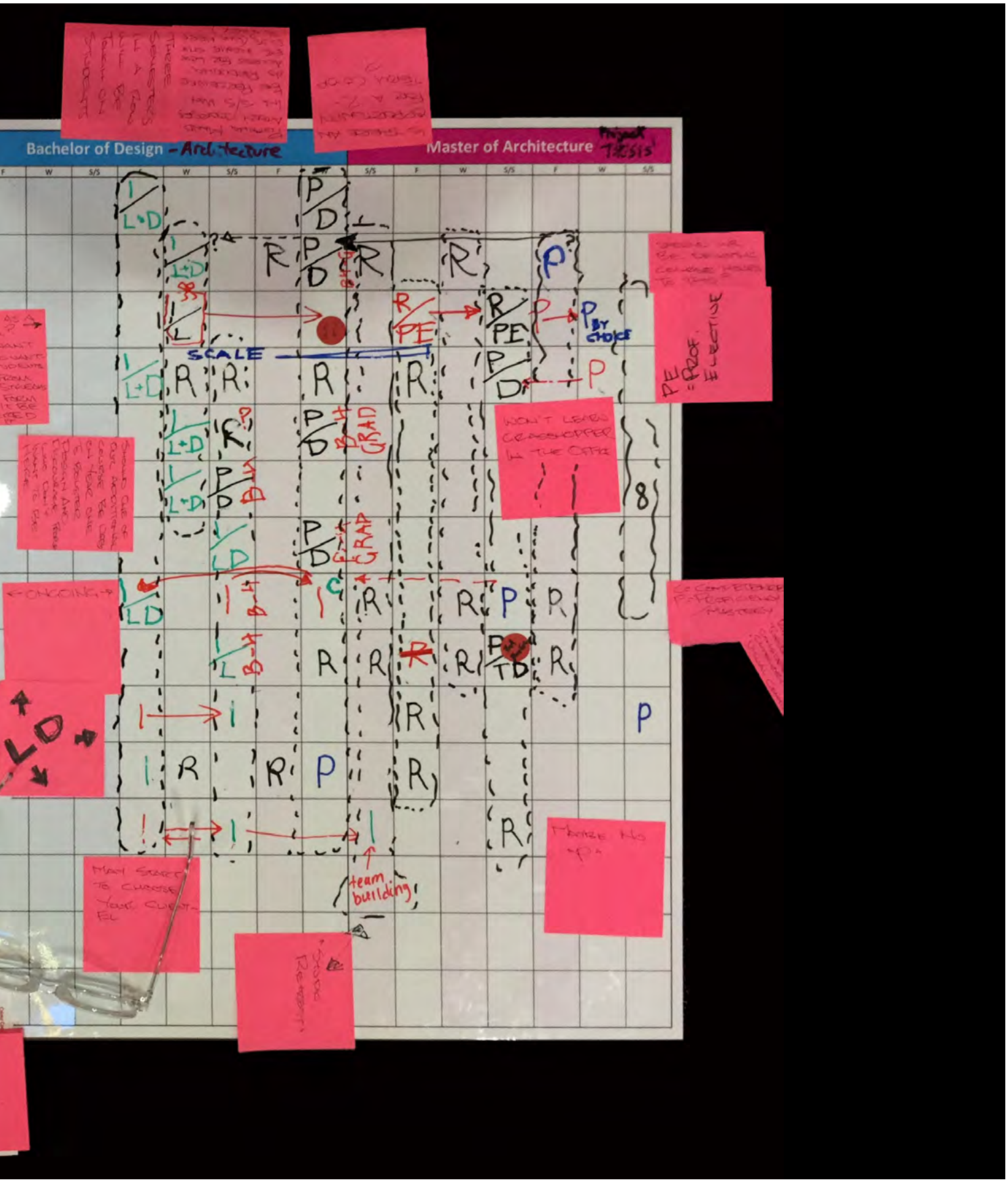
We at the Wilson Centre are extremely excited to see this type of program and facility established as it's closely aligned with our own design thinking culture. For us, this type of a School will allow our innovative ecosystem to continue to grow and prosper. We wholeheartedly support this initiative and look forward to what is in store for the future.

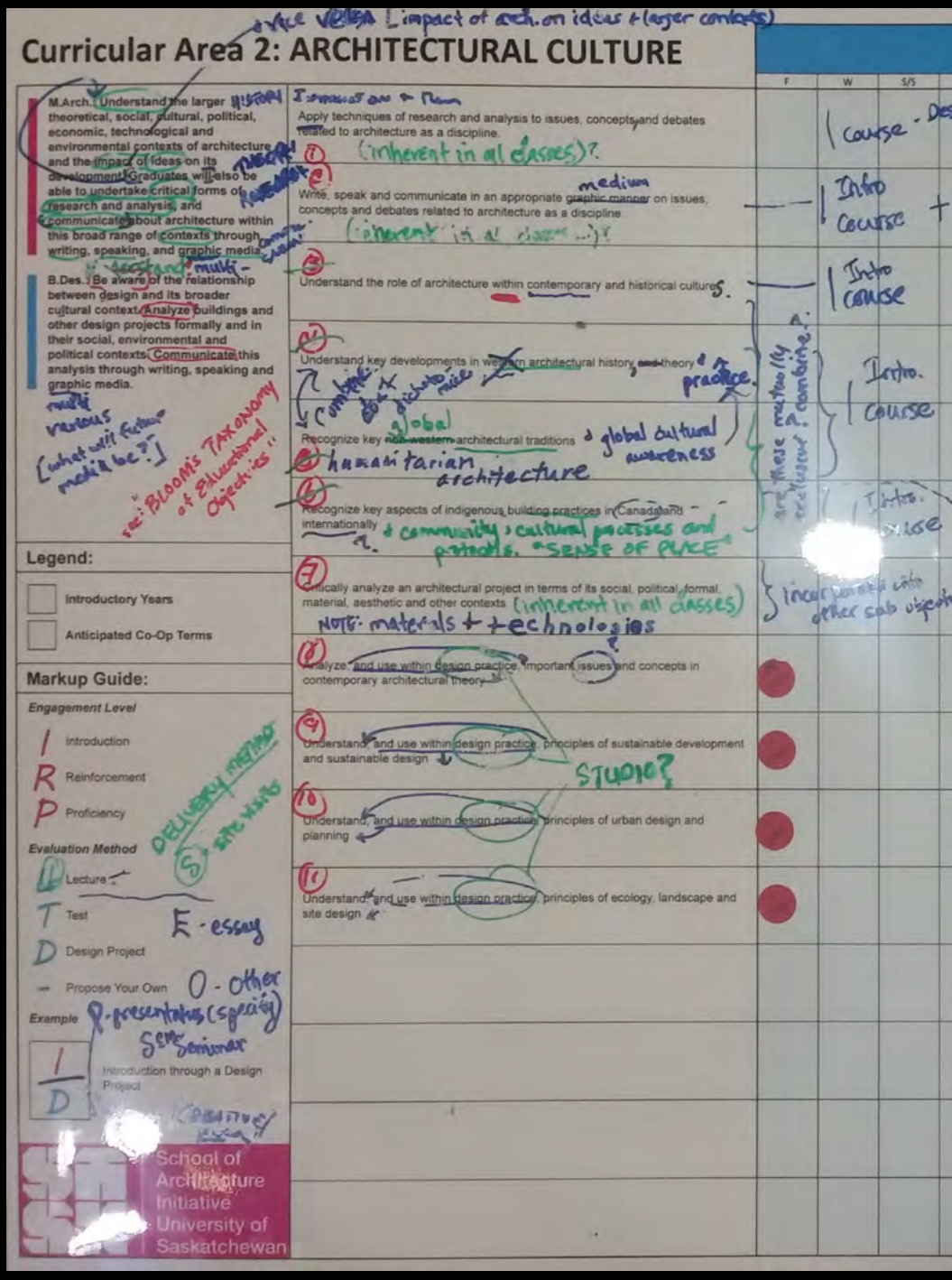
Sincerely,

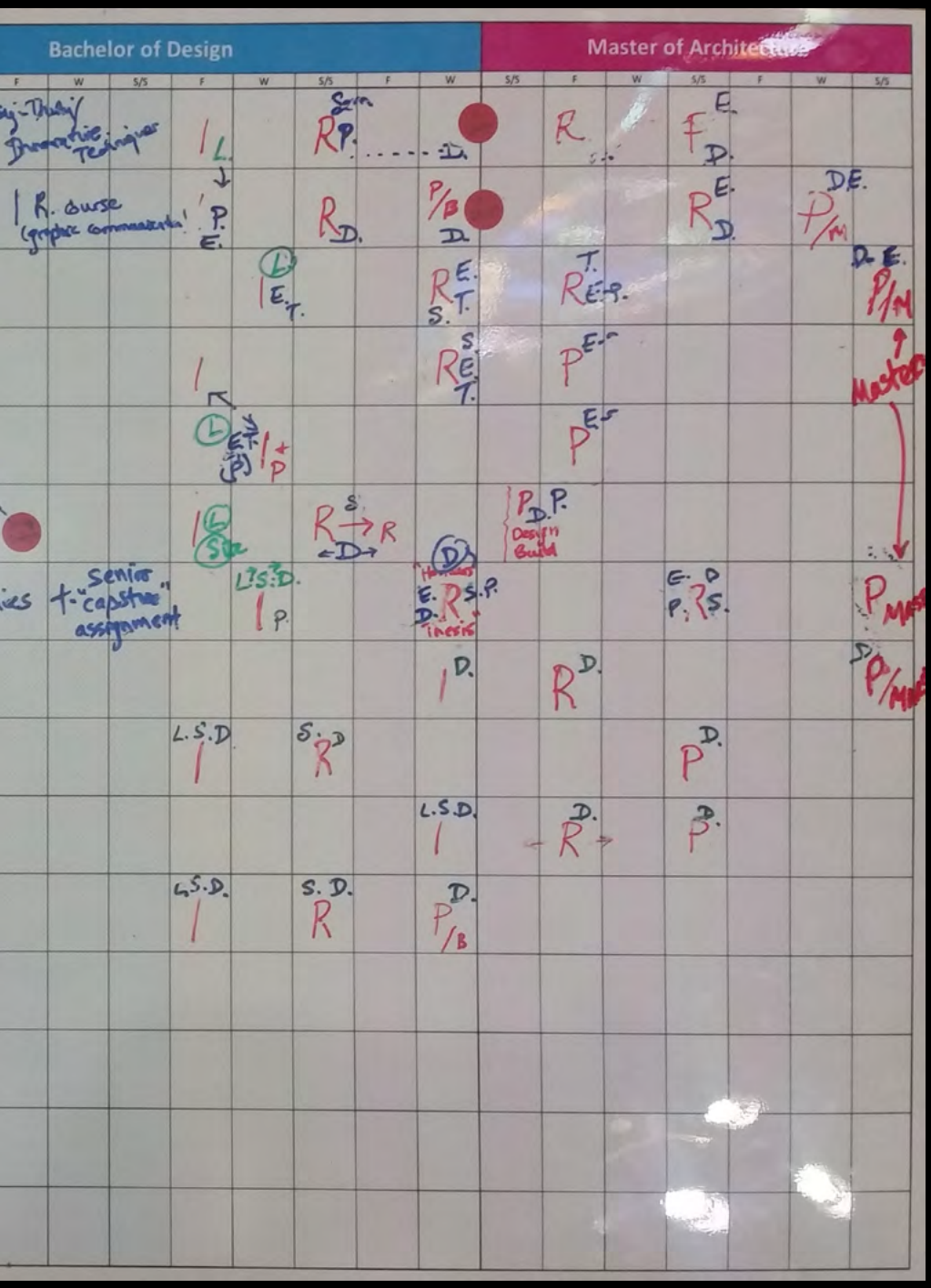
Stephanie Yong, Director
Wilson Centre for Entrepreneurship, University of Saskatchewan

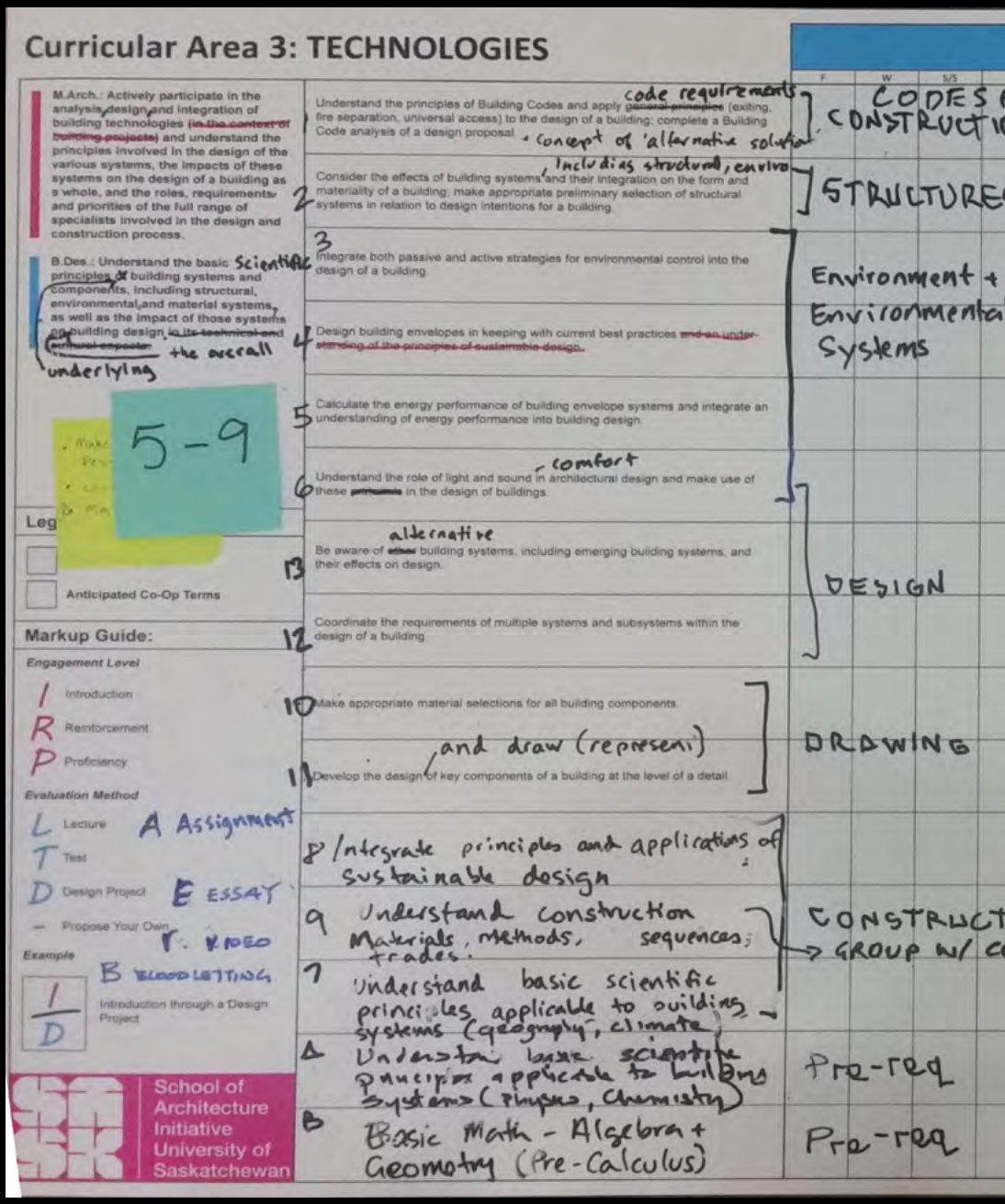
Appendix D:
Working Group Documents

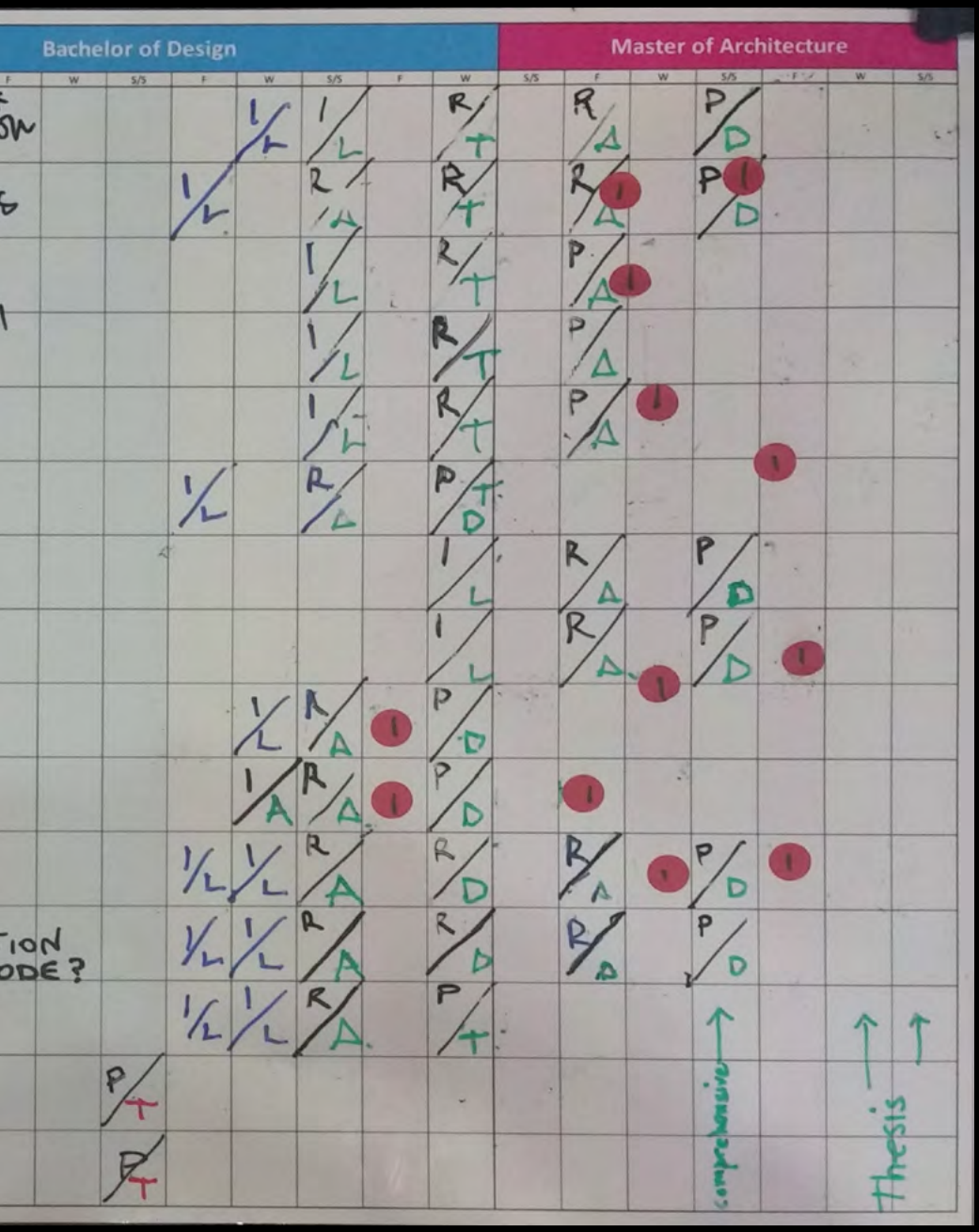

M.Arch: employ intentional and well-developed design processes and articulate their theoretical bases, and in so doing, make use of the tools and techniques typical of architectural design, including new and emerging technologies in order to design complex buildings to a level of resolution appropriate to design development.
B.Des.: Make basic use of the tools and techniques typical of design and a defined process in order to design simple buildings and other architectural projects to a level of resolution appropriate to schematic design.
FUNDAMENTAL
Make use of traditional tools of design, including sketching and model-mak
Make use of contemporary tools of design, including computer drafting, model-making and rendering, and BIM
Make use of emerging tools of design, including Parametric modeling, simulation techniques and digital fabrication technologies
Describe and make use of one or more intentional design processes, including techniques of research and analysis related to site and program; discuss and make use of various theories of design.
urban context
Develop and elaborate an architectural program for a building of reasonable complexity; analyze an architectural program in relation to a proposed site and its multiple (social, technical, environmental, aesthetic) contexts.
Develop a schematic design for a building of reasonable complexity, making appropriate use of inputs from other areas of the curriculum, including theoretical, social, aesthetic and technical considerations.
Undertake Design Development for a building of reasonable complexity, making use of inputs from other areas of the curriculum, including theoretical, social, aesthetic and technical considerations.
Produce documentation required in order to communicate design intent, appropriate to the stage of design, including two-dimensional and three-dimensional images; orthographic drawings; physical models; diagrams; construction documents; and outline specifications.
understand
Describe the components of construction documents, the role and hierarchy of each component, and the relationship between construction documents and contract documents.
oral, visual articulation
written
Visualization skills in 2-D and 3-D
sculpture, painting, form finding
Design + Build projects
Markup
Engagement L
I Introductio
R Reinforceme
P Proficiency
Evaluation Method
L Lecture
T Test
D Design Project
– Propose Your Own
Example
I/D Introduction through a Design Project
School of Architecture Initiative University of Saskatchewan
8 S
+ 2-4

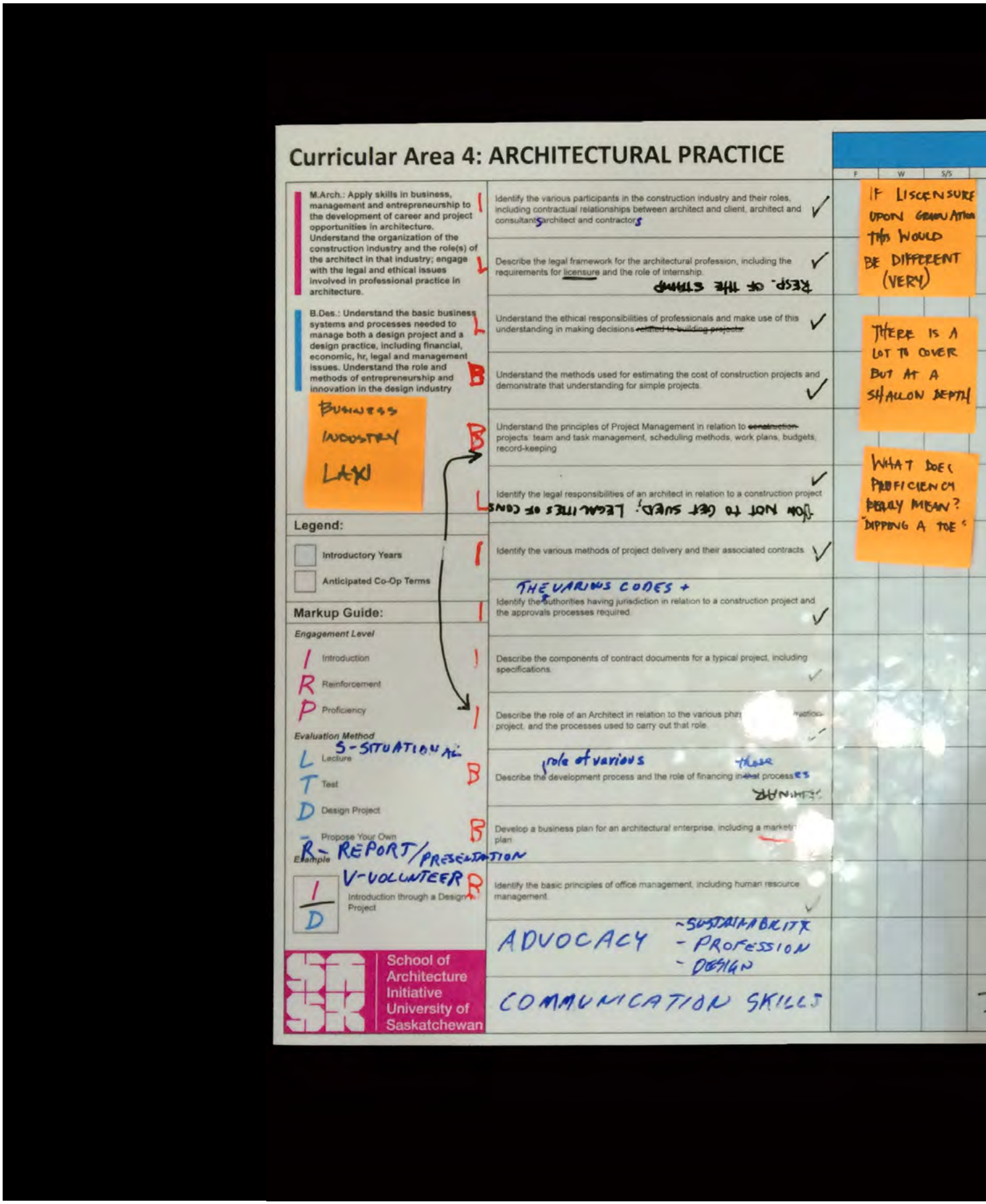

Bachelor of Design – Architecture
Master of Architecture
SCALE
PE = PROF. ELECTIVE
P BY CHOICE
team building

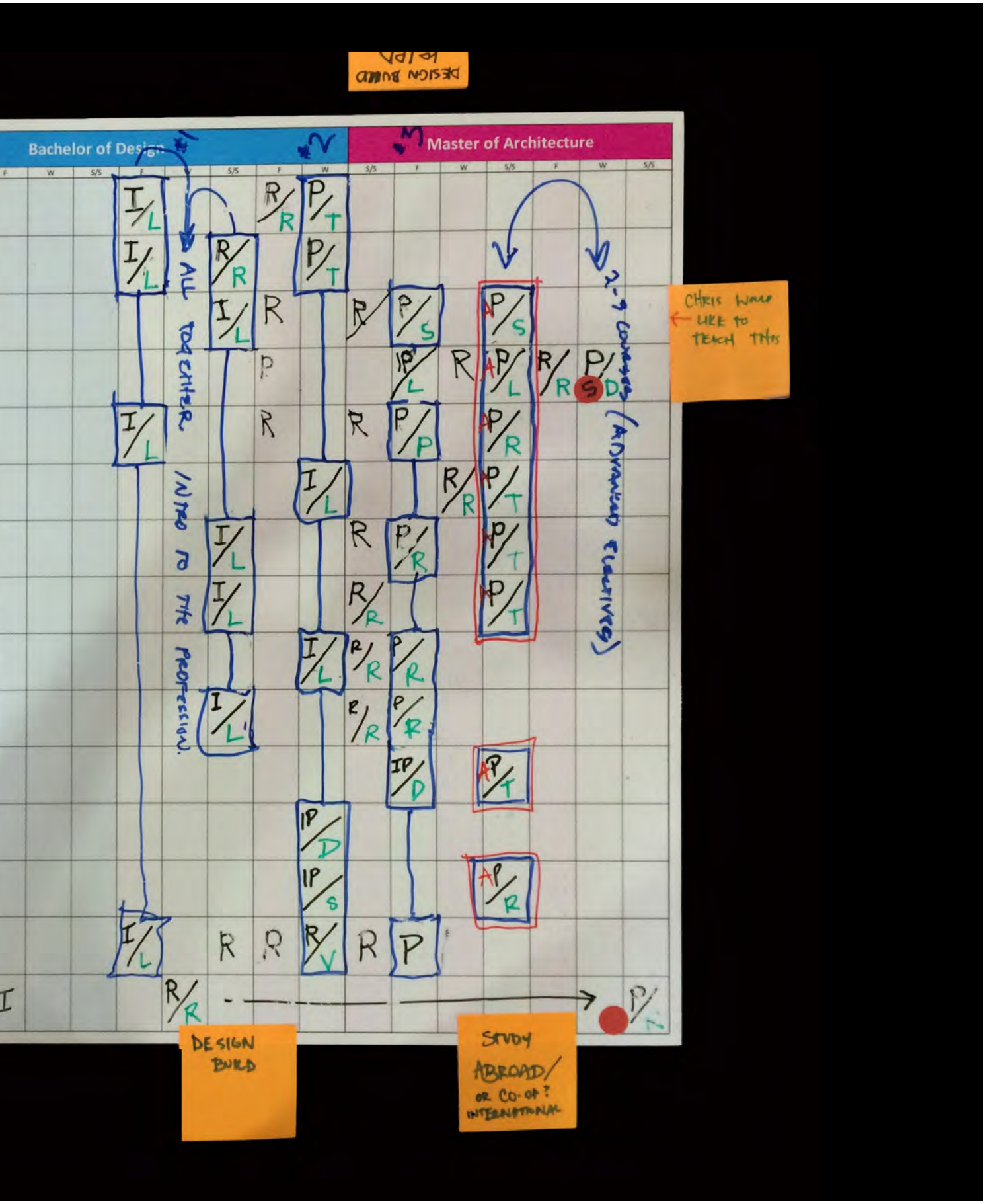

Curricular Area 2: ARCHITECTURAL CULTURE
M.Arch.: Understand the larger theoretical, social, cultural, political, economic, technological and environmental contexts of architecture and the impact of ideas on its development. Graduates will also be able to undertake critical forms of research and analysis, and communicate about architecture within this broad range of contexts through writing, speaking, and graphic media.
B.Des.: Be aware of the relationship between design and its broader cultural context. Analyze buildings and other design projects formally and in their social, environmental and political contexts. Communicate this analysis through writing, speaking and graphic media.
Legend:
Introductory Years
Anticipated Co-Op Terms
Markup Guide:
Engagement Level
I Introduction
R Reinforcement
P Proficiency
Evaluation Method
L Lecture
T Test
D Design Project
– Propose Your Own
Example
I/D Introduction through a Design Project
Apply techniques of research and analysis to issues, concepts and debates related to architecture as a discipline.
Write, speak and communicate in an appropriate graphic manner on issues, concepts and debates related to architecture as a discipline.
Understand the role of architecture within contemporary and historical cultures.
Understand key developments in western architectural history and theory.
Recognize key non-western architectural traditions.
Recognize key aspects of indigenous building practices in Canada and internationally.
Critically analyze an architectural project in terms of its social, political, formal, material, aesthetic and other contexts.
Analyze and use within design practice, important issues and concepts in contemporary architectural theory.
Understand, and use within design practice, principles of sustainable development and sustainable design.
Understand, and use within design practice, principles of urban design and planning.
Understand, and use within design practice, principles of ecology, landscape and site design.
F
W
S/S
School of Architecture Initiative University of Saskatchewan

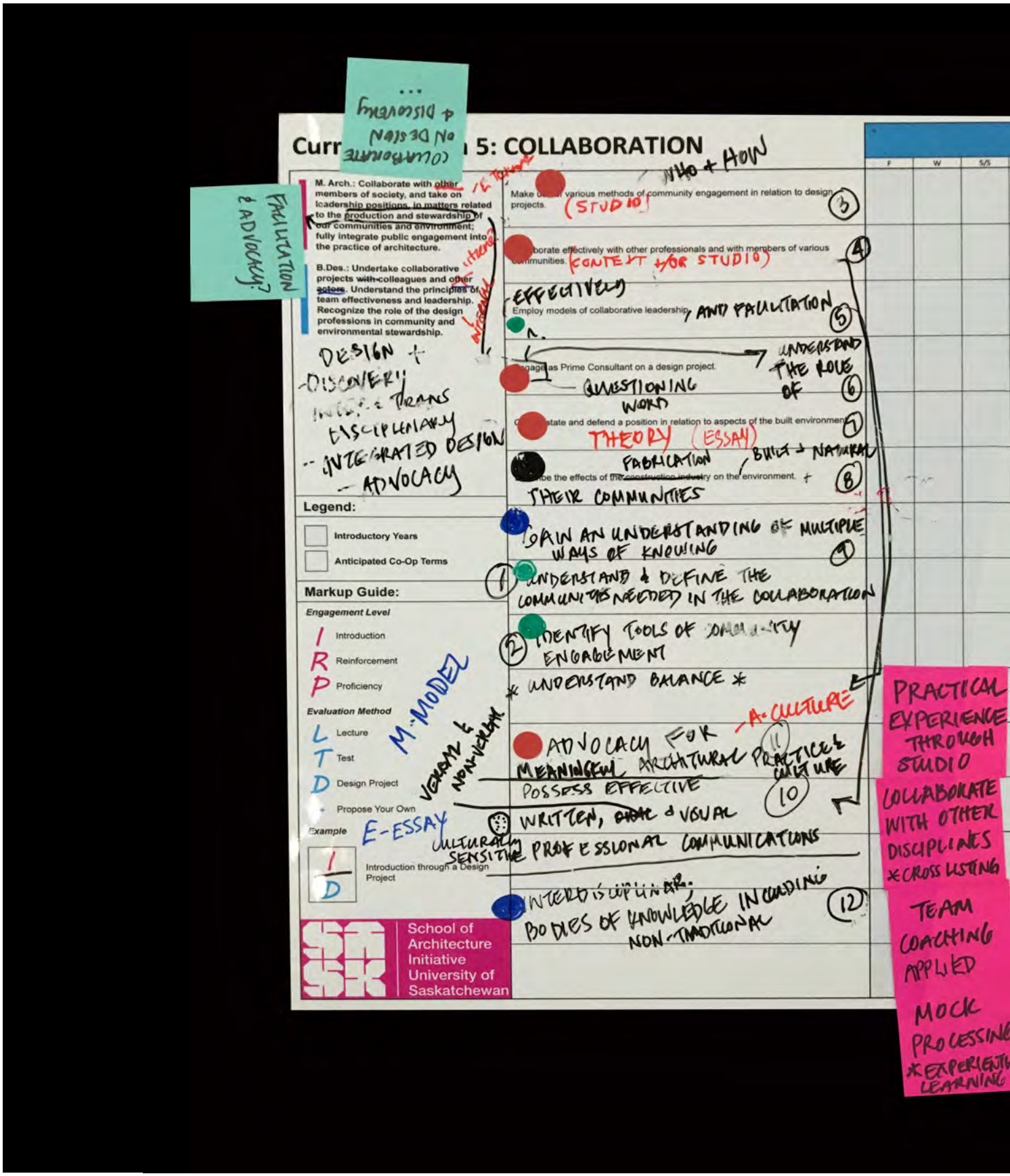

Bachelor of Design
Master of Architecture
F
W
S/S
F
W
S/S
F
W
S/S
F
W
S/S
Senior "capstone" assignment

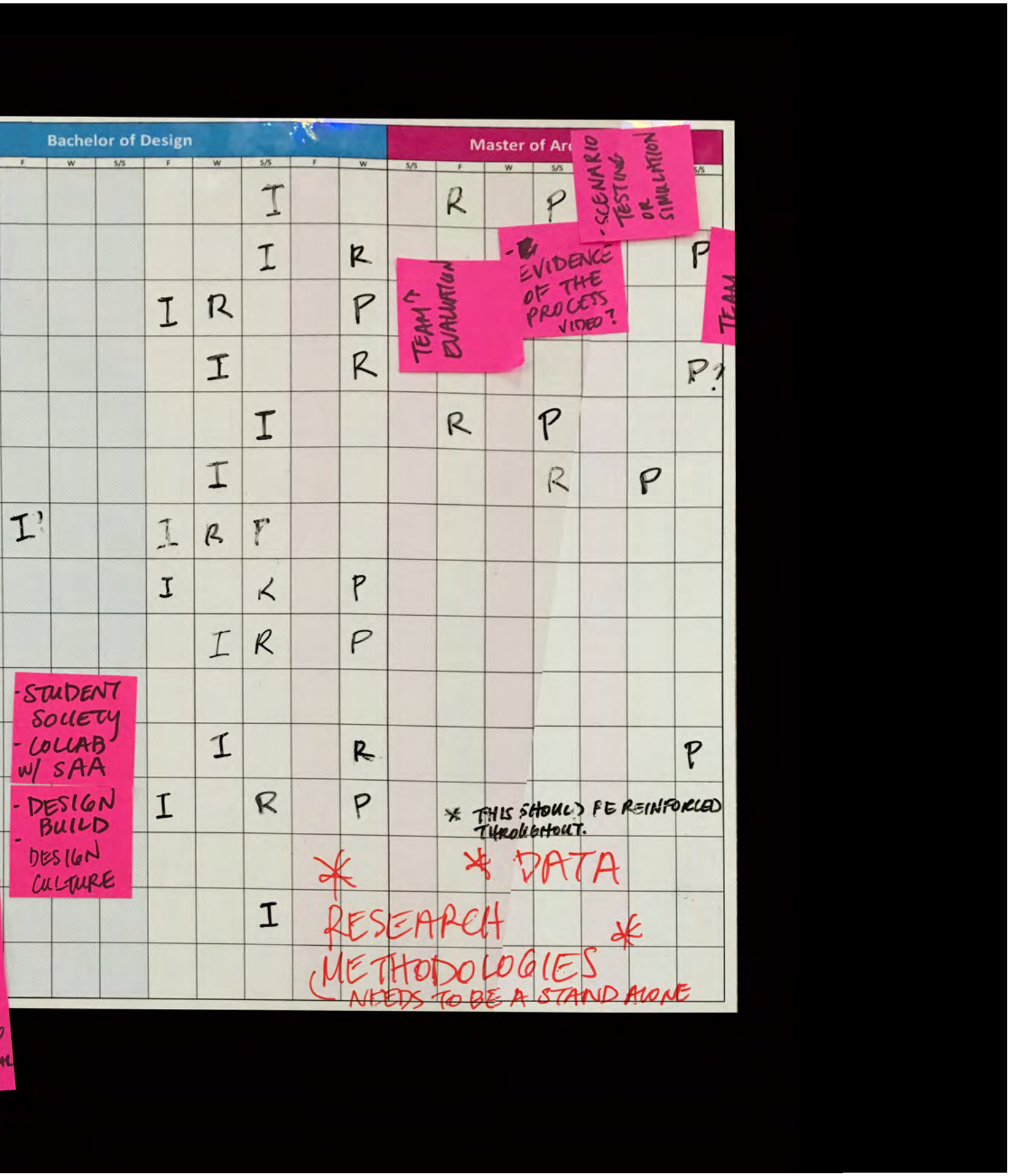

Curricular Area 3: TECHNOLOGIES
M.Arch.: Actively participate in the analysis, design, and integration of building technologies (in the context of building projects) and understand the principles involved in the design of the various systems, the impacts of these systems on the design of a building as a whole, and the roles, requirements, and priorities of the full range of specialists involved in the design and construction process.
B.Des.: Understand the basic principles of building systems and components, including structural, environmental, and material systems, as well as the impact of those systems on building design, in its technical and cultural aspects.
Scientific
underlying
the overall
5-9
Leg
Anticipated Co-Op Terms
Markup Guide:
Engagement Level
I Introduction
R Reinforcement
P Proficiency
Evaluation Method
L Lecture
T Test
D Design Project
– Propose Your Own
A Assignment
E ESSAY
V. VIDEO
Example
I/D
B BLOODLETTING
Introduction through a Design Project
School of Architecture Initiative University of Saskatchewan
1 Understand the principles of Building Codes and apply general principles (exiting, fire separation, universal access) to the design of a building; complete a Building Code analysis of a design proposal.
code requirements
+ concept of 'alternative solution'
CODES / CONSTRUCTION
2 Consider the effects of building systems and their integration on the form and materiality of a building; make appropriate preliminary selection of structural systems in relation to design intentions for a building.
, including structural, enviro
STRUCTURES
3 Integrate both passive and active strategies for environmental control into the design of a building.
4 Design building envelopes in keeping with current best practices and an understanding of the principles of sustainable design.
Environment + Environmental Systems
5 Calculate the energy performance of building envelope systems and integrate an understanding of energy performance into building design.
6 Understand the role of light and sound in architectural design and make use of these elements in the design of buildings.
- comfort
13 Be aware of other building systems, including emerging building systems, and their effects on design.
alternative
12 Coordinate the requirements of multiple systems and subsystems within the design of a building.
DESIGN
10 Make appropriate material selections for all building components.
11 Develop the design of key components of a building at the level of a detail.
, and draw (represent)
DRAWING
8 Integrate principles and applications of sustainable design
9 Understand construction Materials, methods, sequences; trades.
7 Understand basic scientific principles applicable to building systems (geography, climate)
A Understand basic scientific principles applicable to building systems (physics, chemistry)
B Basic Math - Algebra + Geometry (Pre-Calculus)
CONSTRUCT
→ GROUP W/ C
Pre-req
Pre-req

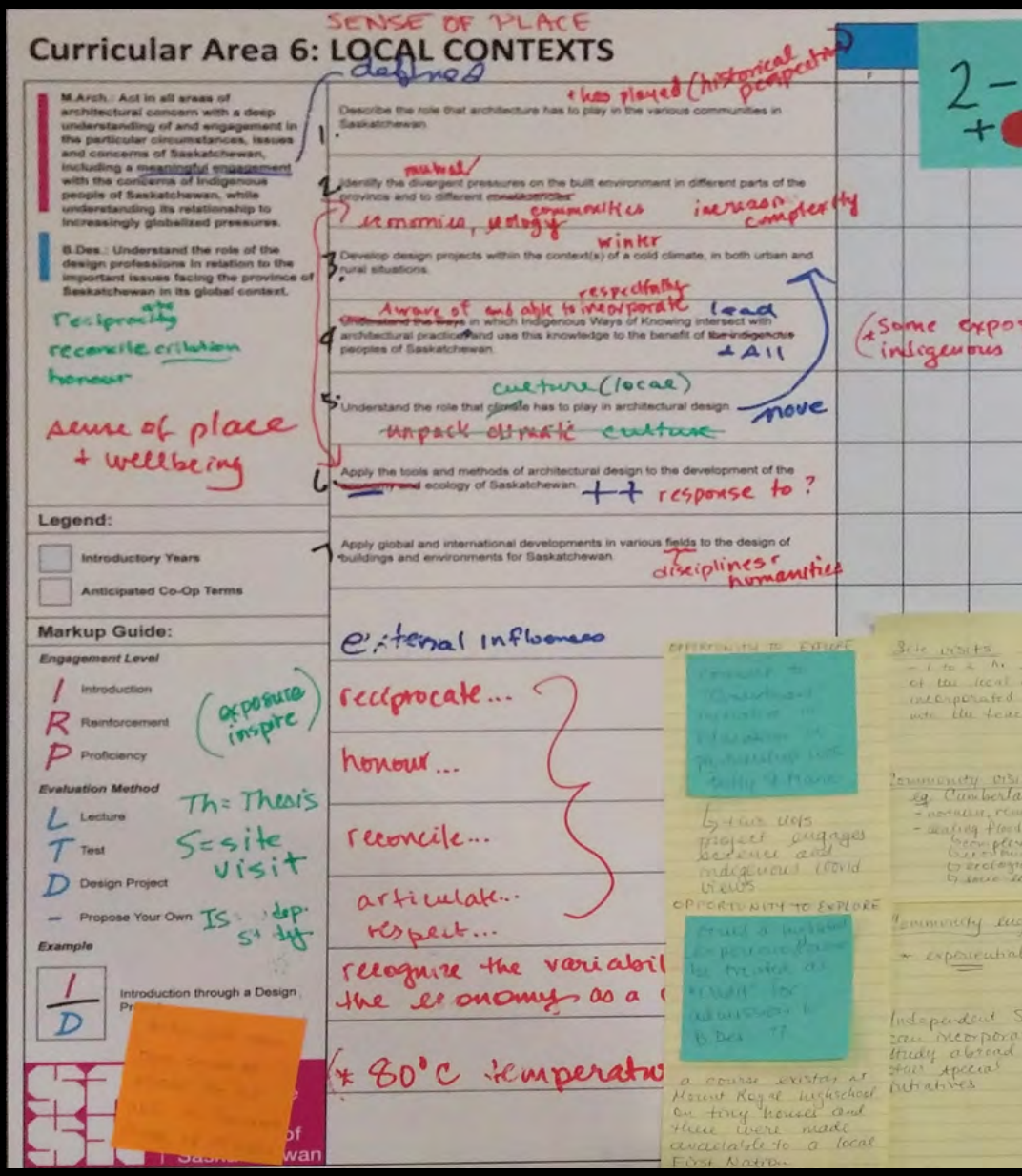

Bachelor of Design
Master of Architecture
comprehensive
thesis

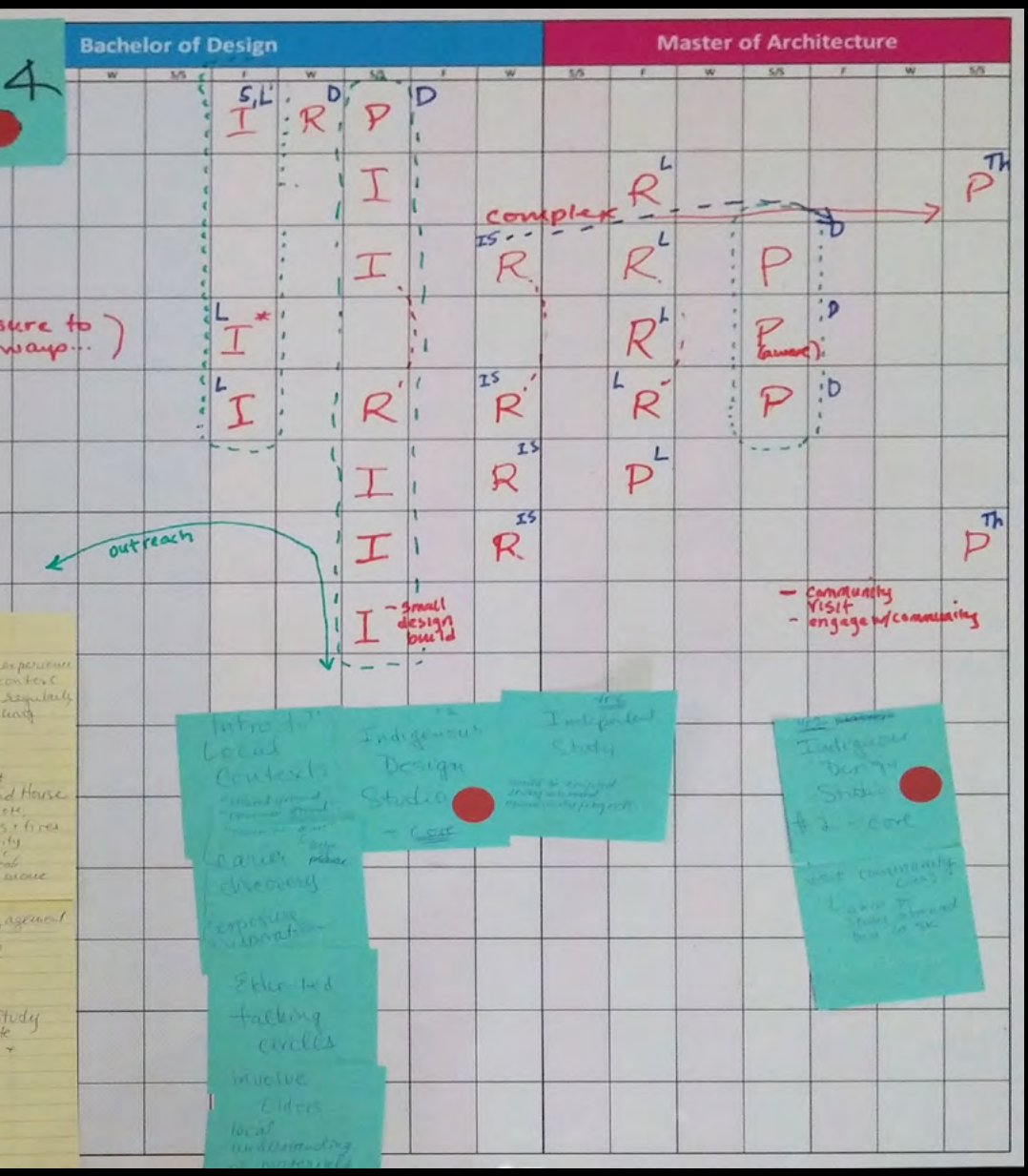

Curricular Area 4: ARCHITECTURAL PRACTICE
F
W
S/S
M.Arch.: Apply skills in business, management and entrepreneurship to the development of career and project opportunities in architecture. Understand the organization of the construction industry and the role(s) of the architect in that industry; engage with the legal and ethical issues involved in professional practice in architecture.
B.Des.: Understand the basic business systems and processes needed to manage both a design project and a design practice, including financial, economic, hr, legal and management issues. Understand the role and methods of entrepreneurship and innovation in the design industry
BUSINESS
INDUSTRY
LAW
Identify the various participants in the construction industry and their roles, including contractual relationships between architect and client, architect and consultants, architect and contractors
Describe the legal framework for the architectural profession, including the requirements for licensure and the role of internship.
Understand the ethical responsibilities of professionals and make use of this understanding in making decisions
Understand the methods used for estimating the cost of construction projects and demonstrate that understanding for simple projects.
Understand the principles of Project Management in relation to construction projects: team and task management, scheduling methods, work plans, budgets, record-keeping
Identify the legal responsibilities of an architect in relation to a construction project
Identify the various methods of project delivery and their associated contracts.
THE VARIOUS CODES +
Identify the authorities having jurisdiction in relation to a construction project and the approvals processes required.
Describe the components of contract documents for a typical project, including specifications.
Describe the role of an Architect in relation to the various phases of construction project, and the processes used to carry out that role.
Describe the development process and the role of financing in real estate processes
Develop a business plan for an architectural enterprise, including a marketing plan
Identify the basic principles of office management, including human resource management.
ADVOCACY
- SUSTAINABILITY
- PROFESSION
- DESIGN
COMMUNICATION SKILLS
IF LICENSURE UPON GRADUATION THIS WOULD BE DIFFERENT (VERY)
THERE IS A LOT TO COVER BUT AT A SHALLOW DEPTH
WHAT DOES PROFICIENCY REALLY MEAN? DIPPING A TOE?
Legend:
Introductory Years
Anticipated Co-Op Terms
Markup Guide:
Engagement Level
I Introduction
R Reinforcement
P Proficiency
Evaluation Method
L Lecture
S - SITUATIONAL
T Test
D Design Project
B
R - REPORT/PRESENTATION
V - VOLUNTEER
Example
I/D Introduction through a Design Project
School of Architecture Initiative University of Saskatchewan

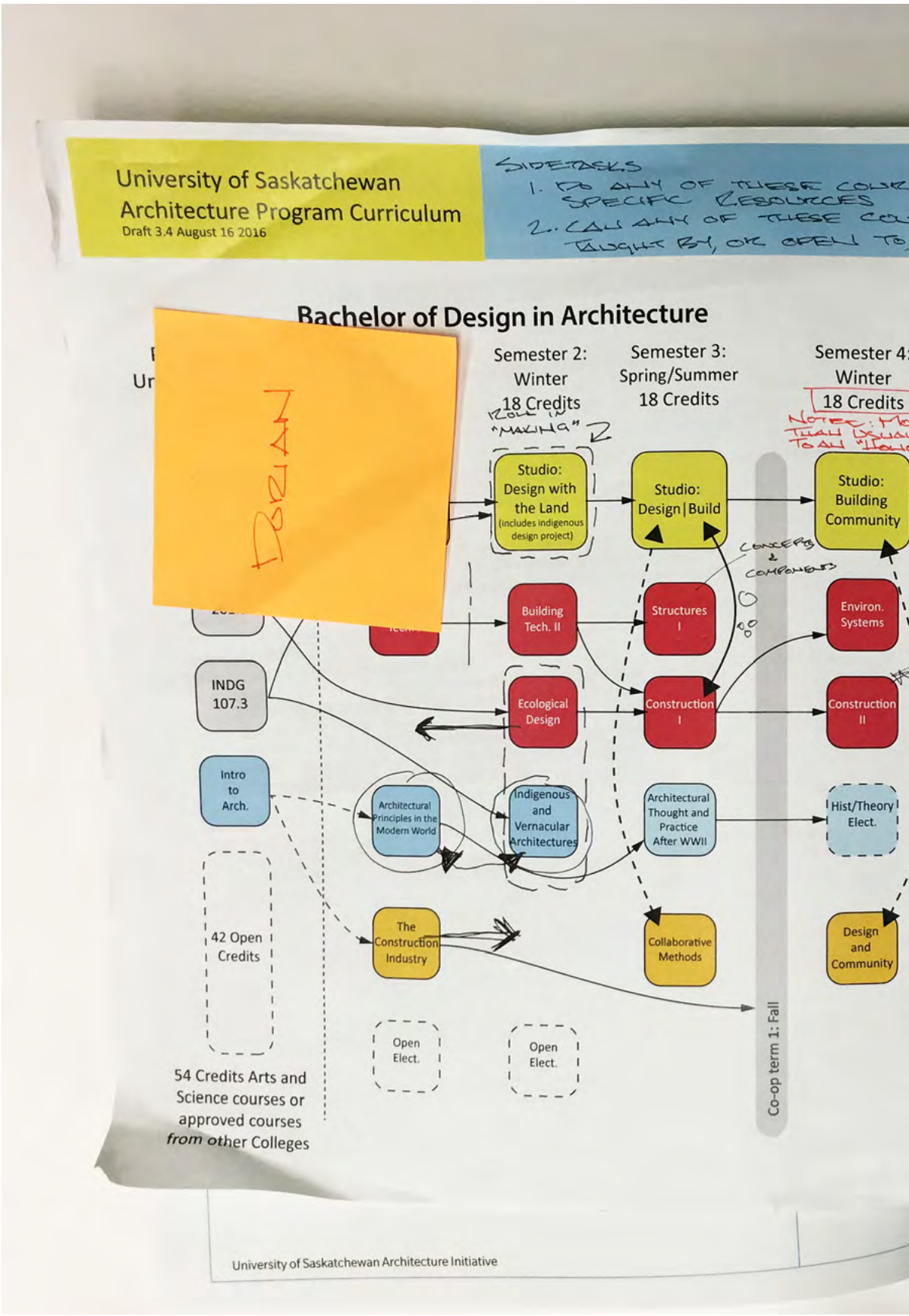

Bachelor of Design
Master of Architecture
ALL TOGETHER INTO THE PROFESSION.
2-3 COURSES (ADVANCED ELECTIVES)
CHRIS WOULD LIKE TO TEACH THIS
DESIGN BUILD
STUDY ABROAD/ OR CO-OP? INTERNATIONAL


5: COLLABORATION
M. Arch.: Collaborate with other 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.
B.Des.: Undertake collaborative projects with colleagues and other actors. Understand the principles of team effectiveness and leadership. Recognize the role of the design professions in community and environmental stewardship.
Make use of various methods of community engagement in relation to design projects.
(STUDIO)
Collaborate effectively with other professionals and with members of various communities.
(CONTENT FOR STUDIO)
Employ models of collaborative leadership
Engage as Prime Consultant on a design project.
Articulate and defend a position in relation to aspects of the built environment.
THEORY (ESSAY)
Describe the effects of the construction industry on the environment.
Legend:
Introductory Years
Anticipated Co-Op Terms
Markup Guide:
Engagement Level
I Introduction
R Reinforcement
P Proficiency
Evaluation Method
L Lecture
T Test
D Design Project
* Propose Your Own
Example
I/D Introduction through a Design Project
School of Architecture Initiative University of Saskatchewan
DESIGN + DISCOVERY
INTEGRATED DESIGN
ADVOCACY
EFFECTIVELY
AND FACILITATION
UNDERSTAND THE ROLE OF
QUESTIONING WORLD
FABRICATION
BUILT + NATURAL
THEIR COMMUNITIES
GAIN AN UNDERSTANDING OF MULTIPLE WAYS OF KNOWING
UNDERSTAND & DEFINE THE COMMUNITIES NEEDED IN THE COLLABORATION
IDENTIFY TOOLS OF ENGAGEMENT
* UNDERSTAND BALANCE *
M-MODEL
VERBAL & NON-VERBAL
A-CULTURE
ADVOCACY FOR MEANINGFUL ARCHITECTURAL
POSSESS EFFECTIVE
WRITTEN, & VISUAL
CULTURALLY SENSITIVE PROFESSIONAL COMMUNICATIONS
E-ESSAY
BODIES OF KNOWLEDGE INCLUDING NON-TRADITIONAL
FACILITATION & ADVOCACY?
PRACTICAL EXPERIENCE THROUGH STUDIO
COLLABORATE WITH OTHER DISCIPLINES *CROSS LISTING
TEAM COACHING APPLIED
MOCK PROCESSING
*EXPERIENTIAL LEARNING


Bachelor of Design
Master of Ar
F W S/S F W S/S F W
S/S F W S/S S/S
- SCENARIO TESTING OR SIMULATION
- EVIDENCE OF THE PROCESS VIDEO?
TEAM EVALUATION
TEAM
- STUDENT SOCIETY
- COLLAB W/ SAA
- DESIGN BUILD
- DESIGN CULTURE
* THIS SHOULD BE REINFORCED THROUGHOUT.
* DATA
RESEARCH METHODOLOGIES
NEEDS TO BE A STAND ALONE


SENSE OF PLACE
Curricular Area 6: LOCAL CONTEXTS
M.Arch.: Act in all areas of architectural concern 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.
B.Des.: Understand the role of the design professions in relation to the important issues facing the province of Saskatchewan in its global context.
Describe the role that architecture has to play in the various communities in Saskatchewan
Identify the divergent pressures on the built environment in different parts of the province and to different
Develop design projects within the context(s) of a cold climate, in both urban and rural situations.
Understand the role that climate has to play in architectural design
Apply the tools and methods of architectural design to the development of the ecology of Saskatchewan
Apply global and international developments in various fields to the design of buildings and environments for Saskatchewan
Legend:
Introductory Years
Anticipated Co-Op Terms
Markup Guide:
Engagement Level
I Introduction
R Reinforcement
P Proficiency
Evaluation Method
L Lecture
T Test
D Design Project
– Propose Your Own
Example
I/D
Introduction through a Design
reciprocate...
honour...
reconcile...
articulate...
respect...
external influences
OPPORTUNITY TO EXPLORE
OPPORTUNITY TO EXPLORE


Bachelor of Design
Master of Architecture
complex
outreach
- small design build
- community visit - engage w/ community
Indigenous Design Studio
Independent Study
Intro to Local Contexts
Career discovery
Elder led talking circles
involve Elders


University of Saskatchewan
Architecture Program Curriculum
Draft 3.4 August 16 2016
Bachelor of Design in Architecture
Semester 2:
Winter
18 Credits
Semester 3:
Spring/Summer
18 Credits
Studio:
Design with
the Land
(includes indigenous
design project)
Studio:
Design|Build
Studio:
Building
Community
Building
Tech. II
Structures
I
Environ.
Systems
INDG
107.3
Ecological
Design
Construction
I
Construction
II
Intro
to
Arch.
Architectural
Principles in the
Modern World
Indigenous
and
Vernacular
Architectures
Architectural
Thought and
Practice
After WWII
Hist/Theory
Elect.
42 Open
Credits
The
Construction
Industry
Collaborative
Methods
Design
and
Community
Open
Elect.
Open
Elect.
54 Credits Arts and
Science courses or
approved courses
from other Colleges
Co-op term 1: Fall
University of Saskatchewan Architecture Initiative

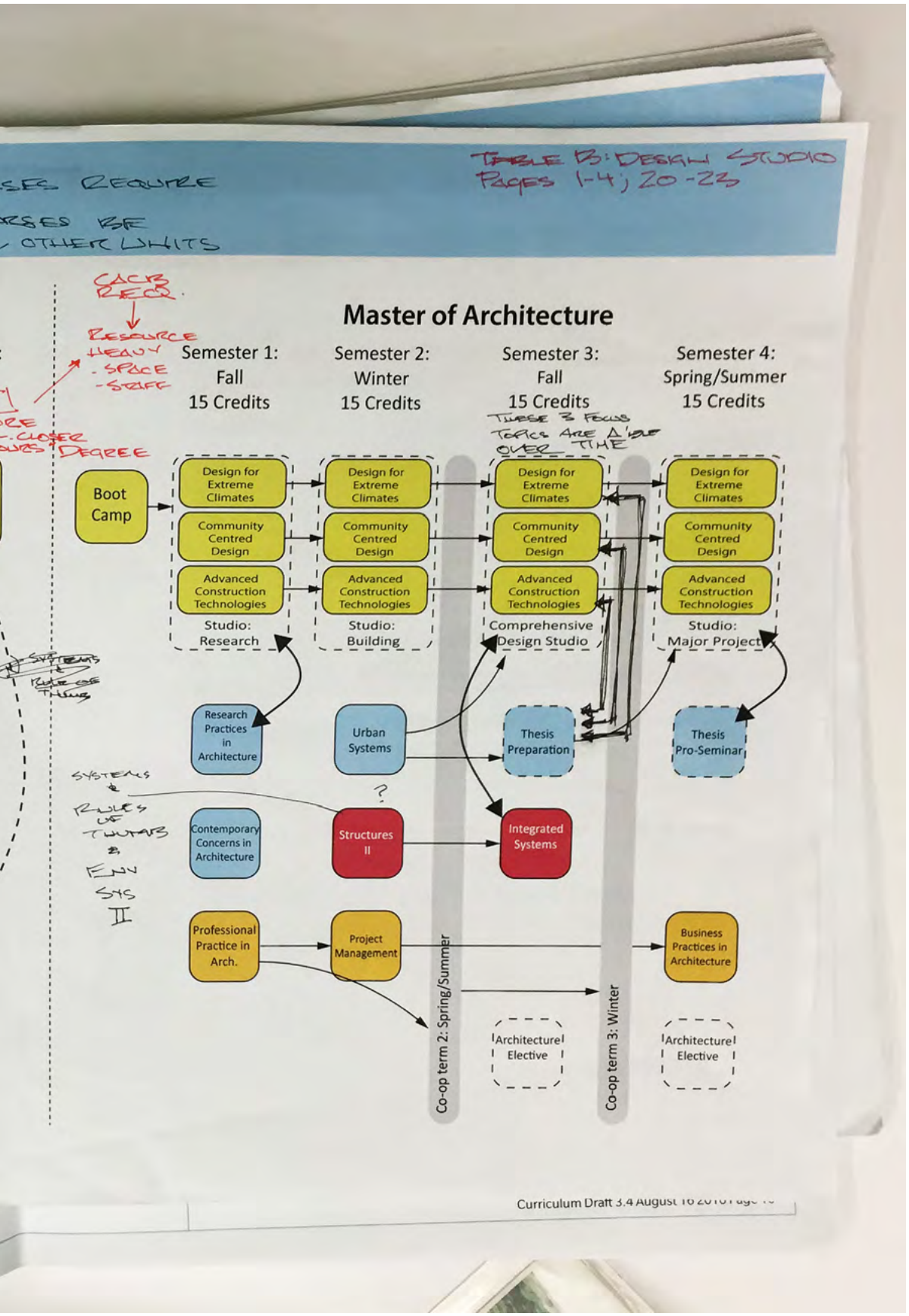


TABLE B: DESIGN STUDIO
PAGES 1-4; 20-23
Master of Architecture
Semester 1: Fall 15 Credits
Semester 2: Winter 15 Credits
Semester 3: Fall 15 Credits
Semester 4: Spring/Summer 15 Credits
THESE 3 FOCUS TOPICS ARE A BIT OVER TIME
Boot Camp
Design for Extreme Climates
Community Centred Design
Advanced Construction Technologies
Studio: Research
Studio: Building
Comprehensive Design Studio
Studio: Major Project
Research Practices in Architecture
Urban Systems
Thesis Preparation
Thesis Pro-Seminar
Contemporary Concerns in Architecture
Structures II
Integrated Systems
Professional Practice in Arch.
Project Management
Business Practices in Architecture
Architecture Elective
Architecture Elective
Co-op term 2: Spring/Summer
Co-op term 3: Winter
Curriculum Draft 3.4 August

Undergraduate - Studio

Feedback & Notes

STUDIO 2: DESIGN WITH THE LAND

Term and Level of Offering: Bachelor of Design in Architecture, Semester 2, Winter

Format: Studio, 12 hours per week – assuming 156 hours, 39 studios, 13 weeks

Credits: 6

Prerequisite: INDG107.3, STUDIO 1 – "not to solely Rely on" INDG 107.3

Course Description:

This course requires students to design architectural projects, including small buildings, within a physical, ecological and cultural context. Students will begin to develop an intentional design process as well as their skills with design methods and technologies. The studio will also introduce basic ideas of sustainable design as well as formal, material and constructional considerations.

- Reflect this in a more

Learning Objectives:

By the end of the course students should be able to:

- Make use of the tools and methods of design developed in earlier studios at a higher level of proficiency ✓
- ✓ (Make use of Building Information Management software to design and document a building)?
- Describe and make use of an intentional design process
- Develop a program for a building of low complexity
- Making use of inputs from other areas of the curriculum, develop, document and present to a critical audience a schematic design for a building of a low level of programmatic complexity
- Consider the influence of ecology, indigenous building practices, community needs, and the environment on the design of buildings
- Integrate basic ideas of sustainable design with an understanding of material properties and construction methods into the design of buildings

opportunity -

"attitude tow

- emphasis on of bld

- explicit description

Evaluation:

1. Project one: site structure — 4 weeks — 25%
   Using techniques developed in the previous studio, students design a structure that fulfils a functional need and fits into its site.
2. Project two: the detail — 2 weeks — 15%
   Students design a detail of their site structure using drawings and model.
3. Project three: drawing exercise — 2 weeks — 15%
   Students produce a speculative drawing building on architectural issues studied in other courses.
4. Project three: small building — 5 weeks — 35%
   Using BIM software as well as tools previously developed, students design a building of the programmatic complexity of a small house, incorporating ideas about sustainable design.
5. Portfolio — N/A — 10%

- team b
- more HAN
= out-door
- extreme
- material (materi
- team c

University of Saskatchewan Architecture Initiative

TABLE D JAKE CHAKASIM
AUGUST 17TH.

THERE IS A
* PROPOSAL
(to BE REPLACED
OR SIGNIFICANTLY
MODIFIED
- direct way.

Required Texts: TBD

Class Schedule:

Week	Topic	Readings/Discussion	Assignment
1	Course Introduction Project 1 Introduction	Building and Site	Site Structure
2		Precedents	Site Structure
3		TBC	Site Structure
4	Project 1 Reviews	TBC	Site Structure
5	Project 2 Introduction BIM Seminar	TBC	The Detail
6	Project 2 Reviews	TBC	The Detail
7	Project 3 Introduction	Perspective	Drawing Exercise
8	Project 3 Reviews	TBC	Drawing Exercise
9	Final Project Introduction	Developing program	Small Building
10	Computer Graphics Seminar	Architectural Ideas	Small Building
11		TBC	Small Building
12		Presenting a project	Small Building
13			Small Building
Exam Period	Final Reviews		

(* co-hort of Elders)
* Recognized Elder in
[illegible].

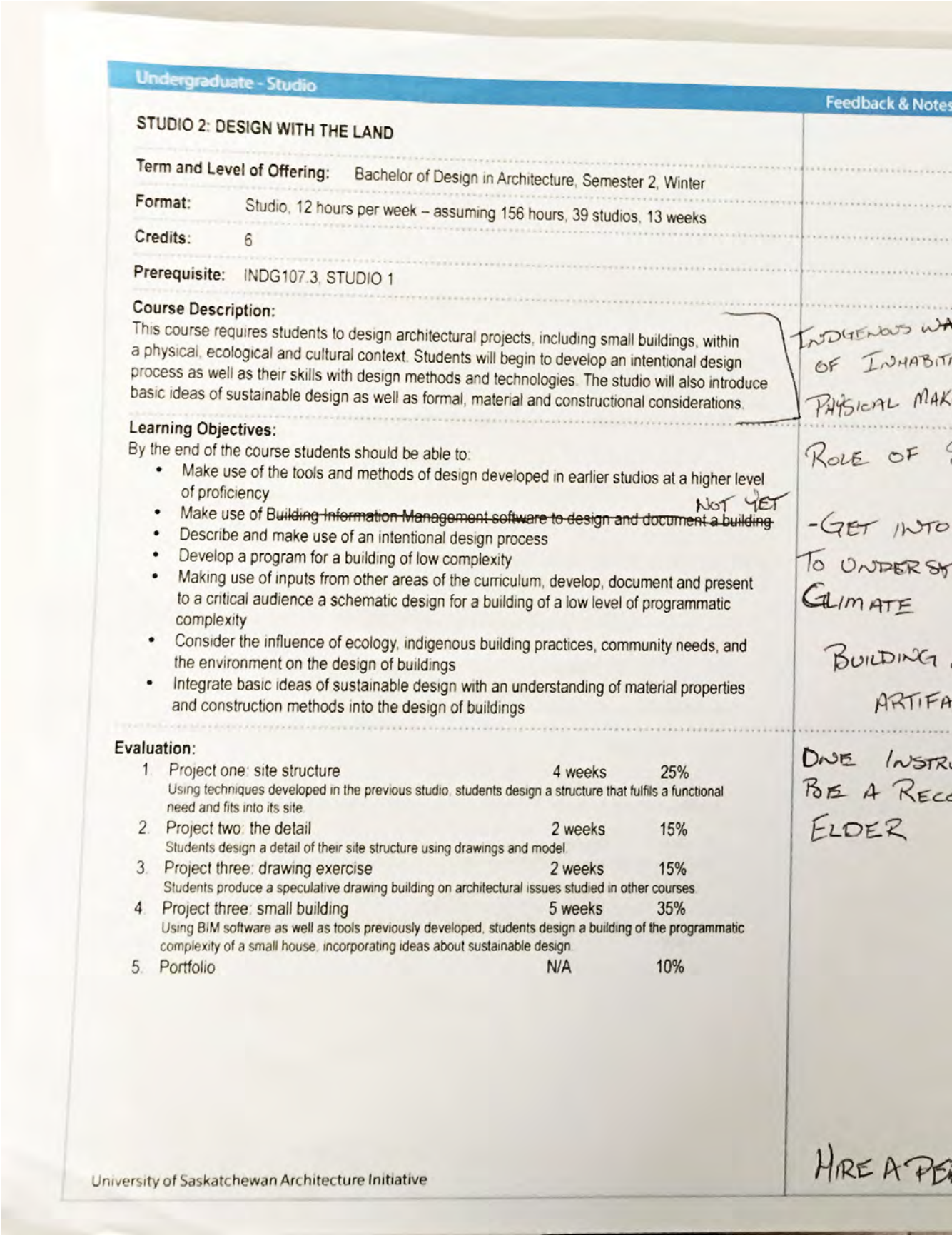
* Regional REPRESENTATION

- more of an exploration
of form - paradigm
approach.

-

...RDS OWNERSHIP
... translations
... patterns
about [illegible]
...ON
... approached.
...ds on LEARNING
COMPONENT
climate EXPIRIENCE
study
... culture)
... the physicality
learning.

Curriculum Draft 3.4 August 16 2016 Page 2



Undergraduate - Studio

Feedback & Notes

STUDIO 2: DESIGN WITH THE LAND

Term and Level of Offering: Bachelor of Design in Architecture, Semester 2, Winter

Format: Studio, 12 hours per week – assuming 156 hours, 39 studios, 13 weeks

Credits: 6

Prerequisite: INDG107.3, STUDIO 1

Course Description:
This course requires students to design architectural projects, including small buildings, within a physical, ecological and cultural context. Students will begin to develop an intentional design process as well as their skills with design methods and technologies. The studio will also introduce basic ideas of sustainable design as well as formal, material and constructional considerations.

INDIGENOUS WA
OF INHABIT
PHYSICAL MAK

Learning Objectives:
By the end of the course students should be able to:

- Make use of the tools and methods of design developed in earlier studios at a higher level of proficiency
- Make use of ~~Building Information Management software to design and document a building~~ NOT YET
- Describe and make use of an intentional design process
- Develop a program for a building of low complexity
- Making use of inputs from other areas of the curriculum, develop, document and present to a critical audience a schematic design for a building of a low level of programmatic complexity
- Consider the influence of ecology, indigenous building practices, community needs, and the environment on the design of buildings
- Integrate basic ideas of sustainable design with an understanding of material properties and construction methods into the design of buildings

ROLE OF
-GET INTO
TO UNDERST
CLIMATE
BUILDING
ARTIFA

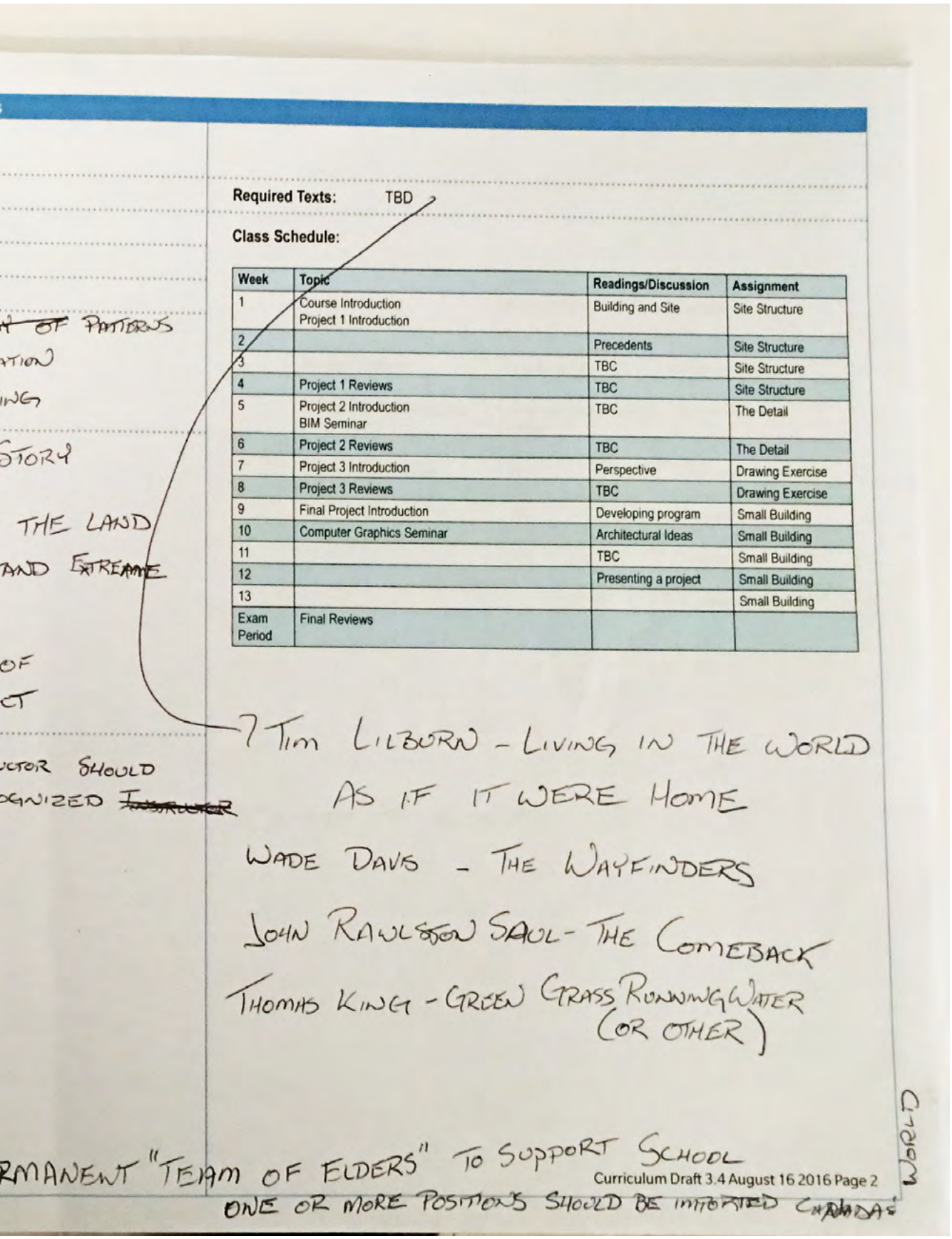
Evaluation:

1.	Project one: site structure Using techniques developed in the previous studio, students design a structure that fulfils a functional need and fits into its site.	4 weeks	25%
2.	Project two: the detail Students design a detail of their site structure using drawings and model.	2 weeks	15%
3.	Project three: drawing exercise Students produce a speculative drawing building on architectural issues studied in other courses.	2 weeks	15%
4.	Project three: small building Using BIM software as well as tools previously developed, students design a building of the programmatic complexity of a small house, incorporating ideas about sustainable design.	5 weeks	35%
5.	Portfolio	N/A	10%

ONE INSTR
BE A REC
ELDER

HIRE A PE

University of Saskatchewan Architecture Initiative



Required Texts: TBD

Class Schedule:

Week	Topic	Readings/Discussion	Assignment
1	Course Introduction Project 1 Introduction	Building and Site	Site Structure
2		Precedents	Site Structure
3		TBC	Site Structure
4	Project 1 Reviews	TBC	Site Structure
5	Project 2 Introduction BIM Seminar	TBC	The Detail
6	Project 2 Reviews	TBC	The Detail
7	Project 3 Introduction	Perspective	Drawing Exercise
8	Project 3 Reviews	TBC	Drawing Exercise
9	Final Project Introduction	Developing program	Small Building
10	Computer Graphics Seminar	Architectural Ideas	Small Building
11		TBC	Small Building
12		Presenting a project	Small Building
13			Small Building
Exam Period	Final Reviews		

? TIM LILBURN - LIVING IN THE WORLD AS IF IT WERE HOME

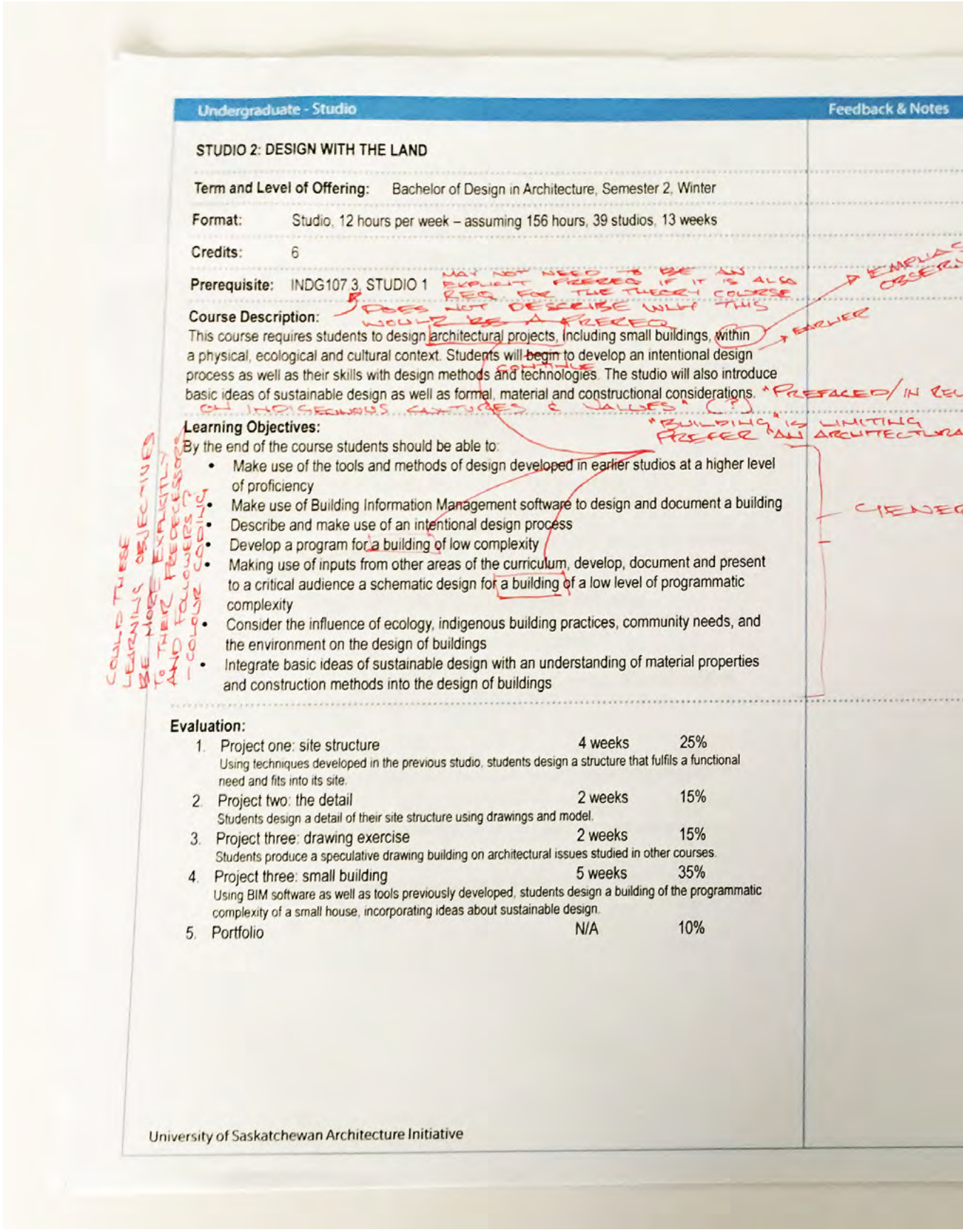
WADE DAVIS - THE WAYFINDERS

JOHN RAULSTON SAUL - THE COMEBACK

THOMAS KING - GREEN GRASS RUNNING WATER (OR OTHER)

RMANENT "TEAM OF ELDERS" TO SUPPORT SCHOOL

ONE OR MORE POSITIONS SHOULD BE INTEGRATED



Undergraduate - Studio | Feedback & Notes

STUDIO 2: DESIGN WITH THE LAND

Term and Level of Offering: Bachelor of Design in Architecture, Semester 2, Winter

Format: Studio, 12 hours per week – assuming 156 hours, 39 studios, 13 weeks

Credits: 6

Prerequisite: INDG107 3, STUDIO 1

Course Description:
This course requires students to design architectural projects, including small buildings, within a physical, ecological and cultural context. Students will begin to develop an intentional design process as well as their skills with design methods and technologies. The studio will also introduce basic ideas of sustainable design as well as formal, material and constructional considerations.

Learning Objectives:
By the end of the course students should be able to:

- Make use of the tools and methods of design developed in earlier studios at a higher level of proficiency
- Make use of Building Information Management software to design and document a building
- Describe and make use of an intentional design process
- Develop a program for a building of low complexity
- Making use of inputs from other areas of the curriculum, develop, document and present to a critical audience a schematic design for a building of a low level of programmatic complexity
- Consider the influence of ecology, indigenous building practices, community needs, and the environment on the design of buildings
- Integrate basic ideas of sustainable design with an understanding of material properties and construction methods into the design of buildings

Evaluation:

1.	Project one: site structure Using techniques developed in the previous studio, students design a structure that fulfils a functional need and fits into its site.	4 weeks	25%
2.	Project two: the detail Students design a detail of their site structure using drawings and model.	2 weeks	15%
3.	Project three: drawing exercise Students produce a speculative drawing building on architectural issues studied in other courses.	2 weeks	15%
4.	Project three: small building Using BIM software as well as tools previously developed, students design a building of the programmatic complexity of a small house, incorporating ideas about sustainable design.	5 weeks	35%
5.	Portfolio	N/A	10%

University of Saskatchewan Architecture Initiative

IAN McCARG' DESIGN ON THE LAND

Required Texts: TBD

Class Schedule:

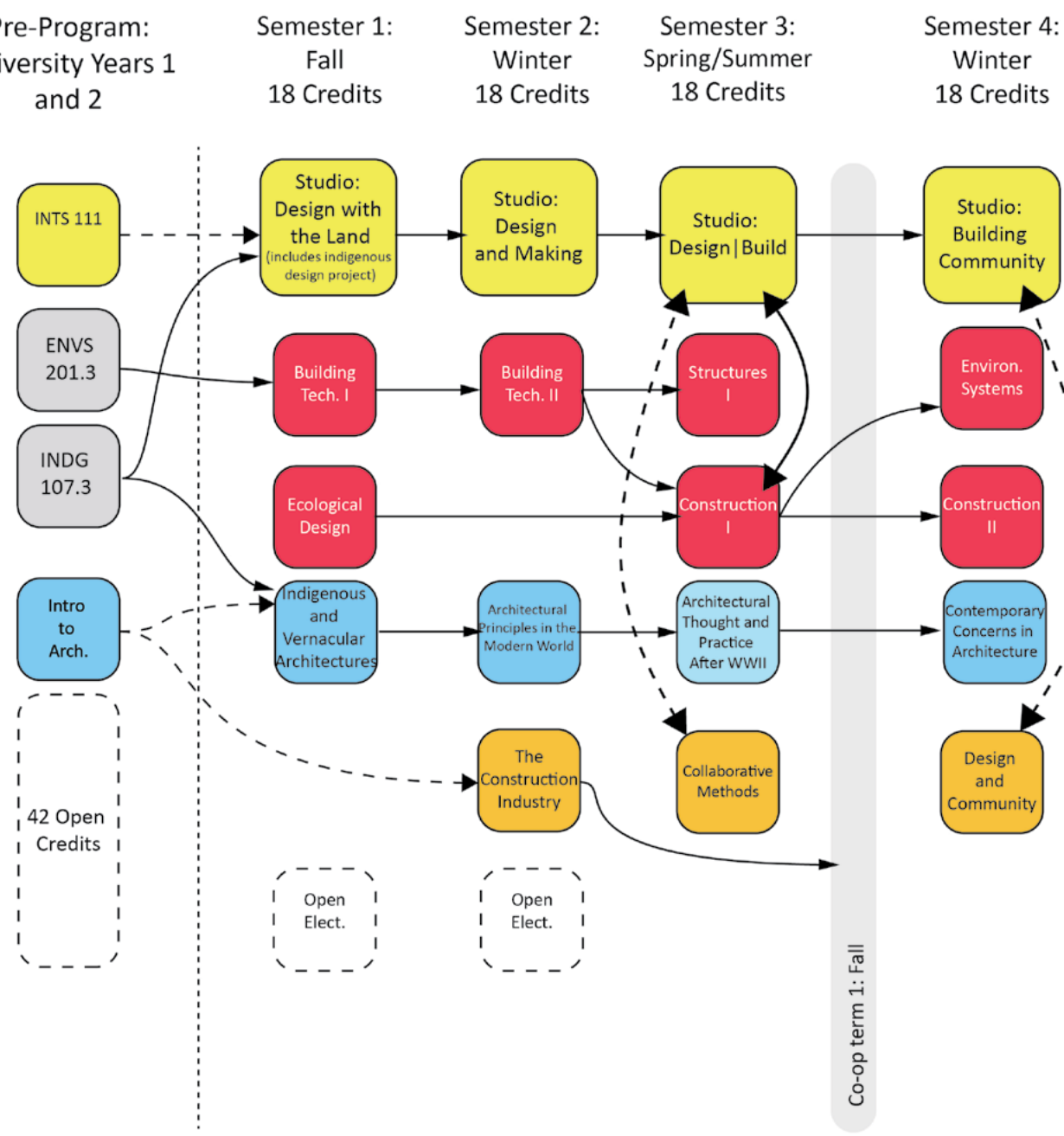
Week	Topic	Readings/Discussion	Assignment
1	Course Introduction Project 1 Introduction	Building and Site	Site Structure
2		Precedents	Site Structure
3		TBC	Site Structure
4	Project 1 Reviews	TBC	Site Structure
5	Project 2 Introduction BIM Seminar	TBC	The Detail
6	Project 2 Reviews	TBC	The Detail
7	Project 3 Introduction	Perspective	Drawing Exercise
8	Project 3 Reviews	TBC	Drawing Exercise
9	Final Project Introduction	Developing program	Small Building
10	Computer Graphics Seminar	Architectural Ideas	Small Building
11		TBC	Small Building
12		Presenting a project	Small Building
13			Small Building
Exam Period	Final Reviews		

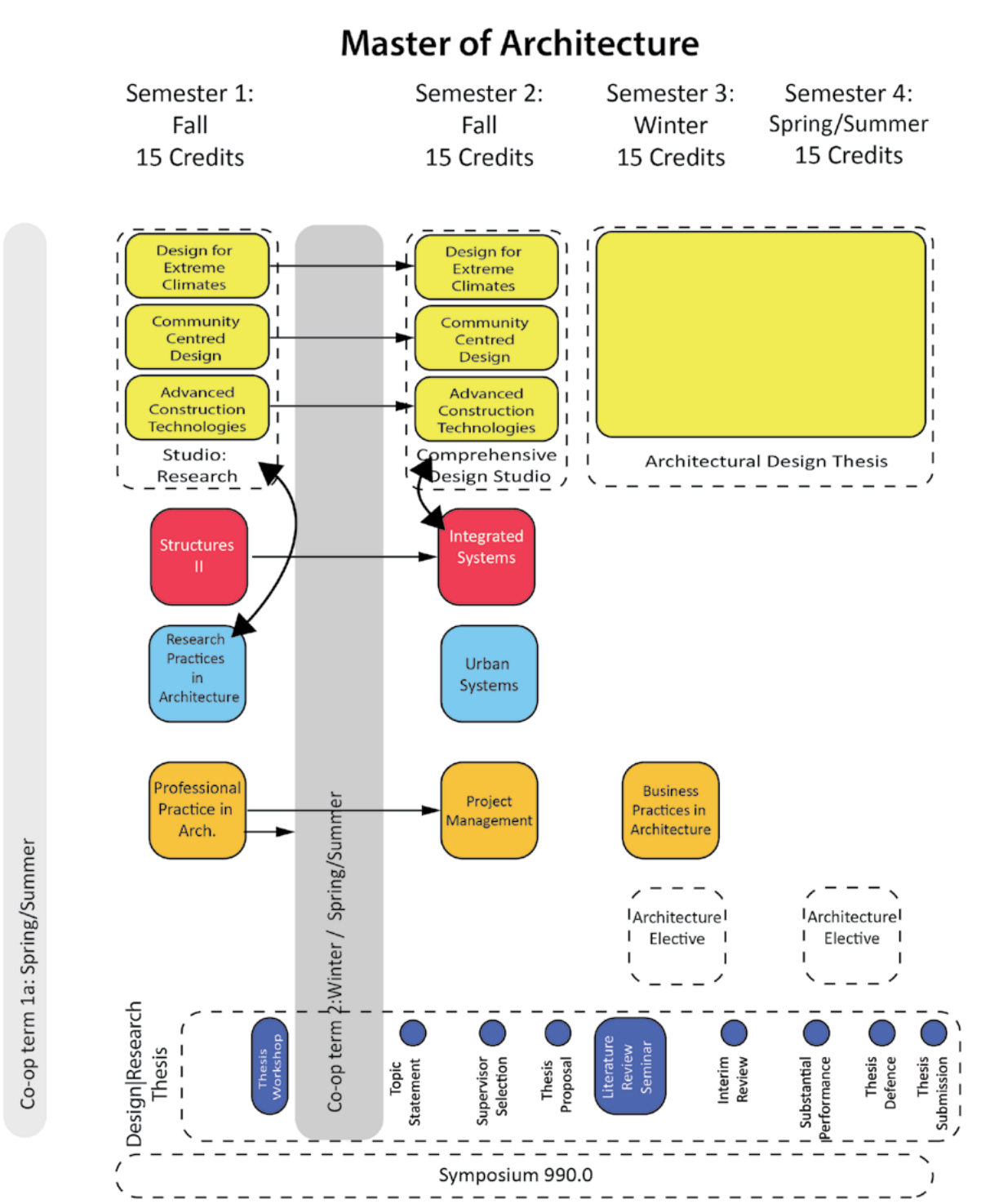
RESOURCES: THE OUTDOORS

Appendix E:
Program Flow Diagram

University of Saskatchewan
Architecture Program Curriculum
Draft 4.1 October 16 2016

Bachelor of Design in Architecture




Master of Architecture
Semester 1: Fall 15 Credits
Semester 2: Fall 15 Credits
Semester 3: Winter 15 Credits
Semester 4: Spring/Summer 15 Credits
Co-op term 1a: Spring/Summer
Co-op term 2:Winter / Spring/Summer
Design for Extreme Climates
Community Centred Design
Advanced Construction Technologies
Studio: Research
Comprehensive Design Studio
Architectural Design Thesis
Structures II
Integrated Systems
Research Practices in Architecture
Urban Systems
Professional Practice in Arch.
Project Management
Business Practices in Architecture
Architecture Elective
Architecture Elective
Design|Research Thesis
Thesis Workshop
Topic Statement
Supervisor Selection
Thesis Proposal
Literature Review Seminar
Interim Review
Substantial Performance
Thesis Defence
Thesis Submission
Symposium 990.0

Appendix F:
Completed Program Mappings

Curricular Area 1: DESIGN

October 2016

Legend:

▷ Introductory Level Expectations

▶ Intermediate or Reinforcement Level Expectations

◉ Advanced or Proficiency Level Expectations

○ Supporting Material or Experience

		Pre-Program					Term
		Elective/breadth courses	INTS 111.3	ENVS 201.3	INDG 107.3	Introduction to Architecture	Studio: Design with the Land
M.Arch: 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. **B.Des.: 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.**	*Make use of fundamental tools of design, including sketching, drawing, and model-making.*		▷				▷
	Make use of contemporary tools of design, including computer drafting, model-making and rendering, BIM,						
	*Make us of emerging tools of design, including Parametric modelling, simulation techniques and digital fabrication technologies (combine with above). ***						
	Describe and make use of and contextualize intentional design processes, including research and analysis related to site and program; discuss and make use of various theories of design.		▷				▷
	Understand and make use of principles of composition and form generation in 2D and 3D.		▷				▷
	Develop and elaborate an architectural program for a building of a moderate level of complexity; analyze an architectural program in relation to a proposed site and its multiple (social, technical, environmental, ethical, aesthetic) contexts.						
	Develop a schematic design for a building of a moderate level of complexity, making appropriate use of inputs from other areas of the curriculum, including theoretical, social, aesthetic and technical considerations.						
	Integrate technical and material systems into the design of a building of a moderate level of complexity, making use of inputs from other areas of the curriculum, including theoretical, social, aesthetic and technical considerations.						
	Produce documentation required in order to communicate design intent, appropriate to the stage of design, including two-dimensional and three-dimensional images; orthographic drawings; physical models; diagrams; construction documents; and outline specifications.						▷
	Describe the components of construction documents, the role and hierarchy of each component, and the relationship between construction documents and contract documents.						

Bachelor of Design - Architecture
Term U1 F
Building Technology I
Ecological Design
Indigenous and Vernacular Architectures
Elective
Term U2 W
Studio: Design and Making
Building Technology II
Architectural Principals in the Modern World
The Construction Industry
Elective
Term U3 S/S
Studio: Design/Build
Structures I
Construction I
Collaborative Practices
Architectural Thought and Practice after WWII
Coop Term I - Fall
Term U4 W
Studio: Building Community
Environmental Systems
Construction II
Design and Community
Contemporary Concerns in Architecture
Master of Architecture
Term M1 F
Studio in architectural research
Professional Practice in Arch.
Research Practices in archtiecture
Structures II
Coop Term II
Coop Term III
Term M2 F
Comprehensive Design Studio
Integrated Systems
Urban Systems
Architectural Project Management
Term M3 W
Design | Research Thesis
Thesis Seminar
Elective
Term M4 S/S
Design | Research Thesis
Business Practices in Architecture
Elective

Curricular Area 2: Architectural Culture

October 2016

Legend:

▷ Introductory Level Expectations

▶ Intermediate or Reinforcement Level Expectations

◉ Advanced or Proficiency Level Expectations

○ Supporting Material or Experience

		Pre-Program					Term
		Elective/breadth courses	INTS 111.3	ENVS 201.3	INDG 107.3	Introduction to Architecture	Studio: Design with the Land
M.Arch.: 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. **B.Des.: 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..**	Apply techniques of research and analysis to issues, concepts and debates related to architecture as a discipline.						▷
	Write, speak and communicate in an appropriate medium on issues, concepts and debates related to architecture as a discipline.	▷				▷	▷
	Understand the role of architecture within contemporary and historical cultures.					▷	▷
	Understand key developments in architectural history, theory and practice.					▷	
	Recognize key global architectural traditions and global cultural awareness - humanitarian architecture.					▷	
	Recognize key aspects of indigenous building practices in Canada and internationally, and community, cultures processes and "Sense of Place"						▷
	Critically analyze an architectural project in terms of its social, political, formal, material, aesthetic and other contexts (Note: materials and technologies)					▷	
	Analyze important issues and concepts in contemporary architectural theory and use within design practice.						
	Understand principles of sustainable development and sustainable design and use within design practice.			▷			
	Understand principles of urban design and planning and use within design practice.						
	Understand principles of ecology, landscape and site design and use within design practice.			▷			

Bachelor of Design - Architecture
Term U1 F
Building Technology I
Ecological Design
Indigenous and Vernacular Architectures
Elective
Term U2 W
Studio: Design and Making
Building Technology II
Architectural Principals in the Modern World
The Construction Industry
Elective
Term U3 S/S
Studio: Design/Build
Structures I
Construction I
Collaborative Practices
Architectural Thought and Practice after WWII
Coop Term I - Fall
Term U4 W
Studio: Building Community
Environmental Systems
Construction II
Design and Community
Contemporary Concerns in Architecture
Master of Architecture
Term M1 F
Studio in architectural research
Professional Practice in Arch.
Research Practices in archtiecture
Structures II
Coop Term II
Coop Term III
Term M2 F
Comprehensive Design Studio
Integrated Systems
Urban Systems
Architectural Project Management
Term M3 W
Design | Research Thesis
Thesis Seminar
Elective
Term M4 S/S
Design | Research Thesis
Business Practices in Architecture
Elective

Curricular Area 3: Architectural Technologies

October 2016

Legend:

▷ Introductory Level Expectations

▶ Intermediate or Reinforcement Level Expectations

◉ Advanced or Proficiency Level Expectations

○ Supporting Material or Experience

		Pre-Program					Term
		Elective/breadth courses	INTS 111.3	ENVS 201.3	INDG 107.3	Introduction to Architecture	Studio: Design with the Land
M.Arch.: 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. **B.Des.: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.**	Understand the principles of Building Codes and apply code requirements (exiting, fire separation, universal access) to the design of a building; complete a Building Code analysis of a design proposal. Concept of alternative solutions - codes and construction.						
	Consider the effects of building systems, including structural, environmental and their integration on the form and materiality of a building; make appropriate preliminary selection of structural systems in relation to design intentions for a building.						
	Integrate both passive and active strategies for environmental control into the design of a building.						
	Design building envelopes in keeping with current best practices.						
	Calculate the energy performance of building envelope systems and integrate an understanding of energy performance into building design.						
	Understand the role of light and sound comfort in architectural design and make use of these in the design of buildings.						
	Be aware of other building systems, including emerging building systems, and their effects on design.						
	Coordinate the requirements of multiple systems and subsystems within the design of a building.						
	Make appropriate material selections for all building components.						
	Develop the design and draw (represent) of key components of a building at the level of a detail.						
	Integrate principles and applications of sustainable design			▷			
	Understand construction materials, methods, sequences, trades. Construction group with code.						
	Understand basic scientific principles applicable to building systems (geography, climate)	◉		▷			
	Understand basic scientific principles applicable to building systems (physics, chemistry) - pre-requisite	◉					
	Basic math, algebra, and geometry (pre-calculus) - pre-requisite	◉					

Bachelor of Design - Architecture
Term U1 F
Building Technology I
Ecological Design
Indigenous and Vernacular Architectures
Elective
Term U2 W
Studio: Design and Making
Building Technology II
Architectural Principals in the Modern World
The Construction Industry
Elective
Term U3 S/S
Studio: Design/Build
Structures I
Construction I
Collaborative Practices
Architectural Thought and Practice after WWII
Coop Term I - Fall
Term U4 W
Studio: Building Community
Environmental Systems
Construction II
Design and Community
Contemporary Concerns in Architecture
Master of Architecture
Term M1 F
Studio in architectural research
Professional Practice in Arch.
Research Practices in archtiecture
Structures II
Coop Term II
Coop Term III
Term M2 F
Comprehensive Design Studio
Integrated Systems
Urban Systems
Architectural Project Management
Term M3 W
Design | Research Thesis
Thesis Seminar
Elective
Term M4 S/S
Design | Research Thesis
Business Practices in Architecture
Elective

Curricular Area 4: Architectural Practice

October 2016

Legend:

▷ Introductory Level Expectations

▶ Intermediate or Reinforcement Level Expectations

◉ Advanced or Proficiency Level Expectations

○ Supporting Material or Experience

		Pre-Program					Term
		Elective/breadth courses	INTS 111.3	ENVS 201.3	INDG 107.3	Introduction to Architecture	Studio: Design with the Land
M.Arch.: 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. **B.Des.: 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.**	*Identify the various participants in the construction industry and their roles, including contractual relationships between architect and client, architect and consultants, architect and contractors.*						
	Describe the legal framework for the architectural profession, including the requirements for licensure and the role of internship.						
	Understand the ethical responsibilities of professionals and make use of this understanding in making decisions related to building projects.						
	Understand the methods used for estimating the cost of construction projects and demonstrate that understanding for simple projects.						
	Understand the principles of Project Management in relation to construction projects: team and task management, scheduling methods, work plans, budgets, record-keeping						
	Identify the legal responsibilities of an architect in relation to a construction project						
	Identify the various methods of project delivery and their associated contracts.						
	Identify the various codes and authorities having jurisdiction in relation to a construction project and the approvals processes required.						
	Describe the components of contract documents for a typical project, including specifications.						
	Describe the role of an Architect in relation to the various phases of a construction project, and the processes used to carry out that role.						
	Describe the role of various development process and the role of financing in those processes.						
	Develop a business plan for an architectural enterprise, including a marketing plan.						
	Identify the basic principles of office management, including human resource management.						
	Be an effective advocate for the profession, for the environment, and for design within various communities.						
	Communicate in an appropriate professional manner in relation to issues in architectural practice.						

Bachelor of Design - Architecture
Term U1 F
Building Technology I
Ecological Design
Indigenous and Vernacular Architectures
Elective
Term U2 W
Studio: Design and Making
Building Technology II
Architectural Principals in the Modern World
The Construction Industry
Elective
Term U3 S/S
Studio: Design/Build
Structures I
Construction I
Collaborative Practices
Architectural Thought and Practice after WWII
Coop Term I - Fall
Term U4 W
Studio: Building Community
Environmental Systems
Construction II
Design and Community
Contemporary Concerns in Architecture
Master of Architecture
Term M1 F
Studio in architectural research
Professional Practice in Arch.
Research Practices in archtiecture
Structures II
Coop Term II
Coop Term III
Term M2 F
Comprehensive Design Studio
Integrated Systems
Urban Systems
Architectural Project Management
Term M3 W
Design | Research Thesis
Thesis Seminar
Elective
Term M4 S/S
Design | Research Thesis
Business Practices in Architecture
Elective

Curricular Area 5: Collaboration

October 2016

Legend:

▷ Introductory Level Expectations

▶ Intermediate or Reinforcement Level Expectations

◉ Advanced or Proficiency Level Expectations

○ Supporting Material or Experience

		Pre-Program					Term
		Elective/breadth courses	INTS 111.3	ENVS 201.3	INDG 107.3	Introduction to Architecture	Studio: Design with the Land
M. Arch.: 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. **B.Des.: 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.**	Make use of various methods of community engagement in relation to design projects.						
	Collaborate effectively with other professionals and with members of various communities.						
	Effectively employ models of collaborative leadership and facilitation.						
	Understand the role of the Prime Consultant on a design project.						
	Clearly state and defend a position in relation to aspects of the built environment.					▷	▷
	Describe the effects of the fabrication on the built and natural environment and their communities.						▷
	Understand the diversity of forms of knowledge and ways of knowing as well as the role of interdisciplinary and non-traditional knowledge.				▷		
	Understand and develop specific techniques for collaborating with various and diverse communities.						
	Advocate for cultures and communities within and outside of architectural practice.	▷			▷		▷

Bachelor of Design - Architecture
Term U1 F
Building Technology I
Ecological Design
Indigenous and Vernacular Architectures
Elective
Term U2 W
Studio: Design and Making
Building Technology II
Architectural Principals in the Modern World
The Construction Industry
Elective
Term U3 S/S
Studio: Design/Build
Structures I
Construction I
Collaborative Practices
Architectural Thought and Practice after WWII
Coop Term I - Fall
Term U4 W
Studio: Building Community
Environmental Systems
Construction II
Design and Community
Contemporary Concerns in Architecture
Master of Architecture
Term M1 F
Studio in architectural research
Professional Practice in Arch.
Research Practices in archtiecture
Structures II
Coop Term II
Coop Term III
Term M2 F
Comprehensive Design Studio
Integrated Systems
Urban Systems
Architectural Project Management
Term M3 W
Design | Research Thesis
Thesis Seminar
Elective
Term M4 S/S
Design | Research Thesis
Business Practices in Architecture
Elective

Curricular Area 6: Local Contexts

October 2016

Legend:

▷ Introductory Level Expectations

▶ Intermediate or Reinforcement Level Expectations

◉ Advanced or Proficiency Level Expectations

○ Supporting Material or Experience

		Pre-Program					Term
		Elective/breadth courses	INTS 111.3	ENVS 201.3	INDG 107.3	Introduction to Architecture	Studio: Design with the Land
M.Arch.: 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. Act with reciprocity, reconciliation, honour and strive to support a sense of place and well being. **B.Des.: 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.**	*Describe the role that architecture has to play and has played (historical perspective) in the various communities in Saskatchewan.*					▷	
	Identify the mutual/divergent pressures on the built environment in different parts of the province and to different economies, ecology, and increasing complexity communities. Recognize the diversity of economies and ecologies in the Province.			▷	▷		
	Develop design projects within the context(s) of a cold winter climate, in both urban and rural situations.						
	Aware of and able to respecfully incorporate areas in which Indigenous Ways of Knowing lead/ intersect with architectural practice, and use this knowledge to the benefit of all peoples of Saskatchewan.				▷		▶
	Understand the role that culture (local) has to play in architectural design.					▷	
	Apply the tools and methods of architectural design to the development of the economy of Saskatchewan.						▷
	Apply global and international developments in various disciplines and humanities to the design of buildings and environments for Saskatchewan.	▷					

Bachelor of Design - Architecture
Term U1 F
Building Technology I
Ecological Design
Indigenous and Vernacular Architectures
Elective
Term U2 W
Studio: Design and Making
Building Technology II
Architectural Principals in the Modern World
The Construction Industry
Elective
Term U3 S/S
Studio: Design/Build
Structures I
Construction I
Collaborative Practices
Architectural Thought and Practice after WWII
Coop Term I - Fall
Term U4 W
Studio: Building Community
Environmental Systems
Construction II
Design and Community
Contemporary Concerns in Architecture
Master of Architecture
Term M1 F
Studio in architectural research
Professional Practice in Arch.
Research Practices in archtiecture
Structures II
Coop Term II
Coop Term III
Term M2 F
Comprehensive Design Studio
Integrated Systems
Urban Systems
Architectural Project Management
Term M3 W
Design | Research Thesis
Thesis Seminar
Elective
Term M4 S/S
Design | Research Thesis
Business Practices in Architecture
Elective

Appendix G:
CACB Program Mapping

CACB Student Performance Criteria

October 2016

Legend:

▷ Introductory Level Expectations

▶ Intermediate or Reinforcement Level Expectations

◉ Advanced or Proficiency Level Expectations

○ Supporting Material or Experience

	Bachelor of Desi													
	Pre-Program					Term U1 F					Term U2 W			
	Elective/breadth courses	INTS 111.3	ENVS 201.3	INDG 107.3	Introduction to Architecture	Studio: Design with the Land	Building Technology I	Ecological Design	Indigenous and Vernacular Architectures	Elective	Studio: Design and Making	Building Technology II	Architectural Principals in the Modern World
A1. General Studies: *The opportunity to develop a broad understanding of human knowledge in the arts and sciences, outside of the specific discipline of architecture.*	◉									▶			
A2. Elective Courses: *Opportunities for students to develop particular areas of expertise or to study topics of personal interest within the discipline of architecture.*										▷			
B1. Global Perspectives, Environmental Stewardship and Community Engagement *The ability to respond to the diversity of global cultures and perspectives, positively impact society through civic and community engagement, and contribute to the stewardship of the environment.*			▷	▷	▷			▶	▶				
B2. Collaboration and Leadership: *The ability to support and foster successful individual and team dynamics, collaborative experiences, and opportunities for leadership.*													
C1. The Architectural Profession *An understanding of the organization of the profession, the Architects Act(s) and their regulations, the role of regulatory bodies, the paths to licensure including internship and reciprocal rights and responsibilities of interns and employers.*													
C2. Ethical and Legal Responsibilities *An understanding of the ethical issues involved in the formation of professional judgment; the architect's legal responsibility under the laws, codes, regulations, and contracts common to the practice of architecture; and the role of advocacy in relation to environmental, social, and cultural issues.*													
C3. Practice Organization *An understanding of the basic principles of practice organization, including financial management, business planning, entrepreneurship, marketing, negotiation, project management, and risk mitigation as well as an understanding of trends that affect practice.*													
C4. Project Management *An understanding of the relationships among key stakeholders in the design process; the methods for selecting consultants and assembling teams; building economics and cost control strategies; and the development of work plans, project schedules, and project delivery methods.*													
D1. Design Theories, Precedents and Methods: *Ability to articulate an intentional design process grounded in one or more theoretical positions, an understanding of important design principles and methods, and the analysis of critical architectural precedents, and to apply these to the design of buildings, landscapes, spaces, building components and/or other architectural projects.*		▷				▷					▷		
D2. Design Skills: *Ability to apply organizational, spatial, structural, and constructional principles to the conception, configuration and design of buildings, spaces, building elements, and tectonic components.*		▷				▷					▷		
D3. Design Tools: *Ability to use the broad range of design tools available to the architectural profession, including traditional and emerging techniques of two-dimensional and three-dimensional representation, computational design, modeling, simulation and fabrication.*		▷				▷					▷		
D4. Design Program: *Ability to prepare a comprehensive program for an architectural project that draws from appropriate precedents; assesses client/user needs, conditions of occupancy, and spatial parameters and requirements; and includes a review of regulatory contexts and standards relevant to the project.*											▷		
D5. Urban Design Context: *Ability to analyze the larger urban context within which architecture is situated, its developmental patterning and spatial morphologies, and infrastructural, environmental and ecological systems, and to understand the regulatory instruments (planning and zoning acts and bylaws) that govern this context, the broader implications of architectural design decisions on the evolution of cities, and the impact of urbanism on design.*											▷		
D6. Site Design: *Ability to analyze and respond to local site characteristics, including urban context, topography, ecology, climate, and building orientation, in the development of an architectural design project.*			▷			▷		▷			▷		
D7. Detail Design: *Ability to assess as an integral part of design, appropriate combinations of materials, components, and assemblies in the development of detailed architectural elements through drawing, modeling and/or full scale prototypes.*											▷		
D8. Design Documentation: *Ability to document and present the outcome of a design project using the broad range of media available to the architectural profession, including the types of documentation for the purposes of construction and to understand the role of contract documents and specifications in this process.*		▷				▷					▷		

gn - Architecture
Term U3 S/S
Term U4 W
The Construction Industry
Elective
Studio: Design/Build
Structures I
Construction I
Collaborative Practices
Architectural Thought and Practice after WWII
Coop Term I - Fall
Studio: Building Community
Environmental Systems
Construction II
Design and Community
Contemporary Concerns in Architecture
Master of Architecture
Term M1 F
Term M2 F
Term M3 W
Term M4 S/S
Studio in architectural research
Professional Practice in Arch.
Research Practices in archtiecture
Structures II
Coop Term II
Coop Term III
Comprehensive Design Studio
Integrated Systems
Urban Systems
Architectural Project Management
Design|Research Thesis
Thesis Seminar
Elective
Design|Research Thesis
Business Practices in Architecture
Elective

CACB Student Performance Criteria

October 2016

Legend:

▷ Introductory Level Expectations

▶ Intermediate or Reinforcement Level Expectations

◉ Advanced or Proficiency Level Expectations

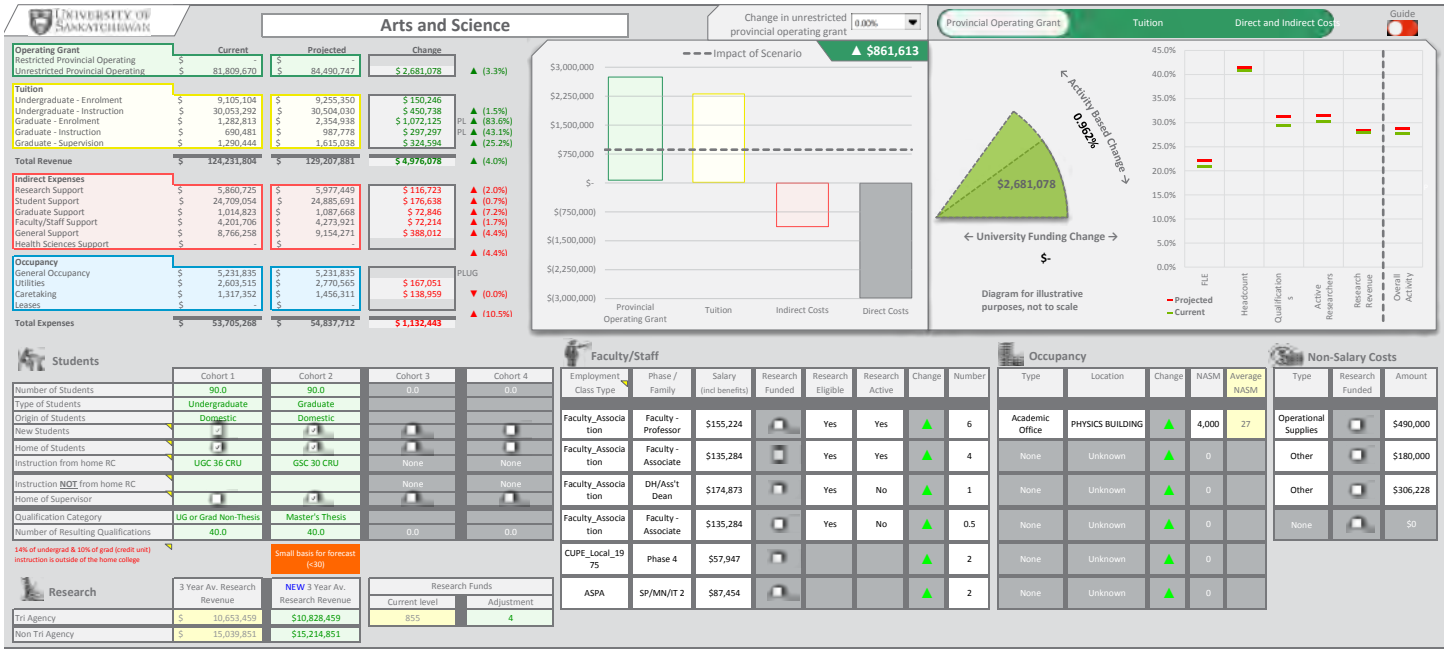
○ Supporting Material or Experience

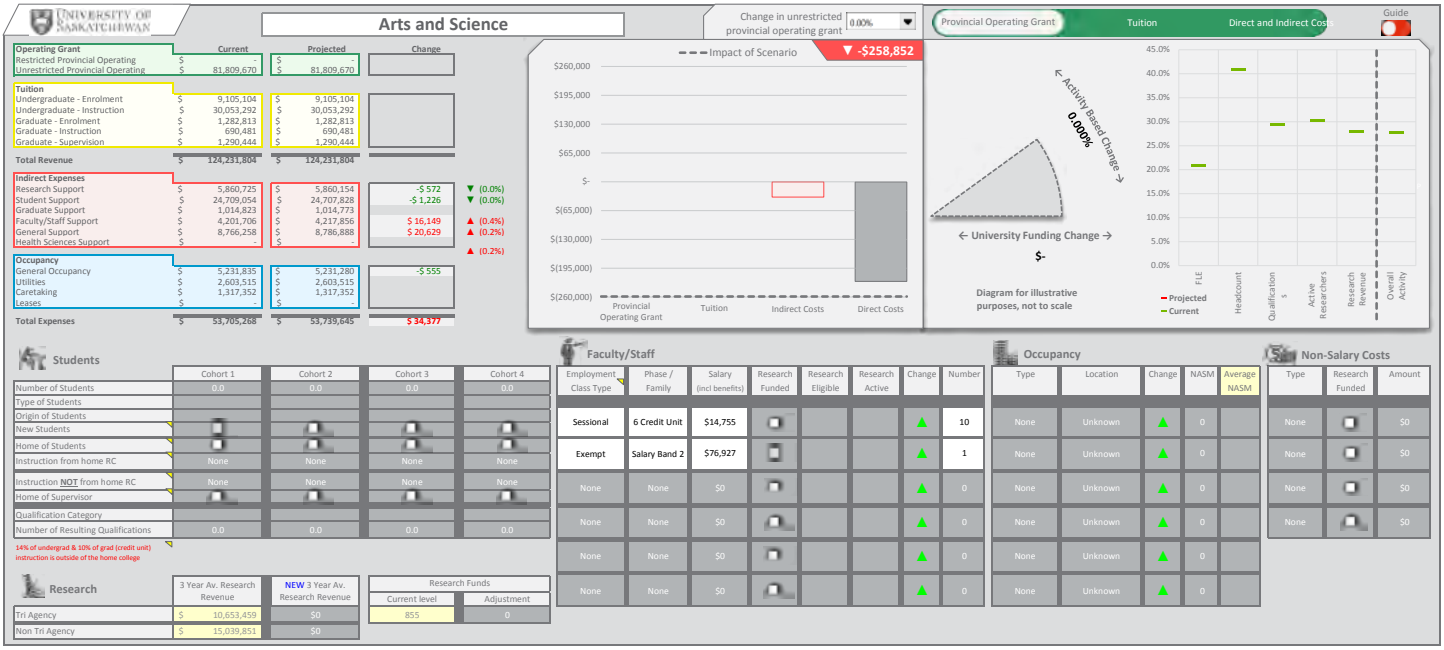
	Bachelor of Desi													
	Pre-Program					Term U1 F					Term U2 W			
	Elective/breadth courses	INTS 111.3	ENVS 201.3	INDG 107.3	Introduction to Architecture	Studio: Design with the Land	Building Technology I	Ecological Design	Indigenous and Vernacular Architectures	Elective	Studio: Design and Making	Building Technology II	Architectural Principals in the Modern World
E1. Critical Thinking: Research, Analysis, Synthesis *Ability to raise clear and precise questions; record, assess and comparatively evaluate information; synthesize research findings and test potential alternative outcomes against relevant criteria and standards; and reach well-supported conclusions related to a specific project or assignment.*					▷				▷				▷
E2. Communication Skills: Writing, speaking and graphic communication *Ability to write and speak effectively and use graphic media to appropriately communicate on subject matter related to the architectural discipline both within the profession and with the general public.*					▷				▷				▷
E3. Architectural History and Theory *Understanding of the history of architecture, landscape, and urban design; the conceptual and theoretical frameworks that have shaped these disciplines; and the relevant precedents and cultural, political, ecological, and technological factors that have influenced their development.*					▷				▷				▷
E4. Cultural Diversity and Global Perspectives *Understanding of the diverse needs, values, behavioral norms, and social/ spatial patterns that characterize different global cultures and individuals, as well as the implications of this diversity on the societal roles and responsibilities of architects.*				▷					▷				▷
F1. Regulatory Frameworks: *Understanding of the applicable building codes, regulations, and standards for a given building and site including universal design standards and the principles that inform the design and selection of life-safety systems.*							▷					▷	
F2 Structural Systems *Understanding of the principles of structural behavior in withstanding gravitational, seismic, and lateral forces, including the selection and application of appropriate structural systems.*							▷					▷	
F3. Environmental Systems *Understanding of the basic principles that inform the design of passive and active environmental modification systems and building service systems, the issues involved in the coordination of these systems, in a building, energy use and appropriate tools for performance assessment, and the codes and regulations that govern their application in buildings.*							▷					▷	
F4. Ecological Systems *Understanding of the broader ecologies that inform the design of buildings and their systems and of the impacts of design decisions on those ecologies.*			▷					▷					
F5. Building Materials, Envelope Systems, & Assemblies: *Understanding of the basic principles used in the appropriate selection and application of construction materials and building envelope systems and associated assemblies relative to fundamental performance, aesthetics, durability, energy, material resources, and environmental impact.*							▷					▷	
G1. Design Research *Ability to apply research and investigative methods in the design process.*		▷				▷					▷		
G2. Design Analysis *Ability to analyze design inputs, including the use of architectural and urban precedents, evaluate the implications of potential design options, and demonstrate the skills associated with assessing multiple variables during the design process. This includes problem identification, setting evaluative criteria, analyzing solutions, and predicting the effectiveness of implementation.*		▷				▷					▷		
G3. Design Synthesis *Ability to make design decisions and synthesize variables within a moderately complex architectural project while demonstrating consideration and integration of social, cultural, spatial, material, environmental, and technological systems.*		▷				▷					▷		

gn - Architecture
Term U3 S/S
Term U4 W
The Construction Industry
Elective
Studio: Design/Build
Structures I
Construction I
Collaborative Practices
Architectural Thought and Practice after WWII
Coop Term I - Fall
Studio: Building Community
Environmental Systems
Construction II
Design and Community
Contemporary Concerns in Architecture
Master of Architecture
Term M1 F
Term M2 F
Term M3 W
Term M4 S/S
Studio in architectural research
Professional Practice in Arch.
Research Practices in archtiecture
Structures II
Coop Term II
Coop Term III
Comprehensive Design Studio
Integrated Systems
Urban Systems
Architectural Project Management
Design|Research Thesis
Thesis Seminar
Elective
Design|Research Thesis
Business Practices in Architecture
Elective

Appendix H:
Financial Tables

DRAFT AS OF NOVEMBER 9, 2016


Arts and Science
Change in unrestricted provincial operating grant
0.00%
Provincial Operating Grant
Tuition
Direct and Indirect Costs
Guide
Operating Grant
Restricted Provincial Operating
Unrestricted Provincial Operating
Current
Projected
Change
81,809,670
84,490,747
$ 2,681,078
▲ (3.3%)
Tuition
Undergraduate - Enrolment
Undergraduate - Instruction
Graduate - Enrolment
Graduate - Instruction
Graduate - Supervision
9,105,104
30,053,292
1,282,813
690,481
1,290,444
9,255,350
30,504,030
2,354,938
987,778
1,615,038
$ 150,246
$ 450,738
$ 1,072,125
$ 297,297
$ 324,594
▲ (1.5%)
PL ▲ (83.6%)
PL ▲ (43.1%)
▲ (25.2%)
Total Revenue
124,231,804
129,207,881
$ 4,976,078
▲ (4.0%)
Indirect Expenses
Research Support
Student Support
Graduate Support
Faculty/Staff Support
General Support
Health Sciences Support
5,860,725
24,709,054
1,014,823
4,201,706
8,766,258
5,977,449
24,885,691
1,087,668
4,273,921
9,154,271
$ 116,723
$ 176,638
$ 72,846
$ 72,214
$ 388,012
▲ (2.0%)
▲ (0.7%)
▲ (7.2%)
▲ (1.7%)
▲ (4.4%)
▲ (4.4%)
Occupancy
General Occupancy
Utilities
Caretaking
Leases
5,231,835
2,603,515
1,317,352
5,231,835
2,770,565
1,456,311
$ 167,051
$ 138,959
PLUG
▼ (0.0%)
Total Expenses
53,705,268
54,837,712
$ 1,132,443
▲ (10.5%)
Impact of Scenario
▲ $861,613
$3,000,000
$2,250,000
$1,500,000
$750,000
$-
$(750,000)
$(1,500,000)
$(2,250,000)
$(3,000,000)
Provincial Operating Grant
Tuition
Indirect Costs
Direct Costs
Activity Based Change
0.962%
$2,681,078
University Funding Change
$-
Diagram for illustrative purposes, not to scale
45.0%
40.0%
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
FLE
Headcount
Qualification s
Active Researchers
Research Revenue
Overall Activity
Projected
Current
Students
Cohort 1
Cohort 2
Cohort 3
Cohort 4
Number of Students
90.0
90.0
0.0
0.0
Type of Students
Undergraduate
Graduate
Origin of Students
Domestic
Domestic
New Students
Home of Students
Instruction from home RC
UGC 36 CRU
GSC 30 CRU
None
None
Instruction NOT from home RC
None
None
Home of Supervisor
Qualification Category
UG or Grad Non-Thesis
Master's Thesis
Number of Resulting Qualifications
40.0
40.0
0.0
0.0
14% of undergrad & 10% of grad (credit unit) instruction is outside of the home college
Small basis for forecast (<30)
Research
3 Year Av. Research Revenue
NEW 3 Year Av. Research Revenue
Research Funds
Current level
Adjustment
Tri Agency
10,653,459
$10,828,459
855
4
Non Tri Agency
15,039,851
$15,214,851
Faculty/Staff
Employment Class Type
Phase / Family
Salary (incl benefits)
Research Funded
Research Eligible
Research Active
Change
Number
Faculty_Association
Faculty - Professor
$155,224
Yes
Yes
6
Faculty_Association
Faculty - Associate
$135,284
Yes
Yes
4
Faculty_Association
DH/Ass't Dean
$174,873
Yes
No
1
Faculty_Association
Faculty - Associate
$135,284
Yes
No
0.5
CUPE_Local_1975
Phase 4
$57,947
2
ASPA
SP/MN/IT 2
$87,454
2
Occupancy
Type
Location
Change
NASM
Average NASM
Academic Office
PHYSICS BUILDING
4,000
27
None
Unknown
0
Non-Salary Costs
Type
Research Funded
Amount
Operational Supplies
$490,000
Other
$180,000
Other
$306,228
None
$0


Arts and Science
Change in unrestricted provincial operating grant
0.00%
Provincial Operating Grant
Tuition
Direct and Indirect Cost
Guide
Operating Grant
Restricted Provincial Operating
Unrestricted Provincial Operating
Current
Projected
Change
81,809,670
81,809,670
Tuition
Undergraduate - Enrolment
Undergraduate - Instruction
Graduate - Enrolment
Graduate - Instruction
Graduate - Supervision
9,105,104
30,053,292
1,282,813
690,481
1,290,444
9,105,104
30,053,292
1,282,813
690,481
1,290,444
Total Revenue
124,231,804
124,231,804
Indirect Expenses
Research Support
Student Support
Graduate Support
Faculty/Staff Support
General Support
Health Sciences Support
5,860,725
24,709,054
1,014,823
4,201,706
8,766,258
5,860,154
24,707,828
1,014,773
4,217,856
8,786,888
-$ 572
-$ 1,226
$ 16,149
$ 20,629
▼ (0.0%)
▼ (0.0%)
▲ (0.4%)
▲ (0.2%)
▲ (0.2%)
Occupancy
General Occupancy
Utilities
Caretaking
Leases
5,231,835
2,603,515
1,317,352
5,231,280
2,603,515
1,317,352
-$ 555
Total Expenses
53,705,268
53,739,645
$ 34,377
Impact of Scenario
▼ -$258,852
$260,000
$195,000
$130,000
$65,000
$-
$(65,000)
$(130,000)
$(195,000)
$(260,000)
Provincial Operating Grant
Tuition
Indirect Costs
Direct Costs
Activity Based Change
0.000%
University Funding Change
$-
Diagram for illustrative purposes, not to scale
45.0%
40.0%
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
FLE
Headcount
Qualification s
Active Researchers
Research Revenue
Overall Activity
Projected
Current
Students
Cohort 1
Cohort 2
Cohort 3
Cohort 4
Number of Students
0.0
0.0
0.0
0.0
Type of Students
Origin of Students
New Students
Home of Students
Instruction from home RC
None
None
None
None
Instruction NOT from home RC
None
None
None
None
Home of Supervisor
Qualification Category
Number of Resulting Qualifications
0.0
0.0
0.0
0.0
14% of undergrad & 10% of grad (credit unit) instruction is outside of the home college
Research
3 Year Av. Research Revenue
NEW 3 Year Av. Research Revenue
Research Funds
Current level
Adjustment
Tri Agency
10,653,459
$0
855
0
Non Tri Agency
15,039,851
$0
Faculty/Staff
Employment Class Type
Phase / Family
Salary (incl benefits)
Research Funded
Research Eligible
Research Active
Change
Number
Sessional
6 Credit Unit
$14,755
10
Exempt
Salary Band 2
$76,927
1
None
None
$0
0
Occupancy
Type
Location
Change
NASM
Average NASM
None
Unknown
0
Non-Salary Costs
Type
Research Funded
Amount
None
$0

Architecture Programs (B.Des. + M.Arch.) Proposed Budget				Grad yr 2 intake			Pre-program	A&S general education		UG yr 3 intake	UG yr 4 intake	Grad yr1 intake
				Year 4 +			Year -3	Year -2	Year -1	**Year 1**	**Year 2**	**Year 3**
Director (0.5 FTE teaching, 0.5 admin)	DH/Ass't Dean	1	174,873	174,873			50,000	174,873	174,873	174,873	174,873	174,873
Program Director (0.5 FTE teaching, 0.5 admin)	DH/Ass't Dean	2	135,284	270,568						135,284	135,284	270,568
Stipend for Program Directors		2	12,000	24,000						12,000	12,000	24,000
Career Faculty Salaries and Benefits	6 res'h & 2 Ass.	8	150,239	1,201,912						450,717	751,195	1,051,673
Sessional Lecturers - Studio	sal (8 @6cu)	8	14,755	118,040						88,530	118,040	118,040
Sessional Lecturers - other	no longer req'd	0		-						-	-	-
Teaching Assistants	Grad std rate [1]	16	3,609	57,751						28,876	57,751	57,751
Librarian	Faculty assoc.	0.5	135,284	67,642				33,821	33,821	67,642	67,642	67,642
Teaching Release for Co-op	Ses'l 6cu x2 term	2	14,755	29,510								
Sub-total Academic Salaries and Benefits					**1,944,296**		**50,000**	**208,694**	**208,694**	**957,922**	**1,316,785**	**1,764,547**
Staff - Admin Coord/EA	Ex SB2	1	76,927	76,927				38,463.50	38,463.50	76,927	76,927	76,927
Staff - AA	CUPE Ph4	2	57,947	115,894						57,947	115,894	115,894
Technical Staff	ASPA IT2/(CP6)	2	87,454	174,908						174,908	174,908	174,908
Sub-total Non-Academic Salaries and Benefits		20.5			**367,729**		-	**38,464**	**38,464**	**309,782**	**367,729**	**367,729**
Graduate Student Support - $4,000/student for 50% intake			could be 2x	180,000						-	-	90,000
Direct Non-Salary Operating Costs [2]				350,000		13%	20,000	20,000	20,000	100,000	200,000	200,000
Relocation and start up research costs for faculty								70,000		150,000	140,000	150,000
Library Acquisitions				40,000			50,000	50,000	50,000	60,000	40,000	40,000
ICT (computer, equipment)				100,000				10,000	10,000	50,000	100,000	100,000
Rent prior to renovation being completed				-								
Sub-total non-salary costs					**670,000**							
Total Direct Costs					**2,982,025**		**120,000**	**397,158**	**327,158**	**1,627,704**	**2,164,514**	**2,712,276**
Indirect costs per SAT (TABBS)				826,430		28%				451,097	599,867	751,673
Space Overhead: Proxy utilities and caretaking [3]				306,010		10%					included in rent yrs 1-3	
Total Overhead					**1,132,440**					**451,097**	**599,867**	**751,673**
Total Costs					**4,114,465**					**2,078,801**	**2,764,382**	**3,463,949**
Anticipated Tuition Revenue ($12,000 per year- non-standard) [4]					2,160,000					540,000	1,080,000	1,620,000
Anticipated Certified Co-op fee revenue ($1,000 per term in addition to tuition)					135,000						45,000	135,000
Expenses (including indirect) less Tuition [5]					**1,819,465**					**1,538,801**	**1,684,382**	**1,843,949**
Anticipated Operating Grant impact [6]					2,681,078					lag	lag	1/5th
Expenses less Tuition and Op. Grant Allocation					**(861,613)**	32%						
Renovations for Space: $20-30M. [7] If not fundraised, shown over 25 years				and/or	1,000,000							
Costs of Fundraising (10%) (one-time)					2,500,000							

Notes

1 Grad student rate is increased by 50% from current rate given the recent oranization of PSAC.

2 Operating costs include $100k workshop and program, $90k events, projects and promotion, $25k research support, $25k student support and $110k other.

3 Space overhead is calculated using occupancy model portion of TABBS for utilities and caretaking costs only. Uses similar space type building (Physics). Also contacted Colliers as likely that caretaking for building would be externally contracted. Colliers' estimate is nearly $100,000 per year lower but does not include insurance, taxes, snow removal and is a very high level estimate at this point.

4 Tuition revenue: Recommending a non-standard tuition revenue averaging $12,000 per year. Assume all tuition revenue is allocated to Architecture as all salary costs included in this budget, even if the home college is elsewhere costs for that portion of salary is still included in Architecture budget. Assuming all costs are incremental not using existing resources in other colleges. Tuition revenue included in above budget assumes all tuition is incremental. If 50% of admitted undergrads were existing A&S students and only incremental tuition above A&S rates were included, the tuition revenue projected above in year 4 would decrease by $180,000/year.

5 Direct expenses less projected tuition is $687,025

6 Anticipated provincial operating grant impact: As per TABBS SAT, assuming all students in the program are new students to the university, using average A&S multipliers in SUFM (which is likely low as Arch. students may fit under alternate or new discipline).

7 Renovation cost: Consultant hired for $30M feasibilty study, it is to be completed by ~March 2017. Current recommendation is to use internal fundraising capacity vs external. Board noted 80% fundraising dollars committed before begin for ice rink but unknown what threshold would be for this.

Appendix I:
Initial Course Outlines

To be provided at a later date.

Appendix J:
Letters of Support

UNIVERSITY OF SASKATCHEWAN
College of
Arts and Science
ARTSANDSCIENCE.USASK.CA

November 2, 2016

The Chair, Graduate Programs Committee
c/o Dr. Martha Smith-Norris
Acting Associate Dean, College of Graduate Studies and Research

Re: Letter of Support for Masters in Architecture Program

The College of Arts & Science is pleased to strongly support the Masters of Architecture program proposal which has been created by Colin Ripley. The College's approval is conditional upon obtaining new funding for this program.

Attached please find the course proposals for the graduate level ARCD courses that will be required in the program. Please accept this letter in lieu of the college-level signature on each form.

We look forward to meaningful and creative consultation with the College of Graduate Studies and Research in establishing this program.

Sincerely,

Peta Bonham-Smith
Dean (Interim) and Professor

cc. Colin Ripley, Project Director, School of Architecture Initiative
Vice-Dean Academic, College of Arts and Science
Director, Programs Office, College of Arts and Science

Office of the Dean
College of Arts & Science
University of Saskatchewan
E: officeofthedean@artsandscience.usask.ca
T: (306) 966-4232
F: (306) 966-8839

RE: ENVS 201

1 message

Steelman, Toddi <toddi.steelman@usask.ca> Thu, Oct 20, 2016 at 5:36 PM
To: "cripley@ryerson.ca" <cripley@ryerson.ca>
Cc: "Reed, Maureen" <mgr774@mail.usask.ca>, "Jones, Paul" <pdj055@mail.usask.ca>, "colin.laroque@usask.ca" <colin.laroque@usask.ca>, "Loring, Philip" <phil.loring@usask.ca>, "Steelman, Toddi" <toddi.steelman@usask.ca>

Colin,

SENS is very supportive of the proposed efforts related to the new School of Architecture. We look forward to building on our existing discussion and collaboration. We are especially excited about the prospect of having ARC students in our ENVS201 class—Foundations of Sustainability. The potential for a cross-appointment between ARC and SENS to pursue sustainability themes and co-teach is especially exciting to us. We look forward to seeing how this exciting initiative will continue to develop.

Toddi A. Steelman, Ph.D.

Executive Director and Professor,

School of Environment and Sustainability

329 Kirk Hall, 117 Science Place

University of Saskatchewan

Saskatoon, SK S7N 5C8

306 966 1499

Bergstrom, Donald <don.bergstrom@usask.ca> Tue, Nov 1, 2016 at 10:41 AM
To: "cripley@ryerson.ca" <cripley@ryerson.ca>

Hello Colin,

The purpose of this email is to confirm the support of the College of Engineering for the development of a School of Architecture on this campus. We believe that the School would be a natural partner for our college, and the potential sharing of select faculty resources and collaborations in both teaching and research programs hold significant promise. For example, we would welcome the opportunity to explore teaching some of the engineering content to architecture students with an approach that is not so calculus-centric. The opportunity to have faculty from the School share their special expertise related to design is also exciting. Finally, we expect that our research programs would converge on such themes as sustainable and energy-efficient structures for remote and indigenous communities. Overall, we are enthusiastic over the prospect of having a School of Architecture as a new academic partner on this campus.

Sincerely,

Don Bergstrom

Donald J Bergstrom, PhD, PEng
Interim Dean
College of Engineering, University of Saskatchewan
Room 3B48, Engineering Building, 57 Campus Dr.
Saskatoon, SK **S7N 5A9**
Tel: (306) **966-5593** Fax: (306) **966-5205**
Email: engr.dean@usask.ca
Web: engineering.usask.ca

Support for Notice of Intent for a School of Architecture

1 message

Willoughby, Keith <willoughby@edwards.usask.ca> Mon, Oct 31, 2016 at 5:40 PM
To: "cripley@ryerson.ca" <cripley@ryerson.ca>

Hello, Colin.

The Edwards School of Business is pleased to provide support in principle for the notice of intent to create a School of Architecture at the U of Sask.

Participating in this initiative would offer the Edwards School an important set of interdisciplinary opportunities.

All the best,

Keith

Keith A. Willoughby, PhD | Interim Dean and Associate Professor
Edwards School of Business | University of Saskatchewan
25 Campus Drive, Saskatoon, SK S7N 5A7

t: (306) 966-4786 | **willoughby@edwards.usask.ca**

SASKATCHEWAN
ASSOCIATION OF ARCHITECTS

February 9, 2017

Dr. Michael Atkinson, Interim Provost and Vice President Academic
204 Peter MacKinnon Building
107 Administration Place
University of Saskatchewan
Saskatoon, SK S7N 5A2

Dear Dr. Atkinson,

Re: Saskatchewan Association of Architects – Support for proposed School of Architecture

The Saskatchewan Association of Architects has been a strong supporter of the initiative to bring a School of Architecture to the province of Saskatchewan for some time and is pleased to be participating in the School of Architecture and Visual Art planning that the University of Saskatchewan has led. Our members have been solidly in support of this initiative both physically, in terms of 3 members participating on the Advisory Committee and several members on the Steering Committee, and financially through our commitment of matching funds to a level of $267,500 to assist in the initiative.

Our SAA Council and membership has recognized the need and benefits that this School will bring the province, for many years now and over a number of years has enthusiastically endorsed the support of the pursuit of this worthy goal. The SAA and its members remain committed to the pursuit of this school and look forward to a successful approval by the University of Saskatchewan and the next steps toward making the School of Architecture and Visual Art a reality.

Should you have any questions regarding the SAA involvement or commitment, please do not hesitate to contact us.

Kind Regards,

Ray Gosselin, SAA, MAA, RAIC
President, Saskatchewan Association of Architects

UNIVERSITY OF SASKATCHEWAN
College of Graduate Studies and Research
Room C180 Administration Building, 105 Administration Place, Saskatoon SK CANADA S7N 5A2
Telephone (306)966-5751, Fax: (306)966-5756, General E-mail: grad.studies@usask.ca

GSR 400.1
New Graduate Course Proposal

In addition to this form, please complete and submit a *Course Creation Information* form, available on the University website (www.usask.ca/university_secretary/council/committees/academic_programs/report_files/course_creation.php), to the Department of Academic Services and Financial Assistance, Student and Enrolment Services Division.

EXAM EXEMPTION: Yes ☒ **(must complete section 6.1)** No ☐

Basic information about the proposed course:

1. Department/Unit: Art and Art History College of: Arts and Science

2. _____ _____
(Authorizing Unit Head - PLEASE PRINT) (Authorizing Unit Head - SIGNATURE)

3. Information required for the calendar:
   - 3.1 Label and number of course: ARCD 811.6
   - 3.2 Title of course: Studio in Architectural Research
   - 3.3 Total Hours: Lecture: 0
     Seminar: 0
     Lab: 0
     Tutorial: 0
     Other: 156 (Studio)
   - 3.4 Weekly Hours: Lecture: 0
     Seminar: 0
     Lab: 0
     Tutorial: 0
     Other: 12 (Studio)
   - 3.5 Term in which it will be offered: T1 ☒ T2 ☐ T1 or T2 ☐ T1 and T2 ☐
   - 3.6 Prerequisite: None
   - 3.7 Calendar description (not more than 50 words):

     In this studio course, students will develop an approach to architectural design based in research. Students will be confronted with design problems that will require the implementation of research strategies and to examine the conditions architectural practice, including their own practices and beliefs, in the design of several architectural projects.

4. Rationale for introducing this course:

   This course is required for the proposed Master of Architecture degree program.

5. Impact of this course:
   - 5.1 Are the programs/courses of other academic units/Colleges affected by this new course (possible duplication)?
     No ☒ Yes **(Please list)**:

5.2 Were any other academic units asked to review or comment on the proposal?

No ☒ Yes **(Please attach correspondence)** ☐

5.3 Will the offering of this course lead to the deletion or modification of any other course(s)?

No ☒ Yes **(Please list)**: _____

5.4 Course(s) for which this graduate course will be a prerequisite?

ARCD 821.6 Comprehensive Design Studio

5.5 Is this course to be required by your graduate students, or by graduate students in another program?

No ☐ Yes **(Please list)**: Master of Architecture students

6. Course Information. **(Please append the Course Outline (Syllabus), including a separate Undergraduate Course Outline (Syllabus) if required. Information on Academic Integrity and Student Conduct can be found on the U of S website at http://www.usask.ca/university_secretary/honesty/)**

Checklist:
- ☒ Course objectives need to be clearly stated
- ☒ Description of and Activities for Evaluation must be listed
- ☒ **Course Outline** (syllabus) with **Reading List** must be included
- ☒ Percentage of Total Mark for each evaluation listed
- ☐ If undergraduate lectures are included, also submit the **Undergraduate Course Outline (Syllabus)** and include information on what additional activities make this a graduate level course. For guidelines, see '**Undergraduate Component of Graduate Courses**' under '*Forms for Graduate Chairs*' at http://www.usask.ca/cgsr/prospective_students/forms.php
- ☒ Professor must be a member of the Graduate Faculty

6.1 **EXAM EXEMPTION**: Please note, **if there is no final exam or if the final examination is worth less than 30% of the final grade** please provide a brief statement which explains why a final examination is inappropriate for this course.

Final reviews will be held during the examination period in lieu of a final exam. Reviews will be scheduled for a six-hour period. All students are required to attend all reviews. External critics will be invited to the sessions.

7. Enrolment:

7.1 Expected Enrolment: 45

7.2 From which colleges/programs: College of Arts and Science / Master of Architecture only

8. Resources:

8.1 Proposed instructor(s) (Please include qualifications):

The instructor will have a graduate degree in architecture and either a PhD in architecture or architectural theory or architectural licensure. The instructor will be a member of the Graduate Faculty.

8.2 How does the department plan to handle the additional teaching or administrative workload:

This course is proposed as part of the new M.Arch. program. Teaching and administrative requirements are being reviewed as part of that proposal.

8.3 Are sufficient library or other research resources available for this course:

Yes

8.4 Are any additional resources required (library, audio-visual, technology, lab equipment, lab space, etc.):

This course will require studio space for all students, as identified in the Program Proposal.

9. Date of Implementation:

9.1 To be offered: Annually ☒ Biennially ☐ Alternate Years ☐ Other ☐

This course will conform to the academic requirements and standards for graduate courses, including the rules of *Student Appeals in Academic Matters* (see www.usask.ca/university_secretary/council/reports_forms/reports/12-06-99.php) and Academic Integrity and Student Conduct (see www.usask.ca/university_secretary/honesty/).

Date of Approval by College (of the home academic unit): _____

The signature of the Dean of your College signifies that the necessary resources are either available or shall be supplied by the College/Department budget.

_____
(Authorizing College Signature (of the home academic unit)

_____
(Name of Person Signing Above - PLEASE PRINT)

Form version April 2009

UNIVERSITY OF SASKATCHEWAN

ARCD 811.6 Studio in Architectural Research

Term 1

First Proposed Offering ~~2020~~ 2022

Delivery Format: ~~Lecture~~ Studio, 6 hours per week

Location and Date: TBD

Instructor: TBD

Course Description

In this studio course, students will develop an approach to architectural design based in research. Students will be confronted with design problems that will require the implementation of research strategies and to examine the conditions architectural practice, including their own practices and beliefs, in the design of several architectural projects.

Prerequisite

None

Learning Outcomes

By the completion of this course, students will be expected to:

1. Identify the primary issues involved in carrying out design work within a specific area of concern identified by the program and chosen by the student, including issues of environmental and socio-political context.
2. Understand critically the role of design research in elucidating these primary issues.
3. Apply architectural and design research methods to questions encountered during the design process.
4. Apply a high level of competency in the tools and methods of design, including new and emerging tools, to a clearly articulated and intentional design process leading towards the design of buildings in their sites and within their environmental and social contexts.
5. Produce documentation as required to communicate design intent and present the design to critical and community groups.

More information on the Academic Courses Policy on course delivery, examinations and assessment of student learning can be found at:
http://policies.usask.ca/policies/academic-affairs/academic-courses.php
The University of Saskatchewan Learning Charter is intended to define aspirations about the learning experience that the University aims to provide, and the roles to be played in realizing these aspirations by students, instructors and the institution. A copy of the Learning Charter can be found at: http://www.usask.ca/university_secretary/LearningCharter.pdf

Information on literal descriptors for grading at the University of Saskatchewan can be found at: http://students.usask.ca/academics/grading/grading-system.php

University of Saskatchewan Grading System (for graduate courses)

90-100 Exceptional

A superior performance with consistent strong evidence of

- a comprehensive, incisive grasp of subject matter;
- an ability to make insightful, critical evaluation of information;
- an exceptional capacity for original, creative and/or logical thinking;
- an exceptional ability to organize, to analyze, to synthesize, to integrate ideas, and to express thoughts fluently;
- an exceptional ability to analyze and solve difficult problems related to subject matter.

80-89 Very Good to Excellent

A very good to excellent performance with strong evidence of

- a comprehensive grasp of subject matter;
- an ability to make sound critical evaluation of information;
- a very good to excellent capacity for original, creative and/or logical thinking;
- a very good to excellent ability to organize, to analyze, to synthesize, to integrate ideas, and to express thoughts fluently;
- a very good to excellent ability to analyze and solve difficult problems related to subject matter.

70-79 Satisfactory to Good

A satisfactory to good performance with evidence of

- a substantial knowledge of subject matter;
- a satisfactory to good understanding of the relevant issues and satisfactory to good familiarity with the relevant literature and technology;
- a satisfactory to good capacity for logical thinking;
- some capacity for original and creative thinking;
- a satisfactory to good ability to organize, to analyze, and to examine the subject matter in a critical and constructive manner;
- a satisfactory to good ability to analyze and solve moderately difficult problems.

60-69 Poor

A generally weak performance, but with some evidence of

- a basic grasp of the subject matter;
- some understanding of the basic issues;
- some familiarity with the relevant literature and techniques;
- some ability to develop solutions to moderately difficult problems related to the subject matter;
- some ability to examine the material in a critical and analytical manner.

<60 Failure

An unacceptable performance.

Program Requirements

- Percentage scores of at least 70% are required for a minimal pass performance in undergraduate courses taken by graduate students;
- For all other graduate courses, percentage scores of at least 60-69% are required for a minimal pass performance for each course which is included in a Master's program, provided that the student's Cumulative Weighted Average is at least 70%;
- Graduate courses for which students receive grades of 60-69% are minimally acceptable in a Postgraduate Diploma program, provided that the Cumulative Weighted Average is at least 65%

Course Overview

The Studio in Architectural Research, the first studio in the Master of Architecture sequence, provides an introduction to design research methodologies and their application to architecture. Each of the three sections of studio will investigate the design problems through a different lens tuned to specific issues within current architectural practice: Design for Extreme Climates; Community Centred Design; or Advanced Construction Technologies~~; students will choose one of the three sections for their work~~. ~~Within these specializations are shared historical, technical, and professional courses that provide opportunities for intellectual consistency and cross fertilization among the program.~~

To begin, research and analysis of architectural practices are conducted to determine an array of critical positions among contemporary discourses within (but not limited to) the chosen research concentration. The initial venture into a specific territory of research possibilities arises out of the allocation of these practices into a range of alliances and agonisms. The refinement of the students' initial positions through similarity and difference within and among the discourses commences the process of design research.

The design research media of the studio is conducted through a series of quick probes – a small structure, an interior, a detail, and a housing project of small scale. The variety of type and scale of these probes provides dexterity and encourages intellectual agility. This leads to the process, rather than the product, of design research becoming the focus of the research studio.

Class Schedule

Week	Module	Readings Discussions and Activities	Deadlines
1	Course Introduction Project 1: Small structure	Readings will be provided by individual instructors for their sections.	
2	Project 1: Small structure	Work in studio. Desk crits and small group discussions.	
3	Project 1: Small structure	Review and Discussion: Project 1	Project 1 Due
4	Project 2: An interior	Work in studio. Desk crits and small group discussions.	
5	Project 2: An interior	Work in studio. Desk crits and small group discussions.	
6	Project 2: An interior	Review and Discussion: Project 2	Project 2 Due
7	Project 3: A detail	Work in studio. Desk crits and small group discussions.	
8	Project 3: A detail	Work in studio. Desk crits and small group discussions.	Symposium I

9	Project 3: A detail	Review and Discussion: Project 3	Project 3 Due
10	Project 4: Housing	Work in studio. Desk crits and small group discussions.	
11	Project 4: Housing	Work in studio. Desk crits and small group discussions.	
12	Project 4: Housing	Work in studio. Desk crits and small group discussions.	
13	Project 4: Housing	Work in studio. Desk crits and small group discussions.	Project 4 Due
	Final Reviews	Final reviews will be held in lieu of a final exam, during the exam period.	Portfolio Due

Midterm and Final Examination Scheduling

Midterm and final examinations must be written on the date scheduled.
Final examinations may be scheduled at any time during the examination period (INSERT FIRST AND LAST DAY OF CURRENT EXAM PERIOD); students should therefore avoid making prior travel, employment, or other commitments for this period. If a student is unable to write an exam through no fault of his or her own for medical or other valid reasons, documentation must be provided and an opportunity to write the missed exam may be given. Students are encouraged to review all examination policies and procedures:

http://students.usask.ca/academics/exams.php

Length and Mode of Final Examination

Final reviews will be held during the examination period in lieu of a final exam. Reviews will be scheduled for a six-hour period. All students are required to attend all reviews. External critics will be invited to the sessions.

Instructor Information

Note: This information will be completed before the syllabus is released to students.

Contact Information

TBD

Office Hours

TBD

Instructor Profile

The instructor will have a graduate degree in architecture and either a PhD in architecture or architectural theory or architectural licensure. The instructor will be a member of the Graduate Faculty.

~~Required Activities Outside of Class Time~~

~~The student-organized symposia will take place outside of class time.~~

Required Resources

Readings/Textbooks

There are no required texts for this studio. As graduate students, students will be expected to find their own sources.

~~Textbooks are available from the University of Saskatchewan Bookstore: www.usask.ca/consumer_services/bookstore/textbooks~~

Electronic Resources

Section instructors will post readings and other materials to the BBLearn site as appropriate.

Grading Scheme

Project 1: Small Structure	20%
Project 2: An Interior	20%
Project 3: A Detail	15%
Project 4: Housing Project	35%
Portfolio	10%
Total	100%

Evaluation Components

Assignment 1: Small Structure

Value: 20% of final grade
Due Date: See Course Schedule
Type: Design Project
Description: Students will produce designs for a small structure, such as a park pavilion. Design positions and the resulting research will vary depending on the area of concentration of the section. For example, students studying Extreme Climate Design are likely to pay attention to environmental conditions and how those can be mediated; students studying Community-Centred Design may focus on community need, accessibility, or consultation; and those studying Advanced Manufacturing may study the ways in which the mobilization of such

technologies could inform formal and material decisions.

Assignment 2: An Interior

Value: 20% of final grade
Date: See Course Schedule
Type: Design Project
Description: Each section will now put their knowledge and research methodologies to work to consider the design of an interior space. The programmatic nature of the space may vary from section to section.

Project 3: A Detail

Value: 15% of final grade
Date: See Course Schedule
Type: Design Project
Description: One detail taken from either the Small Structure or the Interior project is developed to a higher level of resolution and performance.

Project 4: Housing Project

Value: 35% of final grade
Date: See Course Schedule
Type: Design Project
Description: Students carry their design research methods into the design of a multi-family housing project.

Portfolio

Value: 10% of final grade
Date: Due at final review
Type: Portfolio of work of the term
Description: Students will compile their work of the term into a portfolio that reflects on their learning.

Submitting Assignments

Assignments are to be submitted through the course BBLearn dropbox.

Late Assignments

Aside from situations requiring accommodation due to illness or other documented emergency in accordance with University policies, late assignments will not be accepted.

Criteria That Must Be Met to Pass

All evaluation criteria must be completed in order to pass this course.

Attendance Expectations

Attendance at all sessions is expected, although attendance will not be taken.

Recording of the Course

Recording of the course will only be allowed in circumstances where it is required as part of an accommodation for students with special needs.

Collection of Student Work

Students should be aware that they will be required to document their work for the purposes of CACB accreditation of the Architecture program. As well, work may be collected and archived by the program for this same reason.

Copyright

Materials posted on BBLearn or distributed in class will be made available in accordance with Canadian copyright laws. Students are reminded of their obligation to also abide by this legislation.

Student Feedback

Students will be asked to complete an anonymous survey at the completion of the course, which will include an area for freeform feedback.

Integrity Defined (from the Office of the University Secretary)

The University of Saskatchewan is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect. Students are particularly urged to familiarize themselves with the provisions of the Student Conduct & Appeals section of the University Secretary Website and avoid any behavior that could potentially result in suspicions of cheating, plagiarism, misrepresentation of facts and/or participation in an offence. Academic dishonesty is a serious offence and can result in suspension or expulsion from the University.

All students should read and be familiar with the Regulations on Academic Student Misconduct (http://www.usask.ca/secretariat/student-conduct-appeals/StudentAcademicMisconduct.pdf) as well as the Standard of Student Conduct in Non-Academic Matters and Procedures for Resolution of Complaints and Appeals (http://www.usask.ca/secretariat/student-conduct-appeals/StudentNon-AcademicMisconduct.pdf)

For more information on what academic integrity means for students see the Student Conduct & Appeals section of the University Secretary Website at:
http://www.usask.ca/secretariat/student-conduct-appeals/forms/IntegrityDefined.pdf

Examinations with Disability Services for Students (DSS)

Students who have disabilities (learning, medical, physical, or mental health) are strongly encouraged to register with Disability Services for Students (DSS) if they have not already done so. Students who suspect they may have disabilities should contact DSS for advice and referrals. In order to access DSS programs and supports, students must follow DSS policy and procedures. For more information, check http://students.usask.ca/health/centres/disability-services-for-students.php, or contact DSS at 966-7273 or dss@usask.ca.

Students registered with DSS may request alternative arrangements for mid-term and final examinations.
Students must arrange such accommodations through DSS by the stated deadlines. Instructors shall provide the examinations for students who are being accommodated by the deadlines established by DSS.

Student Supports

Student Learning Services

Student Learning Services (SLS) offers assistance to U of S undergrad and graduate students. For information on specific services, please see the SLS web site https://www.usask.ca/ulc/.

Student and Enrolment Services Division

The Student and Enrolment Services Division (SESD) focuses on providing developmental and support services and programs to students and the university community. For more information, see the SESD web site http://www.usask.ca/sesd/.

College Supports

Students in Arts & Science are encouraged to contact the Undergraduate Student Office and/or the Trish Monture Centre for Success with any questions on how to choose a major; understand program requirements; choose courses; develop strategies to improve grades; understand university policies and procedures; overcome personal barriers; initiate pre-career inquiries; and identify career planning resources. Contact information is available at:
(http://artsandscience.usask.ca/undergraduate/advising/)

Treaty Acknowledgement

As we gather here today, we acknowledge we are on Treaty Six Territory and the Homeland of the Métis. We pay our respect to the First Nation and Métis ancestors of this place and reaffirm our relationship with one another.

CACB Student Performance Criteria

Within the Architecture professional program at the University of Saskatchewan, this course is responsible for demonstrating the following Student Performance Criteria as set out by the CACB:

A2. Elective Courses:
Opportunities for students to develop particular areas of expertise or to study topics of personal interest within the discipline of architecture.
D1. Design Theories, Precedents and Methods:
Ability to articulate an intentional design process grounded in one or more theoretical positions, an understanding of important design principles and methods, and the analysis of critical architectural precedents, and to apply these to the design of buildings, landscapes, spaces, building components and/or other architectural projects.

D2. Design Skills:
Ability to apply organizational, spatial, structural, and constructional principles to the conception, configuration and design of buildings, spaces, building elements, and tectonic components

D3. Design Tools:
Ability to use the broad range of design tools available to the architectural profession, including traditional and emerging techniques of two-dimensional and three-dimensional representation, computational design, modeling, simulation and fabrication.

D8. Design Documentation:
Ability to document and present the outcome of a design project using the broad range of media available to the architectural profession, including the types of documentation for the purposes of construction and to understand the role of contract documents and specifications in this process.

E1. Critical Thinking: Research, Analysis, Synthesis
Ability to raise clear and precise questions; record, assess and comparatively evaluate information; synthesize research findings and test potential alternative outcomes against relevant criteria and standards; and reach well-supported conclusions related to a specific project or assignment.

E2. Communication Skills: Writing, speaking and graphic communication
Ability to write and speak effectively and use graphic media to appropriately communicate on subject matter related to the architectural discipline both within the profession and with the general public.

G1. Design Research
Ability to apply research and investigative methods in the design process.
G2. Design Analysis

ARCD 811.6 Studio in Architectural Research

Ability to analyze design inputs, including the use of architectural and urban precedents, evaluate the implications of potential design options, and demonstrate the skills associated with assessing multiple variables during the design process. This includes problem identification, setting evaluative criteria, analyzing solutions, and predicting the effectiveness of implementation.

G3. Design Synthesis

Ability to make design decisions and synthesize variables within a moderately complex architectural project while demonstrating consideration and integration of social, cultural, spatial, material, environmental, and technological systems.

UNIVERSITY OF SASKATCHEWAN
College of Graduate Studies and Research
Room C180 Administration Building, 105 Administration Place, Saskatoon SK CANADA S7N 5A2
Telephone (306)966-5751, Fax: (306)966-5756, General E-mail: grad.studies@usask.ca

GSR 400.1
New Graduate Course Proposal

In addition to this form, please complete and submit a *Course Creation Information* form, available on the University website (www.usask.ca/university_secretary/council/committees/academic_programs/report_files/course_creation.php), to the Department of Academic Services and Financial Assistance, Student and Enrolment Services Division.

EXAM EXEMPTION: Yes ☐ **(must complete section 6.1)** No ☒

Basic information about the proposed course:

1. Department/Unit: Art and Art History College of: Arts and Science

2. _____ _____
(Authorizing Unit Head - PLEASE PRINT) (Authorizing Unit Head - SIGNATURE)

3. Information required for the calendar:
   - 3.1 Label and number of course: ARCD 812.3
   - 3.2 Title of course: Structures II
   - 3.3 Total Hours: Lecture: 39
     Seminar: 0
     Lab: 0
     Tutorial: 0
     Other: 0
   - 3.4 Weekly Hours: Lecture: 3
     Seminar: 0
     Lab: 0
     Tutorial: 0
     Other: 0
   - 3.5 Term in which it will be offered: T1 ☒ T2 ☐ T1 or T2 ☐ T1 and T2 ☐
   - 3.6 Prerequisite: None
   - 3.7 Calendar description (not more than 50 words):

     Case studies are used to examine the successful conceptual development, structural design, and construction processes of architectural projects, with a particular focus on selecting and designing with structural steel, reinforced concrete and timber systems. Topics are studied using calculations, design aids, rules of thumb and the latest CSA design standards.

4. Rationale for introducing this course:

   This course is required for the proposed Master of Architecture degree program.

5. Impact of this course:
   - 5.1 Are the programs/courses of other academic units/Colleges affected by this new course (possible duplication)?
     No ☒ Yes **(Please list)**:

5.2 Were any other academic units asked to review or comment on the proposal?
No ☒ Yes **(Please attach correspondence)** ☐

5.3 Will the offering of this course lead to the deletion or modification of any other course(s)?
No ☒ Yes **(Please list)**: _____

5.4 Course(s) for which this graduate course will be a prerequisite?
ARCD 822.3 Integrated Systems

5.5 Is this course to be required by your graduate students, or by graduate students in another program?
No ☐ Yes **(Please list)**: Master of Architecture students

6. Course Information. **(Please append the Course Outline (Syllabus), including a separate Undergraduate Course Outline (Syllabus) if required. Information on Academic Integrity and Student Conduct can be found on the U of S website at http://www.usask.ca/university_secretary/honesty/)**

Checklist:
- ☒ Course objectives need to be clearly stated
- ☒ Description of and Activities for Evaluation must be listed
- ☒ **Course Outline** (syllabus) with **Reading List** must be included
- ☒ Percentage of Total Mark for each evaluation listed
- ☐ If undergraduate lectures are included, also submit the **Undergraduate Course Outline (Syllabus)** and include information on what additional activities make this a graduate level course. For guidelines, see '**Undergraduate Component of Graduate Courses**' under '*Forms for Graduate Chairs*' at http://www.usask.ca/cgsr/prospective_students/forms.php
- ☒ Professor must be a member of the Graduate Faculty

6.1 **EXAM EXEMPTION**: Please note, **if there is no final exam or if the final examination is worth less than 30% of the final grade** please provide a brief statement which explains why a final examination is inappropriate for this course.

7. Enrolment:

7.1 Expected Enrolment: 45

7.2 From which colleges/programs: College of Arts and Science / Master of Architecture only

8. Resources:

8.1 Proposed instructor(s) (Please include qualifications):

The instructor should be a licensed professional engineer in Saskatchewan and be suitable to teach non-engineers (minimum ten years) preferably with experience in a consulting practice. The instructor will be a member of the graduate faculty.

8.2 How does the department plan to handle the additional teaching or administrative workload:

This course is proposed as part of the new M.Arch. program. Teaching and administrative requirements are being reviewed as part of that proposal.

8.3 Are sufficient library or other research resources available for this course:

Yes

8.4 Are any additional resources required (library, audio-visual, technology, lab equipment, lab space, etc.):

Resources are being reviewed as part of the M.Arch. program proposal.

9. Date of Implementation:

9.1 To be offered: Annually ☒ Biennially ☐ Alternate Years ☐ Other ☐

This course will conform to the academic requirements and standards for graduate courses, including the rules of *Student Appeals in Academic Matters* (see www.usask.ca/university_secretary/council/reports_forms/reports/12-06-99.php) and Academic Integrity and Student Conduct (see www.usask.ca/university_secretary/honesty/).

Date of Approval by College (of the home academic unit): _____

The signature of the Dean of your College signifies that the necessary resources are either available or shall be supplied by the College/Department budget.

_____
(Authorizing College Signature (of the home academic unit)

_____
(Name of Person Signing Above - PLEASE PRINT)

Form version April 2009

UNIVERSITY OF SASKATCHEWAN

ARCD 812.3 Structures II

Term 1

First Proposed Offering ~~2020~~ 2022

Format: Lecture, 3 hours per week
Date and time: TBD
Instructor:

Course Description

Case studies are used to examine the successful conceptual development, structural design, and construction processes of architectural projects, with a particular focus on selecting and designing with structural steel, reinforced concrete and timber systems. Topics are studied using calculations, design aids, rules of thumb and the latest CSA design standards.

Prerequisites

None

Learning Outcomes

By the completion of this course, students will be expected to:

1. Be able to apply the principles of structural behaviour in withstanding gravitational, seismic, and lateral forces
2. Consider the effects of building systems, such as structural and environmental, as well as their integration on the form and materiality of a building
3. Make appropriate preliminary selections of structural systems in relation to design intentions for a building
4. Understand load paths
5. Be able to make use of the Steel, Concrete and Timber Design Manuals to assist in preliminary member sizing and spacing
6. Understand the impact of wind and seismic issues on structural design and stability
7. Be able to have an intelligent conversation with a consulting engineer.

Information on literal descriptors for grading at the University of Saskatchewan can be found at: http://students.usask.ca/academics/grading/grading-system.php

Please note: There are different literal descriptors for undergraduate and graduate students.

More information on the Academic Courses Policy on course delivery, examinations and assessment of student learning can be found at:

http://policies.usask.ca/policies/academic-affairs/academic-courses.php

The University of Saskatchewan Learning Charter is intended to define aspirations about the

learning experience that the University aims to provide, and the roles to be played in realizing these aspirations by students, instructors and the institution. A copy of the Learning Charter can be found at: http://www.usask.ca/university_secretary/LearningCharter.pdf

Course Overview

This course will greatly expand upon the structural information introduced in Structures I and the Building Technology Courses. The use of case studies will focus the discussions on real world examples in order to better understand the general sizing and detailing of structural systems of varying sizes, spans and building functions. Suitability of systems will be addressed including limitations, constraints and possibilities. Students should be able to carry out system selection and preliminary member sizing and spacing. The focus is not for architects to be able to do their own structural sizing but rather work effectively on projects with consulting engineers in a collaborative sense for the best decisions and outcomes.

University of Saskatchewan Grading System (for graduate courses)

90-100 Exceptional

A superior performance with consistent strong evidence of

- a comprehensive, incisive grasp of subject matter;
- an ability to make insightful, critical evaluation of information;
- an exceptional capacity for original, creative and/or logical thinking;
- an exceptional ability to organize, to analyze, to synthesize, to integrate ideas, and to express thoughts fluently;
- an exceptional ability to analyze and solve difficult problems related to subject matter.

80-89 Very Good to Excellent

A very good to excellent performance with strong evidence of

- a comprehensive grasp of subject matter;
- an ability to make sound critical evaluation of information;
- a very good to excellent capacity for original, creative and/or logical thinking;
- a very good to excellent ability to organize, to analyze, to synthesize, to integrate ideas, and to express thoughts fluently;
- a very good to excellent ability to analyze and solve difficult problems related to subject matter.

70-79 Satisfactory to Good

A satisfactory to good performance with evidence of

- a substantial knowledge of subject matter;
- a satisfactory to good understanding of the relevant issues and satisfactory to good familiarity with the relevant literature and technology;
- a satisfactory to good capacity for logical thinking;
- some capacity for original and creative thinking;
- a satisfactory to good ability to organize, to analyze, and to examine the subject matter in a critical and constructive manner;
- a satisfactory to good ability to analyze and solve moderately difficult problems.

60-69 Poor

A generally weak performance, but with some evidence of

- a basic grasp of the subject matter;
- some understanding of the basic issues;
- some familiarity with the relevant literature and techniques;
- some ability to develop solutions to moderately difficult problems related to the subject matter;
- some ability to examine the material in a critical and analytical manner.

<60 Failure

An unacceptable performance.

Program Requirements

- Percentage scores of at least 70% are required for a minimal pass performance in undergraduate courses taken by graduate students;
- For all other graduate courses, percentage scores of at least 60-69% are required for a minimal pass performance for each course which is included in a Master's program, provided that the student's Cumulative Weighted Average is at least 70%;

Graduate courses for which students receive grades of 60-69% are minimally acceptable in a Postgraduate Diploma program, provided that the Cumulative Weighted Average is at least 65%;

Course Schedule

Week	Topic	Readings	Assignment
1	Advanced Loads / Loading in More Complex Buildings	Salvadori, Oakley and Heller. Structure in Architecture: The Building of Buildings (4th Edition), Pearson, 2016.Part I: Fundamental Concepts, Chapters 1 through 5	
2	Structural system selection based on building design and use.	Salvadori: Part II: Structural Forms, Chapters 7 and 8	
3	Steel Structural Systems, (members, sizes, spans, column bay spacing, method for achieving stability) (Part 1)	Salvadori: Part II: Chapters 6, 9	
4	Steel Structural Systems, (members, sizes, spans, column bay spacing, method for achieving stability) (Part 2)	Boake, Terri Meyer. Understanding Steel Design: An Architectural Design Manual. Birkhauser, 2012. Chapters 1 through 5	Quiz 1
5	Steel Structural Systems, (members, sizes, spans, column bay spacing, method for achieving stability) (Part 3)	CISC Handbook	
6	Concrete Structural Systems, (members, sizes, spans, column bay spacing, method for achieving stability) (Part 1 – reinforced, monolithic, thin shells)	.Salvadori: Part III: Chapters 7, 10, 12 Concrete Handbook	Quiz 2
7	Concrete Structural Systems, (members, sizes, spans, column bay spacing, method for achieving	Salvadori: Part III: Chapters 7, 10, 12 Concrete Handbook	

	stability) (Part 2 – Precast and Prestressed)	Precast Concrete Design Manual	
8	Heavy Timber and Cross Laminated Timber, (members, sizes, spans, column bay spacing, method for achieving stability) (Part 1)	Timber Manual, selected readings	
9	Heavy Timber and Cross Laminated Timber, (members, sizes, spans, column bay spacing, method for achieving stability) (Part 2)	Timber Manual, selected readings (CLT is very new so expect new materials to be added)	
10	Seismic, Wind Design and Bracing Systems	Salvadori: Part III: Chapter 13, Structural Failures	Quiz 3
11	Tall Building Design	Boake: Chapter 13 Online resources, CTBUH	
12	Architecturally Exposed Systems (impact on architectural design and detailing); long spans, cantilevers, non-orthogonal geometries, innovative systems	Salvadori: Part III: Chapter 14, Structural Aesthetics Boake: Chapters 5 and 6	
13	Case study presentations / Wrap Up (making buildings constructable, the impact of our structural selections on buildability, cost and safety)		Presentations
	Final Exam		

Midterm and Final Examination Scheduling

Midterm and final examinations must be written on the date scheduled.

Final examinations may be scheduled at any time during the examination period (INSERT FIRST AND LAST DAY OF CURRENT EXAM PERIOD); students should therefore avoid making prior travel, employment, or other commitments for this period. If a student is unable to write an exam through no fault of his or her own for medical or other valid reasons, documentation must be provided and an opportunity to write the missed exam may be given. Students are encouraged to review all examination policies and procedures:

http://students.usask.ca/academics/exams.php

Length and Mode of Final Examination

The final exam will be two hours in length and will be comprised of a number of short-answer questions that will require synthesis of the course material.

Instructor Information

Contact Information

TBD

Office Hours

TBD

Instructor Profile

The instructor should be a licensed professional engineer in Saskatchewan and be suitable to teach non-engineers (minimum ten years) preferably with experience in a consulting practice. The instructor will be a member of the graduate faculty.

Required Resources

Readings/Textbooks

Students are expected to purchase the following books:

Salvadori, Oakley and Heller. Structure in Architecture: The Building of Buildings (4th Edition), Pearson, 2016.

Boake, Terri Meyer. Understanding Steel Design: An Architectural Design Manual. Birkhauser, 2012.

Textbooks are available from the University of Saskatchewan Bookstore:
www.usask.ca/consumer_services/bookstore/textbooks

Supplementary Resources

Steel Detailing: http://www.tboake.com/SSEF1/index.shtml

Students will need access to the following:

CISC Steel Design Manual.
Concrete Design Manual.
Timber Design Manual.
Precast Concrete Design Manual.
Other industry material as required.

Grading Scheme

In class exercises/quizzes	30%
Case Study ~~Essay~~ Report and Presentation	30%
Class Participation	10%
Final Exam	30%

Total	100%

Evaluation Components

Quiz 1: Structural Steel Design

Value: 5% of final grade
Due Date: See Course Schedule
Type: Short answer and problem solving
Length: 30 minutes
Description: Students will show that they can select structural members using the CISC Handbook and address systems selection appropriateness for building types

Quiz 2: Reinforced Concrete Design

Value: 5% of final grade
Due Date: See Course Schedule
Type: Short answer and problem solving
Length: 30 minutes
Description: Students will show that they can address systems selection appropriateness for building types and understand the placement of tension reinforcing

Quiz 3: Timber Design

Value: 5% of final grade
Due Date: See Course Schedule
Type: Short answer and problem solving
Length: 30 minutes
Description: Students will show that they can make an approximate design of a heavy timber system including connection detailing

Participation

Value: 10% of final grade
There will be a series of in class quizzes to test on the three main structural systems as the term progresses. These will involve a discussion session as the quizzes are taken up in class which will feed into the class participation grade.

Project: Case Study ~~Essay~~ Report and Presentation

Value: 30% of final grade
Due Date: See Course Schedule
Type: Research report
Description: The Case Study ~~Essay~~ Report and Presentation will be a major focus of the work of the term. These will be done in groups of 3 to 4 students as is best suited by the class size. It will be required that all students speak as part of the presentation graded component. The ~~Essay~~ report will be illustrated and of approximately 2,000 words in length. The Powerpoint presentations should be 10 minutes in length and include detailed analysis drawings of the structural system, load paths, critical connection details. A list of important contemporary buildings will be provided for selection.

Final Exam

Value: 30% of final grade
Due Date: See Course Schedule
Type: Short answer and problem solving and sketch design
Length: 2 hours
Description: The final exam will focus on overall systems selection and include some short design problems that ask students to make systems selection and approximate sizing. Compare and contrast pros and cons of systems for building types.

Submitting Assignments

Assignments are to be submitted through the course BBLearn dropbox.

Late Assignments

Aside from situations requiring accommodation due to illness or other documented emergency in accordance with University policies, late assignments will not be accepted.

Criteria That Must Be Met to Pass

All evaluation criteria must be completed in order to pass this course.

Attendance Expectations

Attendance at all sessions is expected, although attendance will not be taken.

Participation

Participation grade as per above details.

Recording of the Course

Recording of the course will only be allowed in circumstances where it is required as part of an accommodation for students with special needs.

Collection of Student Work

Students should be aware that they will be required to document their work for the purposes of CACB accreditation of the Architecture program. As well, work may be collected and archived by the program for this same reason.

Copyright

Materials posted on BBLearn or distributed in class will be made available in accordance with Canadian copyright laws. Students are reminded of their obligation to also abide by this legislation.

Student Feedback

Students will be asked to complete an anonymous survey at the completion of the course, which will include an area for freeform feedback.

Integrity Defined (from the Office of the University Secretary)

The University of Saskatchewan is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect. Students are particularly urged to familiarize themselves with the provisions of the Student Conduct & Appeals section of the University Secretary Website and avoid any behavior that could potentially result in suspicions of cheating, plagiarism, misrepresentation of facts and/or participation in an offence. Academic dishonesty is a serious offence and can result in suspension or expulsion from the University.

All students should read and be familiar with the Regulations on Academic Student Misconduct (http://www.usask.ca/secretariat/student-conduct-appeals/StudentAcademicMisconduct.pdf) as well as the Standard of Student Conduct in Non-Academic Matters and Procedures for Resolution of Complaints and Appeals (http://www.usask.ca/secretariat/student-conduct-appeals/StudentNon-AcademicMisconduct.pdf)

For more information on what academic integrity means for students see the Student Conduct & Appeals section of the University Secretary Website at: http://www.usask.ca/secretariat/student-conduct-appeals/forms/IntegrityDefined.pdf

Examinations with Disability Services for Students (DSS)

Students who have disabilities (learning, medical, physical, or mental health) are strongly encouraged to register with Disability Services for Students (DSS) if they have not already done so. Students who suspect they may have disabilities should contact DSS for advice and referrals. In order to access DSS programs and supports, students

must follow DSS policy and procedures. For more information, check http://students.usask.ca/health/centres/disability-services-for-students.php, or contact DSS at 966-7273 or dss@usask.ca.

Students registered with DSS may request alternative arrangements for mid-term and final examinations. Students must arrange such accommodations through DSS by the stated deadlines. Instructors shall provide the examinations for students who are being accommodated by the deadlines established by DSS.

Student Supports

Student Learning Services

Student Learning Services (SLS) offers assistance to U of S undergrad and graduate students. For information on specific services, please see the SLS web site https://www.usask.ca/ulc/.

Student and Enrolment Services Division

The Student and Enrolment Services Division (SESD) focuses on providing developmental and support services and programs to students and the university community. For more information, see the SESD web site http://www.usask.ca/sesd/.

College Supports

Students in Arts & Science are encouraged to contact the Undergraduate Student Office and/or the Trish Monture Centre for Success with any questions on how to choose a major; understand program requirements; choose courses; develop strategies to improve grades; understand university policies and procedures; overcome personal barriers; initiate pre-career inquiries; and identify career planning resources. Contact information is available at: (http://artsandscience.usask.ca/undergraduate/advising/)

Treaty Acknowledgement

As we gather here today, we acknowledge we are on Treaty Six Territory and the Homeland of the Métis. We pay our respect to the First Nation and Métis ancestors of this place and reaffirm our relationship with one another.

CACB Student Performance Criteria

Within the Architecture professional program at the University of Saskatchewan, this course is responsible for demonstrating the following Student Performance Criteria as set out by the CACB:

F2. Structural Systems

Understanding of the principles of structural behavior in withstanding gravitational, seismic, and lateral forces, including the selection and application of appropriate structural systems.

UNIVERSITY OF SASKATCHEWAN
College of Graduate Studies and Research
Room C180 Administration Building, 105 Administration Place, Saskatoon SK CANADA S7N 5A2
Telephone (306)966-5751, Fax: (306)966-5756, General E-mail: grad.studies@usask.ca

GSR 400.1
New Graduate Course Proposal

In addition to this form, please complete and submit a *Course Creation Information* form, available on the University website (www.usask.ca/university_secretary/council/committees/academic_programs/report_files/course_creation.php), to the Department of Academic Services and Financial Assistance, Student and Enrolment Services Division.

EXAM EXEMPTION: Yes ☒ **(must complete section 6.1)** No ☐

Basic information about the proposed course:

1. Department/Unit: Art and Art History College of: Arts and Science

2. _____ _____
(Authorizing Unit Head - PLEASE PRINT) (Authorizing Unit Head - SIGNATURE)

3. Information required for the calendar:
   - 3.1 Label and number of course: ARCD 814.3
   - 3.2 Title of course: Research Practices in Architecture
   - 3.3 Total Hours: Lecture: 39
     Seminar: 0
     Lab: 0
     Tutorial: 0
     Other: 0
   - 3.4 Weekly Hours: Lecture: 3
     Seminar: 0
     Lab: 0
     Tutorial: 0
     Other: 0
   - 3.5 Term in which it will be offered: T1 ☒ T2 ☐ T1 or T2 ☐ T1 and T2 ☐
   - 3.6 Prerequisite: None - Corequisite: 811.6 Studio in Architectural Research
   - 3.7 Calendar description (not more than 50 words):

     The various methods and practices of research in architecture are investigated, including archival research, experimental research and design research. Students will be expected to make use of the tools of architectural practice as research methodologies.

4. Rationale for introducing this course:

   This course is required for the proposed Master of Architecture degree program.

5. Impact of this course:
   - 5.1 Are the programs/courses of other academic units/Colleges affected by this new course (possible duplication)?
     No ☒ Yes **(Please list)**:

5.2 Were any other academic units asked to review or comment on the proposal?

No ☒ Yes **(Please attach correspondence)** ☐

5.3 Will the offering of this course lead to the deletion or modification of any other course(s)?

No ☒ Yes **(Please list)**: _____

5.4 Course(s) for which this graduate course will be a prerequisite?

None

5.5 Is this course to be required by your graduate students, or by graduate students in another program?

No ☐ Yes **(Please list)**: Master of Architecture students

6. Course Information. **(Please append the Course Outline (Syllabus), including a separate Undergraduate Course Outline (Syllabus) if required. Information on Academic Integrity and Student Conduct can be found on the U of S website at http://www.usask.ca/university_secretary/honesty/)**

Checklist:
- ☒ Course objectives need to be clearly stated
- ☒ Description of and Activities for Evaluation must be listed
- ☒ **Course Outline** (syllabus) with **Reading List** must be included
- ☒ Percentage of Total Mark for each evaluation listed
- ☐ If undergraduate lectures are included, also submit the **Undergraduate Course Outline (Syllabus)** and include information on what additional activities make this a graduate level course. For guidelines, see '**Undergraduate Component of Graduate Courses**' under '*Forms for Graduate Chairs*' at http://www.usask.ca/cgsr/prospective_students/forms.php
- ☒ Professor must be a member of the Graduate Faculty

6.1 **EXAM EXEMPTION**: Please note, **if there is no final exam or if the final examination is worth less than 30% of the final grade** please provide a brief statement which explains why a final examination is inappropriate for this course.

This course culminates in a design|research project in lieu of a final exam.

7. Enrolment:

7.1 Expected Enrolment: 45

7.2 From which colleges/programs: College of Arts and Science / Master of Architecture only

8. Resources:

8.1 Proposed instructor(s) (Please include qualifications):

The instructor will have a graduate degree in architecture and either a PhD in architecture or architectural theory or architectural licensure. The instructor will be a member of the Graduate Faculty.

8.2 How does the department plan to handle the additional teaching or administrative workload:

This course is proposed as part of the new M.Arch. program. Teaching and administrative requirements are being reviewed as part of that proposal.

8.3 Are sufficient library or other research resources available for this course:

Yes

8.4 Are any additional resources required (library, audio-visual, technology, lab equipment, lab space, etc.):

This course will require studio space for all students, as identified in the Program Proposal.

9. Date of Implementation:

9.1 To be offered: Annually ☒ Biennially ☐ Alternate Years ☐ Other ☐

This course will conform to the academic requirements and standards for graduate courses, including the rules of *Student Appeals in Academic Matters* (see www.usask.ca/university_secretary/council/reports_forms/reports/12-06-99.php) and Academic Integrity and Student Conduct (see www.usask.ca/university_secretary/honesty/).

Date of Approval by College (of the home academic unit): _____

The signature of the Dean of your College signifies that the necessary resources are either available or shall be supplied by the College/Department budget.

_____
(Authorizing College Signature (of the home academic unit)

_____
(Name of Person Signing Above - PLEASE PRINT)

Form version April 2009

UNIVERSITY OF SASKATCHEWAN

ARCD 814.3 Research Practices in Architecture

Term 1

First Proposed Offering ~~2020~~ 2022

Delivery Format: Lecture, 3 hours per week

Location and Date: TBD

Instructor: TBD

Course Description

The various methods and practices of research in architecture are investigated, including archival research, experimental research and design research. Students will be expected to make use of the tools of architectural practice as research methodologies.

Corequisite

811.6 Studio in Architectural Research

Learning Outcomes

By the completion of this course, students will be expected to:

1. Conduct research of various types in relation to issues encountered within architectural design practice
2. Critically review the current state of architectural research
3. Use the techniques of architectural practice as research methodologies on subjects and questions in a number of fields
4. Construct an effective research question and design a process and methodology to respond to that question
5. Conduct research to respond to questions at the leading edge of the architectural discipline

More information on the Academic Courses Policy on course delivery, examinations and assessment of student learning can be found at:
http://policies.usask.ca/policies/academic-affairs/academic-courses.php
The University of Saskatchewan Learning Charter is intended to define aspirations about the learning experience that the University aims to provide, and the roles to be played in realizing these aspirations by students, instructors and the institution. A copy of the Learning Charter can be found at: http://www.usask.ca/university_secretary/LearningCharter.pdf
Information on literal descriptors for grading at the University of Saskatchewan can be found at: http://students.usask.ca/academics/grading/grading-system.php

University of Saskatchewan Grading System (for graduate courses)

90-100 Exceptional

A superior performance with consistent strong evidence of

- a comprehensive, incisive grasp of subject matter;
- an ability to make insightful, critical evaluation of information;
- an exceptional capacity for original, creative and/or logical thinking;
- an exceptional ability to organize, to analyze, to synthesize, to integrate ideas, and to express thoughts fluently;
- an exceptional ability to analyze and solve difficult problems related to subject matter.

80-89 Very Good to Excellent

A very good to excellent performance with strong evidence of

- a comprehensive grasp of subject matter;
- an ability to make sound critical evaluation of information;
- a very good to excellent capacity for original, creative and/or logical thinking;
- a very good to excellent ability to organize, to analyze, to synthesize, to integrate ideas, and to express thoughts fluently;
- a very good to excellent ability to analyze and solve difficult problems related to subject matter.

70-79 Satisfactory to Good

A satisfactory to good performance with evidence of

- a substantial knowledge of subject matter;
- a satisfactory to good understanding of the relevant issues and satisfactory to good familiarity with the relevant literature and technology;
- a satisfactory to good capacity for logical thinking;
- some capacity for original and creative thinking;
- a satisfactory to good ability to organize, to analyze, and to examine the subject matter in a critical and constructive manner;
- a satisfactory to good ability to analyze and solve moderately difficult problems.

60-69 Poor

A generally weak performance, but with some evidence of

- a basic grasp of the subject matter;
- some understanding of the basic issues;
- some familiarity with the relevant literature and techniques;
- some ability to develop solutions to moderately difficult problems related to the subject matter;
- some ability to examine the material in a critical and analytical manner.

<60 Failure

An unacceptable performance.

Program Requirements

- Percentage scores of at least 70% are required for a minimal pass performance in undergraduate courses taken by graduate students;
- For all other graduate courses, percentage scores of at least 60-69% are required for a minimal pass performance for each course which is included in a Master's program, provided that the student's Cumulative Weighted Average is at least 70%;
- Graduate courses for which students receive grades of 60-69% are minimally acceptable in a Postgraduate Diploma program, provided that the Cumulative Weighted Average is at least 65%

Course Overview

In this course, students will gain an understanding of the typical research techniques used in architectural practice. In addition to surveying the modes of research particular to architecture and how they can be applied to particular projects, we will attempt to understand the goals of architectural research.

Traditionally, architectural research has been understood as the types of research done by architects in preparation for a building project. In this course we will move beyond that definition to examine forms of research that seek to move the discipline and practice of architecture forward. As one could imagine, such research can take many forms and be broad in its approach, even regularly transgressing disciplinary boundaries – becoming inter- multi- cross- or trans-disciplinary in its practices. Students will carry out a case study of a design|research practice and a design|research project (illustrated essay) on a topic related to their interests. In addition, each research group (organized by studio section) will produce a public symposium on selected research issues related to their area of concern.

Class Schedule

Week	Topic	Readings	Assignment
1	Course introduction: What is architectural research?	Wang, D., & Groat, L. N. (2013). *Architectural research methods*. Hoboken NJ: Wiley. ch. 1. Dodds, G. and J. Erdman, eds. (2007). Architectural Design as Research, Scholarship and Inquiry: Journal of Architectural Education, Vol. 61 No. 1. Washington, D.C.: ACSA., Introduction. Echinique, M., Short, A., and Steemers, K. (2005). What is Architectural Research? Architectural Research Quarterly Vol , No 1, pp. 13-16.	
2	Asking good questions: Successfully framing research inquiry	Hinson, P., Design as Research. In Dodds and Erdman.	
3	Understanding the state of research: The literature review,	Wang and Groat, ch. 3, 11, 12.	

	precedents and case studies		
4	What do we mean by data?	Wang and Groat, ch. 8.	Case Study
5	Pre-design: developing a research-based program	Dodds and Erdman, pp 7-31. Manzini, E.(2007). Design Research for Sustainable Social Innovation. In Design research now. (2007). Basel: Birkhauser Va.	
6	Research tools: Surveys, consultations and focus groups	Alreck, P. L., & Settle, R. B. (2004). The survey research handbook. Boston (Mass.: McGraw-Hill/Irwin	
7	Site and context: data collection for a building project	LaGro, J. A. (2013). Site analysis: Informing context-sensitive and sustainable site planning and design. Hoboken: Wiley.	
8	Design as a research methodology	*Design Research Now,* pp. 25-98.	Symposium I
9	Post-0ccupancy and forensic evaluation	HEFCE (2006). Guide to post-occupancy evaluation.	Symposium II
10	Visualizing data	Tufte, E. R. (1983). The visual display of quantitative information. Cheshire, Conn. (Box 430, Cheshire 06410: Graphics Press.	Symposium III
11	Interpretive methods	Wang and Groat, ch. 6, 7.	
12	Experimentation, testing and simulation	Wang and Groat, ch. 9, 10.	
13	Conclusion: The uses abuses of research	McClure, U. (2007). The good, the bad and the ugly. In Dodds and Erdman.	Design-Research project

Midterm and Final Examination Scheduling

Midterm and final examinations must be written on the date scheduled.

Final examinations may be scheduled at any time during the examination period (INSERT FIRST AND LAST DAY OF CURRENT EXAM PERIOD); students should therefore avoid making prior travel, employment, or other commitments for this period. If a student is unable to write an exam through no fault of his or her own for medical or other valid reasons, documentation must be provided and an opportunity to write the missed exam may be given. Students are

encouraged to review all examination policies and procedures:

http://students.usask.ca/academics/exams.php

Length and Mode of Final Examination

This course has a major research project in lieu of a final examination.

Instructor Information

Note: This information will be completed before the syllabus is released to students.

Contact Information

TBD

Office Hours

TBD

Instructor Profile

The instructor will have a graduate degree in architecture and either a PhD in architecture or architectural theory or architectural licensure. The instructor will be a member of the Graduate Faculty.

Required Activities Outside of Class Time

The student-organized symposia will take place outside of class time.

Required Resources

Readings/Textbooks

Students are expected to purchase the following books:

Alreck, P. L., & Settle, R. B. (2004). The survey research handbook. Boston (Mass.: McGraw-Hill/Irwin.

Design research now. (2007). Basel: Birkhauser Va.

LaGro, J. A. (2013). Site analysis: Informing context-sensitive and sustainable site planning and design. Hoboken: Wiley.

Wang, D., & Groat, L. N. (2013). *Architectural research methods*. Hoboken NJ: Wiley.

Recommended:

Tufte, E. R. (1983). The visual display of quantitative information. Cheshire, Conn. (Box 430, Cheshire 06410: Graphics Press.

Textbooks are available from the University of Saskatchewan Bookstore:

www.usask.ca/consumer_services/bookstore/textbooks

Electronic Resources

Links to the following readings will be made available through the BBLearn site:

HEFCE (2006). Guide to post-occupancy evaluation. Available at http://www.smg.ac.uk/documents/POEBrochureFinal06.pdf

Dodds, G. and J. Erdman, eds. (2007). Architectural Design as Research, Scholarship and Inquiry: Journal of Architectural Education, Vol. 61 No. 1. Washington, D.C.: ACSA.

Echinique, M., Short, A., and Steemers, K. (2005). What is Architectural Research? Architectural Research Quarterly Vol , No 1, pp. 13-16. http://journals2.scholarsportal.info/details.xqy?uri=/13591355/v09i0001/13_arqawadoo.xml

Grading Scheme

Case Study	30%
Symposium (group)	30%
Design-research project	40%
Total	100%

Evaluation Components

Assignment 1: Case Study

Value: 30% of final grade

Due Date: See Course Schedule

Type: Case study

Description: Students will produce a case study of an established design-research practice. The work will include 1500-2000 words of text describing and critically evaluating the work of the practice, its objectives and its structure, in the form of a poster presentation.

Assignment 2: Symposium

Value: 30% of final grade (including 10% peer-evaluation)

Date: See Course Schedule

Type: Symposium (group project)

Description: Each studio section will develop and produce a research symposium based on the issues that are being considered in their particular area of concern. The symposia will be held outside of class time, either at noon or in the evenings, and open to the University and the general public.

Design-research project

Value: 40% of final grade

Date: See Course Schedule

Type: 2500 to 3000 word illustrated ~~essay~~ research paper, or equivalent

Description: Students will undertake a design response to a research question chosen from their area of concern.

Submitting Assignments

Assignments are to be submitted through the course BBLearn dropbox.

Late Assignments

Aside from situations requiring accommodation due to illness or other documented emergency in accordance with University policies, late assignments will not be accepted.

Criteria That Must Be Met to Pass

All evaluation criteria must be completed in order to pass this course.

Attendance Expectations

Attendance at all sessions is expected, although attendance will not be taken.

Recording of the Course

Recording of the course will only be allowed in circumstances where it is required as part of an accommodation for students with special needs.

Collection of Student Work

Students should be aware that they will be required to document their work for the purposes of CACB accreditation of the Architecture program. As well, work may be collected and archived by the program for this same reason.

Copyright

Materials posted on BBLearn or distributed in class will be made available in accordance with Canadian copyright laws. Students are reminded of their obligation to also abide by this legislation.

Student Feedback

Students will be asked to complete an anonymous survey at the completion of the course, which will include an area for freeform feedback.

Integrity Defined (from the Office of the University Secretary)

The University of Saskatchewan is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect. Students are particularly urged to familiarize themselves with the provisions of the Student Conduct & Appeals section of the University Secretary Website and avoid any behavior that could potentially result in suspicions of cheating, plagiarism, misrepresentation of facts and/or participation in an offence. Academic dishonesty is a serious offence and can result in suspension or expulsion from the University.

All students should read and be familiar with the Regulations on Academic Student Misconduct (http://www.usask.ca/secretariat/student-conduct-appeals/StudentAcademicMisconduct.pdf) as well as the Standard of Student Conduct in Non-Academic Matters and Procedures for Resolution of Complaints and Appeals (http://www.usask.ca/secretariat/student-conduct-appeals/StudentNon-AcademicMisconduct.pdf)

For more information on what academic integrity means for students see the Student Conduct & Appeals section of the University Secretary Website at: http://www.usask.ca/secretariat/student-conduct-appeals/forms/IntegrityDefined.pdf

Examinations with Disability Services for Students (DSS)

Students who have disabilities (learning, medical, physical, or mental health) are strongly encouraged to register with Disability Services for Students (DSS) if they have not already done so. Students who suspect they may have disabilities should contact DSS for advice and referrals. In order to access DSS programs and supports, students must follow DSS policy and procedures. For more information, check http://students.usask.ca/health/centres/disability-services-for-students.php, or contact DSS at 966-7273 or dss@usask.ca.

Students registered with DSS may request alternative arrangements for mid-term and final examinations. Students must arrange such accommodations through DSS by the stated deadlines. Instructors shall provide the examinations for students who are being accommodated by the deadlines established by DSS.

Student Supports

Student Learning Services

Student Learning Services (SLS) offers assistance to U of S undergrad and graduate students. For information on specific services, please see the SLS web site https://www.usask.ca/ulc/.

Student and Enrolment Services Division

The Student and Enrolment Services Division (SESD) focuses on providing developmental and support services and programs to students and the university community. For more information, see the SESD web site http://www.usask.ca/sesd/.

College Supports

Students in Arts & Science are encouraged to contact the Undergraduate Student Office and/or the Trish Monture Centre for Success with any questions on how to choose a major; understand program requirements; choose courses; develop strategies to improve grades; understand university policies and procedures; overcome personal barriers; initiate pre-career inquiries; and identify career planning resources. Contact information is available at: (http://artsandscience.usask.ca/undergraduate/advising/)

Treaty Acknowledgement

As we gather here today, we acknowledge we are on Treaty Six Territory and the Homeland of the Métis. We pay our respect to the First Nation and Métis ancestors of this place and reaffirm our relationship with one another.

CACB Student Performance Criteria

Within the Architecture professional program at the University of Saskatchewan, this course is responsible for demonstrating the following Student Performance Criteria as set out by the CACB:

D1. Design Theories, Precedents and Methods:
Ability to articulate an intentional design process grounded in one or more theoretical positions, an understanding of important design principles and methods, and the analysis of critical architectural precedents, and to apply these to the design of buildings, landscapes, spaces, building components and/or other architectural projects.

D8. Design Documentation:
Ability to document and present the outcome of a design project using the broad range of media available to the architectural profession, including the types of documentation for the purposes of construction and to understand the role of contract documents and specifications in this process.

E1. Critical Thinking: Research, Analysis, Synthesis
Ability to raise clear and precise questions; record, assess and comparatively evaluate information; synthesize research findings and test potential alternative outcomes against relevant criteria and standards; and reach well-supported conclusions related to a specific project or assignment.

E2. Communication Skills: Writing, speaking and graphic communication
Ability to write and speak effectively and use graphic media to appropriately communicate on subject matter related to the architectural discipline both within the profession and with the general public.

G1. Design Research
Ability to apply research and investigative methods in the design process.
G2. Design Analysis
Ability to analyze design inputs, including the use of architectural and urban precedents, evaluate the implications of potential design options, and demonstrate the skills associated with assessing multiple variables during the design process. This includes problem

identification, setting evaluative criteria, analyzing solutions, and predicting the effectiveness of implementation.

UNIVERSITY OF SASKATCHEWAN
College of Graduate Studies and Research
Room C180 Administration Building, 105 Administration Place, Saskatoon SK CANADA S7N 5A2
Telephone (306)966-5751, Fax: (306)966-5756, General E-mail: grad.studies@usask.ca

GSR 400.1
New Graduate Course Proposal

In addition to this form, please complete and submit a *Course Creation Information* form, available on the University website (www.usask.ca/university_secretary/council/committees/academic_programs/report_files/course_creation.php), to the Department of Academic Services and Financial Assistance, Student and Enrolment Services Division.

EXAM EXEMPTION: Yes ☒ **(must complete section 6.1)** No ☐

Basic information about the proposed course:

1. Department/Unit: Art and Art History College of: Arts and Science

2. _____ _____
(Authorizing Unit Head - PLEASE PRINT) (Authorizing Unit Head - SIGNATURE)

3. Information required for the calendar:
   - 3.1 Label and number of course: ARCD 815.3
   - 3.2 Title of course: Professional Practice in Architecture
   - 3.3 Total Hours: Lecture: 39
     Seminar: 0
     Lab: 0
     Tutorial: 0
     Other: 0
   - 3.4 Weekly Hours: Lecture: 3
     Seminar: 0
     Lab: 0
     Tutorial: 0
     Other: 0
   - 3.5 Term in which it will be offered: T1 ☒ T2 ☐ T1 or T2 ☐ T1 and T2 ☐
   - 3.6 Prerequisite: None
   - 3.7 Calendar description (not more than 50 words):

     This course examines the current and evolving role of the professional architect within society and within the construction industry. The legal and regulatory framework for architectural practice in Canada is discussed, as are the ethical responsibilities of architects, and the role of the architect as advocate for the built environment.

4. Rationale for introducing this course:

   This course is required for the proposed Master of Architecture degree program.

5. Impact of this course:
   - 5.1 Are the programs/courses of other academic units/Colleges affected by this new course (possible duplication)?
     No ☒ Yes **(Please list)**:

5.2 Were any other academic units asked to review or comment on the proposal?

No ☒ Yes **(Please attach correspondence)** ☐

5.3 Will the offering of this course lead to the deletion or modification of any other course(s)?

No ☒ Yes **(Please list)**: _____

5.4 Course(s) for which this graduate course will be a prerequisite?

ARCD 825.3 Architectural Project Management

5.5 Is this course to be required by your graduate students, or by graduate students in another program?

No ☐ Yes **(Please list)**: Master of Architecture students

6. Course Information. **(Please append the Course Outline (Syllabus), including a separate Undergraduate Course Outline (Syllabus) if required. Information on Academic Integrity and Student Conduct can be found on the U of S website at http://www.usask.ca/university_secretary/honesty/)**

Checklist:
- ☒ Course objectives need to be clearly stated
- ☒ Description of and Activities for Evaluation must be listed
- ☒ **Course Outline** (syllabus) with **Reading List** must be included
- ☒ Percentage of Total Mark for each evaluation listed
- ☐ If undergraduate lectures are included, also submit the **Undergraduate Course Outline (Syllabus)** and include information on what additional activities make this a graduate level course. For guidelines, see '**Undergraduate Component of Graduate Courses**' under '*Forms for Graduate Chairs*' at http://www.usask.ca/cgsr/prospective_students/forms.php
- ☒ Professor must be a member of the Graduate Faculty

6.1 **EXAM EXEMPTION**: Please note, **if there is no final exam or if the final examination is worth less than 30% of the final grade** please provide a brief statement which explains why a final examination is inappropriate for this course.

This course culminates in a major research paper in lieu of a final exam.

7. Enrolment:

7.1 Expected Enrolment: 45

7.2 From which colleges/programs: College of Arts and Science / Master of Architecture only

8. Resources:

8.1 Proposed instructor(s) (Please include qualifications):

The instructor will be a licensed architect in Saskatchewan and either have a graduate degree in architecture or significant practice experience (minimum ten years). The instructor will be a member of the Graduate Faculty.

8.2 How does the department plan to handle the additional teaching or administrative workload:

This course is proposed as part of the new M.Arch. program. Teaching and administrative requirements are being reviewed as part of that proposal.

8.3 Are sufficient library or other research resources available for this course:

Yes

8.4 Are any additional resources required (library, audio-visual, technology, lab equipment, lab space, etc.):

Resources are being reviewed as part of the M.Arch. program proposal.

9. Date of Implementation:

9.1 To be offered: Annually ☒ Biennially ☐ Alternate Years ☐ Other ☐

This course will conform to the academic requirements and standards for graduate courses, including the rules of *Student Appeals in Academic Matters* (see www.usask.ca/university_secretary/council/reports_forms/reports/12-06-99.php) and Academic Integrity and Student Conduct (see www.usask.ca/university_secretary/honesty/).

Date of Approval by College (of the home academic unit): _____

The signature of the Dean of your College signifies that the necessary resources are either available or shall be supplied by the College/Department budget.

_____
(Authorizing College Signature (of the home academic unit)

_____
(Name of Person Signing Above - PLEASE PRINT)

Form version April 2009

UNIVERSITY OF SASKATCHEWAN

ARCD 815.3 Professional Practice in Architecture

Term 1

First Proposed Offering: ~~2020~~ 2022

Delivery Format: Lecture, 3 hours per week

Location and time TBD

Instructor TBD

Course Description

This course examines the current and evolving role of the professional architect within society and within the construction industry. The legal and regulatory framework for architectural practice in Canada is discussed, as are the ethical responsibilities of architects, and the role of the architect as advocate for the built environment.

Prerequisites

none

Learning Outcomes

By the completion of this course, students will be expected to:

1. ~~Describe~~ Demonstrate a critical understanding of the role of the architectural profession as stewards and advocates for the built environment, and in relation to clients, society and the world
2. Describe the regulatory framework for architectural practice in Canada, including the various paths to architectural licensure and the institutional organization of the profession
3. ~~Describe~~ Demonstrate a critical understanding of the ethical and legal responsibilities of the professional architect, and act in accordance with these responsibilities
4. Describe, in brief, the history of the architectural profession, and understand the forces that are changing the role of the architect
5. Anticipate the specific needs and possibilities for the architectural profession in relation to the Province of Saskatchewan.

More information on the Academic Courses Policy on course delivery, examinations and assessment of student learning can be found at:
http://policies.usask.ca/policies/academic-affairs/academic-courses.php
The University of Saskatchewan Learning Charter is intended to define aspirations about the learning experience that the University aims to provide, and the roles to be played in realizing these aspirations by students, instructors and the institution. A copy of the Learning Charter

can be found at: http://www.usask.ca/university_secretary/LearningCharter.pdf
Information on literal descriptors for grading at the University of Saskatchewan can be found at: http://students.usask.ca/academics/grading/grading-system.php

University of Saskatchewan Grading System (for graduate courses)

90-100 Exceptional

A superior performance with consistent strong evidence of

- a comprehensive, incisive grasp of subject matter;
- an ability to make insightful, critical evaluation of information;
- an exceptional capacity for original, creative and/or logical thinking;
- an exceptional ability to organize, to analyze, to synthesize, to integrate ideas, and to express thoughts fluently;
- an exceptional ability to analyze and solve difficult problems related to subject matter.

80-89 Very Good to Excellent

A very good to excellent performance with strong evidence of

- a comprehensive grasp of subject matter;
- an ability to make sound critical evaluation of information;
- a very good to excellent capacity for original, creative and/or logical thinking;
- a very good to excellent ability to organize, to analyze, to synthesize, to integrate ideas, and to express thoughts fluently;
- a very good to excellent ability to analyze and solve difficult problems related to subject matter.

70-79 Satisfactory to Good

A satisfactory to good performance with evidence of

- a substantial knowledge of subject matter;
- a satisfactory to good understanding of the relevant issues and satisfactory to good familiarity with the relevant literature and technology;
- a satisfactory to good capacity for logical thinking;
- some capacity for original and creative thinking;
- a satisfactory to good ability to organize, to analyze, and to examine the subject matter in a critical and constructive manner;
- a satisfactory to good ability to analyze and solve moderately difficult problems.

60-69 Poor

A generally weak performance, but with some evidence of

- a basic grasp of the subject matter;
- some understanding of the basic issues;
- some familiarity with the relevant literature and techniques;
- some ability to develop solutions to moderately difficult problems related to the subject matter;
- some ability to examine the material in a critical and analytical manner.

<60 Failure

An unacceptable performance.

Program Requirements

- Percentage scores of at least 70% are required for a minimal pass performance in undergraduate courses taken by graduate students;
- For all other graduate courses, percentage scores of at least 60-69% are required for a minimal pass performance for each course which is included in a Master's program, provided that the student's Cumulative Weighted Average is at least 70%;

- Graduate courses for which students receive grades of 60-69% are minimally acceptable in a Postgraduate Diploma program, provided that the Cumulative Weighted Average is at least 65%

Course Overview

This course looks in more detail at what it means to be a professional architect in Canada and abroad. How are architects regulated in Canada? What are their expected ethical and leadership roles? Their legal responsibilities?

We will also examine the ways in which the profession is changing, what other roles architects might take on besides that of building designer. How is globalization changing architectural practice? Conversely, how do the specific contexts of Saskatchewan inflect the roles that an architect may take on?

The course is organized in a workshop fashion around weekly topics. Students will be responsible for coming to the sessions prepared for discussion with their peers, in large or small groups. Students will be expected to prepare a research paper on one significant aspect of the future of architectural practice and to complete a group assignment.

Class Schedule

Week	Topic	Readings	Assignment
1	A brief history of the architectural profession	Royal Architectural Institute of Canada. (2009). *Canadian handbook of practice for architects*. Ottawa: Royal Architectural Institute of Canada, 1.1.1	
2	The organization of the architectural profession in Canada: regulatory structure	RAIC, 1.1.5, 1.1.6 Saskatchewan., & Saskatchewan Association of Architects. (1983). *Chapter A-25: An act respecting the Saskatchewan Association of Architects.* Saskatchewan: The Association.	
3	Leadership roles of architects	RAIC 1.1.2	
4	The legal responsibilities of an architect	RAIC 1.1.4	
5	Professional ethics	RAIC 1.1.3	Short Essay

		Fisher, T. (2010). Ethics for architects: 50 dilemmas of professional practice. New York: Princeton Architectural Press.	
6	Contemporary ethical issues	Spector, T. (2001). *The Ethical Architect: The Dilemma of Contemporary Practice*. Princeton Architectural Press. Chapter 3: Utilitas, pp. 64-88	
7	Issues facing architects in the Saskatchewan context	N/A	Group presentations
8	Current issues facing the profession in Canada: demographic trends	N/A	Group presentations
9	The internationalization of architectural practice	N/A	Group presentations
10	The Architect in other roles	N/A	Group presentations
11	Future practice 1: economic shifts	Royal Institute of British Architects (2010). The future for architects - Building futures.	
12	Future practice 2: technological shifts	Ripley, C. (2012). Ceci Tuera Cela: Architectural Practice in the Age of Ubiquitous Software. In Costa, X. and Thorne, M., *Change, Architecture, Education, Practice*. ACSA international Conference, 2012, Barcelona. Washington, DC: ACSA Press, pp. 95-98.	
13	Future practice 3: social and political shifts	Hyde, R. (2013). Future practice: Conversations from the edge of architecture. New York.: Routledge.	Research Paper

Midterm and Final Examination Scheduling

Midterm and final examinations must be written on the date scheduled.

Final examinations may be scheduled at any time during the examination period (INSERT FIRST AND LAST DAY OF CURRENT EXAM PERIOD); students should therefore avoid making prior travel, employment, or other commitments for this period. If a student is unable to write an exam through no fault of his or her own for medical or other valid reasons, documentation must be provided and an opportunity to write the missed exam may be given. Students are encouraged to review all examination policies and procedures:

http://students.usask.ca/academics/exams.php

Length and Mode of Final Examination

This course has no final examination.

Instructor Information

Note: This information will be completed before the syllabus is released to students.

Contact Information

TBD

Office Hours

TBD

Instructor Profile

The instructor be a licensed architect in Saskatchewan and either have a graduate degree in architecture or significant practice experience (minimum ten years). The instructor will be a member of the Graduate Faculty.

Required Resources

Readings/Textbooks

Students are expected to purchase the following books:

Waldrep, L. W. (2006). *Becoming an architect: A guide to careers in design*. Hoboken, N.J: J. Wiley & Sons

Royal Architectural Institute of Canada. (2009). *Canadian handbook of practice for architects*. Ottawa: Royal Architectural Institute of Canada. **Note: this book is required for several courses in this program.**

Fisher, T. (2010). Ethics for architects: 50 dilemmas of professional practice. New York: Princeton Architectural Press. ISBN 9781568989464.

Spector, T. (2001). *The Ethical Architect: The Dilemma of Contemporary Practice*. Princeton Architectural Press. Chapter 3: Utilitas, pp. 64-88. ISBN 1568982852.

Textbooks are available from the University of Saskatchewan Bookstore:
www.usask.ca/consumer_services/bookstore/textbooks

Library Reserves:

Hyde, R. (2013). Future practice: Conversations from the edge of architecture. New York.: Routledge.

Electronic Resources

The following readings will be made available through the BBLearn site:

Ripley, C. (2012). Ceci Tuera Cela: Architectural Practice in the Age of Ubiquitous Software. In Costa, X. and Thorne, M., *Change, Architecture, Education, Practice*. ACSA international Conference, 2012, Barcelona. Washington, DC: ACSA Press, pp. 95-98. ISBN 978-0- 935502-83-1. Available in full text at www.acsa-arch.org.

Royal Institute of British Architects (2010). The future for architects - Building futures. Available at http://www.buildingfutures.org.uk/projects/building-futures/the-future-for-architects/ the-future-for-architects-report/.

Saskatchewan., & Saskatchewan Association of Architects. (1983). *Chapter A-25: An act respecting the Saskatchewan Association of Architects*. Saskatchewan: The Association.

Grading Scheme

Class presentation (group)	25%
Advocacy (peer-assessment)	15%
~~Short Essay~~ Position Paper	20%
Research paper	40%
Total	100%

Evaluation Components

Assignment 1: Class presentation

Value: 25% of final grade

Due Date: See Course Schedule

Type: Group research presentation

Description: Working in small groups, students will undertake research about an emerging aspect of the architectural profession. Each group will be responsible for finding suitable qualitative and quantitative data in relation to their area of research, presenting this in comprehensible form to their classmates, and leading a discussion or workshop on the issue.

Peer-evaluation

Value: 15% of final grade

Date: See Course Schedule

Type: Peer evaluation

Description: Students will be evaluated by their peers on their performance during the Class Presentation. Note that the design of the peer evaluation process is part of the Class Presentation.

Assignment 2: ~~Short Essay~~ Position Paper

Value: 20% of final grade

Due Date: See Course Schedule

Type: 1000 to 1500 word essay

Description: Students will prepare a brief text that critically analyzes ~~position statement regarding~~ an aspect of architectural ethics.

Research Paper

Value: 40% of final grade

Date: See Course Schedule

ARCD 815.3 Professional Practice in Architecture

Type: 2500 to 3000 word illustrated ~~essay~~ research paper

Description: Students will prepare an ~~essay~~ research paper discussing an issue of relevance to the future of architecture as a profession and as a discipline, assembling literature and data analysis in the service of a clear position.

Submitting Assignments

Assignments are to be submitted through the course BBLearn dropbox.

Late Assignments

Aside from situations requiring accommodation due to illness or other documented emergency in accordance with University policies, late assignments will not be accepted.

Criteria That Must Be Met to Pass

All evaluation criteria must be completed in order to pass this course. A student who misses the class presentation due to illness or other documented emergency will be assigned an alternative written exercise.

Attendance Expectations

Attendance at all lectures is expected, although attendance will not be taken.

Participation

Participation will be evaluated using a peer-evaluation method, as listed above.

Recording of the Course

Recording of the course will only be allowed in circumstances where it is required as part of an accommodation for students with special needs.

Collection of Student Work

Students should be aware that they will be required to document their work for the purposes of CACB accreditation of the Architecture program. As well, work may be collected and archived by the program for this same reason.

Copyright

Materials posted on BBLearn or distributed in class will be made available in accordance with Canadian copyright laws. Students are reminded of their obligation to also abide by this legislation.

Student Feedback

Students will be asked to complete an anonymous survey at the completion of the course, which will include an area for freeform feedback.

Integrity Defined (from the Office of the University Secretary)

The University of Saskatchewan is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect. Students are particularly urged to familiarize themselves with the provisions of the Student Conduct & Appeals section of the University Secretary Website and avoid any behavior that could potentially result in suspicions of cheating, plagiarism, misrepresentation of facts and/or participation in an offence. Academic dishonesty is a serious offence and can result in suspension or expulsion from the University.

All students should read and be familiar with the Regulations on Academic Student Misconduct (http://www.usask.ca/secretariat/student-conduct-appeals/StudentAcademicMisconduct.pdf) as well as the Standard of Student Conduct in Non-Academic Matters and Procedures for Resolution of Complaints and Appeals (http://www.usask.ca/secretariat/student-conduct-appeals/StudentNon-AcademicMisconduct.pdf)

For more information on what academic integrity means for students see the Student Conduct & Appeals section of the University Secretary Website at: http://www.usask.ca/secretariat/student-conduct-appeals/forms/IntegrityDefined.pdf

Examinations with Disability Services for Students (DSS)

Students who have disabilities (learning, medical, physical, or mental health) are strongly encouraged to register with Disability Services for Students (DSS) if they have not already done so. Students who suspect they may have disabilities should contact DSS for advice and referrals. In order to access DSS programs and supports, students must follow DSS policy and procedures. For more information, check http://students.usask.ca/health/centres/disability-services-for-students.php, or contact DSS at 966-7273 or dss@usask.ca.

Students registered with DSS may request alternative arrangements for mid-term and final examinations.
Students must arrange such accommodations through DSS by the stated deadlines. Instructors shall provide the examinations for students who are being accommodated by the deadlines established by DSS.

Student Supports

Student Learning Services

Student Learning Services (SLS) offers assistance to U of S undergrad and graduate students. For information on specific services, please see the SLS web site https://www.usask.ca/ulc/.

Student and Enrolment Services Division

The Student and Enrolment Services Division (SESD) focuses on providing developmental and support services and programs to students and the university community. For more information, see the SESD web site http://www.usask.ca/sesd/.

College Supports

Students in Arts & Science are encouraged to contact the Undergraduate Student Office and/or the Trish Monture Centre for Success with any questions on how to choose a major; understand program requirements; choose courses; develop strategies to improve grades; understand university policies and procedures; overcome personal barriers; initiate pre-career inquiries; and identify career planning resources. Contact information is available at: (http://artsandscience.usask.ca/undergraduate/advising/)

Treaty Acknowledgement

As we gather here today, we acknowledge we are on Treaty Six Territory and the Homeland of the Métis. We pay our respect to the First Nation and Métis ancestors of this place and reaffirm our relationship with one another.

CACB Student Performance Criteria

Within the Architecture professional program at the University of Saskatchewan, this course is responsible for demonstrating the following Student Performance Criteria as set out by the CACB:

B1. Global Perspectives, Environmental Stewardship and Community Engagement
The ability to respond to the diversity of global cultures and perspectives, positively impact society through civic and community engagement, and contribute to the stewardship of the environment.

C1. The Architectural Profession
An understanding of the organization of the profession, the Architects Act(s) and their regulations, the role of regulatory bodies, the paths to licensure including internship and reciprocal rights and responsibilities of interns and employers.

C2. Ethical and Legal Responsibilities
An understanding of the ethical issues involved in the formation of professional judgment; the architect's legal responsibility under the laws, codes, regulations, and contracts common to the practice of architecture; and the role of advocacy in relation to environmental, social, and cultural issues.

UNIVERSITY OF SASKATCHEWAN
College of Graduate Studies and Research
Room C180 Administration Building, 105 Administration Place, Saskatoon SK CANADA S7N 5A2
Telephone (306)966-5751, Fax: (306)966-5756, General E-mail: grad.studies@usask.ca

GSR 400.1
New Graduate Course Proposal

In addition to this form, please complete and submit a *Course Creation Information* form, available on the University website (www.usask.ca/university_secretary/council/committees/academic_programs/report_files/course_creation.php), to the Department of Academic Services and Financial Assistance, Student and Enrolment Services Division.

EXAM EXEMPTION: Yes ☒ **(must complete section 6.1)** No ☐

Basic information about the proposed course:

1. Department/Unit: Art and Art History College of: Arts and Science

2. _____ _____
(Authorizing Unit Head - PLEASE PRINT) (Authorizing Unit Head - SIGNATURE)

3. Information required for the calendar:
   - 3.1 Label and number of course: ARCD 821.6
   - 3.2 Title of course: Comprehensive Design Studio
   - 3.3 Total Hours: Lecture: 0
     Seminar: 0
     Lab: 0
     Tutorial: 0
     Other: 156 (Studio)
   - 3.4 Weekly Hours: Lecture: 0
     Seminar: 0
     Lab: 0
     Tutorial: 0
     Other: 12 (Studio)
   - 3.5 Term in which it will be offered: T1 ☒ T2 ☐ T1 or T2 ☐ T1 and T2 ☐
   - 3.6 Prerequisite: ARCD 811.6 Studio in Architectural Research
   - 3.7 Calendar description (not more than 50 words):

     In this studio students will apply their knowledge of various areas of the curriculum to the design of a building that integrates a clearly articulated architectural idea with technical and cultural dependent systems into a coherent building. While all students will complete this primary task, each section will take a different focus.

4. Rationale for introducing this course:

   This course is required for the proposed Master of Architecture degree program.

5. Impact of this course:
   - 5.1 Are the programs/courses of other academic units/Colleges affected by this new course (possible duplication)?
     No ☒ Yes **(Please list)**:

5.2 Were any other academic units asked to review or comment on the proposal?

No ☒ Yes **(Please attach correspondence)** ☐

5.3 Will the offering of this course lead to the deletion or modification of any other course(s)?

No ☒ Yes **(Please list)**: _____

5.4 Course(s) for which this graduate course will be a prerequisite?

5.5 Is this course to be required by your graduate students, or by graduate students in another program?

No ☐ Yes **(Please list)**: Master of Architecture students

6. Course Information. **(Please append the Course Outline (Syllabus), including a separate Undergraduate Course Outline (Syllabus) if required. Information on Academic Integrity and Student Conduct can be found on the U of S website at http://www.usask.ca/university_secretary/honesty/)**

Checklist:
- ☒ Course objectives need to be clearly stated
- ☒ Description of and Activities for Evaluation must be listed
- ☒ **Course Outline** (syllabus) with **Reading List** must be included
- ☒ Percentage of Total Mark for each evaluation listed
- ☐ If undergraduate lectures are included, also submit the **Undergraduate Course Outline (Syllabus)** and include information on what additional activities make this a graduate level course. For guidelines, see '**Undergraduate Component of Graduate Courses**' under '*Forms for Graduate Chairs*' at http://www.usask.ca/cgsr/prospective_students/forms.php
- ☒ Professor must be a member of the Graduate Faculty

6.1 **EXAM EXEMPTION**: Please note, **if there is no final exam or if the final examination is worth less than 30% of the final grade** please provide a brief statement which explains why a final examination is inappropriate for this course.

Final reviews will be held during the examination period in lieu of a final exam. Reviews will be scheduled for a six-hour period. All students are required to attend all reviews. External critics will be invited to the sessions.

7. Enrolment:

7.1 Expected Enrolment: 45

7.2 From which colleges/programs: College of Arts and Science / Master of Architecture only

8. Resources:

8.1 Proposed instructor(s) (Please include qualifications):

The instructor will have a graduate degree in architecture and significant experience in architectural practice. The instructor will be a member of the Graduate Faculty.

8.2 How does the department plan to handle the additional teaching or administrative workload:

This course is proposed as part of the new M.Arch. program. Teaching and administrative requirements are being reviewed as part of that proposal.

8.3 Are sufficient library or other research resources available for this course:

Yes

8.4 Are any additional resources required (library, audio-visual, technology, lab equipment, lab space, etc.):

This course will require studio space for all students, as identified in the Program Proposal.

9. Date of Implementation:

9.1 To be offered: Annually ☒ Biennially ☐ Alternate Years ☐ Other ☐

This course will conform to the academic requirements and standards for graduate courses, including the rules of *Student Appeals in Academic Matters* (see www.usask.ca/university_secretary/council/reports_forms/reports/12-06-99.php) and Academic Integrity and Student Conduct (see www.usask.ca/university_secretary/honesty/).

Date of Approval by College (of the home academic unit): _____

The signature of the Dean of your College signifies that the necessary resources are either available or shall be supplied by the College/Department budget.

_____
(Authorizing College Signature (of the home academic unit)

_____
(Name of Person Signing Above - PLEASE PRINT)

Form version April 2009

UNIVERSITY OF SASKATCHEWAN

ARCD 821.6 Comprehensive Design Studio

~~Term 1~~ Term 2

First Proposed Offering ~~2021~~ 2023

Delivery Format: ~~Lecture~~ Studio, 6 hours per week

Location and Date: TBD

Instructor: TBD

Course Description

In this studio students will apply their knowledge of various areas of the curriculum to the design of a building that integrates a clearly articulated architectural idea with technical and cultural dependent systems into a coherent building. While all students will complete this primary task, each section will take a different focus.

Prerequisite

ARCD 811.6 Studio in Architectural Research

Co-requisite

ARCD 822.3 Integrated Systems

Learning Outcomes

By the completion of this course, students will be expected to:

1. Apply a high level of proficiency in the tools and methods of design, including new and emerging tools, to a clearly articulated and intentional design process leading towards the design of a moderately complex building in its site and within its environmental and social context.
2. Employ knowledge and processes specific to the area of research of the section, within the design of this building, in order to successfully select and develop material and technical systems, and to establish meaningful programmatic and formal relationships.
3. Integrate and coordinate technical, material and programmatic systems in the building.
4. Produce documentation as required to communicate both design intent and construction requirements down to the level of the construction detail, and to present the design to critical and community groups.

More information on the Academic Courses Policy on course delivery, examinations and assessment of student learning can be found at:
http://policies.usask.ca/policies/academic-affairs/academic-courses.php

The University of Saskatchewan Learning Charter is intended to define aspirations about the learning experience that the University aims to provide, and the roles to be played in realizing these aspirations by students, instructors and the institution. A copy of the Learning Charter can be found at: http://www.usask.ca/university_secretary/LearningCharter.pdf
Information on literal descriptors for grading at the University of Saskatchewan can be found at: http://students.usask.ca/academics/grading/grading-system.php

University of Saskatchewan Grading System (for graduate courses)

90-100 Exceptional

A superior performance with consistent strong evidence of

- a comprehensive, incisive grasp of subject matter;
- an ability to make insightful, critical evaluation of information;
- an exceptional capacity for original, creative and/or logical thinking;
- an exceptional ability to organize, to analyze, to synthesize, to integrate ideas, and to express thoughts fluently;
- an exceptional ability to analyze and solve difficult problems related to subject matter.

80-89 Very Good to Excellent

A very good to excellent performance with strong evidence of

- a comprehensive grasp of subject matter;
- an ability to make sound critical evaluation of information;
- a very good to excellent capacity for original, creative and/or logical thinking;
- a very good to excellent ability to organize, to analyze, to synthesize, to integrate ideas, and to express thoughts fluently;
- a very good to excellent ability to analyze and solve difficult problems related to subject matter.

70-79 Satisfactory to Good

A satisfactory to good performance with evidence of

- a substantial knowledge of subject matter;
- a satisfactory to good understanding of the relevant issues and satisfactory to good familiarity with the relevant literature and technology;
- a satisfactory to good capacity for logical thinking;
- some capacity for original and creative thinking;
- a satisfactory to good ability to organize, to analyze, and to examine the subject matter in a critical and constructive manner;
- a satisfactory to good ability to analyze and solve moderately difficult problems.

60-69 Poor

A generally weak performance, but with some evidence of

- a basic grasp of the subject matter;
- some understanding of the basic issues;
- some familiarity with the relevant literature and techniques;
- some ability to develop solutions to moderately difficult problems related to the subject matter;
- some ability to examine the material in a critical and analytical manner.

<60 Failure

An unacceptable performance.

Program Requirements

- Percentage scores of at least 70% are required for a minimal pass performance in undergraduate courses taken by graduate students;

- For all other graduate courses, percentage scores of at least 60-69% are required for a minimal pass performance for each course which is included in a Master's program, provided that the student's Cumulative Weighted Average is at least 70%;
- Graduate courses for which students receive grades of 60-69% are minimally acceptable in a Postgraduate Diploma program, provided that the Cumulative Weighted Average is at least 65%

Course Overview

Comprehensive Design Studio follows the second work term of the professional program, the first in the Master of Architecture sequence. The architectural propositions developed in the previous studios are refined, tested, and furthered through systems integration processes. Rather than reducing the complexity of the thesis, the various systems each will increase and amplify the thesis to approach the complexity of architectural realities.

The co-requisite Integrated Systems course generates a set of related topics of deep investigation through the student's thesis work. Legal and professional regulations, structural and building science systems, and social and environmental analyses provide probes from a number of vantages external to the thesis. As the thesis morphs and modifies in absorbing these externalities, the strengths and opportunities of design research avenues expands. A final technical report is produced, amplifying both the urban building design and the thesis speculation itself.

The Comprehensive Design Studio offers the support of professional processes in companionship with design research investigations. It demonstrates that real world buildings can and do make claim to ideas beyond mere building to become architecture.

Class Schedule

Week	Module	Readings Discussions and Activities	Deadlines
1	Course Introduction Project 1: Context Analysis	Readings will be provided by individual instructors for their sections.	
2	Project 1: Context Analysis	Review and Discussion: Project 1	Project 1 Due
3	Project 2: Schematic Design	Work in studio. Desk crits and small group discussions.	
4	Project 2: Schematic Design	Work in studio. Desk crits and small group discussions.	
5	Project 2: Schematic Design	Review and Discussion: Project 2	Project 2 Due
6	Project 3: Research Exercise	Work in studio. Desk crits and small group discussions.	
7	Project 3: Research Exercise	Review and Discussion: Project 3	Project 3 Due
8	Project 4: Systems Integration	Work in studio. Desk crits and small group discussions.	
9	Project 4: Systems Integration	Work in studio. Desk crits and small group discussions.	

10	Project 4: Systems Integration	Work in studio. Desk crits and small group discussions.	
11	Project 4: Systems Integration	Work in studio. Desk crits and small group discussions.	
12	Project 4: Systems Integration	Work in studio. Desk crits and small group discussions.	
13	Project 4: Systems Integration	Work in studio. Desk crits and small group discussions.	Project 4 Due
	Final Reviews	Final reviews will be held in lieu of a final exam, during the exam period.	Portfolio Due

Midterm and Final Examination Scheduling

Midterm and final examinations must be written on the date scheduled.

Final examinations may be scheduled at any time during the examination period (INSERT FIRST AND LAST DAY OF CURRENT EXAM PERIOD); students should therefore avoid making prior travel, employment, or other commitments for this period. If a student is unable to write an exam through no fault of his or her own for medical or other valid reasons, documentation must be provided and an opportunity to write the missed exam may be given. Students are encouraged to review all examination policies and procedures:

http://students.usask.ca/academics/exams.php

Length and Mode of Final Examination

Final reviews will be held during the examination period in lieu of a final exam. Reviews will be scheduled for a six-hour period. All students are required to attend all reviews. External critics will be invited to the sessions.

Instructor Information

Note: This information will be completed before the syllabus is released to students.

Contact Information

TBD

Office Hours

TBD

Instructor Profile

The instructor will have a graduate degree in architecture and significant experience in architectural practice. The instructor will be a member of the Graduate Faculty.

~~Required Activities Outside of Class Time~~

~~The student-organized symposia will take place outside of class time.~~

Required Resources

Readings/Textbooks

There are no required texts for this studio. As graduate students, students will be expected to find their own sources.

~~Textbooks are available from the University of Saskatchewan Bookstore: www.usask.ca/consumer_services/bookstore/textbooks~~

Electronic Resources

Section instructors will post readings and other materials to the BBLearn site as appropriate.

Grading Scheme

Project 1: Context Analysis	15%
Project 2: Schematic Design	25%
Project 3: Research Exercise	15%
Project 4: Systems Integration	35%
Portfolio	10%
Total	100%

Evaluation Components

Assignment 1: Context Analysis

Value: 15% of final grade
Due Date: See Course Schedule
Type: Analysis
Description: Students will analyze the various contextual issues that may affect their projects, including issues of site, environment, regulation, urban systems, cultural contexts and so on. The analyses will be presented in a poster fashion; the work of each section will form a research basis for further work.

Assignment 2: Schematic Design

Value: 25% of final grade
Date: See Course Schedule
Type: Design Project
Description: Students will now produce a schematic design for the building project, which will

be a mid-scale mixed use project. The precise program will vary from section to section, but will include both repetitive and large-span structural spaces.

Project 3: Research Exercise

Value: 15% of final grade
Date: See Course Schedule
Type: Technical research
Description: Each student will investigate the possibility of emerging or new systems that may resolve a technical issue posed by their schematic design. The research will be presented in poster format.

Project 4: Systems Integration

Value: 35% of final grade
Date: See Course Schedule
Type: Design Project
Description: Students will continue to develop their design projects to the point that all building systems have been developed in an integrated and resolved manner.

Portfolio

Value: 10% of final grade
Date: Due at final review
Type: Portfolio of work of the term
Description: Students will compile their work of the term into a portfolio that reflects on their learning.

Submitting Assignments

Assignments are to be submitted through the course BBLearn dropbox.

Late Assignments

Aside from situations requiring accommodation due to illness or other documented emergency in accordance with University policies, late assignments will not be accepted.

Criteria That Must Be Met to Pass

All evaluation criteria must be completed in order to pass this course.

Attendance Expectations

Attendance at all sessions is expected, although attendance will not be taken.

Recording of the Course

Recording of the course will only be allowed in circumstances where it is required as part of an accommodation for students with special needs.

Collection of Student Work

Students should be aware that they will be required to document their work for the purposes of CACB accreditation of the Architecture program. As well, work may be collected and archived by the program for this same reason.

Copyright

Materials posted on BBLearn or distributed in class will be made available in accordance with Canadian copyright laws. Students are reminded of their obligation to also abide by this legislation.

Student Feedback

Students will be asked to complete an anonymous survey at the completion of the course, which will include an area for freeform feedback.

Integrity Defined (from the Office of the University Secretary)

The University of Saskatchewan is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect. Students are particularly urged to familiarize themselves with the provisions of the Student Conduct & Appeals section of the University Secretary Website and avoid any behavior that could potentially result in suspicions of cheating, plagiarism, misrepresentation of facts and/or participation in an offence. Academic dishonesty is a serious offence and can result in suspension or expulsion from the University.

All students should read and be familiar with the Regulations on Academic Student Misconduct (http://www.usask.ca/secretariat/student-conduct-appeals/StudentAcademicMisconduct.pdf) as well as the Standard of Student Conduct in Non-Academic Matters and Procedures for Resolution of Complaints and Appeals (http://www.usask.ca/secretariat/student-conduct-appeals/StudentNon-AcademicMisconduct.pdf)

For more information on what academic integrity means for students see the Student Conduct & Appeals section of the University Secretary Website at:
http://www.usask.ca/secretariat/student-conduct-appeals/forms/IntegrityDefined.pdf

Examinations with Disability Services for Students (DSS)

Students who have disabilities (learning, medical, physical, or mental health) are strongly encouraged to register with Disability Services for Students (DSS) if they have not already done so. Students who suspect they may have disabilities should contact DSS for advice and referrals. In order to access DSS programs and supports, students must follow DSS policy and procedures. For more information, check http://students.usask.ca/health/centres/disability-services-for-students.php, or contact DSS at 966-7273 or dss@usask.ca.

Students registered with DSS may request alternative arrangements for mid-term and final examinations.
Students must arrange such accommodations through DSS by the stated deadlines. Instructors shall provide the examinations for students who are being accommodated by the deadlines established by DSS.

Student Supports

Student Learning Services

Student Learning Services (SLS) offers assistance to U of S undergrad and graduate students. For information on specific services, please see the SLS web site https://www.usask.ca/ulc/.

Student and Enrolment Services Division

The Student and Enrolment Services Division (SESD) focuses on providing developmental and support services and programs to students and the university community. For more information, see the SESD web site http://www.usask.ca/sesd/.

College Supports

Students in Arts & Science are encouraged to contact the Undergraduate Student Office and/or the Trish Monture Centre for Success with any questions on how to choose a major; understand program requirements; choose courses; develop strategies to improve grades; understand university policies and procedures; overcome personal barriers; initiate pre-career inquiries; and identify career planning resources. Contact information is available at: (http://artsandscience.usask.ca/undergraduate/advising/)

Treaty Acknowledgement

As we gather here today, we acknowledge we are on Treaty Six Territory and the Homeland of the Métis. We pay our respect to the First Nation and Métis ancestors of this place and reaffirm our relationship with one another.

CACB Student Performance Criteria

Within the Architecture professional program at the University of Saskatchewan, this course is responsible for demonstrating the following Student Performance Criteria as set out by the CACB:

A2. Elective Courses:
Opportunities for students to develop particular areas of expertise or to study topics of personal interest within the discipline of architecture.

D1. Design Theories, Precedents and Methods:
Ability to articulate an intentional design process grounded in one or more theoretical positions, an understanding of important design principles and methods, and the analysis of critical architectural precedents, and to apply these to the design of buildings, landscapes, spaces, building components and/or other architectural projects.

D2. Design Skills:
Ability to apply organizational, spatial, structural, and constructional principles to the conception, configuration and design of buildings, spaces, building elements, and tectonic components.

D3. Design Tools:
Ability to use the broad range of design tools available to the architectural profession, including traditional and emerging techniques of two-dimensional and three-dimensional representation, computational design, modeling, simulation and fabrication.

D4. Design Program:
Ability to prepare a comprehensive program for an architectural project that draws from appropriate precedents; assesses client/user needs, conditions of occupancy, and spatial parameters and requirements; and includes a review of regulatory contexts and standards relevant to the project.

D5. Urban Design Context:
Ability to analyze the larger urban context within which architecture is situated, its developmental patterning and spatial morphologies, and infrastructural, environmental and ecological systems, and to understand the regulatory instruments (planning and zoning acts and bylaws) that govern this context, the broader implications of architectural design decisions on the evolution of cities, and the impact of urbanism on design.

D6. Site Design:
Ability to analyze and respond to local site characteristics, including urban context, topography, ecology, climate, and building orientation, in the development of an architectural design project.

D7. Detail Design:

Ability to assess as an integral part of design, appropriate combinations of materials, components, and assemblies in the development of detailed architectural elements through

drawing, modeling and/or full scale prototypes.

D8. Design Documentation:
Ability to document and present the outcome of a design project using the broad range of media available to the architectural profession, including the types of documentation for the purposes of construction and to understand the role of contract documents and specifications in this process.

E4. Cultural Diversity and Global Perspectives

Understanding of the diverse needs, values, behavioral norms, and social/ spatial patterns that characterize different global cultures and individuals, as well as the implications of this diversity on the societal roles and responsibilities of architects.

F1. Regulatory Frameworks:

Understanding of the applicable building codes, regulations, and standards for a given building and site including universal design standards and the principles that inform the design and selection of life-safety systems.

F2 Structural Systems

Understanding of the principles of structural behavior in withstanding gravitational, seismic, and lateral forces, including the selection and application of appropriate structural systems.

F3. Environmental Systems

Understanding of the basic principles that inform the design of passive and active environmental modification systems and building service systems, the issues involved in the coordination of these systems, in a building, energy use and appropriate tools for performance assessment, and the codes and regulations that govern their application in buildings.

F4. Ecological Systems

Understanding of the broader ecologies that inform the design of buildings and their systems and of the impacts of design decisions on those ecologies

F5. Building Materials, Envelope Systems, & Assemblies:

Understanding of the basic principles used in the appropriate selection and application of construction materials and building envelope systems and associated assemblies relative to fundamental performance, aesthetics, durability, energy, material resources, and environmental impact.

G1. Design Research
Ability to apply research and investigative methods in the design process.

G2. Design Analysis

Ability to analyze design inputs, including the use of architectural and urban precedents, evaluate the implications of potential design options, and demonstrate the skills associated with assessing multiple variables during the design process. This includes problem identification, setting evaluative criteria, analyzing solutions, and predicting the effectiveness of implementation.

G3. Design Synthesis

Ability to make design decisions and synthesize variables within a moderately complex architectural project while demonstrating consideration and integration of social, cultural, spatial, material, environmental, and technological systems.

UNIVERSITY OF SASKATCHEWAN
College of Graduate Studies and Research
Room C180 Administration Building, 105 Administration Place, Saskatoon SK CANADA S7N 5A2
Telephone (306)966-5751, Fax: (306)966-5756, General E-mail: grad.studies@usask.ca

GSR 400.1
New Graduate Course Proposal

In addition to this form, please complete and submit a *Course Creation Information* form, available on the University website (www.usask.ca/university_secretary/council/committees/academic_programs/report_files/course_creation.php), to the Department of Academic Services and Financial Assistance, Student and Enrolment Services Division.

EXAM EXEMPTION: Yes ☒ **(must complete section 6.1)** No ☐

Basic information about the proposed course:

1. Department/Unit: Art and Art History College of: Arts and Science

2. _____ _____
(Authorizing Unit Head - PLEASE PRINT) (Authorizing Unit Head - SIGNATURE)

3. Information required for the calendar:
   - 3.1 Label and number of course: ARCD 822.3
   - 3.2 Title of course: Integrated Systems
   - 3.3 Total Hours: Lecture: 39
     Seminar: 0
     Lab: 0
     Tutorial: 0
     Other: 0
   - 3.4 Weekly Hours: Lecture: 3
     Seminar: 0
     Lab: 0
     Tutorial: 0
     Other: 0
   - 3.5 Term in which it will be offered: T1 ☒ T2 ☐ T1 or T2 ☐ T1 and T2 ☐
   - 3.6 Prerequisite: 812.3 Structures II-Co-requisites: 821.6 Comprehensive Design Studio
   - 3.7 Calendar description (not more than 50 words):

     A companion course to the Comprehensive Design Studio. The course will run in a workshop fashion to address questions pertaining to the specific structural, envelope, energy, environmental systems, regulatory framework, site planning, sustainable, low carbon, passive, and life safety systems in the buildings. Students will investigate and prepare drawings and a report on technical issues as related to the detailed development of the comprehensive building project.

4. Rationale for introducing this course:

   This course is required for the proposed Master of Architecture degree program.

5. Impact of this course:
   - 5.1 Are the programs/courses of other academic units/Colleges affected by this new course (possible duplication)?
     No ☒ Yes **(Please list)**:

5.2 Were any other academic units asked to review or comment on the proposal?

No ☒ Yes **(Please attach correspondence)** ☐

5.3 Will the offering of this course lead to the deletion or modification of any other course(s)?

No ☒ Yes **(Please list)**: _____

5.4 Course(s) for which this graduate course will be a prerequisite?

5.5 Is this course to be required by your graduate students, or by graduate students in another program?

No ☐ Yes **(Please list)**: Master of Architecture students

6. Course Information. **(Please append the Course Outline (Syllabus), including a separate Undergraduate Course Outline (Syllabus) if required. Information on Academic Integrity and Student Conduct can be found on the U of S website at http://www.usask.ca/university_secretary/honesty/)**

Checklist:
- ☒ Course objectives need to be clearly stated
- ☒ Description of and Activities for Evaluation must be listed
- ☒ **Course Outline** (syllabus) with **Reading List** must be included
- ☒ Percentage of Total Mark for each evaluation listed
- ☐ If undergraduate lectures are included, also submit the **Undergraduate Course Outline (Syllabus)** and include information on what additional activities make this a graduate level course. For guidelines, see '**Undergraduate Component of Graduate Courses**' under '*Forms for Graduate Chairs*' at http://www.usask.ca/cgsr/prospective_students/forms.php
- ☒ Professor must be a member of the Graduate Faculty

6.1 **EXAM EXEMPTION**: Please note, **if there is no final exam or if the final examination is worth less than 30% of the final grade** please provide a brief statement which explains why a final examination is inappropriate for this course.

This course culminates in a major project in lieu of a final exam that demonstrates overall competence in the integration of building systems.

7. Enrolment:

7.1 Expected Enrolment: 45

7.2 From which colleges/programs: College of Arts and Science / Master of Architecture only

8. Resources:

8.1 Proposed instructor(s) (Please include qualifications):

The instructor should be a licensed architect in Saskatchewan and either have a graduate degree in architecture or significant practice experience (minimum ten years). The instructor will be a member of the Graduate Faculty.

8.2 How does the department plan to handle the additional teaching or administrative workload:

This course is proposed as part of the new M.Arch. program. Teaching and administrative requirements are being reviewed as part of that proposal.

8.3 Are sufficient library or other research resources available for this course:

Yes

8.4 Are any additional resources required (library, audio-visual, technology, lab equipment, lab space, etc.):

Resources are being reviewed as part of the M.Arch. program proposal.

9. Date of Implementation:

9.1 To be offered: Annually ☒ Biennially ☐ Alternate Years ☐ Other ☐

This course will conform to the academic requirements and standards for graduate courses, including the rules of *Student Appeals in Academic Matters* (see www.usask.ca/university_secretary/council/reports_forms/reports/12-06-99.php) and Academic Integrity and Student Conduct (see www.usask.ca/university_secretary/honesty/).

Date of Approval by College (of the home academic unit): _____

The signature of the Dean of your College signifies that the necessary resources are either available or shall be supplied by the College/Department budget.

_____
(Authorizing College Signature (of the home academic unit)

_____
(Name of Person Signing Above - PLEASE PRINT)

Form version April 2009

UNIVERSITY OF SASKATCHEWAN

ARCD 822.3 Integrated Systems

~~Term One~~ Term 2

First Proposed Offering: ~~2021~~ 2023

Delivery Format: Lecture/workshop, 3 hours per week
Location Date and Time: TBD
Instructor: TBD

Course Description

A companion course to the Comprehensive Design Studio. The course will run in a workshop fashion to address questions pertaining to the specific structural, envelope, energy, environmental systems, regulatory framework, site planning, sustainable, low carbon, passive, and life safety systems in the buildings. Students will investigate and prepare drawings and a report on technical issues as related to the detailed development of the comprehensive building project.

Prerequisites

812.3 Structures II

Co-requisites

821.6 Comprehensive Design Studio

Learning Outcomes

By the completion of this course, students will be expected to complete the following design aspects for a building of a moderate level of complexity:

1. Set out the structural plan
2. Select appropriate materials and systems
3. Coordinate the program with the materiality of the project
4. ~~Detail the envelope~~ Develop typical details for the building envelope
5. Determine and detail sustainable design strategies that target low carbon
6. Design to target LEED Platinum
7. Coordinate regulatory requirements
8. Handle the technical aspects of a small to mid-sized project

More information on the Academic Courses Policy on course delivery, examinations and assessment of student learning can be found at:
http://policies.usask.ca/policies/academic-affairs/academic-courses.php
The University of Saskatchewan Learning Charter is intended to define aspirations about the

learning experience that the University aims to provide, and the roles to be played in realizing these aspirations by students, instructors and the institution. A copy of the Learning Charter can be found at: http://www.usask.ca/university_secretary/LearningCharter.pdf

Information on literal descriptors for grading at the University of Saskatchewan can be found at: http://students.usask.ca/academics/grading/grading-system.php

University of Saskatchewan Grading System (for graduate courses)

90-100 Exceptional

A superior performance with consistent strong evidence of

- a comprehensive, incisive grasp of subject matter;
- an ability to make insightful, critical evaluation of information;
- an exceptional capacity for original, creative and/or logical thinking;
- an exceptional ability to organize, to analyze, to synthesize, to integrate ideas, and to express thoughts fluently;
- an exceptional ability to analyze and solve difficult problems related to subject matter.

80-89 Very Good to Excellent

A very good to excellent performance with strong evidence of

- a comprehensive grasp of subject matter;
- an ability to make sound critical evaluation of information;
- a very good to excellent capacity for original, creative and/or logical thinking;
- a very good to excellent ability to organize, to analyze, to synthesize, to integrate ideas, and to express thoughts fluently;
- a very good to excellent ability to analyze and solve difficult problems related to subject matter.

70-79 Satisfactory to Good

A satisfactory to good performance with evidence of

- a substantial knowledge of subject matter;
- a satisfactory to good understanding of the relevant issues and satisfactory to good familiarity with the relevant literature and technology;
- a satisfactory to good capacity for logical thinking;
- some capacity for original and creative thinking;
- a satisfactory to good ability to organize, to analyze, and to examine the subject matter in a critical and constructive manner;
- a satisfactory to good ability to analyze and solve moderately difficult problems.

60-69 Poor

A generally weak performance, but with some evidence of

- a basic grasp of the subject matter;
- some understanding of the basic issues;
- some familiarity with the relevant literature and techniques;
- some ability to develop solutions to moderately difficult problems related to the subject matter;
- some ability to examine the material in a critical and analytical manner.

<60 Failure

An unacceptable performance.

Program Requirements

- Percentage scores of at least 70% are required for a minimal pass performance in undergraduate courses taken by graduate students;

- For all other graduate courses, percentage scores of at least 60-69% are required for a minimal pass performance for each course which is included in a Master's program, provided that the student's Cumulative Weighted Average is at least 70%;

Graduate courses for which students receive grades of 60-69% are minimally acceptable in a Postgraduate Diploma program, provided that the Cumulative Weighted Average is at least 65%

Course Overview

This course in acting as the technical companion to the Comprehensive Design Studio serves to provide a structure that will allow students to quite completely investigate and carry out the detailing of their projects. From the broad site and location related issues of climate and place, to the basic requirements to address structure and enclosure, into very detailed questions of sustainability and all systems. Students will in the end have a very detailed project that should serve well as a "final exam" for their professional capability to work well in the profession. The project and associated Technical Report will provide them with high quality material for their work portfolios as well as demonstrate their abilities to visiting accreditation bodies.

Course Schedule

Week	Topic	Readings	Assignment
1	Introduction to the course Detailed Building Code Review (fire safety, size, height, et	NBC ASC: Designing with Building Codes	
2	Planning and zoning law review (assessing project impacts)	Building code and zoning by-laws	Prepare code and by-law analysis of project
3	Building Planning and Programming	ASC: Designing for Egress and Accessibility; Designing for Parking	
4	Structural Systems Selection and Detailing	Review of Materials from Structures II (texts student to retain from previous course) ASC: Designing the Structure	Prepare preliminary sketches of structural system
5	Climate Analysis/Sustainable solutions analysis	Climate Consultant; HEED	Conduct climate analysis of site
6	Passive and Low Carbon Design Strategies Applied	GBS: Case Studies	**Draft Technical Report Due**
7	Envelope Systems: Detailing the Building Envelope (insulation, cladding, window systems, durable building detailing)	GBS: Envelope	

8	Barrier Free Design, Exiting, Fire Protective Design	NBC overview ASC: Designing for Egress and Accessibility	Prepare sketches for project
9	MEP Systems Selection and Structural Coordination	GBS: Heating, Cooling, Water and Waste ASC: Designing Spaces for MEP	Prepare sketches for project
10	Lighting and Daylighting/ Acoustics	GBS: Lighting	
11	Energy Analysis	GBS: Energy Production	Conduct an energy audit of the project
12	Designing to LEED Platinum, Credits and Choices	LEED Materials	Initial work on LEED Spreadsheet for project
13	The Integrated Project: Final Project Synthesis		
	Technical Report due during exam period		

Midterm and Final Examination Scheduling

Midterm and final examinations must be written on the date scheduled.

Final examinations may be scheduled at any time during the examination period (INSERT FIRST AND LAST DAY OF CURRENT EXAM PERIOD); students should therefore avoid making prior travel, employment, or other commitments for this period. If a student is unable to write an exam through no fault of his or her own for medical or other valid reasons, documentation must be provided and an opportunity to write the missed exam may be given. Students are encouraged to review all examination policies and procedures:

http://students.usask.ca/academics/exams.php

Length and Mode of Final Examination

This course has a technical report in lieu of a final examination.

Instructor Information

Note: This information will be completed before the syllabus is released to students.

Contact Information

TBD

Office Hours

TBD

Instructor Profile

The instructor should be a licensed architect in Saskatchewan and either have a graduate degree in architecture or significant practice experience (minimum ten years). The instructor will be a member of the Graduate Faculty.

Required Activities Outside of Class Time

A visit to the site will be required.

Required Resources

Readings/Textbooks

Students are expected to purchase the following books:
Kwok, Alison and Walter Grondzik. Green Building Studio Handbook. Routledge, 2011.
Allen, Edward and Joseph Iano. Architect's Studio Companion. Wiley, 2011.
LEED and other applicable sustainable rating systems handbooks.
The National Building Code.
Other industry material as required.

Textbooks are available from the University of Saskatchewan Bookstore:
www.usask.ca/consumer_services/bookstore/textbooks

Other Required Materials

Climate Consultant. http://www.energy-design-tools.aud.ucla.edu/climate-consultant/request-climate-consultant.php

HEED. http://www.energy-design-tools.aud.ucla.edu/heed/

Grading Scheme

Outline Technical Report	20%
Written Report	15%
LEED Evaluation Report	15%
Drawing Documentation	50%
Total	100%

Evaluation Components

Term Assignment: Technical Report

Part 1: Outline report

Value: 20% of final grade

Due Date: See Course Schedule

Type: Assignment in conjunction with studio project

Description: Students will compile an outline for their technical report that identifies the main systems to be described, the anticipated issues, and possible solutions.

Part 2: Final report

Value: 80% of final grade

Due Date: During the exam period

Type: Assignment in conjunction with studio project.

Description: Students will produce a technical report that documents the technical systems developed during their comprehensive design studio. Although in class work in progress will be expected throughout the term, the course grade will be assessed on the final Technical Report submission.

The grade assessed will be based on:

Written Report (15%),
Comprehensive LEED Evaluation (15%)
Detailed Drawings (50%).

The building must be designed to meet a minimum LEED Gold standard. Additional grade points are possible for achieving LEED Platinum. The LEED spreadsheet MUST include a short PARAGRAPH for each credit explaining why you did or did not claim this credit.

For the drawing breakdown:
Structure 5%
Skins/Envelope Design 10%
Energy Efficient Design Strategies 5%
Environmental Systems and Services: HVAC, Acoustics, Lighting 10%

Life Safety 5%
Barrier Free Design 5%
Environmental Site strategies 5%
Presentation quality 5%

Submitting Assignments
Assignments are to be submitted through the course BBLearn dropbox.

Late Assignments
Aside from situations requiring accommodation due to illness or other documented emergency in accordance with University policies, late assignments will not be accepted.

Criteria That Must Be Met to Pass
All evaluation criteria must be completed in order to pass this course.

Attendance Expectations
Attendance at all sessions is expected, although attendance will not be taken.

Recording of the Course
Recording of the course will only be allowed in circumstances where it is required as part of an accommodation for students with special needs.

Collection of Student Work
Students should be aware that they will be required to document their work for the purposes of CACB accreditation of the Architecture program. As well, work may be collected and archived by the program for this same reason.

Copyright
Materials posted on BBLearn or distributed in class will be made available in accordance with Canadian copyright laws. Students are reminded of their obligation to also abide by this legislation.

Student Feedback
Students will be asked to complete an anonymous survey at the completion of the course, which will include an area for freeform feedback.

Integrity Defined (from the Office of the University Secretary)

The University of Saskatchewan is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect. Students are particularly urged to familiarize themselves with the provisions of the Student Conduct & Appeals section of the University Secretary Website and avoid any behavior that could potentially result in suspicions of cheating, plagiarism, misrepresentation of facts and/or participation in an offence. Academic dishonesty is a serious offence and can result in suspension or expulsion from the University.

All students should read and be familiar with the Regulations on Academic Student Misconduct (http://www.usask.ca/secretariat/student-conduct-appeals/StudentAcademicMisconduct.pdf) as well as the Standard of Student Conduct in Non-Academic Matters and Procedures for Resolution of Complaints and Appeals (http://www.usask.ca/secretariat/student-conduct-appeals/StudentNon-AcademicMisconduct.pdf)

For more information on what academic integrity means for students see the Student Conduct & Appeals section of the University Secretary Website at: http://www.usask.ca/secretariat/student-conduct-appeals/forms/IntegrityDefined.pdf

Examinations with Disability Services for Students (DSS)

Students who have disabilities (learning, medical, physical, or mental health) are strongly encouraged to register with Disability Services for Students (DSS) if they have not already done so. Students who suspect they may have disabilities should contact DSS for advice and referrals. In order to access DSS programs and supports, students must follow DSS policy and procedures. For more information, check http://students.usask.ca/health/centres/disability-services-for-students.php, or contact DSS at 966-7273 or dss@usask.ca.

Students registered with DSS may request alternative arrangements for mid-term and final examinations.
Students must arrange such accommodations through DSS by the stated deadlines. Instructors shall provide the examinations for students who are being accommodated by the deadlines established by DSS.

Student Supports

Student Learning Services

Student Learning Services (SLS) offers assistance to U of S undergrad and graduate students. For information on specific services, please see the SLS web site https://www.usask.ca/ulc/.

Student and Enrolment Services Division

The Student and Enrolment Services Division (SESD) focuses on providing developmental and support services and programs to students and the university community. For more

information, see the SESD web site http://www.usask.ca/sesd/.

College Supports

Students in Arts & Science are encouraged to contact the Undergraduate Student Office and/or the Trish Monture Centre for Success with any questions on how to choose a major; understand program requirements; choose courses; develop strategies to improve grades; understand university policies and procedures; overcome personal barriers; initiate pre-career inquiries; and identify career planning resources. Contact information is available at: (http://artsandscience.usask.ca/undergraduate/advising/)

Treaty Acknowledgement

As we gather here today, we acknowledge we are on Treaty Six Territory and the Homeland of the Métis. We pay our respect to the First Nation and Métis ancestors of this place and reaffirm our relationship with one another.

CACB Student Performance Criteria

Within the Architecture professional program at the University of Saskatchewan, this course is responsible for demonstrating the following Student Performance Criteria as set out by the CACB. As a summative project there are many criteria that will be met by this course:

D7. Detail Design:
Ability to assess as an integral part of design, appropriate combinations of materials, components, and assemblies in the development of detailed architectural elements through drawing, modeling and/or full scale prototypes.

D8. Design Documentation:
Ability to document and present the outcome of a design project using the broad range of media available to the architectural profession, including the types of documentation for the purposes of construction and to understand the role of contract documents and specifications in this process.

F1. Regulatory Frameworks:
Understanding of the applicable building codes, regulations, and standards for a given building and site including universal design standards and the principles that inform the design and selection of life-safety systems.

G2. Design Analysis
Ability to analyze design inputs, including the use of architectural and urban precedents, evaluate the implications of potential design options, and demonstrate the skills associated

with assessing multiple variables during the design process. This includes problem identification, setting evaluative criteria, analyzing solutions, and predicting the effectiveness of implementation.

G3. Design Synthesis

Ability to make design decisions and synthesize variables within a moderately complex architectural project while demonstrating consideration and integration of social, cultural, spatial, material, environmental, and technological systems.

UNIVERSITY OF SASKATCHEWAN
College of Graduate Studies and Research
Room C180 Administration Building, 105 Administration Place, Saskatoon SK CANADA S7N 5A2
Telephone (306)966-5751, Fax: (306)966-5756, General E-mail: grad.studies@usask.ca

GSR 400.1
New Graduate Course Proposal

In addition to this form, please complete and submit a *Course Creation Information* form, available on the University website (www.usask.ca/university_secretary/council/committees/academic_programs/report_files/course_creation.php), to the Department of Academic Services and Financial Assistance, Student and Enrolment Services Division.

EXAM EXEMPTION: Yes ☒ **(must complete section 6.1)** No ☐

Basic information about the proposed course:

1. Department/Unit: Art and Art History College of: Arts and Science

2. _____ _____
(Authorizing Unit Head - PLEASE PRINT) (Authorizing Unit Head - SIGNATURE)

3. Information required for the calendar:
   - 3.1 Label and number of course: ARCD 824.3
   - 3.2 Title of course: Urban Systems
   - 3.3 Total Hours: Lecture: 39
     Seminar: 0
     Lab: 0
     Tutorial: 0
     Other: 0
   - 3.4 Weekly Hours: Lecture: 3
     Seminar: 0
     Lab: 0
     Tutorial: 0
     Other: 0
   - 3.5 Term in which it will be offered: T1 ☒ T2 ☐ T1 or T2 ☐ T1 and T2 ☐
   - 3.6 Prerequisite: None
   - 3.7 Calendar description (not more than 50 words):

     This course investigates ideas and theories about the city, providing students with tools needed to select, analyze and plan an urban site, as well as to design an appropriate building in such a complex environment. The relationship with and reaction to physical, social, economic, political, and cultural contexts are discussed using both local and international examples. Planning and zoning principles, including height, density, use, traffic and pedestrian flows are addressed, as are the administrative and political processes for controlling urban development.

4. Rationale for introducing this course:

   This course is required for the proposed Master of Architecture degree program.

5. Impact of this course:
   - 5.1 Are the programs/courses of other academic units/Colleges affected by this new course (possible duplication)?

No ☒ Yes **(Please list)**:

5.2 Were any other academic units asked to review or comment on the proposal?
No ☒ Yes **(Please attach correspondence)** ☐

5.3 Will the offering of this course lead to the deletion or modification of any other course(s)?
No ☒ Yes **(Please list)**: _____

5.4 Course(s) for which this graduate course will be a prerequisite?

5.5 Is this course to be required by your graduate students, or by graduate students in another program?
No ☐ Yes **(Please list)**: Master of Architecture students

6. Course Information. **(Please append the Course Outline (Syllabus), including a separate Undergraduate Course Outline (Syllabus) if required. Information on Academic Integrity and Student Conduct can be found on the U of S website at http://www.usask.ca/university_secretary/honesty/)**

Checklist:
- ☒ Course objectives need to be clearly stated
- ☒ Description of and Activities for Evaluation must be listed
- ☒ **Course Outline** (syllabus) with **Reading List** must be included
- ☒ Percentage of Total Mark for each evaluation listed
- ☐ If undergraduate lectures are included, also submit the **Undergraduate Course Outline (Syllabus)** and include information on what additional activities make this a graduate level course. For guidelines, see '**Undergraduate Component of Graduate Courses**' under '*Forms for Graduate Chairs*' at http://www.usask.ca/cgsr/prospective_students/forms.php
- ☒ Professor must be a member of the Graduate Faculty

6.1 **EXAM EXEMPTION**: Please note, **if there is no final exam or if the final examination is worth less than 30% of the final grade** please provide a brief statement which explains why a final examination is inappropriate for this course.

This course culminates in a major research paper in lieu of a final exam.

7. Enrolment:

7.1 Expected Enrolment: 45

7.2 From which colleges/programs: College of Arts and Science / Master of Architecture only

8. Resources:

8.1 Proposed instructor(s) (Please include qualifications):

The instructor be a licensed architect or planner in Saskatchewan and either have a graduate degree in architecture or a related field or significant practice experience (minimum ten years). The instructor will be a member of the Graduate Faculty.

8.2 How does the department plan to handle the additional teaching or administrative workload:

This course is proposed as part of the new M.Arch. program. Teaching and administrative requirements are being reviewed as part of that proposal.

8.3 Are sufficient library or other research resources available for this course:

Yes

8.4 Are any additional resources required (library, audio-visual, technology, lab equipment, lab space, etc.):

Resources are being reviewed as part of the M.Arch. program proposal.

9. Date of Implementation:

9.1 To be offered: Annually ☒ Biennially ☐ Alternate Years ☐ Other ☐

This course will conform to the academic requirements and standards for graduate courses, including the rules of *Student Appeals in Academic Matters* (see www.usask.ca/university_secretary/council/reports_forms/reports/12-06-99.php) and Academic Integrity and Student Conduct (see www.usask.ca/university_secretary/honesty/).

Date of Approval by College (of the home academic unit): _____

The signature of the Dean of your College signifies that the necessary resources are either available or shall be supplied by the College/Department budget.

_____
(Authorizing College Signature (of the home academic unit)

_____
(Name of Person Signing Above - PLEASE PRINT)

Form version April 2009

UNIVERSITY OF SASKATCHEWAN

ARCD 824.3 Urban Systems

~~Term One~~ Term 2

First Proposed Offering: ~~2020~~ 2023

Delivery Format: Lecture, 3 hours per week

Location and time TBD

Instructor TBD

Course Description

This course investigates ideas and theories about the city, providing students with tools needed to select, analyze and plan an urban site, as well as to design an appropriate building in such a complex environment. The relationship with and reaction to physical, social, economic, political, and cultural contexts are discussed using both local and international examples. Planning and zoning principles, including height, density, use, traffic and pedestrian flows are addressed, as are the administrative and political processes for controlling urban development.

Prerequisites

None

Learning Outcomes

By the completion of this course, students will be expected to:

1. Understand relationships between planning acts, zoning bylaws and the design of the built urban environment
2. Critically analyze and discuss urban policy in relation to broader societal goals
3. Understand major urban systems – including development structures, transportation and other infrastructures – in their effects on the built environment
4. Critically analyze design proposals in the context of contemporary principles and theories of urban design
5. Design buildings and other architectural projects within the requirements of planning and zoning regulations
6. Understand the processes for approvals and for exemptions, variances and amendments in relation to development or construction projects

More information on the Academic Courses Policy on course delivery, examinations and assessment of student learning can be found at:

http://policies.usask.ca/policies/academic-affairs/academic-courses.php

Revised hmr June 14, 2016

The University of Saskatchewan Learning Charter is intended to define aspirations about the learning experience that the University aims to provide, and the roles to be played in realizing these aspirations by students, instructors and the institution. A copy of the Learning Charter can be found at: http://www.usask.ca/university_secretary/LearningCharter.pdf

Information on literal descriptors for grading at the University of Saskatchewan can be found at: http://students.usask.ca/academics/grading/grading-system.php

University of Saskatchewan Grading System (for graduate courses)

90-100 Exceptional
A superior performance with consistent strong evidence of

- a comprehensive, incisive grasp of subject matter;
- an ability to make insightful, critical evaluation of information;
- an exceptional capacity for original, creative and/or logical thinking;
- an exceptional ability to organize, to analyze, to synthesize, to integrate ideas, and to express thoughts fluently;
- an exceptional ability to analyze and solve difficult problems related to subject matter.

80-89 Very Good to Excellent
A very good to excellent performance with strong evidence of

- a comprehensive grasp of subject matter;
- an ability to make sound critical evaluation of information;
- a very good to excellent capacity for original, creative and/or logical thinking;
- a very good to excellent ability to organize, to analyze, to synthesize, to integrate ideas, and to express thoughts fluently;
- a very good to excellent ability to analyze and solve difficult problems related to subject matter.

70-79 Satisfactory to Good
A satisfactory to good performance with evidence of

- a substantial knowledge of subject matter;
- a satisfactory to good understanding of the relevant issues and satisfactory to good familiarity with the relevant literature and technology;
- a satisfactory to good capacity for logical thinking;
- some capacity for original and creative thinking;
- a satisfactory to good ability to organize, to analyze, and to examine the subject matter in a critical and constructive manner;
- a satisfactory to good ability to analyze and solve moderately difficult problems.

60-69 Poor
A generally weak performance, but with some evidence of

- a basic grasp of the subject matter;
- some understanding of the basic issues;
- some familiarity with the relevant literature and techniques;
- some ability to develop solutions to moderately difficult problems related to the subject matter;
- some ability to examine the material in a critical and analytical manner.

<60 Failure
An unacceptable performance.
Program Requirements

- Percentage scores of at least 70% are required for a minimal pass performance in undergraduate courses taken by graduate students;
- For all other graduate courses, percentage scores of at least 60-69% are required for a minimal pass performance for each course which is included in a Master's program, provided that the student's Cumulative Weighted Average is at least 70%;

- Graduate courses for which students receive grades of 60-69% are minimally acceptable in a Postgraduate Diploma program, provided that the Cumulative Weighted Average is at least 65%

Course Overview

This course provides students with the tools needed to design buildings and other projects within the contemporary developed city. The first part of the course, in connection to work being undertaken at the same time in the studio, will provide a working overview of urban regulations for design: planning acts, zoning bylaws, official plans and so on, particularly from the point of view of Saskatoon (although variants in other cities will be discussed). The second part of the course looks at cities as systems of systems, discussing governance, economic and fiscal systems, transportation, housing and other critical systems. The final part of the course will discuss current perspectives on urban design.

Students will be expected to produce a regulatory report about their studio project as well as a research paper about a current issue affecting Canadian cities.

Class Schedule

Week	Topic	Readings	Assignment
1	Introduction: Cities as systems	Filion, P, Moos, M, Vinodrai, T, and Walker, R (eds) (2015) *Canadian Cities in Transition: Perspectives for an Urban Age* (Toronto, Oxford University Press). Chapters 1, 2, 3.	
2	Planning Acts and their effects on urban form	Students will need to be familiar with the City of Saskatoon planning website: https://www.saskatoon.ca/business-development/planning Downloads Saskatoon (2013). City of Saskatoon Strategic Plan 2013-23. Available at https://www.saskatoon.ca/sites/default/files/documents/city-manager/city-managers-reports/2013-2023_strategic_plan.pdf	
3	Zoning Bylaws and their effects on urban form	Saskatoon (2016). Zoning bylaw no. 8770 of the city of Saskatoon. Available at https://www.saskatoon.ca/sites/default/files/documents/city-clerk/bylaws/8770.pdf Filion, P, et al., Chapter 4.	
4	Site Plan Approval Processes		Zoning and planning assignment
5	Land development processes	Filion, P, et al., Chapter 12.	
6	Civic Governance	Filion, P, et al., Chapter 11.	
7	Transportation systems in cities	Filion, P, et al., Chapter 10. Shannon, K., & Smets, M. (2010). *The landscape of contemporary infrastructure*. Rotterdam: NAi Publishers.	

8	Cities as economic systems	Filion, P, et al., Chapters 5 to 9.	
9	Cities and suburbs	Dunham-Jones, E., & Williamson, J. (2009). *Retrofitting suburbia: Urban design solutions for redesigning suburbs*. Hoboken, N.J: John Wiley & Sons. Filion, P, et al., Chapter 24.	
10	Public Space	Filion, P, et al., Chapter 18.	Research Paper Due
11	Current concerns in urban design	Readings will be prepared one week in advance by each group.	Group presentations and discussion
12	Current concerns in urban design	Readings will be prepared one week in advance by each group.	Group presentations and discussion
13	Current concerns in urban design	Readings will be prepared one week in advance by each group.	Group presentations and discussion

Midterm and Final Examination Scheduling

Midterm and final examinations must be written on the date scheduled.

Final examinations may be scheduled at any time during the examination period (INSERT FIRST AND LAST DAY OF CURRENT EXAM PERIOD); students should therefore avoid making prior travel, employment, or other commitments for this period. If a student is unable to write an exam through no fault of his or her own for medical or other valid reasons, documentation must be provided and an opportunity to write the missed exam may be given. Students are encouraged to review all examination policies and procedures:

http://students.usask.ca/academics/exams.php

Length and Mode of Final Examination

There is no examination for this course.

Instructor Information

Contact Information

TBD

Office Hours

TBD

Instructor Profile

The instructor be a licensed architect or planner in Saskatchewan and either have a graduate degree in architecture or a related field or significant practice experience (minimum ten years). The instructor will be a member of the Graduate Faculty.

Required Resources

Readings/Textbooks

Students are expected to purchase the following books:

Filion, P, Moos, M, Vinodrai, T, and Walker, R (eds) (2015) *Canadian Cities in Transition: Perspectives for an Urban Age* (Toronto, Oxford University Press)

Textbooks are available from the University of Saskatchewan Bookstore:
www.usask.ca/consumer_services/bookstore/textbooks

Library Reserves

The following will be placed on library reserve:

Shannon, K., & Smets, M. (2010). *The landscape of contemporary infrastructure*. Rotterdam: NAi Publishers.

Dunham-Jones, E., & Williamson, J. (2009). *Retrofitting suburbia: Urban design solutions for redesigning suburbs*. Hoboken, N.J: John Wiley & Sons.

Electronic Resources

Students will need to be familiar with the City of Saskatoon planning website: https://www.saskatoon.ca/business-development/planning Downloads

Saskatoon (2016). Zoning bylaw no. 8770 of the city of Saskatoon. Available at https://www.saskatoon.ca/sites/default/files/documents/city-clerk/bylaws/8770.pdf

Saskatoon (2013). City of Saskatoon Strategic Plan 2013-23. Available at https://www.saskatoon.ca/sites/default/files/documents/city-manager/city-managers-reports/2013-2023_strategic_plan.pdf

Grading Scheme

Site Plan Report	30%
Group Presentation and Discussion	30%
Research paper	40%
Total	100%

Evaluation Components

Assignment 1: Site Plan ~~Zoning~~ Report

Value: 30% of final grade
Due Date: See Course Schedule
Type: Assignment in conjunction with studio project

Description: Students will complete a Site Plan submission for their studio project, including relevant planning and zoning issues.

Assignment 2: Group presentation and discussion

Value: 30% of final grade
Date: See Course Schedule

Type: In-class presentation by groups of students

Description: Working in groups of about 5, students will engage the class in a discussion about an issue of contemporary concern in urban design or planning. A list of possible topics will be provided by the instructor.

Research Paper

Value: 40% of final grade
Date: See Course Schedule

Type: 2500 to 3000 word illustrated ~~essay~~ research paper

Description: Students will prepare a ~~essay~~ research paper discussing in detail one of the major systems of contemporary cities. Emphasis will be placed on emerging changes in or pressures on this system and how it affects the future of Canadian cities.

Submitting Assignments

Assignments are to be submitted through the course BBLearn dropbox.

Late Assignments

Aside from situations requiring accommodation due to illness or other documented emergency in accordance with University policies, late assignments will not be accepted.

Criteria That Must Be Met to Pass

All evaluation criteria must be completed in order to pass this course. A student who misses the group presentation due to illness or other documented emergency will be assigned an alternative, written exercise.

Attendance Expectations

Attendance at all sessions is expected, although attendance will not be taken.

Recording of the Course

Recording of the course will only be allowed in circumstances where it is required as part of an accommodation for students with special needs.

Collection of Student Work

Students should be aware that they will be required to document their work for the purposes of CACB accreditation of the Architecture program. As well, work may be collected and archived by the program for this same reason.

Copyright

Materials posted on BBLearn or distributed in class will be made available in accordance with Canadian copyright laws. Students are reminded of their obligation to also abide by this legislation.

Student Feedback

Students will be asked to complete an anonymous survey at the completion of the course, which will include an area for freeform feedback.

Integrity Defined (from the Office of the University Secretary)

The University of Saskatchewan is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect. Students are particularly urged to familiarize themselves with the provisions of the Student Conduct & Appeals section of the University Secretary Website and avoid any behavior that could potentially result in suspicions of cheating, plagiarism, misrepresentation of facts and/or participation in an offence. Academic dishonesty is a serious offence and can result in suspension or expulsion from the University.

All students should read and be familiar with the Regulations on Academic Student Misconduct (http://www.usask.ca/secretariat/student-conduct-appeals/StudentAcademicMisconduct.pdf) as well as the Standard of Student Conduct in Non-Academic Matters and Procedures for Resolution of Complaints and Appeals (http://www.usask.ca/secretariat/student-conduct-appeals/StudentNon-AcademicMisconduct.pdf)

For more information on what academic integrity means for students see the Student Conduct & Appeals section of the University Secretary Website at: http://www.usask.ca/secretariat/student-conduct-appeals/forms/IntegrityDefined.pdf

Examinations with Disability Services for Students (DSS)

Students who have disabilities (learning, medical, physical, or mental health) are strongly encouraged to register with Disability Services for Students (DSS) if they have not already done so. Students who suspect they may have disabilities should contact DSS for advice and referrals. In order to access DSS programs and supports, students must follow DSS policy and procedures. For more information, check http://students.usask.ca/health/centres/disability-services-for-students.php, or contact DSS at 966-7273 or dss@usask.ca.

Students registered with DSS may request alternative arrangements for mid-term and final examinations.

Students must arrange such accommodations through DSS by the stated deadlines. Instructors shall provide the examinations for students who are being accommodated by the deadlines established by DSS.

Student Supports

Student Learning Services

Student Learning Services (SLS) offers assistance to U of S undergrad and graduate students. For information on specific services, please see the SLS web site https://www.usask.ca/ulc/.

Student and Enrolment Services Division

The Student and Enrolment Services Division (SESD) focuses on providing developmental and support services and programs to students and the university community. For more information, see the SESD web site http://www.usask.ca/sesd/.

College Supports

Students in Arts & Science are encouraged to contact the Undergraduate Student Office and/or the Trish Monture Centre for Success with any questions on how to choose a major; understand program requirements; choose courses; develop strategies to improve grades; understand university policies and procedures; overcome personal barriers; initiate pre-career inquiries; and identify career planning resources. Contact information is available at: (http://artsandscience.usask.ca/undergraduate/advising/)

Treaty Acknowledgement

As we gather here today, we acknowledge we are on Treaty Six Territory and the Homeland of the Métis. We pay our respect to the First Nation and Métis ancestors of this place and reaffirm our relationship with one another.

CACB Student Performance Criteria

Within the Architecture professional program at the University of Saskatchewan, this course is responsible for demonstrating the following Student Performance Criteria as set out by the CACB:

D5. Urban Design Context:

Ability to analyze the larger urban context within which architecture is situated, its developmental patterning and spatial morphologies, and infrastructural, environmental and ecological systems, and to understand the regulatory instruments (planning and zoning acts and bylaws) that govern this context, the broader implications of architectural design decisions on the evolution of cities, and the impact of urbanism on design.

D6. Site Design:

Ability to analyze and respond to local site characteristics, including urban context, topography, ecology, climate, and building orientation, in the development of an architectural design project.

E4. Cultural Diversity and Global Perspectives

Understanding of the diverse needs, values, behavioral norms, and social/ spatial patterns that characterize different global cultures and individuals, as well as the implications of this diversity on the societal roles and responsibilities of architects.

F1. Regulatory Frameworks:

Understanding of the applicable building codes, regulations, and standards for a given building and site including universal design standards and the principles that inform the design and selection of life-safety systems.

UNIVERSITY OF SASKATCHEWAN
College of Graduate Studies and Research
Room C180 Administration Building, 105 Administration Place, Saskatoon SK CANADA S7N 5A2
Telephone (306)966-5751, Fax: (306)966-5756, General E-mail: grad.studies@usask.ca

GSR 400.1
New Graduate Course Proposal

In addition to this form, please complete and submit a *Course Creation Information* form, available on the University website (www.usask.ca/university_secretary/council/committees/academic_programs/report_files/course_creation.php), to the Department of Academic Services and Financial Assistance, Student and Enrolment Services Division.

EXAM EXEMPTION: Yes ☐ **(must complete section 6.1)** No ☒

Basic information about the proposed course:

1. Department/Unit: Art and Art History College of: Arts and Science

2. _____ _____
(Authorizing Unit Head - PLEASE PRINT) (Authorizing Unit Head - SIGNATURE)

3. Information required for the calendar:
   - 3.1 Label and number of course: ARCD 825.3
   - 3.2 Title of course: Architectural Project Management
   - 3.3 Total Hours: Lecture: 39
     Seminar: 0
     Lab: 0
     Tutorial: 0
     Other: 0
   - 3.4 Weekly Hours: Lecture: 3
     Seminar: 0
     Lab: 0
     Tutorial: 0
     Other: 0
   - 3.5 Term in which it will be offered: T1 ☒ T2 ☐ T1 or T2 ☐ T1 and T2 ☐
   - 3.6 Prerequisite: ARCD 815.3 Professional Practice in Architecture
   - 3.7 Calendar description (not more than 50 words):

     This course examines in depth the methods and techniques used by architects for the management of construction projects, including: financial management; time management; and task and team management. Various types of project delivery methods will be examined, along with their associated contractual relationships. .

4. Rationale for introducing this course:

   This course is required for the proposed Master of Architecture degree program.

5. Impact of this course:
   - 5.1 Are the programs/courses of other academic units/Colleges affected by this new course (possible duplication)?
     No ☒ Yes **(Please list)**:

5.2 Were any other academic units asked to review or comment on the proposal?

No ☒ Yes **(Please attach correspondence)** ☐

5.3 Will the offering of this course lead to the deletion or modification of any other course(s)?

No ☒ Yes **(Please list)**: _____

5.4 Course(s) for which this graduate course will be a prerequisite?

ARCD 845.3 Business Practices in Architecture

5.5 Is this course to be required by your graduate students, or by graduate students in another program?

No ☐ Yes **(Please list)**: Master of Architecture students

6. Course Information. **(Please append the Course Outline (Syllabus), including a separate Undergraduate Course Outline (Syllabus) if required. Information on Academic Integrity and Student Conduct can be found on the U of S website at http://www.usask.ca/university_secretary/honesty/)**

Checklist:
- ☒ Course objectives need to be clearly stated
- ☒ Description of and Activities for Evaluation must be listed
- ☒ **Course Outline** (syllabus) with **Reading List** must be included
- ☒ Percentage of Total Mark for each evaluation listed
- ☐ If undergraduate lectures are included, also submit the **Undergraduate Course Outline (Syllabus)** and include information on what additional activities make this a graduate level course. For guidelines, see '**Undergraduate Component of Graduate Courses**' under '*Forms for Graduate Chairs*' at http://www.usask.ca/cgsr/prospective_students/forms.php
- ☒ Professor must be a member of the Graduate Faculty

6.1 **EXAM EXEMPTION**: Please note, **if there is no final exam or if the final examination is worth less than 30% of the final grade** please provide a brief statement which explains why a final examination is inappropriate for this course.

This course culminates in a major research paper in lieu of a final exam.

7. Enrolment:

7.1 Expected Enrolment: 45

7.2 From which colleges/programs: College of Arts and Science / Master of Architecture only

8. Resources:

8.1 Proposed instructor(s) (Please include qualifications):

The instructor will be a licensed architect in Saskatchewan and either have a graduate degree in architecture or significant practice experience (minimum ten years). The instructor will be a member of the Graduate Faculty.

8.2 How does the department plan to handle the additional teaching or administrative workload:

This course is proposed as part of the new M.Arch. program. Teaching and administrative requirements are being reviewed as part of that proposal.

8.3 Are sufficient library or other research resources available for this course:

Yes

8.4 Are any additional resources required (library, audio-visual, technology, lab equipment, lab space, etc.):

Resources are being reviewed as part of the M.Arch. program proposal.

9. Date of Implementation:

9.1 To be offered: Annually ☒ Biennially ☐ Alternate Years ☐ Other ☐

This course will conform to the academic requirements and standards for graduate courses, including the rules of *Student Appeals in Academic Matters* (see www.usask.ca/university_secretary/council/reports_forms/reports/12-06-99.php) and Academic Integrity and Student Conduct (see www.usask.ca/university_secretary/honesty/).

Date of Approval by College (of the home academic unit): _____

The signature of the Dean of your College signifies that the necessary resources are either available or shall be supplied by the College/Department budget.

_____
(Authorizing College Signature (of the home academic unit)

_____
(Name of Person Signing Above - PLEASE PRINT)

Form version April 2009

UNIVERSITY OF SASKATCHEWAN

ARCD 825.3 Architectural Project Management

~~Term One~~ Term 2

First Proposed Offering: ~~2021~~ 2023

Delivery Format: Lecture, 3 hours per week

Location, date and time: TBD

Instructor: TBD

Course Description

This course examines in depth the methods and techniques used by architects for the management of construction projects, including: financial management; time management; and task and team management. Various types of project delivery methods will be examined, along with their associated contractual relationships.

Prerequisites

ARCD 815.3 Professional Practice in Architecture

Learning Outcomes

By the completion of this course, students will be expected to:

1. Understand and make use of the principles and methods of Project Management in relation to construction projects, including: team and task management; scheduling methods; work plans; budgets; and record-keeping
2. Describe the various types of construction project delivery, with specific reference to the role of the architect in each type of delivery, including the form of contracts involved; identify the advantages and risks of each type for a particular construction project.
3. Develop a budget and schedule for a construction project
4. Make use of various techniques to estimate the cost of a construction project and to track its progress
5. Describe the typical approvals required for a construction project and their effect on budget and schedule
6. Produce project documents that are required to achieve construction approvals
7. Produce the various components of a typical construction contract, including drawings and specifications

More information on the Academic Courses Policy on course delivery, examinations and assessment of student learning can be found at:
http://policies.usask.ca/policies/academic-affairs/academic-courses.php

The University of Saskatchewan Learning Charter is intended to define aspirations about the learning experience that the University aims to provide, and the roles to be played in realizing these aspirations by students, instructors and the institution. A copy of the Learning Charter can be found at: http://www.usask.ca/university_secretary/LearningCharter.pdf
Information on literal descriptors for grading at the University of Saskatchewan can be found at: http://students.usask.ca/academics/grading/grading-system.php

University of Saskatchewan Grading System (for graduate courses)

90-100 Exceptional

A superior performance with consistent strong evidence of

- a comprehensive, incisive grasp of subject matter;
- an ability to make insightful, critical evaluation of information;
- an exceptional capacity for original, creative and/or logical thinking;
- an exceptional ability to organize, to analyze, to synthesize, to integrate ideas, and to express thoughts fluently;
- an exceptional ability to analyze and solve difficult problems related to subject matter.

80-89 Very Good to Excellent

A very good to excellent performance with strong evidence of

- a comprehensive grasp of subject matter;
- an ability to make sound critical evaluation of information;
- a very good to excellent capacity for original, creative and/or logical thinking;
- a very good to excellent ability to organize, to analyze, to synthesize, to integrate ideas, and to express thoughts fluently;
- a very good to excellent ability to analyze and solve difficult problems related to subject matter.

70-79 Satisfactory to Good

A satisfactory to good performance with evidence of

- a substantial knowledge of subject matter;
- a satisfactory to good understanding of the relevant issues and satisfactory to good familiarity with the relevant literature and technology;
- a satisfactory to good capacity for logical thinking;
- some capacity for original and creative thinking;
- a satisfactory to good ability to organize, to analyze, and to examine the subject matter in a critical and constructive manner;
- a satisfactory to good ability to analyze and solve moderately difficult problems.

60-69 Poor

A generally weak performance, but with some evidence of

- a basic grasp of the subject matter;
- some understanding of the basic issues;
- some familiarity with the relevant literature and techniques;
- some ability to develop solutions to moderately difficult problems related to the subject matter;
- some ability to examine the material in a critical and analytical manner.

<60 Failure

An unacceptable performance.

Program Requirements

- Percentage scores of at least 70% are required for a minimal pass performance in undergraduate courses taken by graduate students;
- For all other graduate courses, percentage scores of at least 60-69% are required for a minimal pass performance for each course which is included in a Master's program, provided that the student's Cumulative Weighted Average is at least 70%;
- Graduate courses for which students receive grades of 60-69% are minimally acceptable in a Postgraduate Diploma program, provided that the Cumulative Weighted Average is at least 65%

Course Overview

This course expands on previous discussions around the goals, strategies and tools for managing construction projects. The course explicitly looks at these issues from the point of view of the architect, although other viewpoints – those of the owner, contractor or other stakeholders – will also be discussed.

Construction projects are complex – after all, buildings are big, heavy, and expensive and a large number of people and a large and diverse quantity of materials are involved in their construction. What are the typical methods by which this is all kept under control? In addition, these methods are currently undergoing a period of significant change due to factors such as technological advances, resource depletion, globalization of construction practices, and changes to project procurement forms and norms. How can we move forward into this world while mitigating or minimizing risk to the various stakeholders in a construction project?

The course is organized in a workshop fashion around weekly topics. Students will be responsible for coming to the sessions prepared for discussion with their peers, in large or small groups. Students will be expected to prepare a research paper on one significant aspect of project management, specifically looking at how the field is changing due to technological change, and to complete two topical assignments.

Class Schedule

Week	Topic	Readings	Assignment
1	Introduction: What is Project Management?	Gould, F. E., Joyce, N. E., & Pearson. (2014). *Construction project management*. Boston etc.: Pearson. ch. 1 Project Management Institute. (2008). *Construction extension to the PMBOK guide, third edition*. Newtown Square, Pa: Project Management Institute. Ch. 1	
2	Understanding risk	Royal Architectural Institute of Canada.	

		(2009). *Canadian handbook of practice for architects*. Ottawa: Royal Architectural Institute of Canada. 2.1.9 Project Management Institute (2008). Ch. 11.	
3	Managing project teams	Gould, ch. 2,3 Project Management Institute (2008). Ch. 9, 10. RAIC 1.2.1, 1.2.2, 1.2.3	
4	Project scheduling	Gould, ch. 5, 10 Project Management Institute (2008). Ch. 6. RAIC 2.3.4, 2.3.5, 2.3.6	
5	Cost estimation methods 1	Gould, ch. 7 Project Management Institute (2008). Ch. 7. RAIC 2.3.3	Scheduling Assignment
6	Cost estimation methods 2	Gould, ch. 8,9 Project Management Institute (2008). Ch. 8.	
7	Project approvals	Gould, ch. 6, 11 RAIC 1.2.4, 1.2.5	Estimating Assignment
8	Forms of project delivery	Gould, ch. 4 Project Management Institute (2008). Ch. 12. RAIC 2.3.2	
9	The construction contract 1: Drawings	RAIC 2.3.7	
10	The construction contract 2: Specifications	RAIC 2.3.8	
11	Administering the construction contract	Gould, ch. 12 RAIC 2.3.10, 2.3.11	Documentation Assignment
12	Managing changes to a construction contract	Gould, ch. 13/14 RAIC 2.3.12	
13	Contract close-out		Research Paper

Midterm and Final Examination Scheduling

Midterm and final examinations must be written on the date scheduled.
Final examinations may be scheduled at any time during the examination period (INSERT FIRST AND LAST DAY OF CURRENT EXAM PERIOD); students should therefore avoid making prior travel, employment, or other commitments for this period. If a student is unable to write an exam through no fault of his or her own for medical or other valid reasons, documentation must be provided and an opportunity to write the missed exam may be given. Students are encouraged to review all examination policies and procedures:

http://students.usask.ca/academics/exams.php

Length and Mode of Final Examination

This course has no final examination.

Instructor Information

Note: This information will be completed before the syllabus is released to students.

Contact Information

TBD

Office Hours

TBD

Instructor Profile

The instructor will be a licensed architect in Saskatchewan and either have a graduate degree in architecture or significant practice experience (minimum ten years). The instructor will be a member of the Graduate Faculty.

Required Activities Outside of Class Time

If possible, we will organize a visit to a construction site. This may need to take place outside of class time.

Required Resources

Readings/Textbooks

Students are expected to purchase the following books:

Gould, F. E., Joyce, N. E., & Pearson. (2014). *Construction project management*. Boston etc.: Pearson.

Project Management Institute. (2008). *Construction extension to the PMBOK guide, third edition*. Newtown Square, Pa: Project Management Institute.

Royal Architectural Institute of Canada. (2009). *Canadian handbook of practice for architects*. Ottawa: Royal Architectural Institute of Canada. **Note: This book is required for several courses in this**

program.

Textbooks are available from the University of Saskatchewan Bookstore:
www.usask.ca/consumer_services/bookstore/textbooks

Other Required Materials
Students will require a hardhat and safety boots.

Supplementary Resources
None.

Grading Scheme

Scheduling Exercise	20%
Estimating Exercise	20%
Documentation Assignment (Group)	30%
Research paper	30%
Total	100%

Evaluation Components

Assignment 1: Scheduling Exercise

Value: 20% of final grade

Due Date: See Course Schedule

Type: Assignment to be completed outside of course time

Description: Students will develop a schedule for the design and construction of a moderately complex construction project (ideally a project they are developing in studio), incorporating as many variables and issues as possible.

Assignment 2: Estimating Exercise

Value: 20% of final grade

Date: See Course Schedule

Type: Assignment to be completed outside of course time

Description: Students will develop a preliminary budget for the design and construction of a moderately complex construction project (ideally a project they are developing in studio), incorporating as many variables and issues as possible.

Assignment 3: Documentation

Value: 30% of final grade

Due Date: See Course Schedule

Type: Group assignment

Description: Students will produce a reduced set of documents for a construction project, including construction drawings and outline specifications.

Research Paper

Value: 30% of final grade

Date: See Course Schedule

Type: 2500 to 3000 word illustrated ~~essay~~ research paper

Description: Students will prepare a ~~essay~~ research paper discussing an issue of relevance to emerging practices in the management of construction projects, assembling literature and data analysis in the service of a clear position. The impact of these emerging trends on architectural practice will be an area of focus.

Submitting Assignments

Assignments are to be submitted through the course BBLearn dropbox.

Late Assignments

Aside from situations requiring accommodation due to illness or other documented emergency in accordance with University policies, late assignments will not be accepted.

Criteria That Must Be Met to Pass

All evaluation criteria must be completed in order to pass this course.

Attendance Expectations

Attendance at all sessions is expected, although attendance will not be taken.

Recording of the Course

Recording of the course will only be allowed in circumstances where it is required as part of an accommodation for students with special needs.

Collection of Student Work

Students should be aware that they will be required to document their work for the purposes of CACB accreditation of the Architecture program. As well, work may be collected and archived

by the program for this same reason.

Copyright

Materials posted on BBLearn or distributed in class will be made available in accordance with Canadian copyright laws. Students are reminded of their obligation to also abide by this legislation.

Student Feedback

Students will be asked to complete an anonymous survey at the completion of the course, which will include an area for freeform feedback.

Integrity Defined (from the Office of the University Secretary)

The University of Saskatchewan is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect. Students are particularly urged to familiarize themselves with the provisions of the Student Conduct & Appeals section of the University Secretary Website and avoid any behavior that could potentially result in suspicions of cheating, plagiarism, misrepresentation of facts and/or participation in an offence. Academic dishonesty is a serious offence and can result in suspension or expulsion from the University.

All students should read and be familiar with the Regulations on Academic Student Misconduct (http://www.usask.ca/secretariat/student-conduct-appeals/StudentAcademicMisconduct.pdf) as well as the Standard of Student Conduct in Non-Academic Matters and Procedures for Resolution of Complaints and Appeals (http://www.usask.ca/secretariat/student-conduct-appeals/StudentNon-AcademicMisconduct.pdf)

For more information on what academic integrity means for students see the Student Conduct & Appeals section of the University Secretary Website at: http://www.usask.ca/secretariat/student-conduct-appeals/forms/IntegrityDefined.pdf

Examinations with Disability Services for Students (DSS)

Students who have disabilities (learning, medical, physical, or mental health) are strongly encouraged to register with Disability Services for Students (DSS) if they have not already done so. Students who suspect they may have disabilities should contact DSS for advice and referrals. In order to access DSS programs and supports, students must follow DSS policy and procedures. For more information, check http://students.usask.ca/health/centres/disability-services-for-students.php, or contact DSS at 966-7273 or dss@usask.ca.

Students registered with DSS may request alternative arrangements for mid-term and final examinations.

Students must arrange such accommodations through DSS by the stated deadlines. Instructors shall provide the examinations for students who are being accommodated by the deadlines established by DSS.

Student Supports

Student Learning Services

Student Learning Services (SLS) offers assistance to U of S undergrad and graduate students. For information on specific services, please see the SLS web site https://www.usask.ca/ulc/.

Student and Enrolment Services Division

The Student and Enrolment Services Division (SESD) focuses on providing developmental and support services and programs to students and the university community. For more information, see the SESD web site http://www.usask.ca/sesd/.

College Supports

Students in Arts & Science are encouraged to contact the Undergraduate Student Office and/or the Trish Monture Centre for Success with any questions on how to choose a major; understand program requirements; choose courses; develop strategies to improve grades; understand university policies and procedures; overcome personal barriers; initiate pre-career inquiries; and identify career planning resources. Contact information is available at: (http://artsandscience.usask.ca/undergraduate/advising/)

Treaty Acknowledgement

As we gather here today, we acknowledge we are on Treaty Six Territory and the Homeland of the Métis. We pay our respect to the First Nation and Métis ancestors of this place and reaffirm our relationship with one another.

CACB Student Performance Criteria

Within the Architecture professional program at the University of Saskatchewan, this course is responsible for demonstrating the following Student Performance Criteria as set out by the CACB:

C1. The Architectural Profession
An understanding of the organization of the profession, the Architects Act(s) and their regulations, the role of regulatory bodies, the paths to licensure including internship and reciprocal rights and responsibilities of interns and employers.

C3. Practice Organization
An understanding of the basic principles of practice organization, including financial management, business planning, entrepreneurship, marketing, negotiation, project management, and risk mitigation as well as an understanding of trends that affect practice

C4. Project Management

ARCD 825.3 Architectural Project Management

An understanding of the relationships among key stakeholders in the design process; the methods for selecting consultants and assembling teams; building economics and cost control strategies; and the development of work plans, project schedules, and project delivery methods.

UNIVERSITY OF SASKATCHEWAN
College of Graduate Studies and Research
Room C180 Administration Building, 105 Administration Place, Saskatoon SK CANADA S7N 5A2
Telephone (306)966-5751, Fax: (306)966-5756, General E-mail: grad.studies@usask.ca

GSR 400.1
New Graduate Course Proposal

In addition to this form, please complete and submit a *Course Creation Information* form, available on the University website (www.usask.ca/university_secretary/council/committees/academic_programs/report_files/course_creation.php), to the Department of Academic Services and Financial Assistance, Student and Enrolment Services Division.

EXAM EXEMPTION: Yes ☒ **(must complete section 6.1)** No ☐

Basic information about the proposed course:

1. Department/Unit: Art and Art History College of: Arts and Science

2. _____ _____
(Authorizing Unit Head - PLEASE PRINT) (Authorizing Unit Head - SIGNATURE)

3. Information required for the calendar:
   - 3.1 Label and number of course: ARCD 845.3
   - 3.2 Title of course: Business Practices in Architecture
   - 3.3 Total Hours: Lecture: 39
     Seminar: 0
     Lab: 0
     Tutorial: 0
     Other: 0
   - 3.4 Weekly Hours: Lecture: 3
     Seminar: 0
     Lab: 0
     Tutorial: 0
     Other: 0
   - 3.5 Term in which it will be offered: T1 ☐ T2 ☐ T1 or T2 ☐ T1 and T2 ☒
   - 3.6 Prerequisite: ARCD 825.3 Architectural Project Management
   - 3.7 Calendar description (not more than 50 words):

     In this course students will learn how to organize and manage an architectural practice. Legal issues, human resource practices, financial management practices, marketing and strategic planning will be discussed, as will the various forms that a practice can take. Students will be required to develop a business plan for an architectural practice.

4. Rationale for introducing this course:

   This course is required for the proposed Master of Architecture degree program.

5. Impact of this course:
   - 5.1 Are the programs/courses of other academic units/Colleges affected by this new course (possible duplication)?
     No ☒ Yes **(Please list)**:

5.2 Were any other academic units asked to review or comment on the proposal?

No ☒ Yes **(Please attach correspondence)** ☐

5.3 Will the offering of this course lead to the deletion or modification of any other course(s)?

No ☒ Yes **(Please list)**: _____

5.4 Course(s) for which this graduate course will be a prerequisite?

5.5 Is this course to be required by your graduate students, or by graduate students in another program?

No ☐ Yes **(Please list)**: Master of Architecture students

6. Course Information. **(Please append the Course Outline (Syllabus), including a separate Undergraduate Course Outline (Syllabus) if required. Information on Academic Integrity and Student Conduct can be found on the U of S website at http://www.usask.ca/university_secretary/honesty/)**

Checklist:
- ☒ Course objectives need to be clearly stated
- ☒ Description of and Activities for Evaluation must be listed
- ☒ **Course Outline** (syllabus) with **Reading List** must be included
- ☒ Percentage of Total Mark for each evaluation listed
- ☐ If undergraduate lectures are included, also submit the **Undergraduate Course Outline (Syllabus)** and include information on what additional activities make this a graduate level course. For guidelines, see '**Undergraduate Component of Graduate Courses**' under '*Forms for Graduate Chairs*' at http://www.usask.ca/cgsr/prospective_students/forms.php
- ☒ Professor must be a member of the Graduate Faculty

6.1 **EXAM EXEMPTION**: Please note, **if there is no final exam or if the final examination is worth less than 30% of the final grade** please provide a brief statement which explains why a final examination is inappropriate for this course.

This course culminates in a major research paper in lieu of a final exam.

7. Enrolment:

7.1 Expected Enrolment: 45

7.2 From which colleges/programs: College of Arts and Science / Master of Architecture only

8. Resources:

8.1 Proposed instructor(s) (Please include qualifications):

The instructor be a licensed architect in Saskatchewan and either have a graduate degree in architecture or significant practice experience (minimum ten years). The instructor will be a member of the Graduate Faculty.

8.2 How does the department plan to handle the additional teaching or administrative workload:

This course is proposed as part of the new M.Arch. program. Teaching and administrative requirements are being reviewed as part of that proposal.

8.3 Are sufficient library or other research resources available for this course:

Yes

8.4 Are any additional resources required (library, audio-visual, technology, lab equipment, lab space, etc.):

Resources are being reviewed as part of the M.Arch. program proposal.

9. Date of Implementation:

9.1 To be offered: Annually ☒ Biennially ☐ Alternate Years ☐ Other ☐

This course will conform to the academic requirements and standards for graduate courses, including the rules of *Student Appeals in Academic Matters* (see www.usask.ca/university_secretary/council/reports_forms/reports/12-06-99.php) and Academic Integrity and Student Conduct (see www.usask.ca/university_secretary/honesty/).

Date of Approval by College (of the home academic unit): _____

The signature of the Dean of your College signifies that the necessary resources are either available or shall be supplied by the College/Department budget.

_____
(Authorizing College Signature (of the home academic unit)

_____
(Name of Person Signing Above - PLEASE PRINT)

Form version April 2009

UNIVERSITY OF SASKATCHEWAN

ARCD 845.3 Business Practices in Architecture

Term Three ~~(Spring/Summer)~~ (Winter)

First Proposed Offering: ~~2022~~ 2024

Delivery Format: Lecture, 3 hours per week

Location date and time: TBD

Instructor: TBD

Course Description

In this course students will learn how to organize and manage an architectural practice. Legal issues, human resource practices, financial management practices, marketing and strategic planning will be discussed, as will the various forms that a practice can take. Students will be required to develop a business plan for an architectural practice.

Prerequisites

ARCD 825.3 Architectural Project Management

Learning Outcomes

By the completion of this course, students will be expected to:

1. Develop a business plan for an architectural practice
2. ~~Describe~~ Critically discuss and speculate on the legal expectations and requirements of architectural practice as well as the organizational forms that practices can take
3. Make use of typical processes for design office management, record-keeping, human resource management, marketing and client development, and financial management for an architectural practice

More information on the Academic Courses Policy on course delivery, examinations and assessment of student learning can be found at:
http://policies.usask.ca/policies/academic-affairs/academic-courses.php
The University of Saskatchewan Learning Charter is intended to define aspirations about the learning experience that the University aims to provide, and the roles to be played in realizing these aspirations by students, instructors and the institution. A copy of the Learning Charter can be found at: http://www.usask.ca/university_secretary/LearningCharter.pdf

Information on literal descriptors for grading at the University of Saskatchewan can be found at: http://students.usask.ca/academics/grading/grading-system.php

University of Saskatchewan Grading System (for graduate courses)

90-100 Exceptional

A superior performance with consistent strong evidence of

- a comprehensive, incisive grasp of subject matter;
- an ability to make insightful, critical evaluation of information;
- an exceptional capacity for original, creative and/or logical thinking;
- an exceptional ability to organize, to analyze, to synthesize, to integrate ideas, and to express thoughts fluently;
- an exceptional ability to analyze and solve difficult problems related to subject matter.

80-89 Very Good to Excellent

A very good to excellent performance with strong evidence of

- a comprehensive grasp of subject matter;
- an ability to make sound critical evaluation of information;
- a very good to excellent capacity for original, creative and/or logical thinking;
- a very good to excellent ability to organize, to analyze, to synthesize, to integrate ideas, and to express thoughts fluently;
- a very good to excellent ability to analyze and solve difficult problems related to subject matter.

70-79 Satisfactory to Good

A satisfactory to good performance with evidence of

- a substantial knowledge of subject matter;
- a satisfactory to good understanding of the relevant issues and satisfactory to good familiarity with the relevant literature and technology;
- a satisfactory to good capacity for logical thinking;
- some capacity for original and creative thinking;
- a satisfactory to good ability to organize, to analyze, and to examine the subject matter in a critical and constructive manner;
- a satisfactory to good ability to analyze and solve moderately difficult problems.

60-69 Poor

A generally weak performance, but with some evidence of

- a basic grasp of the subject matter;
- some understanding of the basic issues;
- some familiarity with the relevant literature and techniques;
- some ability to develop solutions to moderately difficult problems related to the subject matter;
- some ability to examine the material in a critical and analytical manner.

<60 Failure

An unacceptable performance.

Program Requirements

- Percentage scores of at least 70% are required for a minimal pass performance in undergraduate courses taken by graduate students;
- For all other graduate courses, percentage scores of at least 60-69% are required for a minimal pass performance for each course which is included in a Master's program, provided that the student's Cumulative Weighted Average is at least 70%;
- Graduate courses for which students receive grades of 60-69% are minimally acceptable in a Postgraduate Diploma program, provided that the Cumulative Weighted Average is at least 65%

Course Overview

This course continues the discussion of what it is to practice as a professional architect, in this case focusing on the architectural practice as a business. What are the legal issues and structures for an architectural practice? How does one go about forming a practice – what needs to be considered? Once in place, how does the architect manage the various components of the business – money and people?

Like preceding graduate courses in professional practice, the course is organized in a workshop fashion around weekly topics. Students will be responsible for coming to the sessions prepared for discussion with their peers, in large or small groups. Students will be expected to prepare a business plan for an architectural practice as well as a research paper on one significant aspect of project management, specifically looking at how the field is changing due to technological change.

Class Schedule

Week	Topic	Readings	Assignment
1	Introduction: Architectural Practices	RAIC 2.1.1, Samuel & Sanders ch. 5	
2	Developing a business plan	Osterwalder ch. 1,3,5	
3	Legal issues for architectural practices	Samuel & Sanders ch. 1, 3, 4, 22-24, 26, 27	
4	Financial management and accounting systems	RAIC 2.1.4, Stone Vol. 3B	
5	Human resource management 1: Hiring, Leading and Motivating Staff	RAIC 2.1.7, CCCO Recruiting, Leading, Motivating, Coaching,	Business Plan
6	Human resource Management 2: Managing Performance, Conflict, Termination, Legal Aspects	CCCO Managing Performance, Conflict, Termination, Samuel & Sanders Ch. 20-21	
7	Record-keeping expectations	RAIC 2.1.5, 2.1.9 Samuel & Sanders ch. 15	
8	RFPs and other proposals	RAIC 2.1.10, 3.1.1	
9	Architect-client contracts	Samuel & Sanders ch. 6-11, RAIC 1.2.2 2.1.10, 3.1.2, 3.1.3, 3.1.4	RFP Assignment
10	Organizing partnerships and consultant relationships	RAIC 1.2.3, CCCO Partnership Tip Sheets,	
11	Client management	RAIC 1.2.2, 2.1.6, Stone Vol. 2B,	
12	Marketing	RAIC 2.1.3, Stone Vol. 1	
13	Speculations: the architectural practice of the next decade		Research Paper

Midterm and Final Examination Scheduling

Midterm and final examinations must be written on the date scheduled.
Final examinations may be scheduled at any time during the examination period (INSERT FIRST AND LAST DAY OF CURRENT EXAM PERIOD); students should therefore avoid making prior travel, employment, or other commitments for this period. If a student is unable to write an exam through no fault of his or her own for medical or other valid reasons, documentation must be provided and an opportunity to write the missed exam may be given. Students are encouraged to review all examination policies and procedures:

http://students.usask.ca/academics/exams.php

Length and Mode of Final Examination

N/A

Instructor Information

Note: This information will be completed before the syllabus is released to students.

Contact Information

TBD

Office Hours

TBD

Instructor Profile

The instructor be a licensed architect in Saskatchewan and either have a graduate degree in architecture or significant practice experience (minimum ten years). The instructor will be a member of the Graduate Faculty.

Required Activities Outside of Class Time

If possible, we will organize a visit to a construction site. This may need to take place outside of class time.

Required Resources

Readings/Textbooks

Students are expected to purchase the following books:

Royal Architectural Institute of Canada. (2009). *Canadian handbook of practice for architects.* Ottawa: Royal Architectural Institute of Canada.

Osterwalder, A. & Pigneur, Y. (2010). *Business Model Generation*. Hoboken, NJ: John Wiley & Sons Inc.

Brian M. Samuels, B. & Sanders, D. *Practical Law of Architecture, Engineering, and Geoscience, Third Canadian Edition*. (2016). Upper Saddle River, NJ: Pearson Prentice Hall Inc.

Stone, D. A., & Ontario Association of Architects. (2004). *Mastering the business of architecture: A street-smart, hard-knocks guide to success, prosperity and profit in your architectural practice.* Toronto, ON: Ontario Association of Architects.

Textbooks are available from the University of Saskatchewan Bookstore:
www.usask.ca/consumer_services/bookstore/textbooks

Other Required Materials

N/A

Electronic Resources

Links to the following readings will be made available through the BBLearn site:
Cultural Human Resources Council, Culutral Careers Council of Ontario & Netgain Partners Human Resource Management Toolkit. Produced in cooperation with Cultural Human Resources Council and other organizations.

- Leadership and Building Your Team
- Recruiting the Right People
- Motivating People
- Coaching, Mentoring and Succession Planning
- Managing Employee Performance
- Dealing with Challenge and Conflict
- Termination of Employment
- Tip Sheet: Top Ten Tips for Successful Partnerships
- Tip Sheet: Partnership Readiness Checklist
- Tip Sheet: Assessing Your Partnership

Grading Scheme

Interview	15%
Business Plan	25%
Midterm Test	25%
Research paper	35%
Total	100%

Evaluation Components

Assignment 1: Interview

Value: 15% of final grade

Due Date: See Course Schedule

Type: Assignment to be completed outside of course time; 1000-1500 word analytical report

Description: Students will interview a practitioner about major issues facing the practice, and write a brief analytical report based on the interview.

Assignment 2: Business Plan

Value: 25% of final grade

Due Date: See Course Schedule

Type: Assignment to be completed outside of course time

Description: Students will develop a business plan for an architectural practice.

Assignment 3: RFP

Value: 25% of final grade

Date: See Course Schedule

Type: Assignment to be completed outside of course time (group project)

Description: Students will develop a proposal to carry our a project in response to an RFP. This will require producing a position statement about the project, a methodology, defining a team, identifying a fee, and producing portfolio materials.

Research Paper

Value: 35% of final grade

Date: See Course Schedule

Type: 2500 to 3000 word illustrated ~~essay~~ research paper

Description: Students will prepare an ~~essay~~ research paper discussing an issue of relevance to emerging modes of practice in architecture, assembling literature and data analysis in the service of a clear position.

Submitting Assignments

Assignments are to be submitted through the course BBLearn dropbox.

Late Assignments

Aside from situations requiring accommodation due to illness or other documented emergency in accordance with University policies, late assignments will not be accepted.

Criteria That Must Be Met to Pass

All evaluation criteria must be completed in order to pass this course. Students who miss the mid-term test due to illness or other documented emergency will be provided with an alternative evaluation.

Attendance Expectations

Attendance at all sessions is expected, although attendance will not be taken.

Recording of the Course

Recording of the course will only be allowed in circumstances where it is required as part of an accommodation for students with special needs.

Collection of Student Work

Students should be aware that they will be required to document their work for the purposes of CACB accreditation of the Architecture program. As well, work may be collected and archived by the program for this same reason.

Copyright

Materials posted on BBLearn or distributed in class will be made available in accordance with Canadian copyright laws. Students are reminded of their obligation to also abide by this legislation.

Student Feedback

Students will be asked to complete an anonymous survey at the completion of the course, which will include an area for freeform feedback.

Integrity Defined (from the Office of the University Secretary)

The University of Saskatchewan is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to

uphold the policies of the University in this respect. Students are particularly urged to familiarize themselves with the provisions of the Student Conduct & Appeals section of the University Secretary Website and avoid any behavior that could potentially result in suspicions of cheating, plagiarism, misrepresentation of facts and/or participation in an offence. Academic dishonesty is a serious offence and can result in suspension or expulsion from the University.

All students should read and be familiar with the Regulations on Academic Student Misconduct (http://www.usask.ca/secretariat/student-conduct-appeals/StudentAcademicMisconduct.pdf) as well as the Standard of Student Conduct in Non-Academic Matters and Procedures for Resolution of Complaints and Appeals (http://www.usask.ca/secretariat/student-conduct-appeals/StudentNon-AcademicMisconduct.pdf)

For more information on what academic integrity means for students see the Student Conduct & Appeals section of the University Secretary Website at: http://www.usask.ca/secretariat/student-conduct-appeals/forms/IntegrityDefined.pdf

Examinations with Disability Services for Students (DSS)

Students who have disabilities (learning, medical, physical, or mental health) are strongly encouraged to register with Disability Services for Students (DSS) if they have not already done so. Students who suspect they may have disabilities should contact DSS for advice and referrals. In order to access DSS programs and supports, students must follow DSS policy and procedures. For more information, check http://students.usask.ca/health/centres/disability-services-for-students.php, or contact DSS at 966-7273 or dss@usask.ca.

Students registered with DSS may request alternative arrangements for mid-term and final examinations.
Students must arrange such accommodations through DSS by the stated deadlines. Instructors shall provide the examinations for students who are being accommodated by the deadlines established by DSS.

Student Supports

Student Learning Services

Student Learning Services (SLS) offers assistance to U of S undergrad and graduate students. For information on specific services, please see the SLS web site https://www.usask.ca/ulc/.

Student and Enrolment Services Division

The Student and Enrolment Services Division (SESD) focuses on providing developmental and support services and programs to students and the university community. For more information, see the SESD web site http://www.usask.ca/sesd/.

College Supports

Students in Arts & Science are encouraged to contact the Undergraduate Student Office and/or the Trish Monture Centre for Success with any questions on how to choose a major; understand program requirements; choose courses; develop strategies to improve grades; understand university policies and procedures; overcome personal barriers; initiate pre-career inquiries; and identify career planning resources. Contact information is available at: (http://artsandscience.usask.ca/undergraduate/advising/)

Treaty Acknowledgement

As we gather here today, we acknowledge we are on Treaty Six Territory and the Homeland of the Métis. We pay our respect to the First Nation and Métis ancestors of this place and reaffirm our relationship with one another.

CACB Student Performance Criteria

Within the Architecture professional program at the University of Saskatchewan, this course is responsible for demonstrating the following Student Performance Criteria as set out by the CACB:

C1. The Architectural Profession
An understanding of the organization of the profession, the Architects Act(s) and their regulations, the role of regulatory bodies, the paths to licensure including internship and reciprocal rights and responsibilities of interns and employers.

C3. Practice Organization
An understanding of the basic principles of practice organization, including financial management, business planning, entrepreneurship, marketing, negotiation, project management, and risk mitigation as well as an understanding of trends that affect practice

UNIVERSITY OF SASKATCHEWAN

ARCD 901.0 Co-operative Education in Architecture II

Offered in all terms

First Proposed Offering ~~2021~~ 2023

Delivery Format: Work Placement

Location date and time: N/A

Instructor: N/A

Course Description

Students undertake a 4-month work term placement with a partner in the architecture, engineering, and construction industry.

Prerequisites

ARCD 815.3 Professional Practice in Architecture.

Learning Outcomes

By the completion of this course, students will be expected to:

1. Understand and undertake the roles, responsibilities, and tasks involved in the design of the built environment
2. Gain professional experience and insights impacting future career planning
3. Demonstrate the ability to apply academic skills and insights on projects in the AEC industry workplace
4. Develop an understanding of proper workplace etiquette including appropriate behavior, language, and attire
5. Communicate and collaborate with a range of stakeholders involved in the design and construction of a project
6. Critically design and analyze a building project, in the context of technical and regulatory parameters

Information on literal descriptors for grading at the University of Saskatchewan can be found at: http://students.usask.ca/academics/grading/grading-system.php

Please note: There are different literal descriptors for undergraduate and graduate students.

More information on the Academic Courses Policy on course delivery, examinations and assessment of student learning can be found at:

http://policies.usask.ca/policies/academic-affairs/academic-courses.php

The University of Saskatchewan Learning Charter is intended to define aspirations about the learning experience that the University aims to provide, and the roles to be played in realizing these aspirations by students, instructors and the institution. A copy of the Learning Charter can be found at: http://www.usask.ca/university_secretary/LearningCharter.pdf

University of Saskatchewan Grading System (for undergraduate courses)

Exceptional (90-100) A superior performance with consistent evidence of

- a comprehensive, incisive grasp of the subject matter;
- an ability to make insightful critical evaluation of the material given;
- an exceptional capacity for original, creative and/or logical thinking;
- an excellent ability to organize, to analyze, to synthesize, to integrate ideas, and to express thoughts fluently.

Excellent (80-90) An excellent performance with strong evidence of

- a comprehensive grasp of the subject matter;
- an ability to make sound critical evaluation of the material given;
- a very good capacity for original, creative and/or logical thinking;
- an excellent ability to organize, to analyze, to synthesize, to integrate ideas, and to express thoughts fluently.

Good (70-79) A good performance with evidence of

- a substantial knowledge of the subject matter;
- a good understanding of the relevant issues and a good familiarity with the relevant literature and techniques;
- some capacity for original, creative and/or logical thinking;
- a good ability to organize, to analyze and to examine the subject material in a critical and constructive manner.

Satisfactory (60-69) A generally satisfactory and intellectually adequate performance with evidence of

- an acceptable basic grasp of the subject material;
- a fair understanding of the relevant issues;
- a general familiarity with the relevant literature and techniques;
- an ability to develop solutions to moderately difficult problems related to the subject material;
- a moderate ability to examine the material in a critical and analytical manner.

Minimal Pass (50-59) A barely acceptable performance with evidence of

- a familiarity with the subject material;

- some evidence that analytical skills have been developed;
- some understanding of relevant issues;
- some familiarity with the relevant literature and techniques;
- attempts to solve moderately difficult problems related to the subject material and to examine the material in a critical and analytical manner which are only partially successful.

Course Overview

Architecture in contemporary practice is a confluence of industries, skills, and backgrounds that go beyond what is dispensed with in the academic environment. To engage contemporary practice directly in the professional workplace is an invaluable experiential learning opportunity that complements a robust architectural education. Directly participating in the processes of design, development, documentation, and delivery of an architectural project validates academic discourse while simultaneously drawing currency and application into the classroom. Working with employers from diverse base in the Architecture, Engineering, and Construction industry over a four month period, students will have the opportunity to gain insights and experience in contemporary architectural praxis. From conventional architecture firms to design research, students will have an opportunity to directly experience the spectrum of disciplines instrumental in the synthesis of the built environment.

Note: Students admitted into the extended Master of Architecture program will be required to complete three co-operative education Work Terms and have the opportunity for a 4th Work Term in the Summer after Semester 4 (Spring/Summer) of the Master of Architecture program.

Class Schedule

The Work Term Courses do not have a fixed schedule of classes. The topics and insights covered during the Work Term will vary with different employers, locations, and positions. All students must complete a minimum of 12 weeks of full time employment over the 4-month Work Term.

Week	Topic	Readings	Assignment
Pre-Work Term Semester	Work with Course Coordinator in the application and procurement of employment		
Work Term Semester	Potential Site Visit (where possible)	N/A	
	Employer Evaluation	N/A	Employer Assessment of Student Performance
Third week of Post-Work Term Semester	Work Term Report	N/A	Work Term Report

During the semester prior to the Work Term, students are expected to follow through with the procedures outlined by the course coordinator in order to prepare students for transition into the professional workplace. This would include attendance at information sessions and workshops. Students are expected to apply to job postings that will be posted online via the secure co-operative education system interface. Students wishing to pursue employment with parties not on this system must present the position to the course coordinator to determine whether the position is appropriate (including compliance with university, international, and CAFCE guidelines).

During the Work Term, the course coordinator will visit students at their workplaces. These visits will be scheduled throughout the work term and where possible, will be conducted with employers and relevant supervisors. Employers will be provided student evaluation forms in order to assess student performance during the Work Term. Employers and students are expected to use constructive feedback to discuss performance, expectations, and outcomes.

Upon completion of the Work Term, students are expected to compile a Work Term report, which is a portfolio of the work they have conducted with their employers complemented with a reflective report on the impact of the experience on their career. Given that students may complete their Work Terms near the start of the subsequent academic semester, students are to submit their Work Term Report by the third week of the semester following a Work Term.

Midterm and Final Examination Scheduling

There are no exams for Work Term Courses.

Course Co-ordinator Information

Note: This information will be completed before the syllabus is released to students.

Contact Information

TBD

Office Hours

TBD

Course Co-ordinator Profile

The Course Co-ordinator will have a graduate degree in architecture and professional experience within a range of roles and responsibilities in the AEC industry.

Required Activities Outside of Class Time

As this is a co-operative education Work Term, activities are undertaken during an employer's standard hours of operation.

Required Resources

Readings/Textbooks

Given the diversity of employers and assumed roles, there are no required readings or textbooks for this course.

Other Required Materials

Depending on the employer and roles, students may be required to own appropriate Personal Protective Equipment (PPE) including goggles, globes, hard hats, and safety boots.

Electronic Resources

The following readings will be made available through the course management site:

12 Tips for Making an Outstanding Architecture Portfolio. Kogan, Gabriel. Retrieved from ArchDaily: http://www.archdaily.com/780996/12-tips-on-making-an-architecture-portfolio

A Student's Guide to the Architectural Portfolio. Build LLC. Retrieved from Build Blog: http://blog.buildllc.com/2014/04/a-students-guide-to-the-architectural-portfolio/

Employability Skills 2000+. Retrieved from The Conference Board of Canada: http://www.conferenceboard.ca/topics/education/learning-tools/employability-skills.aspx

Supplementary Resources

Students are expected to consult with the course coordinator to determine potential

background knowledge and experience will be required for job postings. This may include learning new software, workflows, or skills to enhance alignment with posted job descriptions.

Depending on their backgrounds and experience, students may consult the following supplementary resources:

Allen, Edward. The Architect's Studio Companion: Rules of Thumb for Preliminary Design. Wiley, 2011.

Kliment, Stephen A. Writing for Design Professionals: A guide to writing successful proposals, letters, brochures, portfolios, reports, presentations, and job applications for architects, engineers, and interior designers. Norton, 2006.

Linton, Harold. Portfolio Design 4th Edition. Norton, 2012.

Luescher, Andreas. The Architect's Portfolio. Routledge, 2010.

Lynda.com – an excellent online resource for quickly updating software skills https://www.lynda.com

Grading Scheme

Work Term Report	Pass/Fail
Employer Evaluation	Pass/Fail
Total	Pass/Fail

Evaluation Components

Employer Evaluation

Value: Pass/Fail **Date**: See Course Schedule

Type: Formal survey of student performance by employer

Description: Employers assess student performance based upon a spectrum of criteria ranging from interpersonal skills to technical ability. The evaluation is based upon the standard co-operative education metrics used throughout all co-operative education programs in the university. Where permitting, this may be submitted in tandem with a site visit by the course coordinator.

Work Term Report

Value: Pass/Fail **Date**: See Course Schedule

Type: Critical documentation of Work Term experience

ARCD 901.0 Co-operative Education in Architecture II

Description: Students create a portfolio of work with an employer compiled over the Co-operative Education Work Term. This document is also supplemented by a comprehensive written report where students critically describe projects, tasks, and their impacts on their future academic and professional pursuits. This is to be submitted within three weeks of the end of the Work Term.

Submitting Assignments

Assignments are to be submitted through the course BBLearn dropbox.

Late Assignments

Aside from situations requiring accommodation due to illness or other documented emergency in accordance with University policies, late assignments (Work Term Reports and Employer Evaluations) will not be accepted.

Criteria That Must Be Met to Pass

All Work Terms must be a minimum of 12 weeks in duration with an industry partner approved by the course coordinator. All evaluation criteria (Work Term Report and Employer Evaluation) must be completed in order to pass this course.

Attendance Expectations

All students are to conform to the attendance expectations established by the employer. Students must work full-time for a minimum of 12 weeks (typically ranging from 35-40 hours each) with approved employers. Excessive absences, tardiness, or misconduct of any kind may result in dismissal by an employer resulting in a failing grade.

Participation

Employer Evaluations will determine student conformance to workplace expectations and engagement.

Experiential Learning

This course serves as the primary venue for experiential learning opportunities within range of disciplines in the AEC industry.

Recording of the Course

Recording of the course will only be allowed in circumstances where it is required as part of an accommodation for students with special needs. Students are required to confirm with employers both the extent and conditions for any recording pertaining to professional work.

Collection of Student Work

Students should be aware that they will be required to document their work for the purposes of CACB accreditation of the Architecture program. As well, work may be collected and archived by the program for this same reason. Students must receive written confirmation from employers that all work submitted is permitted for this purpose.

Copyright

All material produced by students during the Work Term are subject to corporate protocols, disclosure agreements, and employer permissions. All students submitting materials produced during their Work Terms are expected to follow these guidelines when documenting and presenting work to the course coordinator.

Student Feedback

Students will be asked to complete an anonymous survey at the completion of the course, which will include an area for freeform feedback. Though not mandatory, site visits conducted at employer workplaces will provide another opportunity for students to present feedback on their experiences to the course coordinator.

Integrity Defined (from the Office of the University Secretary)

The University of Saskatchewan is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect. Students are particularly urged to familiarize themselves with the provisions of the Student Conduct & Appeals section of the University Secretary Website and avoid any behavior that could potentially result in suspicions of cheating, plagiarism, misrepresentation of facts and/or participation in an offence. Academic dishonesty is a serious offence and can result in suspension or expulsion from the University.

All students should read and be familiar with the Regulations on Academic Student Misconduct (http://www.usask.ca/secretariat/student-conduct-appeals/StudentAcademicMisconduct.pdf) as well as the Standard of Student Conduct in Non-Academic Matters and Procedures for Resolution of Complaints and Appeals (http://www.usask.ca/secretariat/student-conduct-appeals/StudentNon-AcademicMisconduct.pdf)

For more information on what academic integrity means for students see the Student Conduct & Appeals section of the University Secretary Website at:
http://www.usask.ca/secretariat/student-conduct-appeals/forms/IntegrityDefined.pdf

Examinations with Disability Services for Students (DSS)

Students who have disabilities (learning, medical, physical, or mental health) are strongly

encouraged to register with Disability Services for Students (DSS) if they have not already done so. Students who suspect they may have disabilities should contact DSS for advice and referrals. In order to access DSS programs and supports, students must follow DSS policy and procedures. For more information, check http://students.usask.ca/health/centres/disability-services-for-students.php, or contact DSS at 966-7273 or dss@usask.ca.

Students registered with DSS may request alternative arrangements for mid-term and final examinations.
Students must arrange such accommodations through DSS by the stated deadlines. Instructors shall provide the examinations for students who are being accommodated by the deadlines established by DSS.

Student Supports

Student Learning Services

Student Learning Services (SLS) offers assistance to U of S undergrad and graduate students. For information on specific services, please see the SLS web site https://www.usask.ca/ulc/.

Student and Enrolment Services Division

The Student and Enrolment Services Division (SESD) focuses on providing developmental and support services and programs to students and the university community. For more information, see the SESD web site http://www.usask.ca/sesd/.

College Supports

Students in Arts & Science are encouraged to contact the Undergraduate Student Office and/or the Trish Monture Centre for Success with any questions on how to choose a major; understand program requirements; choose courses; develop strategies to improve grades; understand university policies and procedures; overcome personal barriers; initiate pre-career inquiries; and identify career planning resources. Contact information is available at: (http://artsandscience.usask.ca/undergraduate/advising/)

Treaty Acknowledgement

As we gather here today, we acknowledge we are on Treaty Six Territory and the Homeland of the Métis. We pay our respect to the First Nation and Métis ancestors of this place and reaffirm our relationship with one another.

CACB Student Performance Criteria

Within the Architecture professional program at the University of Saskatchewan, this course is responsible for demonstrating the following Student Performance Criteria as set out by the CACB:

B2. Collaboration and Leadership
The ability to support and foster successful individual and team dynamics, collaborative experiences, and opportunities for leadership.

C1. The Architectural Profession
An understanding of the organization of the profession, the Architects Act(s) and their regulations, the role of regulatory bodies, the paths to licensure including internship and reciprocal rights and responsibilities of interns and employers.

C3. Practice Organization
An understanding of the basic principles of practice organization, including financial management, business planning, entrepreneurship, marketing, negotiation, project management, and risk mitigation as well as an understanding of trends that affect practice.

C4. Project Mangement
An understanding of the relationships among key stakeholders in the design process; the methods for selecting consultants and assembling teams; building economics and cost control strategies; and the development of work plans, project schedules, and project delivery methods.

D3. Design Tools
Ability to use the broad range of design tools available to the architectural profession, including traditional and emerging techniques of two-dimensional and three-dimensional representation, computational design, modeling, simulation and fabrication.

D8. Design Documentation
Ability to document and present the outcome of a design project using the braod range of media available to the architectural profession, including the types of documentation for the purposes of construction and to understand the role of contract documents and specifications in this process.

E2. Communication Skills: Writing, speaking and graphic communication
Ability to write and speak effectively and use graphic media to appropriately communicate on subject matter retlated to the architectural discipline both within the profession and with the general public.

UNIVERSITY OF SASKATCHEWAN
College of Graduate Studies and Research
Room C180 Administration Building, 105 Administration Place, Saskatoon SK CANADA S7N 5A2
Telephone (306)966-5751, Fax: (306)966-5756, General E-mail: grad.studies@usask.ca

GSR 400.1
New Graduate Course Proposal

In addition to this form, please complete and submit a *Course Creation Information* form, available on the University website (www.usask.ca/university_secretary/council/committees/academic_programs/report_files/course_creation.php), to the Department of Academic Services and Financial Assistance, Student and Enrolment Services Division.

EXAM EXEMPTION: Yes ☒ **(must complete section 6.1)** No ☐

Basic information about the proposed course:

1. Department/Unit: Art and Art History College of: Arts and Science

2. _____ _____
(Authorizing Unit Head - PLEASE PRINT) (Authorizing Unit Head - SIGNATURE)

3. Information required for the calendar:
   - 3.1 Label and number of course: ARCD 901.0
   - 3.2 Title of course: Co-operative Education in Architecture II
   - 3.3 Total Hours: Lecture: 0
     Seminar: 0
     Lab: 0
     Tutorial: 0
     Other: 0
   - 3.4 Weekly Hours: Lecture: 0
     Seminar: 0
     Lab: 0
     Tutorial: 0
     Other: 0
   - 3.5 Term in which it will be offered: T1 ☐ T2 ☐ T1 or T2 ☐ T1 and T2 ☒
   - 3.6 Prerequisite: ARCD 815.3 Professional Practice in Architecture
   - 3.7 Calendar description (not more than 50 words):
     Students undertake a 4-month work term placement with a partner in the architecture, engineering, and construction industry.

4. Rationale for introducing this course:

   This course is required for the proposed Master of Architecture degree program.

5. Impact of this course:
   - 5.1 Are the programs/courses of other academic units/Colleges affected by this new course (possible duplication)?
     No ☒ Yes **(Please list)**:
   - 5.2 Were any other academic units asked to review or comment on the proposal?

No ☒ Yes **(Please attach correspondence)** ☐

5.3 Will the offering of this course lead to the deletion or modification of any other course(s)?
No ☒ Yes **(Please list)**: _____

5.4 Course(s) for which this graduate course will be a prerequisite?
ARCD 902.0 Co-operative Education in Architecture III

5.5 Is this course to be required by your graduate students, or by graduate students in another program?
No ☐ Yes **(Please list)**: Master of Architecture students

6. Course Information. **(Please append the Course Outline (Syllabus), including a separate Undergraduate Course Outline (Syllabus) if required. Information on Academic Integrity and Student Conduct can be found on the U of S website at http://www.usask.ca/university_secretary/honesty/)**

Checklist:
- ☒ Course objectives need to be clearly stated
- ☒ Description of and Activities for Evaluation must be listed
- ☒ **Course Outline** (syllabus) with **Reading List** must be included
- ☒ Percentage of Total Mark for each evaluation listed
- ☐ If undergraduate lectures are included, also submit the **Undergraduate Course Outline (Syllabus)** and include information on what additional activities make this a graduate level course. For guidelines, see '**Undergraduate Component of Graduate Courses**' under '*Forms for Graduate Chairs*' at http://www.usask.ca/cgsr/prospective_students/forms.php
- ☒ Professor must be a member of the Graduate Faculty

6.1 **EXAM EXEMPTION**: Please note, **if there is no final exam or if the final examination is worth less than 30% of the final grade** please provide a brief statement which explains why a final examination is inappropriate for this course.

This is a work placement course, and as a result has no examination component.

7. Enrolment:

7.1 Expected Enrolment: 45

7.2 From which colleges/programs: College of Arts and Science / Master of Architecture only

8. Resources:

8.1 Proposed instructor(s) (Please include qualifications):

The Course Co-ordinator will have a graduate degree in architecture and professional experience within a range of roles and responsibilities in the AEC industry.

8.2 How does the department plan to handle the additional teaching or administrative workload:

This course is proposed as part of the new M.Arch. program. Teaching and administrative requirements are being reviewed as part of that proposal.

8.3 Are sufficient library or other research resources available for this course:

Yes

8.4 Are any additional resources required (library, audio-visual, technology, lab equipment, lab space, etc.):

This course will require administrative support for the Co-op program, as has been identified in the Program Proposal.

9. Date of Implementation:

9.1 To be offered: Annually ☒ Biennially ☐ Alternate Years ☐ Other ☐

This course will conform to the academic requirements and standards for graduate courses, including the rules of *Student Appeals in Academic Matters* (see www.usask.ca/university_secretary/council/reports_forms/reports/12-06-99.php) and Academic Integrity and Student Conduct (see www.usask.ca/university_secretary/honesty/).

Date of Approval by College (of the home academic unit): _____

The signature of the Dean of your College signifies that the necessary resources are either available or shall be supplied by the College/Department budget.

_____
(Authorizing College Signature (of the home academic unit)

_____
(Name of Person Signing Above - PLEASE PRINT)

Form version April 2009

UNIVERSITY OF SASKATCHEWAN

ARCD 902.0 Co-operative Education in Architecture III

Offered in all terms

First Proposed Offering ~~2021~~ 2023

Delivery Format: Work Placement

Location date and time: N/A

Instructor: N/A

Course Description

The mandatory co-op Work Term provides students an opportunity to undertake a 4-month work term placement with a partner in the architecture, engineering, and construction industry. The co-op program provides students with a unique opportunity to apply their acquired skills in a professional environment while gaining insights on current architectural praxis. Course enrollment is conditional on the student obtaining and accepting a placement offer from an approved industry partner. Where possible, students will be visited as required by the course coordinator to assess professional experience and progress. Work Terms are a minimum of 12 weeks. This course is graded on a pass/fail basis. The grade is achieved at the successful completion of the Work Term and submission of an acceptable Work Term Report.

Prerequisites

ARCD 901.0 Co-operative Education in Architecture II

Learning Outcomes

By the completion of this course, students will be expected to:

1. Understand and undertake the roles, responsibilities, and tasks involved in the design of the built environment
2. Gain professional experience and insights impacting future career planning
3. Demonstrate the ability to apply academic skills and insights on projects in the AEC industry workplace
4. Develop an understanding of proper workplace etiquette including appropriate behavior, language, and attire
5. Communicate and collaborate with a range of stakeholders involved in the design and construction of a project
6. Critically design and analyze a building project, in the context of technical and regulatory parameters

Information on literal descriptors for grading at the University of Saskatchewan can be found at: http://students.usask.ca/academics/grading/grading-system.php

Please note: There are different literal descriptors for undergraduate and graduate students. More information on the Academic Courses Policy on course delivery, examinations and assessment of student learning can be found at:
http://policies.usask.ca/policies/academic-affairs/academic-courses.php

The University of Saskatchewan Learning Charter is intended to define aspirations about the learning experience that the University aims to provide, and the roles to be played in realizing these aspirations by students, instructors and the institution. A copy of the Learning Charter can be found at: http://www.usask.ca/university_secretary/LearningCharter.pdf

University of Saskatchewan Grading System (for undergraduate courses)

Exceptional (90-100) A superior performance with consistent evidence of

- a comprehensive, incisive grasp of the subject matter;
- an ability to make insightful critical evaluation of the material given;
- an exceptional capacity for original, creative and/or logical thinking;
- an excellent ability to organize, to analyze, to synthesize, to integrate ideas, and to express thoughts fluently.

Excellent (80-90) An excellent performance with strong evidence of

- a comprehensive grasp of the subject matter;
- an ability to make sound critical evaluation of the material given;
- a very good capacity for original, creative and/or logical thinking;
- an excellent ability to organize, to analyze, to synthesize, to integrate ideas, and to express thoughts fluently.

Good (70-79) A good performance with evidence of

- a substantial knowledge of the subject matter;
- a good understanding of the relevant issues and a good familiarity with the relevant literature and techniques;
- some capacity for original, creative and/or logical thinking;
- a good ability to organize, to analyze and to examine the subject material in a critical and constructive manner.

Satisfactory (60-69) A generally satisfactory and intellectually adequate performance with evidence of

- an acceptable basic grasp of the subject material;
- a fair understanding of the relevant issues;
- a general familiarity with the relevant literature and techniques;

- an ability to develop solutions to moderately difficult problems related to the subject material;
- a moderate ability to examine the material in a critical and analytical manner.

Minimal Pass (50-59) A barely acceptable performance with evidence of

- a familiarity with the subject material;
- some evidence that analytical skills have been developed;
- some understanding of relevant issues;
- some familiarity with the relevant literature and techniques;
- attempts to solve moderately difficult problems related to the subject material and to examine the material in a critical and analytical manner which are only partially successful.

Course Overview

Architecture in contemporary practice is a confluence of industries, skills, and backgrounds that go beyond what is dispensed with in the academic environment. To engage contemporary practice directly in the professional workplace is an invaluable experiential learning opportunity that complements a robust architectural education. Directly participating in the processes of design, development, documentation, and delivery of an architectural project validates academic discourse while simultaneously drawing currency and application into the classroom. Working with employers from diverse base in the Architecture, Engineering, and Construction industry over a four month period, students will have the opportunity to gain insights and experience in contemporary architectural praxis. From conventional architecture firms to design research, students will have an opportunity to directly experience the spectrum of disciplines instrumental in the synthesis of the built environment.

Note: Students admitted into the extended Master of Architecture program will be required to complete three co-operative education Work Terms and have the opportunity for a 4th Work Term in the Summer after Semester 4 (Spring/Summer) of the Master of Architecture program.

Class Schedule

The Work Term Courses do not have a fixed schedule of classes. The topics and insights covered during the Work Term will vary with different employers, locations, and positions. All students must complete a minimum of 12 weeks of full time employment over the 4-month Work Term.

Week	Topic	Readings	Assignment
Pre-Work Term Semester	Work with Course Coordinator in the application and procurement of employment		
Work Term Semester	Potential Site Visit (where possible)	N/A	
	Employer Evaluation	N/A	Employer Assessment of Student Performance
Third week of Post-Work Term Semester	Work Term Report	N/A	Work Term Report

During the semester prior to the Work Term, students are expected to follow through with the procedures outlined by the course coordinator in order to prepare students for transition into the professional workplace. This would include attendance at information sessions and workshops. Students are expected to apply to job postings that will be posted online via the secure co-operative education system interface. Students wishing to pursue employment with parties not on this system must present the position to the course coordinator to determine whether the position is appropriate (including compliance with university, international, and CAFCE guidelines).

During the Work Term, the course coordinator will visit students at their workplaces. These visits will be scheduled throughout the work term and where possible, will be conducted with employers and relevant supervisors. Employers will be provided student evaluation forms in order to assess student performance during the Work Term. Employers and students are expected to use constructive feedback to discuss performance, expectations, and outcomes.

Upon completion of the Work Term, students are expected to compile a Work Term report, which is a portfolio of the work they have conducted with their employers complemented with a reflective report on the impact of the experience on their career. Given that students may complete their Work Terms near the start of the subsequent academic semester, students are to submit their Work Term Report by the third week of the semester following a Work Term.

Midterm and Final Examination Scheduling

There are no exams for Work Term Courses.

Course Co-ordinator Information

Note: This information will be completed before the syllabus is released to students.

Contact Information

TBD

Office Hours

TBD

Course Co-ordinator Profile

The Course Co-ordinator will have a graduate degree in architecture and professional experience within a range of roles and responsibilities in the AEC industry.

Required Activities Outside of Class Time

As this is a co-operative education Work Term, activities are undertaken during an employer's standard hours of operation.

Required Resources

Readings/Textbooks

Given the diversity of employers and assumed roles, there are no required readings or textbooks for this course.

Other Required Materials

Depending on the employer and roles, students may be required to own appropriate Personal Protective Equipment (PPE) including goggles, globes, hard hats, and safety boots.

Electronic Resources

The following readings will be made available through the course management site:

12 Tips for Making an Outstanding Architecture Portfolio. Kogan, Gabriel. Retrieved from ArchDaily: http://www.archdaily.com/780996/12-tips-on-making-an-architecture-portfolio

A Student's Guide to the Architectural Portfolio. Build LLC. Retrieved from Build Blog: http://blog.buildllc.com/2014/04/a-students-guide-to-the-architectural-portfolio/

Employability Skills 2000+. Retrieved from The Conference Board of Canada: http://www.conferenceboard.ca/topics/education/learning-tools/employability-skills.aspx

Supplementary Resources

Students are expected to consult with the course coordinator to determine potential

background knowledge and experience will be required for job postings. This may include learning new software, workflows, or skills to enhance alignment with posted job descriptions.

Depending on their backgrounds and experience, students may consult the following supplementary resources:

Allen, Edward. The Architect's Studio Companion: Rules of Thumb for Preliminary Design. Wiley, 2011.

Kliment, Stephen A. Writing for Design Professionals: A guide to writing successful proposals, letters, brochures, portfolios, reports, presentations, and job applications for architects, engineers, and interior designers. Norton, 2006.

Linton, Harold. Portfolio Design 4th Edition. Norton, 2012.

Luescher, Andreas. The Architect's Portfolio. Routledge, 2010.

Lynda.com – an excellent online resource for quickly updating software skills https://www.lynda.com

Grading Scheme

Work Term Report	Pass/Fail
Employer Evaluation	Pass/Fail
Total	Pass/Fail

Evaluation Components

Employer Evaluation

Value: Pass/Fail **Date**: See Course Schedule

Type: Formal survey of student performance by employer

Description: Employers assess student performance based upon a spectrum of criteria ranging from interpersonal skills to technical ability. The evaluation is based upon the standard co-operative education metrics used throughout all co-operative education programs in the university. Where permitting, this may be submitted in tandem with a site visit by the course coordinator.

Work Term Report

Value: Pass/Fail **Date**: See Course Schedule

Type: Critical documentation of Work Term experience

Description: Students create a portfolio of work with an employer compiled over the Co-operative Education Work Term. This document is also supplemented by a comprehensive written report where students critically describe projects, tasks, and their impacts on their future academic and professional pursuits. This is to be submitted within three weeks of the end of the Work Term.

Submitting Assignments

Assignments are to be submitted through the course BBLearn dropbox.

Late Assignments

Aside from situations requiring accommodation due to illness or other documented emergency in accordance with University policies, late assignments (Work Term Reports and Employer Evaluations) will not be accepted.

Criteria That Must Be Met to Pass

All Work Terms must be a minimum of 12 weeks in duration with an industry partner approved by the course coordinator. All evaluation criteria (Work Term Report and Employer Evaluation) must be completed in order to pass this course.

Attendance Expectations

All students are to conform to the attendance expectations established by the employer. Students must work full-time for a minimum of 12 weeks (typically ranging from 35-40 hours each) with approved employers. Excessive absences, tardiness, or misconduct of any kind may result in dismissal by an employer resulting in a failing grade.

Participation

Employer Evaluations will determine student conformance to workplace expectations and engagement.

Experiential Learning

This course serves as the primary venue for experiential learning opportunities within range of disciplines in the AEC industry.

Recording of the Course

Recording of the course will only be allowed in circumstances where it is required as part of an accommodation for students with special needs. Students are required to confirm with employers both the extent and conditions for any recording pertaining to professional work.

Collection of Student Work

Students should be aware that they will be required to document their work for the purposes of CACB accreditation of the Architecture program. As well, work may be collected and archived by the program for this same reason. Students must receive written confirmation from employers that all work submitted is permitted for this purpose.

Copyright

All material produced by students during the Work Term are subject to corporate protocols, disclosure agreements, and employer permissions. All students submitting materials produced during their Work Terms are expected to follow these guidelines when documenting and presenting work to the course coordinator.

Student Feedback

Students will be asked to complete an anonymous survey at the completion of the course, which will include an area for freeform feedback. Though not mandatory, site visits conducted at employer workplaces will provide another opportunity for students to present feedback on their experiences to the course coordinator.

Integrity Defined (from the Office of the University Secretary)

The University of Saskatchewan is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect. Students are particularly urged to familiarize themselves with the provisions of the Student Conduct & Appeals section of the University Secretary Website and avoid any behavior that could potentially result in suspicions of cheating, plagiarism, misrepresentation of facts and/or participation in an offence. Academic dishonesty is a serious offence and can result in suspension or expulsion from the University.

All students should read and be familiar with the Regulations on Academic Student Misconduct (http://www.usask.ca/secretariat/student-conduct-appeals/StudentAcademicMisconduct.pdf) as well as the Standard of Student Conduct in Non-Academic Matters and Procedures for Resolution of Complaints and Appeals (http://www.usask.ca/secretariat/student-conduct-appeals/StudentNon-AcademicMisconduct.pdf)

For more information on what academic integrity means for students see the Student Conduct & Appeals section of the University Secretary Website at:
http://www.usask.ca/secretariat/student-conduct-appeals/forms/IntegrityDefined.pdf

Examinations with Disability Services for Students (DSS)

Students who have disabilities (learning, medical, physical, or mental health) are strongly

encouraged to register with Disability Services for Students (DSS) if they have not already done so. Students who suspect they may have disabilities should contact DSS for advice and referrals. In order to access DSS programs and supports, students must follow DSS policy and procedures. For more information, check http://students.usask.ca/health/centres/disability-services-for-students.php, or contact DSS at 966-7273 or dss@usask.ca.

Students registered with DSS may request alternative arrangements for mid-term and final examinations.
Students must arrange such accommodations through DSS by the stated deadlines. Instructors shall provide the examinations for students who are being accommodated by the deadlines established by DSS.

Student Supports

Student Learning Services

Student Learning Services (SLS) offers assistance to U of S undergrad and graduate students. For information on specific services, please see the SLS web site https://www.usask.ca/ulc/.

Student and Enrolment Services Division

The Student and Enrolment Services Division (SESD) focuses on providing developmental and support services and programs to students and the university community. For more information, see the SESD web site http://www.usask.ca/sesd/.

College Supports

Students in Arts & Science are encouraged to contact the Undergraduate Student Office and/or the Trish Monture Centre for Success with any questions on how to choose a major; understand program requirements; choose courses; develop strategies to improve grades; understand university policies and procedures; overcome personal barriers; initiate pre-career inquiries; and identify career planning resources. Contact information is available at: (http://artsandscience.usask.ca/undergraduate/advising/)

Treaty Acknowledgement

As we gather here today, we acknowledge we are on Treaty Six Territory and the Homeland of the Métis. We pay our respect to the First Nation and Métis ancestors of this place and reaffirm our relationship with one another.

CACB Student Performance Criteria

Within the Architecture professional program at the University of Saskatchewan, this course is responsible for demonstrating the following Student Performance Criteria as set out by the CACB:

B2. Collaboration and Leadership
The ability to support and foster successful individual and team dynamics, collaborative experiences, and opportunities for leadership.

C1. The Architectural Profession
An understanding of the organization of the profession, the Architects Act(s) and their regulations, the role of regulatory bodies, the paths to licensure including internship and reciprocal rights and responsibilities of interns and employers.

C3. Practice Organization
An understanding of the basic principles of practice organization, including financial management, business planning, entrepreneurship, marketing, negotiation, project management, and risk mitigation as well as an understanding of trends that affect practice.

C4. Project Mangement
An understanding of the relationships among key stakeholders in the design process; the methods for selecting consultants and assembling teams; building economics and cost control strategies; and the development of work plans, project schedules, and project delivery methods.

D3. Design Tools
Ability to use the broad range of design tools available to the architectural profession, including traditional and emerging techniques of two-dimensional and three-dimensional representation, computational design, modeling, simulation and fabrication.

D8. Design Documentation
Ability to document and present the outcome of a design project using the braod range of media available to the architectural profession, including the types of documentation for the purposes of construction and to understand the role of contract documents and specifications in this process.

E2. Communication Skills: Writing, speaking and graphic communication
Ability to write and speak effectively and use graphic media to appropriately communicate on subject matter retlated to the architectural discipline both within the profession and with the general public.

UNIVERSITY OF SASKATCHEWAN
College of Graduate Studies and Research
Room C180 Administration Building, 105 Administration Place, Saskatoon SK CANADA S7N 5A2
Telephone (306)966-5751, Fax: (306)966-5756, General E-mail: grad.studies@usask.ca

GSR 400.1
New Graduate Course Proposal

In addition to this form, please complete and submit a *Course Creation Information* form, available on the University website (www.usask.ca/university_secretary/council/committees/academic_programs/report_files/course_creation.php), to the Department of Academic Services and Financial Assistance, Student and Enrolment Services Division.

EXAM EXEMPTION: Yes ☒ **(must complete section 6.1)** No ☐

Basic information about the proposed course:

1. Department/Unit: Art and Art History College of: Arts and Science

2. _____ _____
(Authorizing Unit Head - PLEASE PRINT) (Authorizing Unit Head - SIGNATURE)

3. Information required for the calendar:
   - 3.1 Label and number of course: ARCD 990.0
   - 3.2 Title of course: Architecture Symposium
   - 3.3 Total Hours: Lecture: 0
     Seminar: 0
     Lab: 0
     Tutorial: 0
     Other: 0
   - 3.4 Weekly Hours: Lecture: 0
     Seminar: 0
     Lab: 0
     Tutorial: 0
     Other: 0
   - 3.5 Term in which it will be offered: T1 ☐ T2 ☐ T1 or T2 ☐ T1 and T2 ☒
   - 3.6 Prerequisite: None
   - 3.7 Calendar description (not more than 50 words):
     N/A

4. Rationale for introducing this course:

   This course is required for the proposed Master of Architecture degree program.

5. Impact of this course:
   - 5.1 Are the programs/courses of other academic units/Colleges affected by this new course (possible duplication)?
     No ☒ Yes **(Please list)**:
   - 5.2 Were any other academic units asked to review or comment on the proposal?
     No ☒ Yes **(Please attach correspondence)** ☐

5.3 Will the offering of this course lead to the deletion or modification of any other course(s)?

No ☒ Yes **(Please list)**: _____

5.4 Course(s) for which this graduate course will be a prerequisite?

5.5 Is this course to be required by your graduate students, or by graduate students in another program?

No ☐ Yes **(Please list)**: Master of Architecture students

6. Course Information. **(Please append the Course Outline (Syllabus), including a separate Undergraduate Course Outline (Syllabus) if required. Information on Academic Integrity and Student Conduct can be found on the U of S website at http://www.usask.ca/university_secretary/honesty/)**

Checklist:
- ☒ Course objectives need to be clearly stated
- ☒ Description of and Activities for Evaluation must be listed
- ☒ **Course Outline** (syllabus) with **Reading List** must be included
- ☒ Percentage of Total Mark for each evaluation listed
- ☐ If undergraduate lectures are included, also submit the **Undergraduate Course Outline (Syllabus)** and include information on what additional activities make this a graduate level course. For guidelines, see '**Undergraduate Component of Graduate Courses**' under '*Forms for Graduate Chairs*' at http://www.usask.ca/cgsr/prospective_students/forms.php
- ☐ Professor must be a member of the Graduate Faculty

6.1 **EXAM EXEMPTION**: Please note, **if there is no final exam or if the final examination is worth less than 30% of the final grade** please provide a brief statement which explains why a final examination is inappropriate for this course.

7. Enrolment:

7.1 Expected Enrolment: 45

7.2 From which colleges/programs: College of Arts and Science / Master of Architecture only

8. Resources:

8.1 Proposed instructor(s) (Please include qualifications):

N/A

8.2 How does the department plan to handle the additional teaching or administrative workload:

This course is proposed as part of the new M.Arch. program. Teaching and administrative requirements are being reviewed as part of that proposal.

8.3 Are sufficient library or other research resources available for this course:

Yes

8.4 Are any additional resources required (library, audio-visual, technology, lab equipment, lab space, etc.):

Resources are being reviewed as part of the M.Arch. program proposal.

9. Date of Implementation:

9.1 To be offered: Annually ☒ Biennially ☐ Alternate Years ☐ Other ☐

This course will conform to the academic requirements and standards for graduate courses, including the rules of *Student Appeals in Academic Matters* (see www.usask.ca/university_secretary/council/reports_forms/reports/12-06-99.php) and Academic Integrity and Student Conduct (see www.usask.ca/university_secretary/honesty/).

Date of Approval by College (of the home academic unit): _____

The signature of the Dean of your College signifies that the necessary resources are either available or shall be supplied by the College/Department budget.

_____
(Authorizing College Signature (of the home academic unit)

_____
(Name of Person Signing Above - PLEASE PRINT)

Form version April 2009

UNIVERSITY OF SASKATCHEWAN
College of Graduate Studies and Research
Room C180 Administration Building, 105 Administration Place, Saskatoon SK CANADA S7N 5A2
Telephone (306)966-5751, Fax: (306)966-5756, General E-mail: grad.studies@usask.ca

GSR 400.1
New Graduate Course Proposal

In addition to this form, please complete and submit a *Course Creation Information* form, available on the University website (www.usask.ca/university_secretary/council/committees/academic_programs/report_files/course_creation.php), to the Department of Academic Services and Financial Assistance, Student and Enrolment Services Division.

EXAM EXEMPTION: Yes ☒ **(must complete section 6.1)** No ☐

Basic information about the proposed course:

1. Department/Unit: Art and Art History College of: Arts and Science

2. _____ _____
(Authorizing Unit Head - PLEASE PRINT) (Authorizing Unit Head - SIGNATURE)

3. Information required for the calendar:
   - 3.1 Label and number of course: ARCD 994.0
   - 3.2 Title of course: Design-Research Thesis in Architecture
   - 3.3 Total Hours: Lecture: 0
     Seminar: 0
     Lab: 0
     Tutorial: 0
     Other: 0
   - 3.4 Weekly Hours: Lecture: 0
     Seminar: 0
     Lab: 0
     Tutorial: 0
     Other: 0
   - 3.5 Term in which it will be offered: T1 ☐ T2 ☐ T1 or T2 ☐ T1 and T2 ☒
   - 3.6 Prerequisite: None
   - 3.7 Calendar description (not more than 50 words):
     N/A

4. Rationale for introducing this course:

   This course is required for the proposed Master of Architecture degree program.

5. Impact of this course:
   - 5.1 Are the programs/courses of other academic units/Colleges affected by this new course (possible duplication)?
     No ☒ Yes **(Please list)**:
   - 5.2 Were any other academic units asked to review or comment on the proposal?
     No ☒ Yes **(Please attach correspondence)** ☐

5.3 Will the offering of this course lead to the deletion or modification of any other course(s)?

No ☒ Yes **(Please list)**: _____

5.4 Course(s) for which this graduate course will be a prerequisite?

5.5 Is this course to be required by your graduate students, or by graduate students in another program?

No ☐ Yes **(Please list)**: Master of Architecture students

6. Course Information. **(Please append the Course Outline (Syllabus), including a separate Undergraduate Course Outline (Syllabus) if required. Information on Academic Integrity and Student Conduct can be found on the U of S website at http://www.usask.ca/university_secretary/honesty/)**

Checklist:
- ☒ Course objectives need to be clearly stated
- ☒ Description of and Activities for Evaluation must be listed
- ☒ **Course Outline** (syllabus) with **Reading List** must be included
- ☒ Percentage of Total Mark for each evaluation listed
- ☐ If undergraduate lectures are included, also submit the **Undergraduate Course Outline (Syllabus)** and include information on what additional activities make this a graduate level course. For guidelines, see '**Undergraduate Component of Graduate Courses**' under '*Forms for Graduate Chairs*' at http://www.usask.ca/cgsr/prospective_students/forms.php
- ☐ Professor must be a member of the Graduate Faculty

6.1 **EXAM EXEMPTION**: Please note, **if there is no final exam or if the final examination is worth less than 30% of the final grade** please provide a brief statement which explains why a final examination is inappropriate for this course.

This is a graduate thesis. A formal presentation of the work will take place in lieu of a final examination.

7. Enrolment:

7.1 Expected Enrolment: 45

7.2 From which colleges/programs: College of Arts and Science / Master of Architecture only

8. Resources:

8.1 Proposed instructor(s) (Please include qualifications):

N/A

8.2 How does the department plan to handle the additional teaching or administrative workload:

This course is proposed as part of the new M.Arch. program. Teaching and administrative requirements are being reviewed as part of that proposal.

8.3 Are sufficient library or other research resources available for this course:

Yes

8.4 Are any additional resources required (library, audio-visual, technology, lab equipment, lab space, etc.):

Resources are being reviewed as part of the M.Arch. program proposal.

9. Date of Implementation:

9.1 To be offered: Annually ☒ Biennially ☐ Alternate Years ☐ Other ☐

This course will conform to the academic requirements and standards for graduate courses, including the rules of *Student Appeals in Academic Matters* (see www.usask.ca/university_secretary/council/reports_forms/reports/12-06-99.php) and Academic Integrity and Student Conduct (see www.usask.ca/university_secretary/honesty/).

Date of Approval by College (of the home academic unit): _____

The signature of the Dean of your College signifies that the necessary resources are either available or shall be supplied by the College/Department budget.

_____
(Authorizing College Signature (of the home academic unit)

_____
(Name of Person Signing Above - PLEASE PRINT)

Form version April 2009