UNIVERSITY OF CALGARY
FACULTY OF ENVIRONMENTAL DESIGN

Architecture Program Report 2016

Master of Architecture Program, University of Calgary

Submitted to the Canadian Architectural Certification Board (CACB)
by the Master of Architecture Program,
Faculty of Enivronmental Design, Univeristy of Calgary
for the consideration of the CACB regarding the applications by the program
for recognition and accreditation for its professional program of study in architecture

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1.1 Program Identity and Mission

The Master of Architecture Program (MArch) at the University of Calgary offers a three-year graduate curriculum leading to a professional degree in architecture. This comprises a two-year Master's component, with an additional Foundation Year for students without an undergraduate architecture degree. It prepares individuals to be productive and thoughtful contributors in the evolving world of architectural practice. Adopted in 2009, and updated during the 2015-2016 academic year, the Program's vision statement situates architectural design education as engaging in a complex range of ecological factors. Beyond delivering an accredited professional program, as a community of educators, practitioners and students, the MArch Program is committed to the following areas of concentration as reflected in teaching, research and practice: sustainable buildings, contemporary urbanism, critical practice, history and theory, digital design and fabrication.

With a total enrolment of approximately 130 graduate students, the MArch Program is able to maintain an intimate and supportive learning environment. The Program is able to attract a diverse and highly capable group of students from its pre-professional Minor in Architectural Studies (ARST), and from many other programs and universities across Canada and the world. The success of the Program can be measured by the accomplishments of its graduates now working in the profession, and in other related careers, many of whom have been widely recognized for their achievements.

The Master of Architecture Program enjoys strong support within the Faculty of Environmental Design (EVDS) and the University of Calgary. The Program also enjoys excellent relations with a number of other units on campus, the local profession and professional association, the Calgary community, and a broader range of national and international organizations. The Faculty of Environmental Design boasts excellent facilities in an atrium building designed by alumni of the Program and built in the early 1990s. The workshop is spacious and supportive of student work, and equipped with wood, metal, and model tools in addition to laser cutters, 3D printers, robots, and two CNC machines. Studio spaces are generous, with each student receiving ample desk area. The building has several newly renovated classrooms, an updated computer lab.

A vital strength of the MArch Program arises from its placement within the interdisciplinary Faculty of Environmental Design. Through courses taken in conjunction with students in other EVDS programs, such as the professional Master's degrees in Landscape Architecture and Planning (MLA, MPlan), architecture students learn how to work within broader intellectual, environmental, and professional contexts. The ability of our students to take full advantage of the many opportunities provided in the Program has been greatly enhanced by a range of scholarships, bursaries and awards available to students through the Program, the Faculty, the University, and beyond.

In addition to a rigorous course-based curriculum there are a number of enrichment opportunities for students during their educational experience. About three-quarters of the students take advantage of one of the Program's semester-long study abroad

programs, which include the Faculty's longstanding program in Barcelona, and a more recent program in the Pacific Rim, including extended stays in Tokyo and Melbourne. The Program is newly developing a North American travel opportunity for the students who are unable to go abroad for that entire semester. In the three locations, the studio courses will present a focus on urban design, in conjunction with locally-offered urban theory courses, thus bringing the student experiences of that semester more in parallel. One-week long block courses are offered, three each academic year by distinguished guests. The Faculty's Design Matters lecture series brings in distinguished speakers in architecture and urbanism each month of the school year. Senior studios allow students to participate in areas of faculty research; students may also be employed as members of Faculty-led teams working on a variety of community based projects. The MArch Program participated in three Calgary-based teams that competed in the U.S. Department of Energy Solar Decathlon in 2009, 2011, and 2013. Students participated in the faculty-led interdisciplinary community projects under the banner of makeCalgary, which was founded five years ago in EVDS.

The pedagogical direction of the MArch Program is driven by a strong commitment of faculty members to professional practice and research. In addition to teaching, the faculty are involved in a diverse range of architectural and academic practice. The active commitment to practice is facilitated by the Faculty of Environmental Design's recognition of peer-reviewed considered or juried design work as a substantive form of academic activity. The Program also draws on the expertise of local professionals, many of whom serve as Adjunct Professors, sessional instructors, and studio reviewers. It benefits from a healthy cooperative relationship with the Alberta Association of Architects, with one faculty and one student from the MArch program sitting on the AAA Council as ex-officio members.

Over the course of its history, since 1971, the Master of Architecture Program has undergone a series of changes that constitute a progressive evolution of the curriculum. The Program seeks to maintain a balance between theory and practice, based on a foundation of rigorous intellectual inquiry and critical thought. The revised Vision, Mission and Philosophical Statements for the MArch Program were revised in 2009, and updated in 2015-2016. They read as follows:

Statement of Philosophy

There is a pressing need for built environments to be comprehensively designed and integrated across scales, fostering better social relations and reducing environmental impacts. Our approach to architecture seeks an ecological response to the forces that factor into the design, construction, and inhabitation of buildings and related environments. Ecology refers to the relationships between organisms and environments, in the case of architecture this includes the many social, technical, political, spatial, and cultural factors that affect these relationships. By engaging contemporary problems through studio, technical, and theory courses, our students come to understand the implications of creating architecture and other environments in the 21st century.

Vision Statement

The Master of Architecture Program at the University of Calgary integrates experimental teaching and research through a critical pedagogical model that is recognized in local, national and international design networks.

Mission Statement

In pursuit of our commitment to leading and learning through community-engaged research and design initiatives, the Program will continue to innovate and develop in the related areas of learning, research, practice and scholarship by broadening our student experience, developing targeted resources and enhancing our reputation.

1.2 Program Action Plan and Objectives

Master of Architecture Program Strategic Planning

Through various strategic planning initiatives, the Master of Architecture Program has affirmed its commitment to delivering a high quality accredited professional graduate program leading to the Master of Architecture degree. It also confirmed the importance of pursuing this goal within the interdisciplinary context of EVDS. The MArch Program's strategic initiatives are first discussed at Program meetings and annual retreats, and, as required, specific research, planning, or policy tasks are assigned to faculty members or committees of the Program. The Associate Dean (Academic – Architecture) has the overall responsibility to implement strategies and to monitor measures of success and time lines associated with the development of the Program.

The Faculty of Environmental Design developed a five-year strategic plan in 2015 that parallels the strategic goals of the MArch Program. The Master of Architecture Program developed and adopted a strategic plan in conjunction with updating its Mission and Vision statement, in April 2016, for the period 2016-2020. Each of the following goals (with their accompanying measures) is being pursued by the MArch Program, in coordination with overall efforts of EVDS:

Master of Architecture Program 2016-2020 Goals and Measures

To accomplish our mission, the Master of Architecture Program defines the following inter-related strategic goals and measures:

Reinforce and expand our commitment to interdisciplinarity through the CITIES program (Barcelona, Pacific Rim, and Pacific NW), and through partnerships with a variety of organizations

Develop and construct a facility to support research in digital fabrication, lightweight structures, design-build, adaptive design, and building envelope design

Develop a post-professional certificate option in digital design, aimed at recent graduates, mid-career professionals, and allied professions

Develop a funded Research Associate program to support various research initiatives

Develop an endowed Visiting Professorship for a teaching professional architect (similar to practitioner-in-residence)

Secure endowments ($200,000 each) for the Gillmor and Taylor visiting lectureship programs

Continue to ensure the visibility and strength of the Master of Architecture Program (within the Faculty of Environmental Design) through the EVDS website, publications, social media, strategic partnerships, etc.

Improve the tracking, promotion, and recognizing the accomplishments of Master of Architecture Program alumni

Develop targeted student recruitment programs for US, Asia and Latin America in order to increase overall applications by 60 per year

Develop an endowed Master of Architecture Program Foundation fund of $1,000,000

2. PROGRESS SINCE THE PREVIOUS SITE VISIT

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The Master of Architecture Program at the University of Calgary was last visited February 26 to March 2, 2011. The Program received a full six-year term from the CACB. In the ensuing years, the findings of the 2011 Visiting Team Report have reinforced the direction the strategic planning process within the Program, and also have resulted in some curricular adjustments. This has occurred at a variety of levels, both formal and informal, and has ranged from individual faculty members altering specific courses, to more broad-ranging changes at the Program and Faculty levels. There have been a number of changes made to the structure of the MArch curriculum. The administration of the Program by an Associate Dean operating within the administrative structure of the Dean's Office in the Faculty of Environmental Design (EVDS), has been stable and productive. The Dean has supported a renewal of the faculty contingent with several new hires, leading to a slight increase in the number of faculty positions teaching into the MArch program. This includes two new tenure-track faculty members who are women. The following is the response to the previous site visit:

2.1 Summary of Responses to Team Findings

CONDITIONS AND SPC ''NOT-MET''

4. Social Equity

The 2011 Visiting Team Report stated: *Some progress has been made on gender equality in the faculty: women represent 23% of the total FTE in 2010 (from 20% in 2005): 1.5 new full time positions were added since 2004. The previous visiting team report also exhorted the program to hire more women as lecturers, sessional instructors, adjuncts, and visiting professors: this has been done, but without mentioning the number of women.*

The 2011 VTR and previous accreditation teams noted the gender inequality among faculty members, and encouraged the Program to continue its efforts in achieving equity through the hiring of sessional instructors and in tenure-track appointments. The Program also reported on this condition in its 2013 Focused Evaluation Report. Continuous efforts to address this issue have been made by the MArch Program.

In previous years, women had occupied three positions out of a total of thirteen full-time faculty members; i.e., 23% of all full-time faculty in the Program. In 2013, the limited-term appointment of Vera Parlac was converted to a tenure-track Assistant Professor position. In 2014, we hired another woman in a tenure-track Assistant Professor position, Dr. Caroline Hachem-Vermette who teaches and researches in the area of building science. With Jim Love's retirement that year, this raised the ratio of women to men among full-time faculty to four out of thirteen, or 31%. Then, in 2015, we hired for another full-time, tenure-track position in the area of Structures, Mauricio Soto Rubio. Unfortunately, our pool of applicants did not include any women finalists for the position. With this new hire being male, our ratio currently is four women out of fifteen, or 27%. It should be noted that, while the Faculty of Environmental Design strives to hire women, we cannot make it a requirement of these searches.

As recommended by the accreditation team, the Program has made every effort to hire women as sessional (i.e. part-time) instructors and as visiting lecturers. Since the last accreditation visit in 2011, the Program has employed between four and seven female sessional instructors each academic year. After losing two accomplished female sessionals to demands in their firms, the Associate Dean-Architecture spent significant time and effort during summer 2014 recruiting new women sessionals to teach studio. In each of the past three years, four women were hired to teach in the Program as sessionals, plus one more in each of our study abroad locations. In recent years, between one-third and two-thirds of our outside visiting critics for final reviews each semester have been women.

Our Program also has several high-profile visiting lecturers who teach the Block Week courses described above. Nine of the last ten Gillmor Lecturers have been women, as well as several of the most recent years' Somerville Charrette and Taylor Workshop guest professors. We will continue to actively recruit women to these visiting lectureship positions which are highly visible in our local community. It should also be noted that the first hire in the new Master of Landscape Architecture Program has been a woman, Enrica Dall'Ara, and there will be opportunities for studio courses and other forms of collaboration by which our students will be able to interact with her. Finally, as role models for our students, the Dean of EVDS, Nancy Pollock-Ellwand, and many of the highest-level administrative positions (President, Provost, several Vice-Presidents and other Deans) at the University of Calgary are women.

Generally, the gender balance among recent student applicants and admits to the MArch Program is consistent with Faculty and University experience. The percentage of women applicants to the MArch Program has ranged from 47-53 percent during the last six years**.** The percentage of women admitted to the MArch Program has been in the 38-53 percent range in each of the last six years. The Program has no admissions quotas for women or minorities at this time.

The Master of Architecture Program is highly cognizant of gender equity issues as they pertain to both education and the profession. We believe that the specific situation at the University of Calgary is similar to those experienced at other institutions and in the profession. The Program and Faculty will continue to explore ways of recruiting female faculty members, sessionals, adjuncts, guests, and students.

12. Student Performance Criteria

A6. Human Behaviour *Understanding of the relationship between human behaviour, the natural environment and the design of the built environment.*

According to the 2011 Visiting Team Report (VTR), evidence of understanding the relationship between human behavior, the natural environment and the design of the built environment was not sufficiently found in the Interdisciplinary Seminar (EVDS 601) or in Formal Strategies in Architecture (EVDA 621).

The Interdisciplinary Seminar (more recently called Conceptual Bases in Environmental Design) has been taught as a large lecture course for all EVDS students, based largely on guest lectures from EVDS and University faculty members, as well as local professionals and policy makers. While the course touched on many aspects of human behaviour in environments, it was not a key focus of the course. As of Fall 2016, EVDS is replacing this course with the new Leadership and Architecture offering.

The Formal Strategies in Architecture course has been changed since the last accreditation visit from a precedents-driven course to a course focused on architectural theory, called Introduction to Design Theories. This course includes significant material on human behaviour and social/political systems, and it should now largely satisfy the Human Behaviour criterion. In addition, the required urban theory/systems courses of the study abroad term also includes content on Human Behaviour in the context of cities (see below).

Beyond that theory course, the Sustainability in the Built Environment course spends time on aspects of social sustainability. Our History sequence of two courses continues to emphasize the social aspects of architectural development, from human needs for boundaries and monuments, to the interaction of people across urban and institutional built environments of the past. In fact, the History courses are almost exclusively about the relationship of humans with their environments.

Studio courses include aspects of Human Behaviour as well: in particular, Studio II which foregrounds programming, space planning, and social relationships for diverse subjects. Finally, we have recently re-thought the Fall semester of the second year in our MArch, which includes our study abroad options. Driven by the urban design focus of the Barcelona studios in recent years, and the complementary Urban Systems course that is taught there as well, we have decided to similarly align the Pacific Rim study abroad and Calgary curricula around issues of urbanism in what we are calling "City Studios." An urban theory course has been developed by local instructors in Melbourne for our MArch and MPlan students, while the students who remain in Calgary during that semester will receive an urbanistic studio with a travel portion (in 2016 to Portland, Oregon), and will enroll in the Urban Design Theory course offered by our MPlan program. As a bonus, this facilitates new interdisciplinary touch points for EVDS professional degrees, with professional collaboration being an aspect of Human Behaviour.

A7. Cultural Diversity *Understanding of the diverse needs, values, behavioral norms, and social/spatial patterns that characterize different cultures and individuals, as well as the implications of this diversity on the societal roles and responsibilities of architects.*

The 2011 VTR noted that this Student Performance Criteria (SPC) was satisfied only marginally in the two History courses. While History I (EVDA 523.01) always has covered ancient and non-Western cultures, this course increasingly has taken a global and comparative approach in lectures and discussions. Both similarities and differences in spatial patterns, and how space embodies needs and values and norms, are examined across eras and cultures. History II (EVDA 523.02) addresses the changing role of the architect since the Industrial Revolution in response to evolving social classes and demographics, and the rise of the modern city. Cultural Diversity is also addressed in the Urban Design Theory/Urban Systems courses.

To complement and complete the coverage of this SPC, Cultural Diversity is also a key aspect of the program for the multi-unit residential buildings in Studio II, which concerns itself with exploring multiple modes of living among diverse populations, today and into the future. Diversity often is a focus of Studio III and IV, and senior studios. For example, senior studios in recent years included designs for aging-in-

place, inclusive cemetery design, and flexible refugee housing for diverse cultural situations.

B2. Program Preparation *Ability to prepare a comprehensive program for an architectural project that accounts for client and user needs, appropriate precedents, space and equipment requirements, the relevant laws and standards, and site selection and design assessment criteria.*

The 2011 VTR stated that the ability "to create a program or alter a program supplied as initial requirement is not evident" in the MArch Program's intermediate studios. This SPC now is addressed primarily in the first four design studios, particularly in the Intermediate Studio (Studio III) and Comprehensive Design Studio, and to an increasing extent in Studio I and Studio II (multi-use residential buildings). In these three studios, students develop a program for the buildings they design by analyzing the precedents pertinent to the building type or modifying the template program according to a project's site, function, or intention.

Program development is most central to the Intermediate Studio. Given that the previous Visiting Team did not see evidence of this, we decided during the 2014 Program retreat that the Intermediate Studio will henceforth include a standalone assignment or deliverable that specifically demonstrates the students' process of preparing a program.

B3. Site Design *Ability to analyze and respond to context and site conditions in the development of a program and in the design of a project.*

As it was previously to the last accreditation visit, this SPC is covered as a primary concept comprising 30-40 % of the content in our course Sustainability in the Built Environment, including a separate assignment on Site Design. Site is analyzed and responded to in all the first four studios, but the 2011 Visiting Team noted that the ability of students to respond to site conditions was not clearly evident in the studio work.

Studio I and II were re-structured two years ago. Studio I takes on an urban park site, with students deploying urban design methods to determine paths, usage, and diversity in perceptions to inform their designs. In Studio II, the semester begins with a sectional analysis of downtown land use, to project future development before students focus on a site for their multi-unit residential building. Intermediate Studio places an emphasis on the site analysis of an urban site, as part of the overall studio structure. Designs in the Comprehensive Studio clearly respond to site as well: the 2015 site was a triangular corner in Calgary, wedged between an established neighbourhood and a coming transit-oriented development, which resulted in students approaching the site in relation to neighboring buildings and uses; the 2016 site was a downtown parcel adjacent to a heritage building and new light rail infrastructure. Finally, though they are elective studios, many of our senior studios take serious approaches to site, through urban design and studies of the public realm (e.g., our studios abroad).

B4. Sustainable Design *Ability to apply the principles of sustainable design to produce projects that conserve natural and built resources, provide healthy environments for occupants/users, and reduce the impacts of building construction and operations on future generations.*

As was the case prior to the last accreditation visit, the principles and theory of sustainability are taught in our required courses on Sustainability in the Built Environment and Conceptual Bases in Environmental Design. According to the 2011 Visiting Team, however, the integration of Sustainable Design in the studio courses was lacking.

It is true that we do not offer a specific studio in Sustainable Design. Our first four studios incorporate sustainable design tenets in different ways and to different extents: Studio I in its grounding within the specific landscape of a park considers broad ecological issues; Studio II is concerned with social sustainability in its program for multi-use residential buildings, often for groups at risk; Intermediate Studio projects of the last few years have tasked students with developing a strategy in relation to sustainability and resilience for their overall design approach; and the Comprehensive Studio asks students to diagram and discuss the sustainable solutions included in their design.

In addition, it was reaffirmed at the MArch Program's 2014 retreat that our technical courses such as EVDA 511, EVDA 611, EVDA 615 and EVDA 617, would foreground sustainable solutions through classroom material, exams, field trips, and (in the case of 611 and 615) technical desk crits and reviews that are integrated with the Comprehensive Studio. These courses are all taught by national leaders in sustainability research including faculty members Tang Lee and Caroline Hachem-Vermette, and our long-time sessional Chris Roberts, a LEED-accredited consulting architect. Finally, a number of our elective senior studios recently have taken on approaches to sustainability through materials recycling, responsive environments, densification, resilient housing, or urban design. Sustainable Design is a factor in the Urban Design Theory/Urban Systems courses which address the structure of urban environments.

B5. Accessibility *Ability to design both site and building to accommodate individuals with varying physical and cognitive abilities.*

The 2011 Visiting Team Report indicated that accessibility is addressed only in relation to codes in both Building Science & Technology II (EVDA 611) and in Architectural Professional Practice (EVDA 661), and that students' ability in this area was not evident in studio work. Accessibility is addressed in the Comprehensive Studio (EVDA 682.04) through the code analysis exercise that students must perform on their projects.

In the Professional Practice course, a major assignment worth 25% of the course grade evaluates the student's competence in this subject. This building codes assignment is entirely focused on the barrier-free design section of the Alberta Building Code. Currently, there is no specific studio assignment that explicitly requires design of a barrier-free environment, though universal design requirements are embedded in the Comprehensive Studio. Accessibility has also been a central component to our senior studio design-build of a laneway house for aging-in-place the past two years.

C4. Comprehensive Design *Ability to project a comprehensive design based on an architectural idea, a building program and a site. The design or designs should integrate structural and environmental systems, building envelopes, building assemblies, life-safety provisions, and environmental stewardship.*

Our MArch curriculum addresses this criterion primarily through the Comprehensive Studio, in which students integrate structural and environmental systems, building envelopes, building assemblies, life-safety and accessibility provisions, and environmental stewardship. That studio is closely coupled with Structures II, Environmental Control Systems, and Building Science and Technology II, and includes desk crits by the instructors of these technical courses.

The Visiting Team noted one problem was that students worked in pairs in this course, which they felt impeded our ability to demonstrate that each individual student had developed the ability for comprehensive design. As explained below (see the first and second Causes of Concern), we experimented one year with solo projects in the Comprehensive Studio. However, it was decided by the teaching team in discussion with the Program faculty, that having the students work in pairs was better for a number of reasons, and is in fact beneficial to the students in that they can share research and knowledge. In returning to pairs we have instituted two new methods of assessment: a three-quarters technical review of each student conducted by the instructors of the associated technical courses; and a design journal or workbook from each student documenting their thought and design process as individuals. This has ensured that students are assessed individually on their work throughout the semester.

Since 2011, we also have decreased the size of the project to approximately 1800m2 to allow students to wholistically engage with their design and its technical details. In general, we remain proud of our accomplishments in the Comprehensive Studio semester, and exhibited the best of the student work from it at the recent 2015 RAIC Festival here in Calgary, at the University of Calgary's recent 50th Anniversary gala events.

CAUSES OF CONCERN

1. The Comprehensive Design project appears early in the Master's Program, and while exhibiting evidence of understanding, the work does not indicate ability. The projects represent the first substantive and complex building program that a student encounters, and while being explorative in nature, there is concern for the lack of a full comprehension of the complex integration of all technical factors with design.

A substantive building program in the form of a multi-use residential building is now incorporated into Studio II. As well, the programs developed in the Intermediate Studio are substantive and complex public buildings. These precede the Comprehensive Design Studio. In the Comprehensive Studio, the size and complexity of the program have been reduced since the 2011 accreditation visit, allowing the students ample opportunity for developing the ability to integrate technical factors in their designs. New faculty members in building science and structures have been hired in the past three years, which ensures stability in the teaching of integrated courses. They have been tasked with finding efficiencies and opportunities to integrate more

clearly the technical courses with the design studio. Please also see above, under Conditions and SPC ''Not-Met', C4. Comprehensive Design, for more on this Cause of Concern. Since it was first implemented during the 2002-03 academic year the Comprehensive Studio has been the fourth studio in the sequence. The curriculum has been designed to accommodate this. There have been discussions in recent years about moving the Comprehensive Studio to the final semester of the curriculum, however, this would affect the final year as one made up primarily of elective courses. Students undertake a relatively complex building in Studio II, and a complex program in Intermediate Studio, therefore, they are well prepared for the scope of the Comprehensive Studio.

2. While teamwork accelerates production, individual advance as prescribed by the CACB is difficult to assess. The proliferation of group projects presented in the Team Room – Comprehensive Studio EVDA 682.04, Intermediate Studio EVDA 682.02, Research Studios EVDA 782.01, Research Studio (Barcelona) EVDA 782.17, and Structures 1 EVDA 613, for example – suggest that an entire advanced program of studies at the Masters level is devoted to collaborative practice. We recommend that the Program seek a more balanced strategy inclusive of both collaborative and individual work.

The Program has responded in several areas to the concern over teamwork expressed by the Visiting Team. In general, since the accreditation visit group assignments in studio have been largely limited to early, analytical phases of design studios, and the final projects have been developed by each student individually. While group projects remain central to the Comprehensive Studio and to the studios abroad in Barcelona and the Pacific Rim, which seems entirely appropriate to the contexts and course objectives, teamwork has been significantly reduced in the first three core studios. Moreover, there are now fewer group projects in non-studio courses, as we have attempted to strike a balance between individual engagement and collaboration.

We experimented with a solo project in the Comprehensive Studio as well. Although the individual Comprehensive Studio projects of that year were well-resolved, the teaching team was adamant that the workload of this studio was such that students and instructors were better served with paired projects. In particular, it was very difficult for the instructors of the technical courses to meet with students and advise on double the number of studio projects (i.e., with solo projects). Pairing the students up makes these technical desk crits manageable, but raises the issue of individual assessment in the technical courses. To ensure students were assessed individually on the technical aspects of Comprehensive Studio and its related technical courses, we instituted two assignments. First, students each kept a desk journal in which they recorded design development decisions around the integration of building systems, with their justifications and understanding of why they made certain decisions. Second, we introduced a technical review, separate from the design studio reviews, in which students present their building system design decisions to a panel of the technical course instructors who are able to question the individual students on their understanding and ability to integrate building technologies. After one semester using this assessment plan, we felt that it was successful in its goals—e.g., better communicating to students the expectations for their presentations at the technical review. We have now included these two assignments in a second year and found them to be successful.

3. Integration of ecological and environmental systems with design - as defined in the Statement of Philosophy - requires strengthening.

Ecological thinking frames the themes and pedagogies in all studio offerings of the degree, from Foundation to Senior Research Studios. That does not mean that every studio advocates for green buildings or building systems. Rather, ecologies are considered broadly as systems for the integration of environments and life. This includes local ecosystems, social relationships, site design, urban context, and life-support systems within a building, whether biological or psychological. Broad ecological thinking also informs non-studio courses like Sustainability in the Built Environment, a course that is relatively unique to our MArch degree curriculum. In retrospect, though, our position statement and its relation to studio themes and pedagogies lacked clarity, and we have re-framed this in a new vision statement associated with our next strategic plan (2016-2020). This strategic plan was a main subject of discussion at our May 2015 Program retreat and has been completed during the 2015-16 academic year.

4. A full review of the role and capacity of Studio spaces and the Computer Lab in the new Master of Architecture program is recommended in order to maintain relevance in relation to teaching and research.

In 2012, EVDS received funds from the University's facilities allocation to reconfigure and upgrade the existing Computer Lab as a more efficient teaching facility. The two smaller labs and adjacent auxiliary spaces were joined into a large computer classroom equipped with two overhead projectors and state-of-the-art computer workstations, enabling courses to be taught there. In addition, we have rationalized our system and schedule for updating the hardware and software in the lab. Space planning exercises have demonstrated that there is ample capacity in the studio spaces to safely and comfortably accommodate all the MArch students. There is no issue with a lack of space for our students. All the chairs in the studio spaces were replaced last summer. Also last summer, in parts of the MArch studios less desirable for desks, three new pinup spaces were created to allow for more communal areas. The adoption of an open studio arrangement several years ago creates a collaborative and flexible learning environment consistent with contemporary teaching, research, and professional practices.

5. An air quality assessment and upgrade of the air handling capacity in the Material and Fabrication Labs is urgently recommended.

Substantial upgrades were made to the Workshop in 2012, with funding from the facilities allocation and the University of Calgary Provost's Office. Each of the two CNC machines, and the laser cutters, are housed in separate rooms with dedicated air handling units.

6. Efforts should be made to enhance the Program's profile within the University.

In 2011, the Program launched an introductory undergraduate course in architecture and design that was immediately filled to its maximum capacity of 120 students, and continues to fill each year since. In 2015, we graduated our first student who began with this introductory course, then proceeded to the Architectural Studies Minor as an undergraduate, and then was admitted to and completed the MArch degree. There are several other "graduates" of the introductory undergraduate course currently enrolled in the MArch. There are also two new introductory undergraduate courses in

environmental design offered by the Faculty of Environmental Design, one of which will be central to a new, University-wide, interdisciplinary, undergraduate major in sustainability.

The existing Minor in Architectural Studies, formerly managed by the Faculty of Arts, was patriated to EVDS in September 2013. It continues to attract a large number of applicants with high GPAs. Many of the Minor students come from the Urban Studies major in Arts, with which we maintain a strong relationship. Since taking over its control, we have instituted a small portfolio requirement for applicants to the Minor, with the intention of attracting students with strong records in traditional undergraduate coursework and excellent potential for success in studio instruction.

The Faculty and the Program are therefore cognizant of the strong interest in design instruction among undergraduates, though we are currently limited in our offerings by available resources, both in terms of space and instructional capacity. That being said, the exploration of a potential design studies undergraduate degree is part of the EVDS strategic plan, so we may be able to expand in this area in the future.

Interest in architecture and design starts much earlier than undergraduate education, however. In summer of 2015, EVDS launched Design Camp under the leadership of the MArch program and in partnership with the University's Mini-University offerings. Summer camps were held over six weeks for groups in Grades 2-4 and 5-7, taught by four MArch and MPlan students. The kids drew plans; built models from Lego, card stock, plastic, and other materials; visited the East Village redevelopment site in downtown Calgary; and generally learned about being an architect. On the final day of each camp, parents were hosted in EVDS to view the work of the children; camps have been offered in the summers of 2015 and 2016.

Related to research, a significant increase in major grant applications —and recent success in these— by MArch faculty members has raised our profile at the University. For instance, MArch associate professor Jason Johnson obtained a $436,000 Social Sciences and Humanities Research Council (SSHRC) Insight Grant for work on community participation and education in digital design and fabrication. Both Dr. Caroline Hachem-Vermette and Prof. Mauricio Soto Rubio, who are recent hires, have had success in securing grants. In addition, assistant professor Vera Parlac has a University of Calgary teaching grant to explore interdisciplinary collaborations in her senior MArch design studio with students and faculty from Engineering and Computer Science. Professor John Brown has received public and private grants to support two consecutive design-build projects that have been developed and researched in conjunction with faculty and students from the Cumming School of Medicine; these two laneway houses for aging-in-place have been constructed at full-scale in EVDS' Design Research Innovation Lab.

EVDS recently has convinced the University to award honourary doctorates to two designers: Raymond Moriyama in 2013 and Cornelia Hahn Oberlander in 2014. Both of these prestigious presentations and addresses at University Convocation were accompanied by corresponding events and exhibitions held in the Faculty.

A range of EVDS efforts in which MArch faculty have taken leading roles, have in tandem raised the profile of the MArch Program: recent lecture series, design charrettes, days of service, and other events have kept us continuously in the spotlight, both internally and externally. Finally, EVDS' series of makeCalgary events, going back now to 2011, have created a well-recognized brand for the Faculty.

makeCalgary is a themed series of symposia, charrettes, participatory planning exercises, and other events that have addressed issues such as culture in the city, resilience, health, and equity, in partnership with the City of Calgary, the University's O'Brien Institute for Public Health, and other units. It has become apparent that the University now looks to EVDS and makeCalgary as a model for other Faculties and Institutes in the areas of branding, community engagement, fundraising, and student experience.

TEAM COMMENTS (PROGRAM STRENGTHS)

Generally, the items noted by the 2011 Visiting Team continue to be important strengths of the MArch Program at the University of Calgary. The following updates are made for a number of the previous Visiting Team's comments:

The current teaching cohort of academics is of a high caliber, and well respected by the students.
Since 2011 we have bolstered the MArch faculty cohort with new hires Caroline Hachem-Vermette, a building science researcher and practitioner with significant national research funding, and Mauricio Soto Rubio, a specialist in lightweight structures with teaching and practice experience around the globe. In addition, EVDS instituted a Faculty Teaching Award four years ago, and this has been won by MArch instructors three of those years, including faculty members Josh Taron and Marc Boutin, and one award shared by sessionals (and EVDS alumni) Jodi James and Matthew Knapik for their work in our Graphics II course.

A notable array of more than $270,000 in annual Scholarships, Grants and Awards, and numerous teaching and research assistantships approaching $80,000 per year are available to students.
The total Scholarships, Grants and Awards for continuing and entering MArch students in 2015 was $ 276,600, while the combined total of teaching and research assistantships exceeded $135,000 during the 2015-16 academic year.

The MArch faculty members have received $673,000 in research grants in 2016.

Evidence of the desire to build further linkages to the Program's primary external stakeholders, including Alumni, the Professional Community, and the Civic Authorities.
As mentioned above in Causes of Concern, #6, great efforts have been made in this area since the last accreditation visit.

Recent Faculty appointments have strengthened the school's capacity in the area of History and Digital Media.
Since the last accreditation visit we have also made two faculty appointments in Building Science and Structures, as noted above. In addition, Professor Graham Livesey has completed a PhD in architectural theory at the Technical University of Delft, and Professor John Brown has undertaken his PhD in architectural practice at the Royal Melbourne Institute of Technology.

An adaptive, responsive and expanding materials fabrication lab is embracing new technologies, including Laser Cutting and 3D Printing.
We have continued to expand our capacity in these areas, as well as in CNC technologies, as supported by workshop renovations in 2012. We have begun to

expand into robotics under the auspices of Jason Johnson's SSHRC grant, mentioned above. And using profits from the first summer of Design Camp, the EVDS workshop has purchased its first desktop 3D printer and robot arm. These will be used in the MArch design studios in future academic years.

A mature, well-established and highly subscribed Barcelona Program Abroad is in high demand and attracts students to the program.
In addition, an alternative study abroad option is now well-established. It began as a multi-site Australian experience, and in Fall 2016 is being massaged into a Pacific Rim option that will incorporate experiences in Tokyo, Hong Kong, and Melbourne. Moreover, the students who remain in Calgary also will be given the opportunity for a week-long field visit to Portland, Oregon.

2.2 Summary of Responses to Changes in the CACB Conditions

This Architecture Program Report follows the 2012 Conditions and Procedures defined by the CACB. The Architecture Program remains committed to the broad principles of architectural education as set out in the 2012 CACB Conditions for Accreditation and has strengthened its curriculum to respond to the current set of criteria.

3. COMPLIANCE WITH THE CONDITIONS FOR ACCREDITATION

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3.1 Program Response to the CACB Perspectives

The Master of Architecture Program, the Faculty of Environmental Design (EVDS), and the University of Calgary share the Canadian Architectural Certification Board's (CACB) broad perspective on professional education. We have in place procedures and policies designed for effective engagement with the five constituencies: The Academic Context, the Student, Registration, the Profession, and Society. We regularly review the MArch Program and its relationships to assure that these interests are being met. We are continually reminded of how complex the education of an architect is, and that every school makes choices. We seek a particular balance that we believe prepares graduates to begin their internship with the attitudes, values, skills, and knowledge necessary to develop into competent and ethical architects, as well as responsible citizens and leaders.

A Architecture Education and the Academic Context

Architectural education at the University of Calgary takes place in a large research oriented university with significant intellectual, physical and financial resources. The University of Calgary expects that all members of its community, including the professional programs, respect its role as a seeker of truth and a place of free intellectual enquiry. The University provides a context of high academic standards, enabling the program to attract high-calibre faculty, students, and visitors. In return, the University benefits from the pedagogical approaches and activities of a professional MArch Program, particularly design based education and research. The Faculty of Environmental Design, therefore, seeks to balance the academy's tradition of scholarship, collaboration and intellectual enquiry with the profession's more focused concern with real human environments and with professional competence and responsibility. Design thinking helps connect the work of the university to the lives of the larger community.

The University of Calgary provides an ideal academic setting for the education of architecture students, with comprehensive student services, high calibre athletic facilities, a buzzing social hub in the MacEwan Student Centre, the Nickle Arts Museum (which regularly shows architectural exhibitions), a well-developed and innovative library system centred in the Taylor Family Digital Library (which is the home of the Canadian Architectural Archives), and the new Taylor Institute for Teaching and Learning which support faculty's professional development. Being part of a large research university gives the Program access to a large undergraduate population from which to draw students for the Minor in Architectural Studies. Many of the Minor students major in degree programs in the Faculty of Arts (especially Urban Studies and Fine Arts), though the Minor also draws students from the Faculties of Business and Science.

The Faculty of Environmental Design enjoys strong support from the University, and both have prioritized the growth of the MArch Program since 2005, as well as supporting research and educational initiatives. Further, the Faculty shares teaching and research resources in common areas of interest across the University. Currently, EVDS is collaboratively connected with the Faculties of Business, Engineering, Arts, Social Work, Kinesiology, and Medicine on various initiatives. Since 2008, EVDS has worked closely with the Faculty of Graduate Studies, which oversees policy writing, curricular changes, the admissions process, student progress, and student discipline.

The post-professional research degrees in EVDS support the MArch Program in a number of ways. In 1997, EVDS established a PhD in Environmental Design; in 2007 and in 2014 (after the last Unit Review), the Master of Environmental Design (MEDes) degree was reconfigured to be focused on thesis research, rather than coursework. There have been numerous Master's thesis and doctoral students associated with faculty members in Architecture. In particular, EVDS has attracted thesis students in areas such as building science, sustainable design, digital design and fabrication, and design theory. Most of the thesis students working in these areas have professional architecture degrees and practice experience, either from Calgary or around the world. Participating in the EVDS community, these thesis students contribute to the MArch Program as teaching and research assistants, doing studio reviews, presenting their research in the Faculty, and taking classes alongside the professional students.

The Faculty of Environmental Design was founded on the principle of interdisciplinary collaboration. In the past, this meant that all EVDS students took two common introductory courses, a theory/philosophy course and an environmental design studio. With significant program growth, and the increasing professionalization of the curricula in the MArch and Master of Planning (and in EVDS' new Master of Landscape Architecture) degrees, these faculty-wide interdisciplinary courses proved difficult to deliver in a meaningful way. Therefore, EVDS curricula have moved toward focusing interdisciplinary collaboration among the different professional programs in the Fall semester of students' senior years. In that semester, interdisciplinary "city studios," held in Calgary and at EVDS' study abroad sites, will blend students from different professional programs in project-oriented studio work emulating professional practice. These studios will be complemented by urban theory courses offered in each location. Beyond the required MArch curriculum, students have opportunities to take MPlan, MLA, or other EVDS courses, or elective courses outside EVDS. Faculty members from across the University interact with EVDS in a number of ways, and provide MArch students with access to more focused expertise in environmental management, product design, urban design, engineering, entrepreneurship, and the social and behaviourial sciences.

The Faculty and the MArch Program engage in many institutional projects, such as campus-planning initiatives. The MArch Program participated in three consecutive Solar Decathlon projects, as noted above, and these were a testimony to collaboration with other local post-secondary institutions. These all were collaborative projects achieved by students from several programs at the University of Calgary, the Southern Alberta Institute of Technology,

Mount Royal University and the Alberta College of Art and Design. Currently, EVDS' makeCalgary initiative gathers expertise and collaborators from across the University and the broader community. The MArch Program has an extensive history in undertaking design-build projects including various projects for the University of Calgary in recent years. The Faculty of Environmental Design is exploring the option of offering a Certificate in Sustainability Studies and a PhD by practice aimed at professional architects.

B Architecture Education and the Students

While the Faculty's programs are founded on collective goals and values that we see to be important to society, the environment, and the profession, the content and methodology of the MArch Program is also directed to the individual student. The CACB's emphasis on lifelong personal and professional growth and development is well founded, particularly in today's changing professional environment.

Students enter the program with a variety of backgrounds, and with a range of understandings about the nature of the profession. Some are drawn to architecture by their interest in form-making, others as a means for social or environmental change. Some students see the study of architecture as one more academic adventure, and some come with heads full of technical knowledge. All have some idea of the way they intend to practice, although some, through experience or observation, are looking for alternative ways of practicing design.

The students in the MArch Program at the University of Calgary are a diverse and mature group, coming from Western Canada and beyond, and there are no quotas based on gender, race or geography. The Program seeks to strike a balance between a high quality professional curriculum, while allowing opportunities for individualized exploration by students. Consistent with this approach has been recognition of the individuality of student learning paths. This is manifested through the student's selection of electives, block courses, study abroad program, and senior studios.

In the interest of the student, the program must balance sound principles and understanding for use in the long term with specific skills and knowledge of immediate use in contemporary practice. It must balance respect and understanding for contemporary professional roles with a creative view of how society will produce environmentally responsible and innovative buildings in the future. These skills are developed in a variety of ways throughout the curriculum. The philosophical model on which the Faculty of Environmental Design is founded is inclusive and collaborative. Thus, students have always been included in Faculty governance and strategic planning and are represented on all significant committees and councils. In particular, they have long served on the committee that annually reviews performance of academic staff.

In the Faculty, students are immersed in an interdisciplinary and collaborative design environment where they are exposed to a broad range of professional, environmental, and design related topics and challenges. This is reflected in the open studio working and teaching environment that has developed with

the move to a more digital environment; students work in studio areas in team arrangements, but also actively take advantage of many other spaces in the building to work on shared assignments, etc. The Faculty's study abroad programs and in Barcelona and the Pacific Rim, as well as individual student exchange opportunities, allow students to experience international opportunities first hand. The broad range of visitors to the MArch Program (reviewers, lecturers, guest instructors) also exposes students to national and international outlooks.

The leadership roles of future design professionals represent a further important aspect of the curriculum in the MArch Program, and in EVDS more broadly. As a graduate Faculty, students are expected to be involved in shaping their studies and the institution. Architecture students are active in a variety of associations, including the EVDS Student's Association, and the Alberta Association Architects (AAA). In 2003, the AAA created a student position on its governing council, reflecting the close relations between the Program and the profession. Leadership training has been a key part of professional practice courses, and in 2016 a new course was developed specifically in the area of "Leadership and Architecture" (this course replaces the former Interdisciplinary Seminar). Students in the MArch Program have access to a broad range of opportunities in the Faculty, at the University, and beyond. By and large, they gain a broad understanding of professional, cultural and environmental issues.

C Architecture Education and Registration

The Master of Architecture Program at the University of Calgary seeks to balance an understanding of registration criteria and procedures with a creative and realistic long view of practice opportunities. Graduates from the Program are well prepared for internship and professional registration. While most students aspire to registration, studies have shown that a large number also will seek —and excel at— alternative careers in academia and industry. Each graduate, however, is prepared for registration. A high percentage of recent graduates are employed in professional practices. Since the last accreditation site visit in 2011, the MArch Program has graduated 290 students. Many are interns with the AAA or other registration bodies across Canada and abroad.

The professional practice course provides one vehicle for introducing students to internship and registration. In recent years it has been co-taught by the MArch Program's long-time, ex-officio representative to the AAA Council, Tang Lee, and former AAA President Kate Wagner. Most students also seek summer employment in architectural offices, and graduates have had little difficulty finding work and integrating effectively into the profession, though the current recession in Alberta may well have made this more difficult in the last year. Therefore, students upon graduation have a well-developed sense of the profession and the requirements of internship, registration and professional conduct.

D Architecture Education and The Profession

In Canada, the term “architecture profession” refers to the community of individuals who, by virtue of qualification and registration, take responsibility for administration of a Provincial Architects' Act. The MArch Program seeks to establish in each graduate a moral and ethical foundation that is consistent with both legislation and social responsibility.

An important role of EVDS is to inform the student about the nature of the design professions, the world in which they operate and the opportunities that therefore arise. The Faculty was founded on the desire to critically transform the nature of the professional in society. In coursework and other venues, the ethical and moral responsibilities of the design professional are debated within a broad range of disciplinary contexts. Based on their undergraduate studies, students entering the Faculty have been successful in disciplines that see the world in various ways. The ability to shift into new ways of thinking and to apply fundamental values and skills to new situations is essential to success in the Faculty and during a career; it is also a foundation for life-long learning and development.

In the Professional Practice course, students are exposed to the issues involved in balancing client, public, creative, and leadership responsibilities. They engage with allied professionals, such as landscape architects, engineers, project managers, building developers, who participate in making the built environment. In this and other courses, students are presented with opportunities to work in groups and interdisciplinary teams in order to learn about collaboration and team organization.

The Program enjoys a positive and cooperative relationship with the AAA. Through EVDS representation on the AAA Council, formal contact and continuity is maintained. The AAA also sponsors a number of annual awards and prizes for students in the Program. Many EVDS alumni have served on the AAA council, including a number of recent AAA Presidents: Lynn Webster (2000-01), David Down (2003-04), Douglas Campbell (2006-07), Kate Wagner (2007-08), Craig Webber (2009-10), Scott Pickles (2011-12), and Mark Chambers (2013-14). In addition, alumni and faculty members were both heavily involved in planning and staging exhibits for the recent RAIC Festival in Calgary, including several exhibits and installations.

The Program strives for a seamless relationship between the university setting and professional practice. This is reinforced by the fact that several full-time faculty members have active award-winning practices. Professional practice is strongly encouraged, and recognized by the Faculty of Environmental Design for tenure and promotion. There are also many active practitioners among our sessional instructors, adjuncts, and studio reviewers, as well as professional Planners and Landscape Architects in other Programs in the Faculty. Therefore, students are exposed to both theoretical and practical aspects of design, and to an educational milieu that promotes excellence in professional design practice.

E Architecture Education and Society

One of the most vital tasks of the architect is to create spaces that support and enhance human activity. This means dealing with complex factors of culture and environment that become increasingly more difficult to comprehend, let alone address. It is the view of the MArch Program and EVDS that satisfactory solutions to complex social problems will be found not through the creativity and competence of the individual architect alone, but through group and collaborative work that engages both an appropriately broad range of expert knowledge and the support of those who have a stake in the outcome. While the rapid globalization of culture offers, on the one hand, the opportunity for greater richness and diversity of expression and meaning, it presents, on the other hand, the real risk of homogenization and the loss of the distinctive and valuable qualities of many regional cultures.

The Faculty is committed to environmental design, broadly defined, from the design of products to the study of ecosystems; architecture students primarily address buildings and urban ecologies. The MArch Program has a strong commitment to the ecologies of design, reflected in the four core studios. Meanwhile, the social and cultural aspects of professional design practice are addressed in, among others, the history and theory, sustainability, and the professional practice courses. In preparing graduates to address, through architecture, the dilemmas of contemporary society, the Master of Architecture Program must balance the need for strongly-held values, which will provide a personal standard for excellence, with the need for the recognition of, and tolerance for, the pluralistic values and goals of an increasingly diverse society.

Propelled by its strategic plan, EVDS has taken a leadership role in Calgary, promoting the value of design and planning to the growing city. The Faculty has expanded its presence within the cultural life of the city through its involvement with activities such as festivals, lecture series, publications, and gallery exhibitions. Since 2011, EVDS has staged an annual series of highly visible, interdisciplinary design events under the banner of makeCalgary. Combining charrettes, days of service, public consultations and roundtables, block and elective courses, student researchers and faculty member expertise, the makeCalgary events have tackled a major environmental design theme each year: urban catalysts; cultural spaces; resilience (after the 2013 flood); public health; social equity; and walkability. Students and faculty members from the MArch Program have been central to the development and success of makeCalgary, and the collaborations it has yielded with the Faculty of Social Work, the Cumming School of Medicine, the O'Brien Institute of Public Health, the City of Calgary, local community associations, and other entities.

Indeed, EVDS has a long tradition of community involvement and activism. Over the years, interdisciplinary groups of students and faculty have worked with numerous groups and communities on projects ranging from transient housing to community advocacy planning. The MArch Program remains committed to this tradition of activism. This is reflected in studios and design-build projects executed in the last several years, and through the research projects of faculty members. Faculty members, adjuncts, students and alumni

are involved in local and regional design issues in a wide range of capacities, through professional practice, research, and serving on volunteer committees for the profession, the city, and other community organizations.

3.2 Program Self-Assessment

The Master of Architecture Program employs a range of self-assessment techniques to monitor its mission and strategic planning objectives. These include comparison to the formal contexts of the University's *Eyes High Vision and Strategy* (2011), the *EVDS Strategic Plan: 2016-2020, In this Place/ In This Time*, and the MArch Program Strategic Plan (2016). Faculty meetings and committees, Program meetings and retreats, course evaluations, bi-annual faculty member assessments, and tenure and promotion procedures all contribute to the ongoing assessment of the structure and performance of the MArch Program. The recent EVDS strategic planning process was supported by extensive consultation through an alumni survey and tactical interviews with stakeholders. This research was conducted by Associate Professor Marc Boutin and MPlan Assistant Professor Greg Morrow, and has been used in the development of the Faculty's strategic plan.

The Faculty has also been involved in independent bench-marking exercises, such as the 2007 and 2013 Unit Review processes, and considers the CACB accreditation review a major assessment of the quality of the MArch Program. The Associate Dean (Academic – Architecture), in consultation with faculty members, adjuncts, alumni and students, is tasked with ensuring that high standards of teaching, scholarship and service are monitored in the Program. As described above, these standards coincide with the CACB Perspectives with respect to encouraging a diverse and questioning learning environment for students, fostering close and productive ties with the architecture profession, and meeting societal demands at local, regional, national and international levels.

A Description of Program's Self-Assessment Processes

The assessment of EVDS and MArch Program goals, objectives, and performance occur through the ongoing administrative processes of the Faculty, and through periodic reviews – as required prompted by significant issues or events. The MArch Program faculty meet regularly to discuss the general state of the program and to address program specific problems or opportunities. They typically meet once per month during the academic year, with a day-long retreat held in May or June each year. In the Winter 2016 term the MArch Program updated and adopted its strategic plan to guide the program for the next five years. The continuous development of the Program is always under review using a variety of metrics and drivers. Change results from curriculum review, from student and staff identification of needs, resources, deficiencies and opportunities, and from the departure and arrival of academic staff with the concomitant effects on available strengths and interests.

The MArch Program, and then the EVDS-wide Faculty Forum, conduct a formal review of individual student progress, course delivery, and curriculum at the end of each semester (Mid-Year Review in January and Year-End Review in May). These groups (advisory to the dean) discuss and make recommendations respecting policies, procedures, and standards that are then forwarded to the Dean, to a course manager for implementation, or to Faculty Council for formal legislative approval. Periodically, events transpire requiring special review or assessment. These are dealt with by ad-hoc

committees or working groups, or by special sessions of faculty members and students.

In 2010 and in 2015 the Dean of EVDS led a Faculty strategic planning process which entailed serious consultation with stakeholders, especially faculty, students, and alumni. The most recent process began in 2014 with the formation of a visioning committee composed of representatives from these constituencies, which oversaw the conduct of a stakeholder's survey (mentioned above) that guided the planning. This was a useful assessment process for the MArch Program as well as the Faculty.

In addition to Program and Faculty self-assessment, the University assesses EVDS proposals with respect to curriculum, courses and academic regulations through the Faculty of Graduate Studies Council, and then the Academic Planning and Priorities Committee of the General Faculties Council, with feedback returned to the MArch Program at each stage.

Students participate in the ongoing assessment of the MArch Program in a number of ways. Since 2009, the Associate Dean (Academic – Architecture) has held regular (2-4 times per year) "town halls" as open fora to discuss courses, instruction, workshop and studio issues, and the culture of the Program. The town halls have, in fact, resulted in a number of changes to the Program and Faculty life. Specific examples include improvements to the computer lab, workshop, and student lounge (including the addition of ping-pong and a piano); and an initiative by the Program to map out the major assignments in each semester to avoid significant due date conflicts. In addition, the Associate Dean has instituted regular monthly meetings with cohort representatives, to enable discussions of courses and other issues affecting a specific year in the Program.

Generally, students can be involved in all planning activities in EVDS, and also have opportunities through the EVDS-SA to provide feedback on specific courses, the overall curriculum, or any other aspect of the Program. The EVDS-SA President sits on EVDS Faculty Forum and Council, while the Associate Dean (Academic – Architecture) is in regular contact with MArch year representatives from the EVDS-SA. Students are appointed to many committees of the Faculty.

Each semester, EVDS courses are evaluated by the students through an anonymous process of written, qualitative evaluations. Since 1999, this has been supplemented by a university-wide, course evaluation system based on quantitative ratings. Course evaluations are annually reviewed by the Associate Dean (Academic – Architecture), and bi-annually by the EVDS Faculty Promotions Committee as means of accessing teaching effectiveness across the Program.

The high level of personal contact between faculty members and former students has allowed the MArch Program to rely on direct contact for alumni relations and feedback from practitioners. In addition, an official exchange of views between the school and the profession is facilitated by an ex-officio position on the Council of the AAA held by the Associate Dean (Academic – Architecture) or designate, as well as an ex-officio student position on the AAA Council.

Finally, self-assessment occurs by considering progress relative to the MArch Program's mission statement and strategic plan. Generally, strategic objectives at the Program level have been met in the last decade. In the period following the adoption of the 2010 strategic plan for the Program, there has been significant progress in a number of areas:

- Improving marketing and communications, and strengthening external linkages, especially raising the Program's visibility within the University and in the Calgary community;
- Testing and improving upon the curricular changes that took place prior to 2010, and also in response to concerns leveled in the 2011 Visiting Team Report;
- Expanding study abroad opportunities, particularly the Pacific Rim option;
- Increasing the amount of student awards, including new awards;
- Developing the fabrication side of design pedagogy in the areas of design-build and full-scale installations of building elements.
- Improving the facility, including workshop and classrooms.
- Hiring new faculty members and support staff.
- Developing strategic initiatives at the Program, Faculty and University levels.

B Assessment of the Program's Overall Curriculum

Required Curriculum: As noted above, regular curriculum review relies on ongoing discussions with faculty members, sessional instructors, students, and alumni under the direction of the Associate Dean (Academic – Architecture). In 2009, the MArch Program undertook a comprehensive curriculum update, which led to changes in studio sequence and content (related to CACB Student Performance Criteria and to the Program's "ecologies" model), a realignment of various courses, and the placement of a stronger emphasis on electives. For the most part, the curriculum has been settled in its current configuration since 2009, though subject to ongoing assessment and improvement. A number of course changes have been implemented in the past two years, with the movement of the Professional Practice course into the final semester where it will be most meaningful to the graduating students, and the replacement of the logistically difficult Interdisciplinary Seminar with a new course on Leadership and Architecture, with interdisciplinary experiences relocated to a studio and an urban theory course. Other than the Professional Practice course, the CACB accreditation requirements are concentrated in the Foundation Year and MArch Year One, with MArch Year Two left open for study abroad, elective studios, and elective courses (four half-course equivalents) chosen by the students.

Elective Opportunities: The Master of Architecture Program provides a diverse series of educational offerings beyond the core, required curriculum, including the well-established Barcelona Study Abroad program, the newer Pacific Rim study abroad, the Pacific Northwest option in Portland, a variety of elective courses and directed studies, and various visiting lecturer programs in Calgary. Since 2011, the Program has strategically developed new elective courses in Building Information Modeling (BIM) and Building Performance Simulation. Other electives offered in recent years have

included: energy modeling, solar heating, health in the built environment, agile architecture, responsive architecture, cold climate design, digital fabrication techniques, and more in history and theory of architecture and urbanism. The MArch Program's Block Week courses are a significant opportunity for students to interact closely with experts brought in specially to teach them. Of these, students are required to take either the Somerville charrette, Gillmor theory seminar, or the Taylor charrette at least once, and these can also be taken additional times as electives. These Block Week courses expose students to a variety of high caliber educational experiences in theory/history, fabrication, and design charrettes. In addition, the Los Angeles Field Trip is a Block Week elective option in which many Foundation Year and undergraduate Minor students participate.

C Architecture Program Strengths

Historically, the MArch Program has benefited from its interdisciplinary context, its intimate size, the high level of commitment of its faculty, its institutional setting, student funding, and comprehensive enrichment opportunities. The Program has developed several additional initiatives and opportunities that serve to distinguish the school and articulate its character.

i Areas of Expertise

The research, scholarship, and practice undertaken by faculty members in the MArch Program and in EVDS contribute to the Faculty culture of learning and the exposure of the architecture students to valuable ideas and experiences.

Sustainable Buildings: Consistent with the Program's commitment to the ecologies of design is faculty member expertise in various areas of sustainable buildings, including day-lighting design, energy modeling, solar heating, buildings envelope systems, ethics of sustainability, and urban ecology theory. One focus of this expertise is the Faculty's Solar Energy and Community Design Lab, established by new MArch Program member Caroline Hachem-Vermette. The MArch curriculum is distinct for its course on the technical and social aspects of sustainability, including courses taught by professors Brian Sinclair and Tang Lee.

Contemporary Urbanism: The nature of Calgary's urban history and environment means that the MArch Program has developed a strong commitment to the integrated relationship between architecture and contemporary cities. This is reflected in studio exercises and research work. Professional practice, courses, and curation by MArch professors Graham Livesey and Marc Boutin exemplify this expertise. Beginning in Fall 2016, this has also meant course collaboration with the MPlan and MLA programs on a Cities studio and accompanying theory course.

Digital Design and Fabrication: The MArch Program is widely known for its research and teaching in the areas of advanced digital design, digital fabrication, and integrated design. With the EVDS computer lab and workshop, and facilities elsewhere on campus, the Faculty is well-placed as leaders in this area, and has drawn international networks of practitioners

and researchers for conferences and Block Week courses. The Laboratory for Integrative Design, a group of allied architecture faculty including Jason Johnson, Branko Kolarevic, Vera Parlac, and Josh Taron provides a vehicle for this work. This expertise is manifest in the sequence of two graphics courses, as well as the design studios.

Critical Practice: The Program is committed to exploring new forms of professional practice. In addition to the research and critical writing on practice, a number of faculty members are actively engaged in award-winning professional practices, including Marc Boutin, John Brown, and Barry Wylant. This expertise informs many aspects of the curriculum and is most noticeable in the design sequence and the professional practice course. Formerly, the Interdisciplinary Seminar required students to consider critical practice as a way to tackle wicked problems in environmental design. A new course in Fall 2016 now challenges MArch students to develop innovative interventions in society as critical designers who can take leadership roles in their communities. Among other locales, critical practice is explored in the Faculty's Lightweight Structures Research Group, headed by new hire Mauricio Soto Rubio.

History and Theory: The Program has significant strengths in research and teaching history and theory of architecture, urbanism, space and place, as in the work of Catherine Hamel, Graham Livesey, and David Monteyne. The study of Canadian architecture (supported by the Canadian Architectural Archives and the University of Calgary Press) is reflected in elective opportunities and publication projects. The study of socially responsive design as it pertains to social crises and migration, affordable housing, and elderly populations also has been the basis of research and of studio projects, such as those of Catherine Hamel.

ii Enrichment Opportunities

The MArch Program offers a comprehensive slate of enrichment opportunities to students, including the annual EVDS Design Matters lecture series, field trips, exhibitions, conferences, the Somerville, Gillmor and Taylor Visiting Lectureships, and of course the chance for students to take one semester abroad.

Study Abroad Programs: One of the flagship opportunities offered by the MArch Program are the study abroad terms held in Barcelona and the Pacific Rim (Tokyo and Melbourne). In both locations, a design studio and an urban history/theory course are complemented by a Block Week study tour in a different city (recently, Barcelona students have visited Rotterdam, Copenhagen, and the Venice Biennale, while the Pacific Rim students went to Sydney for Block Week).

Initiated over twenty years ago, the Barcelona study abroad program was conceived as a rigourous semester in which students would be immersed in a different cultural context, and be required to work through a series of graduate level studio and lecture courses sited in that city. The Barcelona program was originally organized by a former adjunct professor living in

Barcelona and has operated with a variety of local practitioners and academics over the years. Most recently, the Faculty has engaged a group of independent Barcelona-based educators and design professionals (coordinated by adjunct professor Rafael Gomez-Moriana), and occupies rented space in order to mount the study program.

The Faculty developed a second study abroad program in Australia which occurred in 2011 for the first time. Originally shared between a studio course in Melbourne and a design-build activity in Adelaide, this study abroad has evolved into a Pacific Rim program, with mini-studios in Tokyo and Melbourne, and a Block Week stopover in Hong Kong. Most recently, a studio option has been developed for the students who remain in Calgary for that semester, with the Fall 2016 studio undertaking a project, with a field visit, in Portland, Oregon.

These study abroad programs are augmented by a number of other individual exchange opportunities based on agreements made by the MArch Program or by the University; students have recently taken the opportunity to study in Paris, Hong Kong, and Helsinki, while EVDS has hosted students from France, Mexico, Brazil, and South Korea. About three-quarters of the MArch students in EVDS will spend one semester abroad, either in Barcelona or the Pacific Rim, or on an individual exchange.

The study abroad programs are coordinated by the Associate Dean (Research and International). The Barcelona and Pacific Rim programs are carefully monitored by the Faculty, and final reviews in each location involve a faculty member from Calgary. There is annual exhibition of student work from the Study Abroads held in the EVDS Gallery. The opportunities provided by study abroad terms are some of the most important components of the MArch Program, for recruiting and for student experience. Alumni often refer to EVDS' study abroad programs as one of their most significant educational experiences and life events.

Block Week Courses, Lectures, Exhibitions, and Conferences: Other MArch Program initiatives also provide important enrichment opportunities. The Block Week courses mentioned above are a unique aspect of the degree that date to the founding of the Faculty in 1971. The current offerings include the Somerville charrette, the Gillmor Theory Seminar, and the Taylor Workshop. The William Lyon Somerville Visiting Lectureship, established in 1992, brings a prominent architect to the Program annually to direct a five-day charrette with a group of students. The Gillmor Visiting Lectureship brings a prominent historian or theoretician to the Program annually to give a series of advanced seminars on a selected topic. The more recent Taylor Visiting Lectureship features an emerging designer who leads a workshop that focuses on digital fabrication. Visitors for these courses are listed below under 3.6 F, *Visiting Lecturers and Critics*.

The Faculty sponsors and organizes the annual Design Matters lectures series as well, with 6-8 prominent international guests per year giving a public lecture at the University's Downtown Campus (the Block Week Visiting Lecturers also give public lectures in this series). Students attend these lectures and mix with alumni, practitioners, and the interested public.

Other conferences and events have been put on by EVDS as well. In 2011, the Annual Conference of the Association for Computer-Aided Design in Architecture (ACADIA) was hosted in Calgary/Banff by MArch faculty members and was open to students. In 2013, a second conference on "Building Dynamics: Architecture of Change" was organized by MArch faculty members. MArch students also have access to EVDS travel funds if they are presenting research or design work outside of Calgary. For example, in Summer 2016 two MArch students joined three EVDS thesis students in presenting work at the ACSA International conference in Chile.

Finally, a regular series of exhibits grace the EVDS Gallery. Semester-end student shows are complemented by exhibits of the work of artists and designers from across North America, curated by a MArch faculty member. Faculty members have also been involved in exhibits in other venues, such as the student and intern work displayed in separate shows at the RAIC Festival in Calgary. A prominent example is the recent traveling exhibit designed by a faculty member, showing drawings of Arthur Erickson's early houses in the collection of the Canadian Architectural Archives in the University library.

iii Undergraduate Minor in Architectural Studies (ARST Program)

The Minor in Architectural Studies provides an undergraduate stream into the professional MArch Program and has the following benefits: improved visibility of the Program through an increased number of undergraduate students taking courses in architecture; increased accessibility to the professional degree program; an increase in retention rates among MArch students, as students can apply to that degree after having some experience in the discipline; a potential reduction in time to degree from high school from seven years (four undergraduate and three graduate) to six years (four undergraduate and two graduate); improved competitiveness of the MArch Program with respect to other institutions due to a clear route from high school and a decreased time to degree; and decreased costs for students due to the potential reduction in overall program length and the lower cost of undergraduate tuition. On the completion of their undergraduate degrees, high-performing and ambitious Minor students have successfully applied to the MArch Program and to other professional architecture degrees elsewhere including, in recent years, the University of Toronto, SCI-ARC in Los Angeles, and the Institute for Advanced Architecture of Catalonia, in Barcelona.

iv Student Funding

The Architecture Program offers a comprehensive range of scholarships, awards and student assistantships. Notable scholarships include the Murray W. Waterman Architectural Awards for continuing students, which partly funds the study abroad programs, the Waugh Scholarship in Architecture, and the Cohos Evamy Partners Travel Scholarship (both of which celebrated their 30th anniversary in 2015). New scholarship and awards programs continue to be developed, such as the GEC Award of Excellence in Comprehensive Design now given to the students with the best overall project in that studio semester. A number of national scholarship and awards programs are available to students of architecture (recently student Yves Poitras won the 2014 Michael Evamy Scholarship and the 2015 Prix de Rome in Architecture

for Emerging Practitioners). The Faculty also paid out more than $100,000 in teaching and research assistantships during the last academic year.

v The Ecologies of Design Curriculum

The Faculty of Environmental Design has been committed to sustainability since its inception in 1971. The MArch Program is strongly committed to sustainable design in the curriculum, in research projects, and in practice. In 2009 and 2016 the Program adopted a vision that would build upon the history of the faculty and provide a framework for recasting the first four studios. The adoption of the term "ecology," as opposed to "green" or "sustainable," allows for a broad engagement with a variety of other disciplines: urbanism, planning, computing, engineering, social sciences, social work, etc. Ecology, as the interaction between organisms and environments, allows for the curriculum to engage broad environmental factors, socio-political aspects of design, and intelligently engage technology and processes. Beyond the MArch Program, EVDS has significant expertise in ecological design in the areas of regional and urban ecologies, water and wildlife management, product design, and systems design.

The design studio sequence, and its integration with other components of the curriculum, is an important Program strength. The first four studios explore the fundamental issues of architectural design and ecology, while the last two allow students to explore urban ecologies and others that interest them.

MARCH PROGRAM THEMATIC STRUCTURE

FOUNDATION (Fall Term): ECOLOGY 1

Ecology 1 introduces the concept of ecology as a framework for design thinking. Ecologies, made up of physical, environmental, behavioral, economic and political factors, are explored through iterative design explorations. Particular emphasis is placed on the study of landscape and domestic environments and the fundamental interactions between organisms and their contexts. Precedent analysis, observation, measuring and the introduction of programming strategies are studied and understood as the basis for a generative design processes. These processes include basic programming, an understanding of complex systems, site selection and formal studies as the means for exploring a set of design problems at various scales.

Skills/Knowledge: fundamental design and graphic skills, critical thinking, collaboration, ecological systems, site analysis and interpretation, precedents

FOUNDATION (Winter Term): ECOLOGY 2

Ecology 2 situates design within the context of the social, communal and political aspects of designed environments with an emphasis on dwelling in urban contexts. Individual dwelling units are explored in relation to urban-scale patterns and infrastructures. Emphasis is placed on elements of space and architecture as well as the social organizational systems (program, performance, phenomena, information, and occupation) that constitute design problems in urban environments.

Skills/Knowledge: develop design and graphic skills, introduction to singular vs aggregated programs, introduction to residential and urban design, sustainability, social and political ecologies, organizational systems, programming

M1 (Fall Term): ECOLOGY 3

Ecology 3 synthesizes the scalar, systematic and material aspects of architecture through the application of theoretical frameworks to the design of a complex urban building. Urban context analysis, program development, the production of prototypes, and the exploration of various design media are used to understand the material and technical complexity of human environments. The term focuses on design as producing complex ecological systems at multiple scales.

Skills/Knowledge: materiality, fabrication/construction, complex building typologies, understanding environmental systems, materials and assemblies, program preparation

M1 (Winter Term): ECOLOGY 4

Ecology 4 integrates technological systems into designed environments. These systems include those embedded within the processes, construction and climatic control of buildings, and their related environments. The design of a building and its systems are explored through the comprehensive development of spatial, structural, and mechanical systems internal to the building and the social, climatic, regulatory and cultural components that form its context.

Skills/Knowledge: comprehensive design, life safety and service systems, envelope systems, systems integration, building codes, detailed design development, technical documentation

M2 (Fall Term): ECOLOGY 5

Ecology 5 immerses students in dense built environments, networks, and systems that produce the ecologies of contemporary cities around the world. Many students participate in the Faculty's study abroad programs in Barcelona (Spain) or Melbourne (Australia), while others undertake urban-focused design research in the Calgary region. Urban issues and urban sites are experienced, and a building or intervention is designed, in relation to social and cultural contexts, but also in terms of infrastructure, public space, and environmental impacts.

Skills/Knowledge: architecture and the city, public space, urban politics and social issues

M2 (Winter Term): ECOLOGY 6

Ecology 6 leverages the skills and knowledge gained throughout the previous terms towards the production of focused research within the context of a studio environment. Projects can be theoretical or practical in nature, ranging from highly speculative to design-build projects. General parameters, such as thematic focus, technique, and contemporary research, provide the studio framework in which students develop their work.

Skills/Knowledge: design research, speculative inquiry, professional practice

Each of the first four studios is linked with related courses. In the Foundation Year, Ecologies 1/Studio I is linked with an introduction to environmental history, sustainability, and graphics; Ecologies 2/Studio II works with a graphics course and a technology course. In MArch Year One, Ecologies 3/Intermediate Studio operates with an architectural theory and a structures course; Ecologies 4/Comprehensive Studio is linked to courses in structural systems, enclosure systems, mechanical systems concepts, code analysis and technical documentation. In the fifth and sixth semesters students can take option studios and elective courses. Topics in the senior studios have a focused research agenda, either determined by the instructor and/or the student. Recent senior studios have tackled responsive architecture, design competitions, design-build of laneway housing for seniors, and other topics.

vi Interdisciplinary Context

The Master of Architecture Program, since its inception in 1971, has been housed in an interdisciplinary graduate design Faculty. Students in EVDS come from a diverse range of backgrounds, some with professional work experience, and possess a broad understanding of the world. The programs offered by the Faculty and the diverse expertise offered by faculty members creates an intense interdisciplinary environment for design education, research, scholarship, and practice. Many prospective students are drawn to EVDS for its particular structure, and commitment to the complete spectrum of professional design exploration.

The Faculty of Environmental Design is now formed from three professional programs and two thesis-based research degrees. Alongside the MArch are the accredited MPlan degree, uniquely committed to studio-based teaching of physical planning and urban design, and the recently launched MLA degree which took its first students in Fall 2015. The MLA will go for accreditation in 2018 after graduating its first students. Complementing the three professional degrees are the Master of Environmental Design (MEDes) and the PhD in Environmental Design. These post-professional research degrees attract Canadian and international students who wish to develop deeper knowledge within their fields. Although the professional curricula are tightly packed, the Faculty seeks to establish touchpoints among the five degrees as much as possible. This starts with orientation activities for new students (most recently days of service in a low-income community), and includes makeCalgary events, group gallery exhibits, and elective courses. The new Cities studio structure in the study abroad semester represents another touchpoint where interdisciplinarity can be put into action on design projects.

D Future Directions for the Master of Architecture Program

The future directions for the MArch Program have been developed from the adoption of its strategic plans in 2009 and 2016, and the development of the Faculty's Strategic Plan through 2020. These documents outline the specific goals of the Program and the Faculty over the next five years. Through its strategic planning process, the MArch Program has determined three key goals of enhancing the reputation of the Program, broadening the student experience, and developing targeted resources. These are designed to harmonize with the general strategic objectives of the Faculty of Environmental Design. Under the first goal, the Program will focus on the quality of the curriculum and strengthening links with local, regional, national and international partners. The second goal looks to expand opportunities for students including securing additional funding, further developing study abroad options, and enhancing connections to various stakeholders and local communities. The third goal, in collaboration with the Dean and other programs in the Faculty, looks to develop funding for a number of key initiatives such as a fabrication lab. The MArch Program’s mission and vision statements, and the full strategic plan are included in Section 1, above.

3.3 Public Information

The Faculty of Environmental Design is accurate and consistent in its public representations, and works to assure that ongoing academic advice by faculty members and administration remains consistent with the University of Calgary policies and regulations, and in the best interest of the student. Recruitment materials for the MArch Program distributed online and at open houses and info sessions include newly re-designed print brochures. The up-to-date Program web pages are the most important point of contact for the public, for prospective and current students, and alumni, where information on staff, courses, student work, curriculum, and enrichment opportunities may be found: www.ucalgary.ca/evds

The CACB Guide to Student Performance Criteria is distributed to incoming students during the student orientation session in September. The specific calendar descriptions for the MArch Program are excerpted below; they can also be found on-line as part of the calendar entries for EVDS:

Graduate Calendar:
www.ucalgary.ca/pubs/calendar/grad/current/environmental-design-evds.html

University Calendar:
www.ucalgary.ca/pubs/calendar/current/ev.html

Faculty of Graduate Studies Calendar (Excerpts), EVDS and MArch Program 2016-2017

1. DEGREES AND SPECIALIZATIONS OFFERED
Doctor of Philosophy (PhD)
Master of Environmental Design (MEDes), thesis-based
Master of Planning (MPlan), course-based
Master of Architecture (MArch), course-based
Master of Landscape Architecture (MLA), course-based

3. APPLICATION DEADLINE
Master's Programs
Applications are accepted from September 1 through January 15 for September admission. There is no January admission. Please note that new admissions to any of the master's degree programs may be limited in number on an annual basis.

4. ADVANCED CREDIT
A student may apply for advanced credit for previous courses that have not been used to satisfy the requirements of any other degree or diploma program. The applicant must make advanced credit requests as part of the admission process. Advanced credit will not be given for courses taken more than five years prior to admission application. Credit will not be given for courses taken to bring the grade point average to a required level for graduate studies admission. Advanced credit may not exceed 12 units (2.0 full-course equivalents) or one third of the program whichever is less.

Course Exemptions: Students registered in a graduate degree program may receive an exemption from a specific course if they can demonstrate successful completion of an equivalent course. In order to be eligible for an exemption, the student must provide original transcripts, course outlines and samples of course assignments which will be assessed for academic equivalency. Courses for which exemptions are being sought must be from a recognized institution, and they must be graded courses with a minimum grade of "B-". Students granted an exemption from a course may be required to take another, equally-weighted, course to satisfy credit-hour requirements for their program.

6. ADDITIONAL REQUIREMENTS
A laptop computer is required for all MArch students. Visit the website for further details: evds.ucalgary.ca/content/master-architecture-march-admissions

7. CREDIT FOR UNDERGRADUATE COURSES
Master of Architecture
With the exception of Foundation year courses, only undergraduate courses numbered 500-599 may be considered for graduate-level credit and are subject to approval by the Program Director.

8. TIME LIMIT
Students registered in either the Master of Architecture or Master of Planning (course-based) programs must complete all degree requirements within six registration years. However, it is expected that these students will enroll on a full-time basis and complete the degree requirements within two registration years (excluding the Foundation year in the Master of Architecture program).

Faculty of Graduate Studies Calendar (Excerpts), EVDS and MArch Program 2016-2017

9. SUPERVISORY ASSIGNMENTS
Master of Architecture
Upon admission each MArch student will be assigned a program advisor to assist with program requirements and planning.

10. REQUIRED EXAMINATIONS
In addition to the Faculty of Graduate Studies requirements, the program requires:
Master of Architecture
Successful completion of course requirements.

13. FINANCIAL ASSISTANCE
Financial assistance may be available to qualified students but cannot be guaranteed. For information on admission and academic awards, see the Awards and Financial Assistance section of this calendar, the EVDS website and the Awards Data Base on the Faculty of Graduate Studies website.

14. OTHER INFORMATION
Attendance at orientation for first year students is expected.

University Calendar (Excerpts), EVDS, Minor in Architectural Studies, and MArch Program Description 2016-2017

At the master's level, the Faculty of Environmental Design offers a course-based Master of Architecture, a course-based Master of Landscape Architecture, a course-based Master of Planning, and a thesis-based Master of Environmental Design.

The Master of Architecture is a course-based first professional degree at the graduate level. The degree is accredited by the Canadian Architectural Certification Board. The Master of Planning is a course-based first professional degree at the graduate level. The degree is accredited by the Professional Standards Board of the Canadian Institute of Planners. The thesis-based Master of Environmental Design is a research degree that involves independent inquiry into a range of contemporary issues of human intervention in environments across the spectrum of faculty research expertise.

Note: More information on these programs can be obtained from the Faculty of Graduate Studies calendar.

UNDERGRADUATE
The Faculty of Environmental Design offers a Minor in Architectural Studies at the undergraduate level.

University Calendar (Excerpts),
EVDS, Minor in Architectural Studies, and MArch Program Description 2016-2017

INTRODUCTION
The Faculty of Environmental Design has a dual mandate to offer course-based, first professional degrees in Architecture, Landscape Architecture and Planning, and to offer advanced research opportunities in the Master of Environmental Design and PhD thesis degree programs. The latter research focus is intended for candidates who wish to build upon their professional career experience or related degree, with advanced, problem oriented research.

It is worth noting that since the Faculty's founding in 1971, the important roles for design, planning and management in human activities which impact built and natural environments have increased substantially. Significantly, the Faculty has championed interdisciplinarity as a means to understand and address the complex, and often subtle, interrelationships evident in the pursuit of these human activities. Further, the Faculty actively seeks to work co-operatively with local communities, governments, private corporations, associations and experts in other University Faculties to address complexity in a myriad of environmental design problems. The resulting outcomes may include new buildings, communities, artifacts, urban forms, and cultural landscapes, as well as plans, policies, environmental and ecosystem management strategies, and new technologies and information systems.

PATTERN
Master's degrees are offered by the Faculty of Environmental Design. Please refer to the Faculty of Environmental Design website for further details.

For PhD studies, an area of specialization, submitted by the student and supervisor, must receive the approval of the PhD Program Director prior to its submission to the Faculty of Graduate Studies for their approval.

The Faculty offers a Minor Field of Specialization in Architectural Studies at the undergraduate level.

A recognized four-year undergraduate university degree is required for admission to the Master of Architecture, Master of Planning and the Master of Environmental Design pursuant to Faculty of Graduate Studies regulations. Senior undergraduates in other Faculties may be eligible to take courses in the Faculty of Environmental Design. However, prior approvals of the instructor and the Faculty are required.

ADMISSIONS
Admission to graduate degree programs in the Faculty follows Faculty of Graduate Studies regulations and requirements and Degree Program admission requirements identified below. Current Graduate Studies and Faculty admission requirements are available on the University website.

University Calendar (Excerpts),
EVDS, Minor in Architectural Studies, and MArch Program Description 2016-2017

Applicants to the master's degree programs will require a four-year baccalaureate degree from a recognized university with a grade point average (GPA) in the final two years of study of at least 3.00 (based on a four-point grading system). The Faculty of Graduate Studies may approve special admission requests.
Consistent with Faculty of Graduate Studies requirements, prior to admission to the Faculty of Environmental Design, all applicants must demonstrate English language proficiency for purposes of admission. Please refer to the Faculty of Graduate Studies website (grad.ucalgary.ca) for current special admission request and English language proficiency requirements. For applicants who are required to prove proficiency in English, a TOEFL score of 600 (paper-based); or 100 (Internet-based test); or an IELTS score of 7.5.
Admission to the Minor in Architectural Studies follows Program admission requirements identified below.

Because of limitations on enrolment, all applicants meeting admission requirements are not necessarily admitted.

MASTER OF ARCHITECTURE (MARCH)
Admission to the professional Architecture Program is a competitive process. Applicants must meet minimum Faculty of Graduate Studies requirements (including a 3.00 GPA and English proficiency) and the Architecture Program admission requirements (see the Faculty of Graduate Studies Calendar and additional information is also available on the Faculty of Environmental Design website). For admission to the two-year MArch degree program, applicants must demonstrate successful completion of prerequisite requirements in four areas: Design, Technology, Communications, and History/Theory. Without these prerequisites, students apply for the MArch Foundation Year, which must be successfully completed before advancing to the two-year MArch. Therefore, admission to the MArch may be achieved in one of the following three ways:

- Admission into the MArch Degree based on the completion of a recognized four-year undergraduate degree with a minimum 3.00 GPA calculated on the final two years but needing to complete one or more of the ten course prerequisites required for admission. A student with these qualifications would enter the MArch Foundation Year and complete its studies prior to taking the regular two-year curriculum in the MArch; or
- Admission into the MArch Degree based on the completion of a four-year undergraduate degree from the University of Calgary with a Minor in Architectural Studies (ARST) and a minimum 3.00 GPA calculated on the final two years; or
- Admission into the MArch Degree based on the completion of a recognized four-year undergraduate pre-professional or professional architecture degree (or equivalent) program with a minimum 3.00 GPA calculated on the final two years.

University Calendar (Excerpts),
EVDS, Minor in Architectural Studies, and MArch Program Description 2016-2017

Candidates for the MArch Program (including those entering into the Foundation Year of the Program) must submit a digital portfolio (along with the other application requirements). The portfolio must provide evidence of original and/or creative work in any field or medium, and provide in writing a brief description of the work. The requirements for digital portfolio submissions can be found on the Environmental Studies website: evds.ucalgary.ca/content/master-architecture-march-admissions

Candidates are also required to submit a clearly-written statement of intent and three reference letters.

Students seeking advanced credit for courses should refer to the Faculty of Graduate Studies Calendar.

MINOR FIELD OF SPECIALIZATION IN ARCHITECTURAL STUDIES
In order to be eligible for the Minor, students must have successfully completed a minimum of 24 units (4.0 full-course equivalents) in post-secondary study by the end of the Fall Term in the year in which they apply. Admission to the Minor will be granted for the Fall Term only. Students must apply via their online Student Centre by February 1.

The Minor has a fixed number of places for students. Students will be admitted on a competitive basis. The application to the Minor will include consideration of the applicant's grade point average and a portfolio of their creative work.

A minimum grade point average of 3.20 is required for consideration for admission, but does not guarantee admission. The grade point average for admission purposes will be calculated over the most-recent course work to a maximum of 30 units (5.0 full-course equivalents) inclusive of the University of Calgary courses and/or transferable courses taken at other institutions.

Applicants to the Minor must submit a digital portfolio that provides evidence of original or creative work in any field or medium, and includes a brief statement of their interest in the Minor. The requirements for digital portfolio submissions can be found on the Environmental Design website: evds.ucalgary.ca/content/minor-architectural-studies-arst

University Calendar (Excerpts),
EVDS, Minor in Architectural Studies, and MArch Program Description 2016-2017

APPLICATION PROCEDURES

The deadline date for applications to the Master of Architecture, Master of Planning and Master of Environmental Design programs is January 15, for admission to the following Fall Term. The deadline date for applications to the Minor Field of Specialization in Architectural Studies is February 1, for admission to the following Fall Term. Degree Program Admission Committees for the Master of Architecture, Master of Planning and Master of Environmental Design and the Minor of Architectural Studies evaluate the respective pool of eligible candidates and offers admission to the most-qualified applicants. New admissions to all programs may be limited in number as required on an annual basis.

ACCURACY OF REGISTRATION

Students are responsible for the completeness and accuracy of their registration and for arranging their program to meet all requirements as detailed in this Calendar. Students should, however, seek advice from the Faculty of Environmental Design concerning their choice of courses. In cases of doubt about the interpretation of regulations, a student should consult the Graduate Program Administrator or the Associate Dean for their Program.

PROGRAM DESCRIPTIONS

MASTER OF ARCHITECTURE (MARCH)

The professional Architecture program offers a three-year curriculum, based on a two-year MArch program, plus a Foundation Year when appropriate, leading to the professional Master of Architecture degree accredited by the Canadian Architectural Certification Board (CACB) that prepares students for practice as a registered architect in North America. After its last review in 2011, the University of Calgary Master of Architecture professional program in architecture was accredited for another six years by the Canadian Architectural Certification Board (CACB). This is the maximum period for which programs can be accredited between reviews. Under the North American Free Trade Act, this means that accredited Canadian degrees are fully recognized in the United States and vice versa. In Canada, all provincial associations 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 Bachelor of Architecture and Master of Architecture. A program may be granted a six-year, three-year, or two-year term of accreditation, depending on the 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.

University Calendar (Excerpts),
EVDS, Minor in Architectural Studies, and MArch Program Description 2016-2017

The MArch degree provides a foundation for a range of career opportunities in design, construction and management of the built environment as well as a basis for subsequent advanced design and scholarly research. The MArch curriculum offers an integrated base for developing skills and knowledge in design, communication, technology, history, and theory, cultivated within the program's teaching and research expertise in sustainable design, digital design and fabrication, architecture and the contemporary city, critical practice, and architectural history and theory. In the interdisciplinary design milieu of the Faculty of Environmental Design, architecture students explore innovation and creativity side-by-side with students interested in a wide variety of environmental design disciplines focused on a comprehensive understanding of the built and natural environments.

Architectural design studios provide structured opportunities for advanced design studies and projects in both an individual and collaborative context. Enrichment opportunities include a public lecture series, distinguished international guests delivering seminar and design charrette experiences, publications, and the award-winning Barcelona and Melbourne Studies Abroad (where students are immersed in a foreign design culture for one term).

MINOR FIELD OF SPECIALIZATION IN ARCHITECTURAL STUDIES
The courses required for the Minor are equivalent to the courses in the MArch Foundation Year, and constitute the prerequisites for the University of Calgary's two-year MArch degree.

Completion of this Minor does not guarantee admission to the MArch or to other degree programs in the Faculty of Environmental Design, but it may reduce the number of courses that are required for a MArch. Students completing the Minor must apply for admission to the MArch degree.

Students interested in pursuing a MArch at the University of Calgary should note that only those students who have completed a four-year degree are considered for admission. A three-year Bachelor of Communication and Culture coupled with the Minor is not sufficient.

FIELD OF ARCHITECTURAL STUDIES
The Field of Architectural Studies consists of the following courses:
Architectural Studies 423, 444, 449, 451, 453, 457.01, 457.02, 483, 484.

University Calendar (Excerpts),
EVDS, Minor in Architectural Studies, and MArch Program Description 2016-2017

REQUIREMENTS
The following 30 units (5.0 full-course equivalents) must be completed successfully to achieve the Minor:

- Architectural Studies 423 Sustainability in the Built Environment
- Architectural Studies 444 Studio II in Architecture
- Architectural Studies 449 Building Science and Technology I
- Architectural Studies 451 Graphics Workshop I
- Architectural Studies 453 Graphics Workshop II
- Architectural Studies 457.01 History of Architecture and Human Settlements I
- Architectural Studies 457.02 History of Architecture and Human Settlements II
- Architectural Studies 484 Studio I - Design Thinking

RECOMMENDATIONS
The following optional elective courses in Environmental Design are also available to students in the Minor:

- Environmental Design Block 697.33 Field Trip
- Architectural Studies 483 Interdisciplinary Seminar
- Other electives with approval of the Associate Dean (Academic – Architecture)

Other undergraduate courses in Environmental Design available to all students include:

- Architectural Studies 201 Introduction or Architectural Studies
- University 207 Exploring Sustainability
- Environmental Design 401 Introduction to Environmental Design

3.4 Social Equity

The Faculty of Environmental Design is founded on the principle of promoting a diversity of views and values inherent in the interdisciplinary practice of built environment professionals. University policies and procedures for the conduct of students, faculty and staff encourage and require ethical behavior. It is therefore incumbent upon the MArch Program and the Faculty to follow these ethical principles in their dealings with faculty members, students, staff, or the public.

University policies explicitly require that committees dealing with key decisions, such as those respecting appointments, promotion, and appeals, include members of both genders. The Faculty has extended this practice to other areas such as awards and admission committees. The commitment of the MArch Program to gender equity is discussed in more detail in Section 2.1, *Conditions Not Met*, above. The Faculty has always enjoyed a tradition of open communication where faculty, students, and staff are given access to formulation of policies, procedures, curriculum review, and program development through a range of publications, email communications, and town halls. Information on social equity policies is widely available and disseminated. It is the role of the Associate Dean (Academic – Architecture) and the Dean's Office to ensure policies are developed in a consultative manner, and are appropriately distributed and implemented.

The MArch Program and the Faculty are mindful of their responsibilities with respect to equity and diversity in the conduct of its affairs. This means that EVDS encourages diversity and does not differentiate on the basis of personal characteristics such as age, race, culture, creed, gender, sexual orientation, health, or physical ability. The Faculty must ensure that no barriers to diversity exist in the recruitment, admission, engagement, education, development, or promotion of faculty members, students or staff. This requires that EVDS maintain a working environment free from coercion, intimidation, favoritism or discrimination on any basis. To this end, both the University and the Faculty of Graduate Studies maintain formal policies and procedures to deal with these issues.

University policies on social equity in relation to students can be found in the section dealing with Academic Regulations in the current University of Calgary Calendar. These include statements of principles around Student Accommodation, Academic Conduct, Student Misconduct, Integrity of Scholarly Activity, and Sexual Harassment. This can be found at: www.ucalgary.ca/pubs/calendar/current/academic-regs.html

Academic Regulations specific to graduate students are found in the current Faculty of Graduate Studies Calendar at:
www.ucalgary.ca/pubs/calendar/grad/current/gs-academic-regulations.html

Published University policies and procedures cover a wide range of social equity areas, such as: Employment Equity, Research Integrity, Conflict of Interest, Ethics of Human Research, the Code of Conduct, Non-Academic Misconduct, and Workplace Violence (which includes Harassment). These policies and procedures area available to all at:
www.ucalgary.ca/policies/

Social equity and diversity is also supported by the University's Office of Diversity, Equity and Protected Disclosure, which serves as a central point of contact and support regarding harassment, discrimination, and ethical conflicts in research and teaching. A description of the Office is here: www.ucalgary.ca/odepd

Non-academic support staff at the University of Calgary are managed under the "Collective Agreement Between the Governors of the University of Calgary and the Alberta Union of Provincial Employees (AUPE), Local 052, April 1, 2015 – March 31, 2018." This is found at: www.ucalgary.ca/hr/files/hr/aupe-collective-agreement.pdf

Academic staff at the University of Calgary are managed under the "Collective Agreement Between The Faculty Association of the University of Calgary and The Governors of the University of Calgary July 1, 2015 to June 30, 2016."
www.ucalgary.ca/hr/files/hr/tucfa_collective_agreement.pdf

Guidance pertaining to social equity in the recruitment and assessment of faculty members is found in the policy statements of the Canadian Association of University Teachers. These issues are addressed at the University level in two documents, the *APT Manual* (Procedures Pertaining to Appointment, Promotion and Tenure of Academic Staff) and the *GPC Manual* (Manual of Policies and Procedures for the Annual Assessment of Academic Staff):
www.ucalgary.ca/hr/files/hr/apt_manual_current.pdf
www.ucalgary.ca/hr/files/hr/gpc.pdf

Each Faculty at the University has also developed specific terms and interpretations of the *APT* and *GPC Manuals*, reflecting the modes of research, dissemination, and teaching in different areas. The Faculty of Environmental Design uses three published guidelines in the hiring, review, promotion, and renewal of faculty members. These include: "Guidelines for the Selection and Appointment of Academic Staff," "Guidelines for the Assessment and Promotion of Academic Staff by Faculty Promotions Committee," and "Guidelines for Academic Appointment Review and Renewal" (all approved by Provost, March 31, 2009). These are all available at:
www.ucalgary.ca/hr/academic/faculty_guidelines

The Master of Architecture Program is cognizant of gender equity issues as they pertain to both education and the profession. Previous accreditation teams noted the gender inequality among faculty members, and encouraged the MArch Program to continue its efforts in achieving equity through the hiring of sessional instructors and in tenure-track appointments. In 2013, the limited-term appointment of Vera Parlac was converted to a tenure-track Assistant Professor position. In 2014, we hired another woman in a tenure-track Assistant Professor position, Dr. Caroline Hachem-Vermette who teaches and researches in the area of building science. With Jim Love's retirement that year, this raised the ratio of women to men among full-time faculty to four out of thirteen, or 31%. Our ratio currently is four women out of fifteen, or 27%. It should be noted that, while the Faculty of Environmental Design strives to hire women, we cannot make it a requirement of these searches.

The Program has made every effort to hire women as sessional (i.e. part-time) instructors and as visiting lecturers. Since the last accreditation visit in 2011, the Program has employed between four and seven female sessional instructors each academic year. In recent years, between one-third and two-thirds of our outside visiting critics for final reviews each semester have been women. Our Program also has several high-profile visiting lecturers who teach the Block Week courses described above. Nine of the last ten Gillmor Lecturers have been women, as well as several of the most recent years' Somerville Charrette and Taylor Workshop guest professors. We will continue to actively recruit women to these visiting lectureship positions which are highly visible in our local community.

Generally, the gender balance among recent student applicants and admits to the MArch Program is consistent with Faculty and University experience. The percentage of women applicants to the MArch Program has ranged from 47-53 percent during the last six years**.** The percentage of women admitted to the MArch Program has been in the 38-53 percent range in each of the last six years. The Program has no admissions quotas for women or minorities at this time.

3.5 Human Resources

The MArch Program and EVDS are comprised of talented, energetic, and committed students, faculty, administrators, and support staff. The Faculty's collective commitment to the pursuit of professional education within an interdisciplinary and collaborative environment impacts the way that human resources are distributed and utilized, in particular the administrative and staff resources. The administrative structure of EVDS contributes to the overall strength of the MArch Program.

A Students

Students in the Master of Architecture Program come from Canada and abroad. Historically, the Program has attracted most of its students from the four Western Canadian provinces. In the past several years the Program has seen a steady increase in the number of students applying to the Program, including transfer students with pre-professional degrees in Architecture applying to MArch Year One from other institutions, students from our own Minor in Architectural Studies (ARST) program, and a growing cohort of international students.

In the interests of diversity and interdisciplinary sharing of skills the Program admits students from a wide range of disciplines, with varying educational and career backgrounds. In particular, the Foundation Year of the MArch Program is designed to allow for a wide range of backgrounds, as some students enter this year with relatively little experience with design process or studio culture. All students admitted to the Program must be academically qualified and, through their portfolio work, demonstrate a high level of literacy, creativity, and a capacity for critical inquiry. The MArch Program makes admissions decisions, with the approval of the Faculty of Graduate Studies.

Admissions requirements are described in the University Calendar, and on the EVDS web site:
http://evds.ucalgary.ca/content/master-architecture-march-admissions

Students are required to submit an application fee and form, transcripts, three reference letters, a statement of interest, and a portfolio of creative work. Application materials are collected and organized by the EVDS Admissions Officer. The Associate Dean (Academic – Architecture) strikes an Admissions Committee of four members, divided in half between the applications for Foundation Year and MArch Year One. Thus, each application is viewed by at least two faculty members who rate the applicants' portfolios and supplemental materials; a quantitative score is also taken from the applicants' GPAs. This process results in a ranked list of applicants for each year, which is then used by the Associate Dean (Academic – Architecture) to make offers of admission, and of entrance scholarships for those most qualified.

i Origins

Most students in the MArch Program are Canadian: 84% of admittees over the past six years have been Canadian. The number and ratio of international students applying to the MArch Program has seen a great increase over the past six years, from 28% to 34%, with a total of 56 international applicants in 2011, to almost 90 in the past two admissions cycles. For the most part, though, the ratio of international to Canadian admittees to the Program has ranged between 10% and 15%, except for the anomalous year of 2015 when a full 28% of students admitted were from outside of Canada.

ii Educational Background

The following table shows the educational background of admits to the MArch Program over the past six years.

Degree Nomenclature	% of Total Admits to MArch Program, 2011-2016
BFA	11
BA	31
BSc	7
BID	4
B.Env.D	7
BArch	15
BDes	3
BTech	4
B.Eng	4

Students entering MArch Year One from other universities exclusively possess either Bachelor of Architecture, Bachelor of Environmental Design, or Bachelor of Technology degrees with sufficient architectural design studio courses on their records. Other degree backgrounds indicated in the table would point to students entering the Foundation Year. Averaged over the last six years, 14% of the total number of MArch students, and 44% of those entering directly to MArch Year One, come from EVDS' Architectural Studies Minor.

iii Selectivity and retention

The MArch Program aims to regulate admission to result in an ideal population of 4 studio sections of 12-15 students each, for a total of 48-60 in each year of the degree. Combined with the Foundation Year students are the Architectural Studies Minor students. Therefore, admissions targets and student numbers each year reflect these goals:

Foundation Year	30-35 admits (+ 15-20 Minor students) = ± 48 students
MArch Year One	15-20 admits (+ 30-35 continuing students) = ± 48 students
MArch Year Two	± 48 students
Total	130-135 MArch students (+ 15-20 Minor students)

In practice, the MArch Program admits an average of 51 students per year to make up for attrition, leaves, and delays in student progress. This is the combined total number of students admitted into Foundation and MArch Year One.

Since 2011, 107-151 (average, 121) prospective students have applied for the 30-35 positions in the Foundation Year, for a ratio just less than 4:1.

The MArch Year One contingent is made up of students coming directly from the Foundation year of the program, students applying to the MArch from the Minor program, and students applying from other institutions with pre-professional or professional degrees. Applications for the 15-20 positions in MArch Year One have risen significantly since 2011; in that year there were 47 applicants for these positions (a ratio around 3:1), whereas the last five years there has been an average of 98 applicants, for an average ratio over 6:1.

In 2011 and 2012, the Program graduated 59 and 60 students due to the overlap of the new 3-year curriculum with the previous 4-year curriculum, in which students were still enrolled. In the last four years of just the 3-year curriculum, the MArch Program has graduated between 39 and 48 students per annum. The average number graduated per year under the new curriculum is 43. Attrition rates in any particular cohort are in the 4-8% range. Typically, in the first two semesters, 2-4 students leave the degree, or are required to withdraw due to poor performance. Some may transfer into the MPlan, MLA, or the MEDes degrees in order to pursue other topics in design studies. This has reduced Faculty-wide attrition by making other options available in the study of built environments. The retention of students in later years is excellent and the few that leave do so normally because of changes to their personal or financial situation; some take leaves in order to deal with personal matters, most returning when these are resolved.

iv Student/ Faculty Ratios

The MArch Program historically has maintained favorable ratios of students to faculty. In required lecture courses the average is 45:1 – 50:1. The MArch elective courses are capped at 12:1 to ensure a seminar-type experience for students. The student to faculty ratio in the architectural design studios is typically in the 12:1 to 14:1 range, due to enrollment fluctuations (especially in the Minor program), occasionally it has been less.

B Faculty

The teaching faculty in the MArch Program are officially hired by the Faculty and ultimately are responsible to the Dean, especially in terms of service and research; in practice, their teaching assignments are handled by the Associate Dean (Academic – Architecture). Because they are Faculty appointments, faculty roles in EVDS allow for movement across disciplinary lines for the purposes of teaching and research. In particular, MArch faculty members teach in EVDS core and elective courses, as well as into the new MLA program. The new CITIES studio in Fall 2016 will be co-taught by faculty from the MArch and MPlan programs.

In general, the University expects that a full-time faculty member devotes 40% of their time to teaching, 40% to research, practice, or creative activity, and 20% to service for the institution, the profession, and the community. The teaching commitments assigned to each individual recognize this expectation. For faculty teaching design studios, an equivalent of 5 half-course equivalents per year is the norm, whereas 4 half-course equivalents is typical for those teaching lecture and seminar courses only. In addition, faculty are expected to supervise, or serve on the supervisory committees of, students in the Master of Environmental Design, the PhD program, or in graduate programs elsewhere in the academy.

In addition to teaching, each member of the permanent staff is expected to pursue a research program corresponding with their areas of expertise and interests. The Faculty of Environmental Design recognizes that “research” is an inclusive term that encompasses and treats as equivalent:

- Design and creative works (making and exhibiting);

- 'Critical practice' or professional activities that advance 'best practice' within a professional area of specialization, or activities that advance the theoretical underpinnings of the professional discipline. For example, the professional practice demonstrations of innovations (which may be theoretical, professional or technological in nature) that change existing standards, approaches, and thinking in the relevant professional discipline. Professional activities still are required to be published or premiated in peer-reviewed venues or juried awards programs;

- Scholarship and publication of technical, theoretical or historical research (including visual, electronic and print media) in peer-reviewed journals, books, conferences, etc.;

- Expert witness in construction litigation or other proceedings;

- Technical reports on building systems, building failures, indoor air quality assessments, and so on;

- Community engagement and professional advocacy (professional service and other professional practice activities).

Finally, each member of the full time faculty is expected to serve the MArch Program, EVDS, and the University through a series of commitments such as membership on committees, councils, and special project groups, as well as participating in Program Meetings, Faculty Forum and Faculty Council. It is also expected that faculty members will share their expertise and experience through involvement in broader community and civic activities like design review panels, community associations, K-12 classroom visits, etc. This kind of service is a condition of appointment and no administrative release is given or expected.

The following list includes faculty members who contribute to teaching in the MArch Program, and the particular courses they have been responsible for in recent years.

Full-time Teaching Faculty 2016-2017			
Name	**Professorial Rank**	**Load**	**Core Teaching Responsibilities**
Barry Wylant	Associate w/ Tenure	Full	Foundation and Senior Studio, Elective
Branko Kolarevic	Professor w/ Tenure	Full	Intermediate Studio, Graphics, Elective
Brian Sinclair	Professor w/ Tenure	Full	Comprehensive and Senior Studios, Elective
Caroline Hachem-Vermette	Assistant w/o Tenure	Full	Environmental Control Systems, Lighting, Sustainability
Catherine Hamel	Associate w/ Tenure	Full	Foundation and Senior Studios, Leadership and Architecture
David Monteyne	Associate w/ Tenure	25 % teaching release (administrative)	History, Elective
Graham Livesey	Professor w/ Tenure, Associate Dean	50 % teaching release (administrative)	Senior Studio, History
Jason Johnson	Associate w/ Tenure	Full	Foundation Studios, Graphics
John Brown	Professor w/ Tenure, Associate Dean	50 % teaching release (administrative)	Foundation Studio, LA Block Week, Elective
Joshua Taron	Associate w/ Tenure	Full	Foundation and Intermediate Studios, Theory, Elective
Loraine Fowlow	Associate w/Tenure	Leave of Absence, 2016-2017	
Marc Boutin	Associate w/ Tenure	Research and Scholarship Leave, 2016-2017	
Mauricio Soto Rubio	Assistant w/o Tenure	Full	Comprehensive Studio, Structures, Elective
Tang Lee	Professor w/ Tenure	Half	Building Science, Pro. Practice, Elective
Vera Parlac	Assistant w/o Tenure	Full	Intermediate and Senior Studios, Theory

Sessional Instructors 2016-2017			
Name			
Alan Collyer	Architect	DIALOG, Adjunct Professor	Winter 2017
Chris Roberts	Architect	Adjunct Professor Retired	Winter 2017
David Burch	CADD Coordinator	IBI Group	Winter 2017
Dustin Couzens	Architect	MoDA	Winter 2017
Jessie Andjelic	Architect	SPECTACLE Bureau	Winter 2017
Jodi James	Intern Architect	DIALOG	Fall 2016
Kate Wagner	Architect	DIALOG	Winter 2017
Keir Stuhlmiller	Architect	Group2, Adjunct Professor	Winter 2017
Matt Knapik	MArch, MEDes	kilometre	Fall 2016 + Winter 2017
Matthew Parker	MArch, MEDes	EVDS	Fall 2016
Norbert Lemermeyer	Architect	Architecture + Business	Fall 2016
Phil Vandermey	Architect	SPECTACLE Bureau	Fall 2016

Adjunct Professors 2016-2017			
Name			
Alan Collyer	Architect	DIALOG	Calgary
Anthony Leong	Architect (Alumnus)	mbac	Calgary
Chris Roberts	Architect (Alumnus)	Retired	Calgary
David Down	Architect (Alumnus)	City of Calgary	Calgary
David Edmunds	Architect (Alumnus)	GEL	Calgary
Fred Valentine	Architect	Retired	Calgary
Jane Ferabee	Architect	University of Calgary	Calgary
Jeremy Sturgess	Architect	Sturgess Architecture	Calgary
Kate Thompson	Architect (Alumnus)	CMLC	Calgary
Keir Stuhlmiller	Architect (Alumnus)	Group2	Calgary
Lynn Webster	Architect (Alumnus)	DIALOG	Calgary
Martin Jones	Architect (Alumnus)	Martin Jones Architect	Calgary
Rafael Gomez-Moriana		Barcelona	Barcelona

Emeritus Professors
Dale Taylor
Douglas Gillmor
James Love
Michael McMordie

C Administration

The Faculty of Environmental Design is administered by individuals who hold regular academic appointments within the University and have been appointed to administrative positions by the Provost, on the recommendation of the Dean. The operations of the Faculty are managed by an executive team, including the Dean and three Associate Deans, working in collaboration. The Master of Architecture Program is administered by the Associate Dean (Academic - Architecture) who is responsible for decisions directly affecting the day-to-day administration of the program.

The University recognizes the time commitment required to properly conduct the duties of the Associate Dean's office by reducing the expectations for teaching, research, and service. The Associate Deans have a 50% administrative assignment, which includes 50% teaching release, an administrative honourarium, and administrative leave at the end of serving in the position. The Dean of the Faculty holds a 100% administrative appointment and has a background in architecture and planning, and professional qualifications in landscape architecture. In addition, there is a Graduate Program Director for the MEDes and PhD programs, who has a 25% administrative appointment.

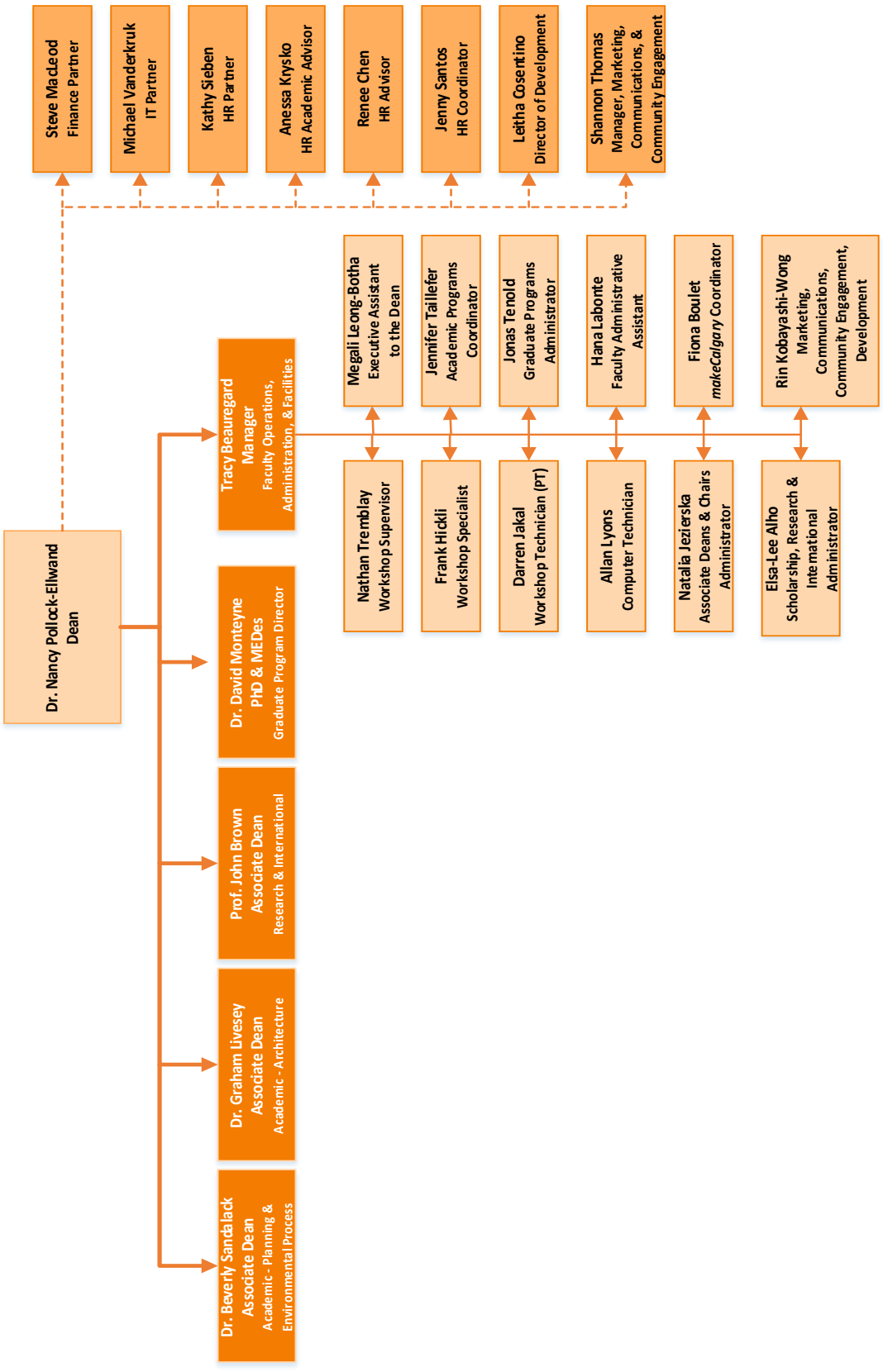
Administration 2016-2017	
Name	**Administrative Position in EVDS**
Nancy Pollock-Ellwand	Dean
Graham Livesey	Associate Dean (Academic – Architecture)
Bev Sandalack	Associate Dean (Academic - Planning and Landscape Architecture)
John Brown	Associate Dean (Research – International)
David Monteyne	Graduate Program Director
Richard Levy	

D Support Staff

The job titles and personnel among the support staff have been reorganized in recent years to reflect shifts in Faculty demographics (program sizes), new programs, managerial efficiencies, and strategic directions. All staff perform tasks that support the MArch Program faculty and students; no staff member is assigned exclusively to the MArch Program (except for an assistant dedicated two days per week to the Associate Dean (Academic – Architecture)), although in effect the two and a half staff who run the Workshop are effectively devoted to supporting architecture students. All support staff are hired or released by Human Resources with the approval of the Dean, they are managed by the Manager of Faculty Operations and the Dean, in consultation with the Associate Deans. Staff, with the exception of the Executive Assistant to the Dean, are members of the Alberta Union of Public Employees (AUPE). The Manager of Faculty Operations directly supervises the support and technical staff; though ultimate responsibility falls to the Dean. The Management and Professional Staff (MaPS), including the Executive Assistant to the Dean, the Manager of Faculty Operations, the Manager of Marketing and Communications, and Director of Development, are not members of AUPE. The Faculty is also supported by Finance, IT, and HR partners.

The members of the technical staff (1 IT and 2.5 workshop) are primarily involved with facilitating student and faculty work. The remaining staff positions provide non-teaching support for the Associate Deans and the Dean's office. Each of the support staff positions has specific assigned roles covering areas such as communication, web site development, student records, student awards and assistantships, admissions, special events organization, budget and finance, fund-raising, and research contract management. The following organization chart indicates the staff roles and the names of people filling these roles.

FACULTY OF ENVIRONMENTAL DESIGN



3.6 Human Resource Development

The MArch Program and EVDS have an obligation to their students and faculty to provide a supportive environment in which each individual is encouraged to develop to the best of their abilities. The Faculty has an ethical responsibility to be a place that embraces diversity and equity of opportunity. For students this also means providing appropriate support systems for academic and personal guidance, providing fair and appropriate evaluation mechanisms, and creating opportunities for enrichment opportunities beyond the strict dimensions of the accredited curriculum. The Faculty also has a commitment to ensure its academic staff are provided sufficient opportunities to develop and advance, to pursue their personal research agendas, and to develop new skills and maintain professional currency through lifelong learning. The MArch Program has developed over time a comprehensive set of enrichment opportunities for students and faculty members, that expose them to a wide range of architectural themes and ideas.

A Faculty Development and Research Support

i Appointment, Promotion, Tenure

Policies pertaining to the career development of faculty members are addressed at the University level in the Collective Agreement, the *APT Manual* (Procedures Pertaining to Appointment, Promotion and Tenure of Academic Staff) and the *GPC Manual* (Manual of Policies and Procedures for the Annual Assessment of Academic Staff). In addition, EVDS uses a number of Faculty-developed guideline documents for the appointment, assessment, and promotion of academic staff. Links to these University and Faculty-level policies are presented above in 3.4, Social *Equity*.

When hiring new faculty members, appointments officially are made by the University Provost in response to a recommendation by the Dean. The Dean acts upon the advice of a Search Committee made up of EVDS faculty members, an external faculty member from another Faculty, and one EVDS student; the Committees are balanced for disciplinary and gender balance. Appointments of sessional instructors are made by the Dean on the advice of the Associate Deans, and through an approved University hiring process..

Tenured faculty are evaluated bi-annually with respect to teaching, research and creative activity, and service. Performance is judged against the 40-40-20 standard for teaching, research and/or creative activity, and service.

The individual faculty member fills out a detailed bi-annual report. The Faculty procedure requires that a narrative assessment, including a recommendation for merit or promotion, be prepared by the Associate Deans on the basis of the bi-annual report prepared by the faculty member, and on other written evidence (such as student course evaluations) as may be available. This report and recommendation is reviewed by the EVDS Faculty Promotions Committee (FPC), which hears appeals and reconciles the merit or promotion recommendation with those of all other members of the Faculty. The FPC recommendation is reviewed by the Dean, and a final Faculty recommendation goes forward to the General Promotions Committee (GPC)

of the University, which makes the final decision on awards of merit or promotion, which are then made by the Provost. While this extensive process welcomes (and sometimes requires) input from students, colleagues and members of the community, including alumni, it is governed by rules of evidence designed to ensure fairness to both the faculty member and those making comment. Provisions for appeal apply throughout the process.

Junior tenure-track faculty must fill out the performance report annually, even though the full review and merit assessment only occur bi-annually. In intervening years, junior faculty meet with the Associate Deans to discuss progress demonstrated in the report, and generally to seek career advice from the Associate Deans, Dean, or senior members of the Faculty. Since 2015, sessional instructors also are assessed on a bi-annual cycle, though in most cases it is only their teaching that is receiving a formal assessment.

ii Professional Development and Currency of Knowledge

Although the nature of research and creative activity undertaken by faculty members in the MArch Program often is non-traditional in the academic context, there have been significant accomplishments in the last several years in national and international awards, grants programs, and publications. MArch faculty members currently hold SSHRC, NSERC, and University teaching grants.

One of the most significant innovations to occur in recent years has been a series of research groups in EVDS. Different MArch faculty members (and students) lead and participate in the Faculty's Laboratory for Integrated Design, the Lightweight Structures Research Group, and the Solar Energy and Community Design Lab. (MArch students also have opportunities to participate in other EVDS research groups in urbanism and environmental science.)

A significant range of development opportunities exist for faculty members. There are no regular summer classes taught in EVDS, which allows for an uninterrupted block of time for research and curriculum development. Conference travel, particularly for the delivery of papers, is partially supported by University and Faculty funds. A number of the MArch faculty members are registered and practicing architects, who participate in professionally mandated Continuing Education. With faculty members running active architectural firms, the MArch Program has strong awareness of the evolving demands of professional practice and licensure. This is reinforced by the strong relationship between the Program and the AAA Council, and with various national/international bodies including RAIC, CACB, the Council of Canadian University Schools of Architecture, and the Association of Collegiate Schools of Architecture.

Faculty members are eligible to apply for research and scholarship leaves (sabbaticals) to pursue research or professional development programs considered of value to the University. A member is eligible for 6 months leave at 80% salary after three years of full-time work; after 6 years of work they may take either 6 months leave at full salary, or 12 months at 80% salary.

Leaves without pay or assisted study leaves are also available to faculty, at the discretion of the Dean and on the recommendation of the Associate Dean. Faculty members involved in administration (Dean or Associate Dean) are eligible for administrative leaves, equivalent to one year of leave after five years of administrative service. Since the last accreditation visit a number of members of the Architecture Program have been granted sabbatical and administrative leaves.

The maintenance of currency is an important obligation that each member of faculty undertakes to remain an effective leader, teacher, researcher, and practitioner. The MArch Program takes the University's position that currency is ensured through an active and peer-reviewed research or creative program, including both traditional and nontraditional (i.e. practice) forms of scholarship. The definition of scholarship for any particular faculty member is a function of that individual's areas of teaching, research, and practice expertise.

B Extracurricular Student Development

i Off-Campus Activities

The opportunities for students to participate in extracurricular activities that contribute to their professional development occur at several scales. In the most modest scale, lecture courses and design studio instruction is augmented by frequent field trips to local construction sites and completed projects. On a broader scale are the Study Abroads, student exchanges, and courses like the annual Los Angeles field trip which, while curricular, offer much beyond classroom and studio projects, involving building tours and office visits, as well as immersion in the design cultures of other places.

The Faculty of Environmental Design also offers opportunities to put the students' expertise and interests to the test in public engagement exercises, days of service, and other activities organized in orientation week or during makeCalgary or similar events. Some student funding is available from the Faculty and the University to present research or to enroll in special courses at other institutions. In recent years, students have taken summer courses in Quebec, Los Angeles, Berlin, and at the Architectural Association's fabrication centre in rural England.

ii Student Activities and Societies

The Faculty of Environmental Design has an active Student Association (EVDS-SA) that organizes the new student orientation each September, as well as social and educational events throughout the year. Yoga and running clubs, puppy days, ski trips, and parties are supplemented by SA-run lectures, mini-charrettes, and so on. Of particular note is the SA's networking event held each Winter, which draws representatives from many of the major local environmental design firms, governmental bodies, and other hiring agencies.

Architecture students play key roles in this Association with representatives from each year of the degree elected by their peers. The SA President typically comes from the ranks of the MArch Program. Students also regularly

volunteer for community organizations such as dtalks, and at the Design Matters lectures. Faculty of Environmental Design students are also members of the University of Calgary's Graduate Student Association, and they have played greater and lesser roles in this organization according to their interests. Student representatives sit on most EVDS committees, including Promotions, Appeals, Faculty Council, etc.

The MArch Program historically played a leading role in the establishment of a national organization for students of architecture, the Canadian Architecture Students Association (CASA). University of Calgary students have been prominently involved in this organization, however, in the last several years the activities of CASA have been sporadic. The students have examined the opportunity to join the American Institute of Architects Students a number of times, and continue to explore the option.

iii Student Support Services

The Faculty of Environmental Design provides an array of support services for its students. All students entering EVDS attend orientation/design camp sessions prior to the beginning of classes. This structured week provides information regarding the Faculty and its programs, the physical facilities and support personnel available in the Faculty and the University, as well as an introduction to the city. Registration for new students occurs during this period. A design exercise or service learning activity led by faculty members introduces students to the themes of EVDS. A significant role of orientation is social, offering multiple opportunities for incoming students to meet with senior students, alumni, faculty, and staff. Students entering the MArch Program also receive the CACB Guide to Student Performance Criteria during orientation.

The relatively small size of EVDS, and the favorable ratio of faculty and staff to students, allow for a significant amount of one-to-one counseling and advice. A faculty member is assigned to manage student advising for each year's cohort of students. In practice, however, academic and career counseling relationships form in a more personal manner according to the personalities and interests of the individuals. Still, it is the standing policy of the Faculty that students have the right and the accessibility to contact the Associate Dean (Academic – Architecture) and/or the Dean on any matter of concern to them. A number of town hall meetings are also held during the academic year, offering another chance for advice and mentoring.

iv Evaluation of Student Progress

Students officially are made aware of their academic performance through the normal process of assigning and posting of grades. At the end of each semester, student records are also reviewed by the MArch Program faculty and issues are further discussed at Faculty Forum; these are known as Mid-Year and Year-End reviews. Resulting from these formal reviews can be a range of communications to students about their academic progress, from letters of commendation and awards, to advice (in the form of required counseling sessions with the Associate Dean), warnings, or sanctions The

most serious sanction is the requirement to withdraw from the Faculty, which must be approved by the Faculty of Graduate Studies. Should a student wish to appeal a course grade or a Faculty decision, there are processes in place. For a grade reappraisal, the process is described in the Graduate Calendar: www.ucalgary.ca/pubs/calendar/grad/current/gs-o.html

For a requirement to withdraw, the student may first appeal to the EVDS Student Appeals Committee, and then the appeals committee in the Faculty of Graduate Studies.

In addition to the resources available within EVDS, students are encouraged to seek assistance from a range of University Student Services which provide confidential help for health, academic, emotional, financial or other personal problems. In the past several years, the Faculty of Graduate Studies has developed a useful series of courses and workshops known as *mygradskills*, which support writing, time management, cultural adjustment, career, and other guidance. Finally, the Student Union also has a career office offering job hunting advice and a graduate and professional programs specialist.

The Faculty of Environmental Design does not maintain formal work terms or job placements, and assumes no responsibility for placing students in a work-study office. However, due to strong employment opportunities in recent years (both pre-and post-graduation) students and graduates generally have had little difficulty in finding summer or permanent work. The annual EVDS-SA networking event, begun in 2010, supports the students in making contacts to look for work. Career guidance also is offered in the Professional Practice course, and by individual faculty members on an ad-hoc basis, and through the mentoring program once students begin their internship.

C Visiting Lecturers and Critics

An important component of the Faculty's human resource development is its commitment to bring visiting lecturers, critics, and exhibitions to EVDS for the benefit of both students and faculty. The Faculty of Environmental Design coordinates the annual Design Matters Lecture Series, which brings a number of prominent practitioners and academics to the city each year. In addition to giving a public lecture, most guests also spend time with students in either an informal seminar or a studio review.

Twice each year the Master of Architecture Program invites visiting critics to the Faculty to review end of term work. In the October block week, a prominent critic or theoretician is invited to the Faculty to give a one-week advanced seminar (Gillmor Visiting Lectureship), during the January block an internationally renowned architect is invited to give a one-week advanced design charrette (William Lyon Somerville Visiting Lectureship), and in the February block an emerging architect directs a workshop (Taylor Visiting Lectureship). Students are required to take at least one of these courses during their studies. There are also other visitors who give occasional lectures, or participate in reviews, throughout the academic year. Typically, the Alberta Association of Architects holds the renowned Banff Sessions every two years, which faculty members and students can attend. Over the five academic years since the last accreditation visit, the following guests from around the world have enriched the Program and Faculty:

2011 – 2012

Design Matters Lecture Series
Rob Adams, Director of City Design, Melbourne
Stephen Teeple, Teeple Architects, Toronto
Richard T.T. Forman, Graduate School of Design, Harvard University
Lunar Design, Palo Alto, CA
Preston Scott Cohen, Graduate School of Design, Harvard University

2011 Douglas Gillmor Visiting Lecturer
Jane Rendell, Bartlett School of Architecture, UCL, London

2012 William Lyon Somerville Visiting Lecturer
Michael Weinstock, London, UK

2012 Dale Taylor Visiting Lectureship
Skylar Tibbits, SJET, MIT, Cambridge

Visiting Critics and Lecturers
Dr. Deborah Ascher-Barnstone, Washington State University
Prof. Michael Everts, Montana State University
Ken Yeang, Singapore
Gavin Affleck, Montreal
Mark Burry, Melbourne
Randy Cohen, Montreal
Barry Johns, Edmonton

2012-2013

Design Matters Lecture Series
Bruce Mau, New York
Jose Gomez-Marquez, Boston
Richard Thieme, Milwaukee
Nader Tehrani, MIT, Boston
Leon van Schaik, RMIT, Melbourne, Australia

2012 Douglas Gillmor Visiting Lecturer
Dr. Shelley Hornstein, York University, Toronto

2013 William Lyon Somerville Visiting Lecturer
Alvin Huang, SDA|Synthesis Design, Los Angeles

2013 Dale Taylor Visiting Lectureship
Tom Wiscombe, Los Angeles

Visiting Critics and Lecturers
Michael Jemtrud, McGill University, Montreal
Scott Marble, Marble Fairbanks & Columbia University, New York
Leslie Van Duzer, UBC, Vancouver
Mark Mistur, RPI, Troy, New York
Rodolphe el-Khoury, University of Toronto

2013-2014

Design Matters Lecture Series
Lise Anne Couture, Asymptote Architecture, New York
Eduardo Arroyo, NO.MAD Arquitectos, Madrid, Spain
Claude Cormier, Montréal
Andreu Arriola, Arriola & Fiol, Barcelona, Spain

2013 Douglas Gillmor Visiting Lecturer
Dr. Vittoria Di Palma, Columbia University

2014 William Lyon Somerville Visiting Lecturer
Scott Marble, Marble Fairbanks & Columbia University, New York

2014 Dale Taylor Visiting Lectureship
Joshua Vermillion, University of Nevada Las Vegas

Visiting Critics and Lecturers
Bernard Jin, GH3, Toronto
Diana Gerrard, GH3, Toronto
Ted Watson, Maclennan Jaunkalns Miller Architects, Toronto
Diarmuid Nash, Moriyama & Teshima Architects, Toronto
Elizabeth Songer, SONGER Architecture, Lethbridge
Michael Heeney, Bing Thom Architects, Vancouver
Alan Collyer, DIALOG, Calgary
Wes Sims, Sims & Shorten Architects, Edmonton

2014-2015

Design Matters Lecture Series
Anastasia Loukaitou-Sideris, UCLA Luskin School of Public Affairs
Bryce Miranda, DTAH, Toronto
Bruce Kuwabara, KPMB Architects, Toronto
Sujit Nair, SdeG, Bangalore, India
Martin Arfalk, Mandaworks, Stockholm
Ma Yansong, MAD Architects, Beijing

2014 Douglas Gillmor Visiting Lecturer
Dr. Mary McLeod, Columbia University, New York

2015 William Lyon Somerville Visiting Lecturer
Rick Joy, Rick Joy Architects, Tucson

2015 Dale Taylor Visiting Lectureship
Mariana Ibañez & Simon Kim, IK Studio, Cambridge, MA

Visiting Critics and Lecturers
Randy Cohen, Montreal
Tony Robins, AA Robins Architect, Vancouver
Stephen Wischer, North Dakota State University
Vedran Skopac, Manasc Isaac, Edmonton
Bruce Kuwabara, KPMB, Toronto
Paul Laurendeau, Atelier Paul Laurendeau, Montreal
Colin Ripley, Ryerson University, Toronto
AnnaLisa Meyboom, University of British Columbia, Vancouver
Michael Cunningham, Michael R Cunningham Architect, Vancouver
Donna Clare, DIALOG, Edmonton

2015-2016

Design Matters Lecture Series
David Benjamin, The Living, New York
James Holston, University of California, Berkeley
Clark Thenhaus, Endemic, Oakland
Brad Cloepfil, Allied Works Architecture, Portland
Robert Cervero, University of California, Berkeley

2015 Douglas Gillmor Visiting Lecturer
Dr. David Gissen, California College of the Arts

2016 William Lyon Somerville Visiting Lecturer
Chris Sharples, SHoP Architects, New York

2016 Dale Taylor Visiting Lectureship
Ellie Abrons and Adam Fure, EADŌ | SIFT Studio, Ann Arbor

Visiting Critics and Lecturers
Kathy Velikov, University of Michigan
Randy Teal, University of Idaho
Ursula Emery McClure, Louisiana State University
Peter Cardew, Peter Cardew Architect, Vancouver
Johanna Hurme, 5468796 Architecture, Winnipeg
Matthew Soules, University of British Columbia
Neil Minik, DIN Projects, Winnipeg
David Newton, McGill University

D Exhibitions

The EVDS Gallery is an exhibition space located adjacent to the main Faculty office. Curated by a MArch faculty member, it is primarily used to showcase the work of students, but also hosts local and international exhibitions. For instance, the visiting Block Week lecturers are often invited to exhibit their work in the space while they are on campus. In addition, the EVDS Student Association curates a portion of the Gallery space. The Gallery's small size and lack of security precludes the ability to mount major traveling shows based on collections. Since 2011 the following exhibitions have occurred:

2011

Projectione
Drura Parrish, Little Billionaires
EVDS End of Year Show 2010-2011

2011-2012

ACADIA 2011 Peer Reviewed Projects, Integration Through Computation
Integrative Sensibilities, Curated Projects of ACADIA 2011
ACADIA FLATCUT Competition
Invited Contributions of the 2011 ACADIA Conference
Laboratory for Integrative Design, Selected Projects
MAS + Synthetiques, Recent Work
Nick Puckett, Project Black Box
EVDS End of Year Show 2011-2012

2012-2013

Synthesis Design Architecture, Recent Work
IK Studio, Recent Work
MoDA Studio, Recent Work
mbac, Recent Work
EVDS End of Year Show 2012-2013

2013-2014

Behind the Scenes: Hand Drawing Samples
Building Dynamics
Make Calgary
Evda 682.02 Intermediate Studio
Rachel Duckhouse: Bow Flow
Building Curiosity
A Range: Landscape Architecture in Alberta
Rad Architecture/Interiors
Barry Wylant: Industrial Design Retrospect
Simple Parts< Complex Effects: 2014 Taylor Seminar with Josh Vermillion
BCN
Afriklando
Sustainability in the City
Minus Anonymity
Sound Reproduction
Digital Processes: Diagrams as Prototypes
Graduation Show 2014

2014-2015

Leon Van Schaik: Procuring Innovative Architecture
Jayda Karsten: Neon Audio Visual
Design at Kasian: Drivers and Outcomes
Christian Bok: A Virus from Outerspace
85 Project: Claire Huot, Robert Majzels, Nathan Tremblay
Robert Claiborne: Sketches and Models
Josh Taron: Warming Huts
Somerville and Taylor Block Week Shows
BCN and Australia Study Abroad Exhibition
Graduation Show 2015

2015-2016

Clark Thenhaus, A project: Four Domes
David Gissen, Alphanoom
EVDS Master of Planning Show
EVDS Fall 2015 Term Show
EADO/Sift Studio, Casting Things
EVDS Structures 2 Exhibition
EVDS Winter 2016 Term Show

Other local venues occasionally exhibit architecture shows, including the Nickle Arts Museum on the University of Calgary Campus, the Triangle Gallery of Visual Arts (downtown), the Illingworth-Kerr Gallery at the Alberta College of Art and Design, and the Walter Phillips Gallery at the Banff Centre. Some architecture exhibitions from the last several years includes:

Layered Landscapes: Constructing Form and Meaning from the Sketches of Arthur Erickson, Nickle Arts Museum, University of Calgary

Ron Thom and the Allied Arts, Nickle Arts Museum, University of Calgary

"Lost Spaces: Winners of the dtalks International Competition," Triangle Gallery, Calgary

"Master of Architecture MDP and Graduating Show," University of Calgary Downtown Campus, Calgary, April 2011

"Combined Master of Architecture MDP and Graduating Show," Art Central, Calgary, April 2012

MArch Graduating Show, Art Central, Downtown Calgary, April 2014

MArch Graduating Show, Inglewood, April 2015

MArch Graduating Show, Inglewood, April 2016

3.7 Physical Resources

The Faculty of Environmental Design is well-endowed with space and equipment to support the academic activities of the MArch Program. In January of 1994, EVDS first occupied its present quarters in the east wing of the Professional Faculties Building, which was designed by alumni of the MArch Program. The facility provides EVDS with 6000 gross m^2. There have been various rounds of major renovations to the Faculty space since 2000. The first round reorganized the gallery, reception, and administration areas. The second created a new large teaching space on the third floor, in place of the photography lab. The third made modifications to studio and teaching spaces (see above). There are currently no plans for major renovations to the building, however, there are minor renovations planned for 2016-2017. Minor renovations of the past six years are noted below.

Consistent with the interdisciplinary idea of the Faculty, the operations of the different Programs are distributed throughout the space, intermixed in some instances, separated in others. Generally, each year of each professional program has dedicated studio space. The facilities are accessible to students and faculty 24 hours a day by pass-card, with the exception of the workshop, which has more limited hours due to safety supervision. Plans of the building are included following this section of the report.

A Faculty space

Each faculty member has a private office of about 13 m^2. Sessionals have a shared office. Dedicated research space is located throughout the building, with the Digital Fabrication Lab and the Laboratory for Integrated Design (Room 4189) of 88 m^2. MArch faculty members also run the Lightweight Structures Research Group (Room 4171), about 30 m^2 and the Solar Energy and Community Design Lab (Room 3197) of 35 m^2. A new development of the past six years has been the EVDS DRI-Lab, a large assembly area (Room 2151) of 163 m^2.

There are other research-oriented spaces in the Faculty, the Urban Lab, the Environmental Science Wet Lab, and offices for EVDS thesis students.

B Student space

Each MArch student has a workstation area of about 5-6 m^2, equipped with a table, lockable drawers, chair, and a shared locker. Foundation Year students occupy a bright and spacious 4th floor studio, while all other MArch students occupy a similar open studio on the 2nd floor. About 130 MArch students and 15-20 Minor students occupy total studio space of 706 gross m^2.

The growth in the Program over the last decade, and the conversion to a largely digital teaching environment, led to some renovations of the building and changes to student workstations. This has resulted in open studio environments where students work in team arrangements of 8-10 tables. Students can also work in meeting rooms and lounge spaces throughout the

building if they want to work in groups or in quiet areas. This mode of working has been very effective.

On the 3rd floor is a lounge where students from all the EVDS programs can mingle or meet more formally. The lounge is equipped with comfortable seating; a long workbench by the windows; sink, kettle, microwave and fridge; a collection of board games and reading materials; a piano; and, most popular, a ping-pong table.

C Classroom, review and exhibition space

Classrooms are located mainly on the 2nd floor, the public access level, with Room 2160 (120 m^2), Room 2165 (88 m^2), Room 2140 (67 m^2) and Room 2110 (120 m^2). On the third floor there are several classrooms, including Room 3160 (120 m^2), Room 3176 (34 m^2), and Room 3177 (44 m^2). Finally, there is Room 4140 (35m^2) on the 4th floor**.** All rooms have walls that can be tacked and provisions for AV, and are used for lectures, seminars, workspaces, and reviews. Most of the classrooms have digital podiums and projectors permanently installed. Two of the main classrooms, Rooms 2160 and 3160, have been fully renovated in 2015 and 2013, respectively; this included new flooring, lighting, wall surfaces, furniture, and AV equipment. The 120 m^2 EVDS Gallery is located adjacent to the Faculty reception and main entry points.

D Workshop

A large workshop (555 m2) is located on the 1st floor. The workshop is well-equipped for working in wood, metals, and plastics. The woodworking area includes table saws, band saws, router, jointer, planers, and other general woodworking machines and tools. The metal area includes tig welding, mig welding, slip rollers, 1 metal milling machine, and 1 metal lathe. There is a Plastic Vacuum Former, a Belovac C Class Vacuum Former (4' x 4' bed) for molding plastic sub straight. The shop is equipped with a spray paint booth, and has suitable ventilation and dust-collecting facilities in all areas, augmented by renovations in 2012. During 2016-2017 it is planned that 2 robots will be installed adjacent to the workshop. Generous assembly areas accommodate student project work.

The University of Calgary has established strict safety protocols for all workshops on campus. All students newly entering the MArch Program (in either Foundation or MArch Year One) must complete an extensive workshop training curriculum before they are given access to the shop. Lectures and demonstrations by University experts and EVDS workshop technicians detail emergency procedures and the safe use of machines and materials, as well the relation between design decisions and safe operations in the workshop. Two days of orientation week are given over to workshop training, which is then integrated into the first weeks of design studio. In addition to attending lectures and demonstrations on both the digital and traditional areas of the workshop, students individually complete a demonstration project showing that they can operate safely and competently in the shop environment. EVDS

workshop technicians control and track student access to the workshop and can suspend or terminate shop privileges to students who are not working safely, are overly fatigued, and so on. The technicians also control the number of students who can be in the shop at one time. Access to laser cutters and 3D printers is available 24/7. Access to the rest of the workshop is only available when a shop technician is present.

Digital fabrication equipment includes:

3D Systems Projet 460Plus Plaster Printer (8” x 10” x 8”)
2- Lulzbot Taz 6 3D printers (280 mm x 280 mm x 250 mm (11.02” x 11.02” x 9.8”)
1- Lulbot Mini 3D Printer (152mm x 152mm x 158mm (6” x 6” x 6.2”)
2- Dobot’s 4 Axis Parallel Desktop Robot Arms
Glowforge Laser Printer / Cutter (portable unit) (To be Delivered early 2017)
1- Thermwood Model 67 CNC 5-Axis Router (5' x 10' bed and 3' Z height)
1 -Shopbot Buddy 32 CNC 3-Axis (32” x 40” bed and 5" Z height)
2 -Trotec Speedy 300 Laser Engravers (28.7” x 16.7" bed)
1- Graphtec Cutting Plotter

E Computing Facilities

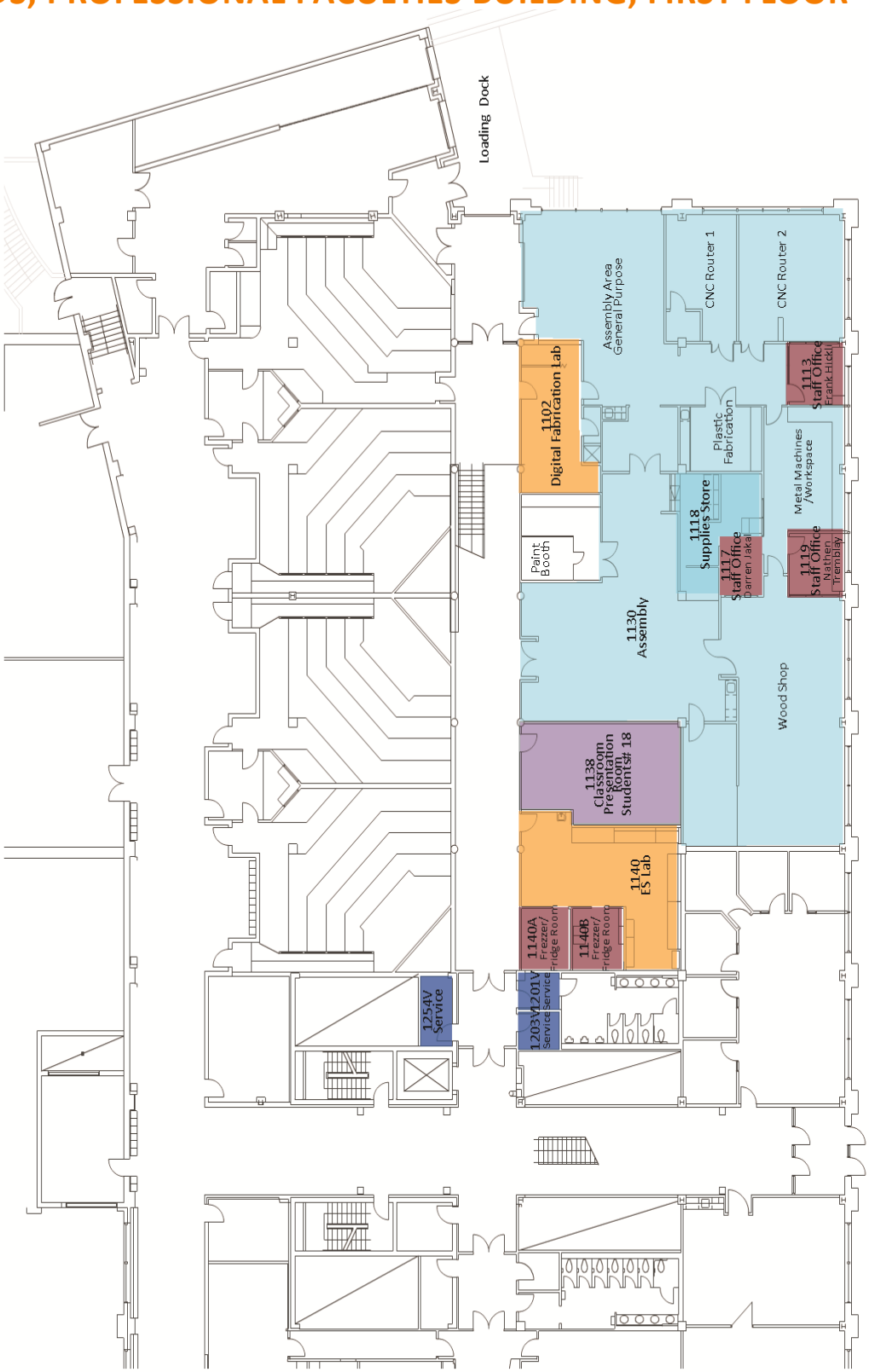
The University supports wireless internet connectivity across campus. MArch students are required to have a laptop for their studies, but still make use of the software and hardware in the Faculty’s Computer Lab. In the Lab there are 30 desktop workstations set up in a classroom configuration for tutorials and coursework. The classroom configuration was established during 2012 renovations to the Lab space. The Lab supports advanced work in computer-aided design, geographic information systems (GIS), multimedia and interface design, and simulation of building systems and environmental systems. It has application software for database management, graphic communication, statistical analysis, desktop publishing, computer-aided design, spatial analysis, image processing, simulation systems for environmental controls. Computers are supported together with peripherals such as an 11x17 scanner, 42" & 60" plotters, and laser printer. Students also have access to other computing facilities on Campus, such as and GIS and Remote Sensing Facilities, and the Visualization Studio in the Taylor Family Digital Library.

The lab workstations are modern workstations with 16G RAM, Xeon processors, and NVidia Quadro graphics cards. A full-time technician provides local support for computing activities. University Computing Services also offers assistance in the form of courses and individual consulting on computing problems. The MicroStore on campus offers computers, software, and supplies at more affordable educational prices: www.calgarybookstore.ca/micro.asp

A partial list of software available in the EVDS Computer Lab includes:

- CAD Applications: AutoCAD, Inventor, Revit
- Modeling and Rendering Applications: 3ds Max, Maya, Rhino3D, SketchUp
- Multimedia Applications: Powerpoint, Adobe Premiere, etc.
- GIS Application: ArcGis, AutoCAD Map 3D
- Graphics Application: Adobe Creative Cloud including Photoshop, Illustrator, InDesign

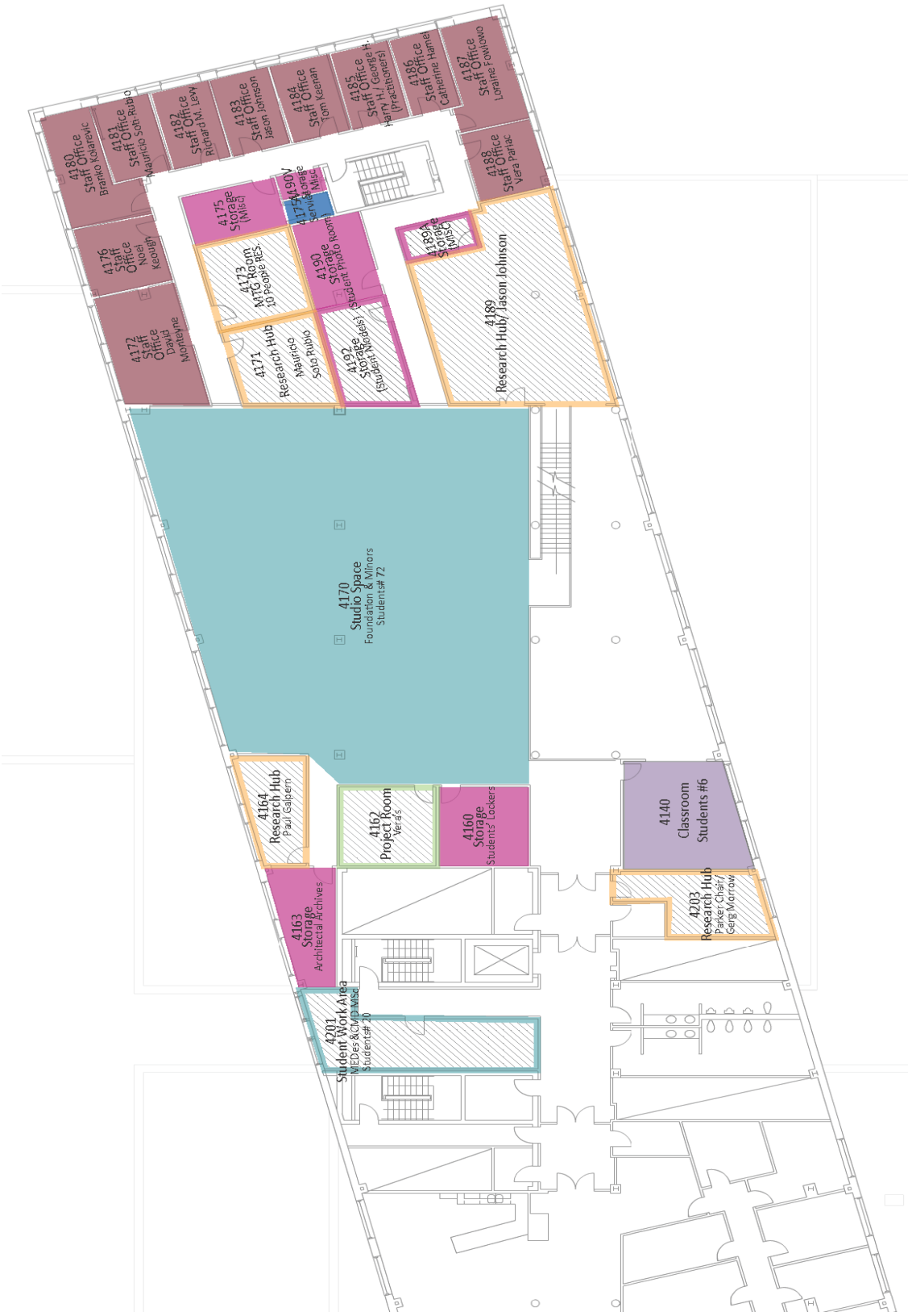
FACULTY OF EVDS, PROFESSIONAL FACULTIES BUILDING, FIRST FLOOR



FACULTY OF EVDS, PROFESSIONAL FACULTIES BUILDING, SECOND FLOOR

FACULTY OF EVDS, PROFESSIONAL FACULTIES BUILDING, THIRD FLOOR

FACULTY OF EVDS, PROFESSIONAL FACULTIES BUILDING, FOURTH FLOOR



3.8 Information Resources and Information Technology

The architecture information resources outlined in this section fall within the administrative unit Libraries and Cultural Resources (LCR) at the University of Calgary. Library and Cultural Resources is comprised of the University Library, Archives and Special Collections, The Nickle Arts Museum, and the University of Calgary Press – all of which support the Master of Architecture Program in the Faculty of Environmental Design.

> *"**LCR Next: Strategic Directions**: Realizing Eyes High is a statement of vision for next generation-libraries based on the University's Eyes High foundational commitments. This high-level statement of strategic direction, combined with enabling capacities necessary for their realization, reflects the changing nature of organizational planning, emphasizing agility, responsiveness, innovation and impact." LCR will: enrich the quality of learning by enhancing the student learning environment; sharpen the focus on research and scholarship through University partnerships in interdisciplinary research, dissemination of scholarly knowledge, and research data stewardship; and integrate the University and the Community with the cultural enrichment of campus and community.*
> From LCR Next: Strategic Directions 2015-2017 found at:
> http://library.ucalgary.ca/news/lcr-next-strategic-directions

Libraries and Cultural Resources operates eight University of Calgary libraries that support students and researchers by providing innovative study spaces, collaborative work areas, advanced technology and information sources in diverse media. Literary and historical collections – ranging from the manuscripts of Nobel Laureate Alice Munro and other famous authors to the Canadian Architectural Archives, the largest collection of the work of Canadian architects in the world – ensure access to the record of yesterday and tomorrow.

The organizational structure of Libraries and Cultural Resources is intended to facilitate a converged environment, an environment which provides a key strategic advantage to researchers by making information - regardless of format - readily available.

Two new LCR facilities were constructed and occupied in the Fall of 2011. The Taylor Family Digital Library (TFDL) brought the diverse LCR collections and services under one roof to better serve students, faculty, and the community. The off-site High Density Library (HDL) provided additional space to house collections for access by the University and external community upon request, with a one-business-day turnaround.

LCR has been further recognized as a research library with acceptance into the membership in ARL (Association of Research Libraries) and RLG (Research Libraries Group). LCR continues to have close ties (through both informal and with formal agreements, such as consortia, and memberships, e.g. CRL: Center for Research Libraries) with other libraries in Calgary, with the University of Alberta Library, and with other academic institutions and libraries, museums and archives across Canada and North America to provide enhanced collections and services.

LCR archivists, curators, and librarians all liaise with Dr. Graham Livesey, and directly with faculty and students to support scholarly pursuits in architecture as discussed below.

Thomas Hickerson, Vice Provost Libraries and Cultural Resources and University Librarian, led a project to explore innovative ways for academic libraries to support multidisciplinary research. Funded by the Andrew W. Mellon Foundation, the planning grant focuses on three research clusters including Smart Cities. Nancy Pollock-Ellwand, Dean of Environmental Design, was also involved in the project's design.

A **NICKLE GALLERIES** (http://nickle.ucalgary.ca)

The Nickle Galleries has an informal relationship with EVDS in support of teaching and research, and has worked with members of EVDS in the following instances:

Ron Thom and the Allied Arts, Tuesday, June 2, 2015 to Friday, August 21, 2015. Exhibition organized by the West Vancouver Museum, curated by Adele Weder. Nickle Galleries produced an acclaimed installation of the exhibition designed by Public: Architecture + Communication, which coincided with the 2015 RAIC Conference, providing guided tours and talks in collaboration with RAIC and participating members from EVDS.

This exhibition included significant holdings from the Canadian Architectural Archives. The exhibition "Ron Thom and the Allied Arts" explores the evolution of west coast architect Ron Thom from his beginnings as an artist/protégé of Jack Shadbolt and Bert Binning at the Vancouver School of Art, to his groundbreaking west coast house architecture, to the internationally renowned architecture of Massey College and Trent University in Ontario. Enriched with never-before-exhibited drawings and sketches, vintage photos, original Ron Thom-designed furniture and prototypes, original drawings by his teachers Shadbolt and Binning, the exhibition conceptually and in some cases literally juxtaposes the west coast work with his architecture in central Canada, tracing and illuminating the narrative thread of Thom's architectural evolution.

Layered Landscapes: Constructing Form and Meaning from the Sketches of Arthur Erickson October 25, 2013 – January 4, 2014. Curated by Linda Fraser and Geoffrey Simmins, designed by EVDS faculty member Marc Boutin and Tony Leong.

The exhibition – co-curated by Linda Fraser and Geoffrey Simmins – focuses on sketches as artefacts of the design process, as a kind of intermediate architecture that reveals inspiration and potential. Contemporary architects and artists have added a crucial and critical interpretive layer to the exhibition. The Marc Boutin Architectural Collaborative has designed a group of eight vitrines for the display of the drawings, allowing the use of light and overlap to reveal both the crafting of the architectural drawings and ideas in a parallel process, while the incorporated videos commissioned by videographer and photographer Brian Shier explore the tactile experience of selected spaces. This exhibition was also drawn from the Canadian Architectural Archives.

The following public presentations in Gallery Hall, TFDL also contributed to a richness in architectural programming at the University of Calgary:

Marc Boutin, Linda Fraser, and Geoffrey Simmins. Tour of Arthur Erickson, Layered Landscapes, 30+participants, November 21, 2013.

Rozhen Mohammed-Amin (EVDS PhD candidate). Make them Alive: Augmented Reality (AR) Technology in Museums and Galleries, 30 participants, November 13, 2014.

Nancy Pollock-Ellwand. Protecting World Heritage-Land and People, 27 participants, April 9, 2015.

B **UNIVERSITY OF CALGARY PRESS** (http://www.uofcpress.com/):

The University of Calgary Press enjoys and values an active relationship with the Faculty of Environmental Design. The Press has peer-reviewed and published books featuring the work of adjunct and emeritus EVDS faculty:

Fraser, Linda, Michael McMordie and Geoffrey Simmins. *John C. Parkin, Archives and Photography: Reflections on the Practice and Presentation of Modern Architecture* (Art in Profile: Canadian Art and Architecture) Calgary: University of Calgary Press, 2013.

C **ARCHIVES AND SPECIAL COLLECTIONS** (http://asc.ucalgary.ca/):

The majority of the Special Collections books and serial collections can be accessed in the Library Catalogue. A project to add the archival fonds of Archives and Special Collections to the Library Catalogue has been completed. There is still a considerable amount of work needed to integrate the discovery of Archival and Special Collections materials, both of artefacts and curated online resources, with more traditional library resources thereby increasing access to researchers. We are also currently in the process of adopting a new archival management system, ICA AtoM, and converting legacy metadata using accepted International descriptive standards. This metadata will be migrated into the new system. Once this project is complete, users will be able to search our archival and specialized collections holdings remotely.

All Archives and Special Collections holdings are housed in either the TFDL or HDL in state-of- the-art climate-controlled environments. Material retrieved from the HDL requires one-business day.

Special Collections:

Holds a teaching collection of historical and some rare architectural publications representative of the Western tradition in architecture going back to the sixteenth century;

Holds archival fonds of selected Canadian architects, e.g. Maxwell Bates whose fonds include architectural drawings, as well as a variety of other visual and textual materials;

Offers sessions on architectural resources upon request;

The Special Collections Librarian was replaced in 2013 and in a recent reorganization has become the Associate University Librarian, Archives and Special Collections.

University Archives:

Holds original copies of all University of Calgary theses and dissertations;

Other University records include architectural drawings and photographs;

Collaboratively with the Faculty of Graduate Studies provides access to a growing collection of digital theses in the Theses Collection of the Institutional Repository (D-Space), including EVDS architecture theses.

Canadian Architectural Archives (http://caa.ucalgary.ca/)**:**

Collections

The Canadian Architectural Archives collects the work of prominent Canadian architects of regional, national, or international significance. As the first institution in Canada to concentrate solely on the collection of architectural records, the Canadian Architectural Archives' mandate was visionary in that the collections were intended to be as comprehensive as possible and therefore, consisted of the entire output of an architectural firm including design development and construction drawings, project files, office files, models, presentation boards and photographs – in fact everything necessary to document both the design and building process and the historical output of a specific firm. The collection is rich in detail and historical precedents and provides a picture of twentieth century Canadian architectural history. It also provides an accurate profile of an architect's practice, as well as the design process of individual projects. Collections may contain design and working drawings, project files, correspondence, slides, photographs, aperture cards, models, and oral history tapes and transcripts.

The archives feature the work of Raymond Affleck, Douglas Cardinal, Carmen and Elin Corneil, Jack Diamond, Arthur Erickson, Raymond Moriyama, John B. Parkin Associates, Ron Thom, Baird Sampson Neuert, Barry Johns, and Jerome Markson. Recent acquisitions include William Grierson, Lorne Simpson, Bing Thom, Jeffrey Lindsay, Jeremy Sturgess, and the private papers of architect, author, and educator George Baird.

The inclusion of photography collections such as John Flanders and Panda Associates strengthens the holdings by not only supporting existing collections but also by highlighting the work of other prominent Canadian architects, as well as the Canadian work of internationally acclaimed figures such as I.M. Pei, Mies Van der Rohe, and Viljo Revell. The archival collections are acquired by donation for which donors receive a tax receipt. Most of the holdings are designated as Cultural Property under the Canadian Cultural Property Export and Import Act. The Canadian Architectural Archives has a small annual budget for reference material and reference tools. The Archives also have access to funds to assist with the purchase of specialized collections.

The Archives is a unique teaching and learning resource and is the country's largest and most comprehensive archive of twentieth century Canadian architecture. The holdings of the Archives lend themselves to many interdisciplinary and multidisciplinary teaching, learning and research opportunities. Although a national collection, which serves a local, national, and international research community, to date the Archives has also been used by the Architecture Program for course specific teaching, practicums, precedent studies, theses, and exhibitions. We receive an average of 100 reference and research questions per month which include everything from practitioners accessing project work to individuals researching their own houses or neighbourhoods to students and scholars working on theses, papers, exhibitions or journal and book publications.

The establishment of an exhibition program has increased our ability to advance the knowledge and appreciation of contemporary Canadian architecture. On average we participate in three to eight exhibitions per year either organized by the CAA or as a resource for research and the loan of material, if guest curated. Over the past five years' exhibitions have included:

Architecture and National Identity: The Centennial Projects 50 Years On (Confederation Centre Art Gallery – Charlottetown + 3-5 venues TBD). 2015-2016.

Shaping Canadian Modernity: The 1958 Toronto City Hall and Square Competition and Its Legacy Paul H. Cocker Gallery, Toronto, 2015.

Layered Landscapes: Constructing Form and Meaning from the Sketches of Arthur Erickson Nickel Galleries*, Calgary*; Eric Arthur Gallery, Toronto; Dalhousie Architectural Gallery, Halifax; Centre de design, Montréal, 2013-2015.

Celebrating the Architecture of Raymond Moriyama (Kasian Gallery +TFDL Digital Gallery -University of Calgary), 2013.

Calgary 1913-2013, (Museum of Contemporary Art - Calgary), 2013.

Ron Thom and the Allied Arts (West Vancouver Museum, Gardiner – Toronto, Trent University – Trent, Lord Beaverbrook Gallery – Fredericton, Nickel Galleries – Calgary), 2013-2015.

Artists, Architects and Artisans (National Gallery - Ottawa*),* 2014.

Gesamtkunstwerk: Life as a Total Work of Art. Vancouver, 2014.

Mid-Century Icons (TFDL Digital Gallery - University of Calgary), 2012.

A Question of Influence (Eric Arthur Gallery, Toronto), 2012.

The exhibitions often have published catalogues which provide rich research resources for students and faculty of the Architecture Program here. The Archivist and Chief Curator of the Canadian Architectural Archives also provides in-depth research support for campus and visiting scholars, which includes supporting external research often of long duration (often months and years) and requiring in-depth collection and subject (architecture) expertise for multiple inquiries and multiple collections for publications and exhibitions. These publications and exhibitions also

provide rich research resources for the students and faculty here and elsewhere. Examples of publications include:

Linda Fraser and Michelangelo Sabatino, Arthur Erickson: Layered Landscapes: Drawings from the Canadian Architectural Archives, Dalhousie Architectural Press: Halifax, 2nd rev. ed. 2016.

George Kapelos, *Competing Modernisms: Toronto's City Hall and Square,* Dalhousie Architectural Press: Halifax, 2015.

Christopher Armstrong, *Civic Symbol: Creating Toronto's New City Hall, 1952-1966*. University of Toronto Press: Toronto, 2015.

Christopher Armstrong, *Making Toronto Modern: Architecture and Design, 1895-1975*, Queens McGill Press, 2014.

Marco Polo and Colin Ripley, *Architecture and National Identity: The Centennial Projects 50 Years On*, Dalhousie Architectural Press: Halifax, 2014.

Adele Weder*, Ron Thom and the Allied Arts*, West Vancouver Museum: West Vancouver, 2013.

Charlie Hill, *Artists, Architects and Artisans: Canadian Art 1890-1918*, National gallery of Canada: Ottawa, 2013.

Stephanie White, Unbuilt Calgary, Dundurn: Toronto, 2012.

Dorothy Mindenhall, Unbuilt Victoria, Dundurn: Toronto, 2012.

Atlas of Twentieth Century World Architecture, Phaidon Press: London, 2012.

Michael Windover, Art Deco: A Mode of Mobility, presses de l'Universite du Quebec: Montreal, 2102.

Currently, Linda Fraser is developing exhibition and publication projects related to Jerome Markson, Jeffrey Lindsay, and Panda Associates.

Services

The Archivist and Chief Curator of the Canadian Architectural Archives is available to give course-specific or group sessions for the architectural students, including the undergraduate program, and is also available for consultation with individual students. The collections have been used as a teaching collection for the study of the history of Canadian architectural practice and design, for design projects, and for precedent studies. It also allows students the opportunity to design and curate exhibitions based on its holdings.

The Canadian Architectural Archives has an enhanced Web presence that includes collection-level descriptions, digital collections, and in some cases finding aids. Our presence has been further enhanced by including access to the collections in the Library catalogue and in Summon, which allows students to search across all of the library, museum, and archival holdings through one integrated search engine.

The Archivist and Chief Curator is also available to act as thesis supervisor, advisor, and examiner for EVDS students as in Jason McMullen. The Canadian Architectural Archives: Contingent Histories of a Distributed Institution, 2014.

In conjunction with Raymond Moriyama receiving an honorary doctorate from the University of Calgary, the Faculty of Environmental Design and Libraries and Cultural Resources mounted an exhibition entitled *Architecture and the City: The Early Work of Raymond Moriyama* curated by Linda Fraser and using material drawn from the Canadian Architectural Archives. The exhibition was mounted in the Kasian Gallery and virtually in the TFDL on the large screens in the entrance lobby where foot traffic is especially high.

Linda Fraser also organized the panel discussion related to the exhibition *Layered Landscapes: Finding Form and Meaning from the Sketches of Arthur Erickson* at the Nickle Galleries. Panelists included Marc Boutin, Geoffrey Erickson, Linda Fraser, Michelangelo Sabatino, and Geoffrey Simmins. This panel was well attended by architecture students.

Staff

1.0 FTE Archivist and Chief Curator
0.2 FTE Conservation Officer
0.8 FTE Library Assistant (Collections Department– Special Materials Processing)

The Archivist and Chief Curator, Canadian Architectural Archives, is a professional librarian responsible for providing reference service, collection development, grantsmanship, fundraising, and exhibition planning and support for the Canadian Architectural Archives. She has twenty-nine years' experience in dealing with architectural records. She also maintains close liaison with the Master of Architecture Program. The Archivist and Chief Curator supports the teaching, learning, and research mandate of the Architecture Program through reference and instruction and in also providing unique research, learning, and job experiences for the architecture students.

The Canadian Architectural Archives also has access to a conservation officer to address preservation and conservation concerns. Processing of archival collections for the period in question was handled by the Special Materials Unit in Collections.

In 2015, Canada Council for the Arts funded a one-year project entitled *Bolstering Public Engagement of Architecture through the Programs of the Canadian Architectural Archives* which was intended to demonstrate that what used to read as a series of special projects to the Archivist and Chief Curator (and sole staff member of the CAA), had now morphed into a seamless stream of work, and demanded the inclusion of a new employee. As a result of that, a position has just been filled that will bring in a new full-time permanent position to the Canadian Architectural Archives. This person will assist with reference, research, and exhibition support, and some collections work.

Facilities

The Canadian Architectural Archives is a special collections unit in Archives and Special Collections, which is currently located on the 5th floor of the Taylor Family Digital Library (TFDL). It maintains separate state-of-the-art storage facilities in the TFDL and HDL. It shares office space, a common reading room and teaching classrooms with the other archival and special collections units including Special Collections and University Archives. The reading room is open 10:00 am to 4:30 pm Monday to Friday. Appointments are recommended.

Budget/Administration

The budget for the Canadian Architectural Archives is part of the operating budget of Libraries and Cultural Resources and is supplemented by grants obtained from provincial and federal granting programs which provide support for the purchase of equipment, preservation activities, and to enhance collection access.

D **LIBRARY** (http://library.ucalgary.ca/):

Spatial and Numeric Data Service
(http://library.ucalgary.ca/sands)

EVDS remains Spatial and Numeric Data Services' (SANDS) second largest user group after Geography/MGIS/Geomatics. (More detailed user group information is not available.)

Between 2011 and 2016, SANDS provided instruction to one or two EVDS classes per year on average. EVDS students are the number one user of the City of Calgary digital files. The most used City spatial files are the Digital Aerial Survey (DAS), Ownership Parcel Fabric (OPF), Digital Elevation Modes (DEM), city-wide orthophotos, land use, roads, hydrology, parks, and pathways. Many of these files are in CAD format, a preferred format for Architecture. In addition, EVDS also uses the Centre's print resources: maps, fire insurance plans, and air photos. These print resources are usually used to study an area's changes over time and, prior to the availability of City files, were often the only source of spatial information about communities in the City or other areas. As for numeric data, the Canadian Census is the main dataset used by EVDS students and faculty.

Visualization Studio
(http://www.library.ucalgary.ca/faculty-instructor-support/visualization-studio)

The Visualization Studio is a state-of-the-art digital facility created to support faculty and graduate researchers. Its primary feature is a high-resolution display wall with surround sound. The studio is designed to provide researchers with significant visual real estate for working with digital information. The display's 34.5 million pixels allow for insight and overview that is impossible to achieve with a desktop monitor or standard projector. The Visualization Studio's display wall is made up of 5x3 arrangement of 15 projectors. Each Christie Digital Entero RPMWU LED projector provides a resolution of 1920x200 pixels on the back of a 46-inch DNP Cross Prism

screen. These screens provide crisp images and almost invisible seams of less than 2 millimetres between projectors. Altogether the wall measures 4.88 metres by 1.85 metres (195 inches by 73 inches) and provides a resolution of 9600x3600 pixels. Faculty, such as Jason Johnson, Richard Levy, Gregory Morrow, Bev Sandalack, Sasha Tsenkova, and Francisco Alaniz Uribe, from the Faculty of Environmental Design have used the Visualization Studio for a wide variety of purposes including demonstrations of 3-D imaging and student presentations of studio work.

LCR Architecture Liaison Librarian
(http://libguides.ucalgary.ca/architecture_design)**:**

As well as being the Archivist and Chief Curator of the Canadian Architectural Archives, Linda Fraser, also acts as the Architecture Liaison Librarian. She works with other LCR staff and architecture faculty and students to develop library services and collections of books, serials, videos and images with continuing relevance to scholarly and practical pursuits in architecture. Faculty and students also consult with the Architecture Liaison and other library staff for assistance identifying, accessing, searching and retrieving information in LCR's suite of online and print/physical resources.

Library Collections
With the assistance of Collections Services, with special thanks to Heather D 'Amour, Head and Andrew Forte, Data Analyst.

The Library holds an extensive collection of print and electronic materials of direct relevance to the Master of Architecture Program, which is located in the Taylor Family Digital Library or in the High Density Library and is an integral part of Libraries and Cultural Resources' system of collections and services. Material requested from the HDL is delivered the following day.

The architecture collection has been developed to support the Master of Architecture Program in EVDS and the undergraduate architecture Minor program, as well as the History of Art and Architecture courses offered in the Department of Art. As such, undergraduate and graduate level, as well as historical and contemporary materials are collected on all aspects of architecture: history, practice, theory and criticism.

The majority of the book and journal collection is in English. Foreign language materials are acquired selectively, often when no English version is available or when the images in the publication are unique. When possible, classic texts and primary resources are acquired in the language of the original, as well as in translation. Canadian resources are acquired in both French and English and are mainly received as part of our extensive Canadian art and architecture approval plan with Coutts.

The architecture collection is particularly strong in areas that overlap with the other EVDS programs, such as urban design and environmental aspects of architecture. In addition, energy conservation and sustainability as related to architecture, urban design, buildings and objects is one of the areas identified as a research focus for EVDS and the University and for which the Library has targeted as a corresponding collection focus.

Books

A number of selection tools are used by the Librarian in the development of the Architecture collection, including approval plans, vendor databases, publishers' websites and catalogues, reviewing media, and subject searches in other library catalogues, such as WorldCat. Faculty input also makes a significant contribution. University of Calgary usage/circulation and document delivery statistics as well as peer comparisons of other academic libraries are also examined periodically.

The move to increased use of approval plans, demand/patron driven or evidence based acquisition and centralized funding has continued since 2010. A larger percentage of the titles are acquired using approval and publisher plans developed in consultation with and monitored jointly by the Liaison librarians (who consult with faculty as appropriate) and the Collections librarians – with multidisciplinary funds. The subject funds are smaller but still exist to fill gaps not covered by other acquisition plans.

Table 1: Architecture Print Book and Ebook Acquisitions 2011-2015 – Budget Expended All Funds

Expenditures by Year	2011	2012	2013	2014	2015	**Total**
Books classed as NA (print & ebook)	$25,830	$26,868	$25,086	$22,103	$33,126	**$132,013**
Other Books classed as TH, SB, TA, TK, TJ (print & ebook)	$7,093	$8,984	$8,052	$9,043	$11,600	**$44,772**
TOTAL	**$32,923**	**$35,852**	**$33,138**	**$31,146**	**$44,726**	**$176,785**

Table 2: Architecture Print Book and Ebook Acquisitions – Title Counts

Title Counts Acquired by Year	2011	2012	2013	2014	2015	**Total**
Books classed as NA (print & ebook)	481	523	466	381	457	**2308**
Other Books TH, SB, TA, TK, TJ (print & ebook)	106	141	131	128	118	**624**
TOTAL	**587**	**664**	**597**	**509**	**575**	**2932**

Table 3: Cumulative Architecture Titles in Collection

Title Counts	Current In Collection	2011	2012	2013	2014	2015 Spent	**Total**
Books classed as NA (print & electronic)	34629	$25,830	$26,868	$25,086	$22,103	$33,126	**$132,013**
Books classed as TH, SB, TA, TK, TJ	9691	$7,093	$8,984	$8,052	$9,043	$11,600	**$44,772**
Periodical Subscriptions (unique title count)	203	N/A	N/A	N/A	N/A	N/A	
Microfilm reels	1587	N/A	N/A	N/A	N/A	N/A	
Microfiche	487	N/A	N/A	N/A	N/A	N/A	
Videos	351						
Digital Image Files	68214						

The level of subject coverage fits the American Library Association category of Advanced Study Level as the collection is "adequate to support the course work of advanced undergraduate and master's degree programs, as well as sustained independent study".

Architecture reference information is included in many e-resources such as: *Oxford Art Online; Oxford Reference Online; Credo Reference; Design Abstracts Retrospective; Knovel.*

Architecture e-books can be found in many of our e-book packages such as: *Academic Complete; SpringerLInk; NetLibrary.*

Primary resource e-book collections include: *Eighteenth Century Collections Online:* Early *English Books Online.*

Dissertations and Theses resources include: *ProQuest Dissertations and Theses* – provides full text theses mainly for North American institutions; Center for Research Libraries (CRL) – provides access to dissertations from mainly Europe and selectively from around the world; selected dissertations online Microformat; *Fowler Collection of Early Architectural Books* (485 titles) is available in microfilm.

The Microformat collection has remained stable since 2010 as new material has not been acquired in recent years. The collection has been transferred to offsite storage and is available within a day to users.

Serials

For a current list of online full-text journals (along with the hosting databases) that support architecture, go to: http://library.ucalgary.ca/journals and browse by subject

Art, Architecture, & Applied Arts or Engineering & Applied Sciences. Just over 1000 electronic titles with architectural content are available via the Library's Discovery system.

To assess the architecture serial collection, a review of the current print and online subscriptions LC-classed in NA, TH, or the landscape architecture section of SB along with serials in any classification indexed by *Avery Index to Architectural Periodicals* or on the 2009 AASL (Association of Architecture School Librarians) List of Core Titles for Architecture Libraries resulted in a list of 172 serials which include the core architecture journals and a sample of other serials which support architecture: 90 print subscriptions and 106 electronic full-text titles, 24 of which duplicate print subscriptions. The majority of the titles are the same as the 156 titles listed in 2010. A large portion of the architecture journal collection remains in print format, largely due to image considerations, and we have since acquired 4 new print journal subscriptions. The econtent though, has increased considerably, with longer runs of electronic backsets, backsets not counted above if they lack current issues.

The number of full-text journal databases has increased significantly and are popular for our users to search directly, e.g. *JSTOR*, *Project MUSE*. The Library uses a one search interface & discovery system (Summon) to allow users to search across collections and databases.

LCR subscribes to 45 of the 54 titles on the 2009 AASL List of Core Titles for Architecture Libraries and 11 of the 42 titles on the Supplementary List (http://www.architecturelibrarians.org/corelist2009.html). The architecture serial title list is available upon request as a separate document. Current awareness services – number and variety of services has expanded greatly with open access: table of contents alerts, search alerts, citation alerts and RSS general alerts (for more information see: (http://library.ucalgary.ca/awareness); coverage varies with service. Important databases for architecture include:

Avery Index to Architectural Periodicals (1977-)

Architectural Periodicals Index (RIBA) – print subscription to be cancelled as RIBA library catalogue now freely available at architecture.com

Art Abstracts/Art Index Retrospective (1929-)

Bibliography of the History of Art (1975-)*/International Bibliography of Art*– BHA now freely available online from Getty while IBA now available as ProQuest subscription

Canadian Business and Current Affairs Complete (1982-)

Compendex (1884-) – part of *Engineering Village*

Design and Applied Arts Index (~1973-)

Design Abstracts Retrospective (early 20th c journals) – part of *Designinform* (new)

Ergonomics Abstracts (1986-) – part of *InformaWorld*

Web of Science (1975-) – includes *Arts and Humanities Citation Index*, *Social Sciences Citation Index*, and *Science Citation Index*

Full-text journal indexes:

Academic Search Complete (interdisciplinary FT database)

Academic OneFile (interdisciplinary FT database)

BuildingGreen.com – materials resource

JSTOR (new in 2004/5) – includes 26 full-text architecture journals to date

Project MUSE (new in 2004/5) – full-text humanities and social sciences journals; few architecture journals covered however many of these journals contain articles on architecture

Wilson OmniFile Full Text Select (new) – includes 25 architecture and 18 building construction titles from *Art Full Text* and *Applied Science & Technology Full Text*

Visual Resources

In addition to commercial media resources, several areas of LCR are digitizing collections, which are comprised of images, audio, and video. Most commercial image content purchases by the Library is available through the Shared Shelf platform of Artstor and our in-house digitization of images are on the Content DM platform.

Images

Images are essential to architectural studies for visual presentations and as surrogates for the study of the primary resources of architecture, that is, the built environment itself. The image collections consist of a collection of ~80,000 high-resolution digital images acquired from external vendors with educational use rights, subscription image databases, and image collections digitized in-house.

Online image resources have increased significantly both as a result of their availability and LCR's commitment to providing digital resources to meet users' expectations for ondemand, remote access.

Architecture content includes:

ARTstor, a high-resolution digital image database of ~850,000 images (in Canada; more available in USA) as well as some QuickTime Virtual Reality (QTRV) architecture resources

In addition, we are participating in the ARTstor hosting program, whereby they are hosting some of our other acquired digital image collections, e.g. our 40,000 image Archivision collection

Pidgeon Digital, an audiovisual collection of illustrated talks by architects and designers (image resolution: up to 700 x 600 pixels; 180KB)

Bridgeman Images: Cultural Collection via *Credo Reference* (image resolution: up to 500 x 600 pixels; 100KB)

CAA digital image collections include:

Calgary Modern (778 images)

Donovan & Eunice Joan Williams Canadian Church Slide Collection (500 images)

Flanders Architectural Slide Collection (1504 images)

Gordon Aktins (809 images)

Marine Building (116 images)
Panda Associates Digital Image Collection (9838 images)

Thomas Mawson Image Collection (95 images)

There is still a need to identify and address the gaps in the digital image collections for images not available from commercial vendors or our in-house collections but needed to support teaching and research. Identifying gaps and acquiring images individually is a challenge as it is a resource intensive process.

Videos

Libraries and Cultural Resources video collections are accessible via the Library's Discovery system. The number of videos in DVD, VHS, and 16mm formats that are on architecture has decreased; however, overall access to video titles has increased with the subscription to the online video databases Films on Demand.

The number of online video resources has also increased significantly in LCR's collection as a result of their availability, the University's ability to provide the necessary bandwidth and LCR's commitment to providing digital resources to meet users' expectations for *ondemand*, remote access. The online video resources are particularly well suited to teaching and learning as often one can create playlists of excerpts or of entire videos for personal or shared use. The current Discovery system identifies 833 streaming videos available with Architecture content.

Collections Budgets

Since the last architecture accreditation report, the Library's collections budget continues to be an institutional priority although the purchasing power of the Canadian dollar has been eroded by the less favourable value of the Canadian dollar compared to the American dollar during the past few years (Canadian vs. US dollar information in article *Canadian dollar* in Wikipedia). As quoted in the Globe & Mail, Tom Hickerson said "Every drop of a penny against the American dollar takes a bite of over $100,000 out of his acquisition budget." (*Dropping Loonie Squeezes Library Budgets as Costs for Materials Climbs*, March 11, 2016.) Added to the drop in the Canadian dollar is the rising costs of academic journals. The University's buying power for library resources decreased by 22% between the 2014-2015 and 2015-2016 fiscal cycles. A major challenge is that journals are sold in bundles (much like cable TV channels) and a small number of titles in a package may be heavily used while the rest

are used rarely, if at all. For example, one package we subscribe to includes more than 1,000 titles but only 181 are considered to be high-use. LCR is in the process of developing a content strategy to make the best investment decisions in the future, as most predictions indicate that the Canadian dollar will continue to be unstable. The process will involve determining the frequency of use for various journals and examining content overlap, which is the amount of material available through alternative resources.

The problem of ascertaining the architecture serials budget, past and present, is more problematic with the move to online journals acquired in large, most often multidisciplinary, packages. The 2006 Library Support – EVDS Unit Review analyses the transition occurring from print to electronic journals. In that report, it is noted in Appendix B: EVDS Journal Expenditures by Fund and E-Journal Package that $20,034 was spent on print architecture journals in 2004 and $18,484 in 2005. The 2005 Library Support – Fine Arts Unit Review (table p.11) indicates that 63% of the art/architecture subscriptions were for print journals and 37% for electronic titles. The 2006 Library Support – EVDS Unit Review reports that 33% of the total journal funds were spent on print subscriptions for all EVDS subjects and 67% on e-journal packages. No data is available for more recent years however we are clearly maintaining our architecture serial collection.

LCR has interdisciplinary video funds for firm orders per year which is supplemented by cost-sharing with teaching departments. Online video database expenditures are in addition to this monographic video fund, e.g. Films on Demand. The video collection is heavily developed by faculty requests to support teaching. Therefore, titles are normally acquired with educational public performance rights to allow classroom use.

Staff

Libraries and Cultural Resources have four administrative units overseen by H. Thomas Hickerson, Vice Provost (Libraries and Cultural Resources) and University Librarian. The support for the Architecture Program runs across all of these units. In many cases, such as in the architecture liaison librarian, Canadian Architectural Archives, SANDS, and the Visualization Studio the staff is considered to be a valuable component of the architectural program educational team.

Linda Fraser is Archivist and Chief Curator, Canadian Architectural Archives and the Liaison Librarian for Architecture. She holds a Bachelor of Arts in History and a MLIS. She is responsible for collection development, reference and research services, exhibition planning and support, grantsmanship, and outreach for the Canadian Architectural Archives and collection development and reference and research support for architecture in general. She has 29 years of professional experience. She has served on the Boards of the Association of Canadian Archivists, the Bureau of Canadian Archivists, the Calgary Heritage Authority, and the Calgary Civic Trust. She currently serves on the Board of the Arthur Erickson Foundation. She spends 1.0 of her time on architecture. The Canadian Architectural Archives staffing was reported earlier in section C: Archives and Special Collections.

Architecture Liaison Librarian (Office: 530D TFDL, Canadian Architectural Archives):

Provides subject-specific library instruction, reference, research assistance, collection development for all media, service development, and web pages.

Available by phone, e-mail, drop-in or appointment.

Short introductory sessions on architecture and design collections and services are available upon request. Library instruction and sessions on new products useful to Architecture are available upon request.

The architecture librarian responds to architecture graduate student consultations. The content ranges from an overview of all the Library's relevant services and resources to a student orientation on preparing a literature review for an MDP (Master Degree Project), to tips on using databases, to help with finding specific articles, to research support for faculty.

Although all requests are fielded appropriately, the Architecture Librarian would prefer to have more time to dedicate to working with architecture faculty, students, and staff. Services provided by Canadian Architectural Archives are described in Section C: Archives and Special Collections. As most of the service points are not subject specific, it is not possible to determine the amount of staff time spent specifically on architecture in most cases. Staff specifically supporting architecture continues to be stretched thin. While much of the past few years have seen vacant positions remain unfilled, funds were often utilized to create new positions to meet strategic priorities and new service demands. In many cases, these positions have benefited the Architecture Program. The current year has seen LCR begin to fill vacant positions. With the assistance of centralized staffing services and increasing user independence using digital resources with supporting online assistance, an adequate level of service continues to be provided to the Architecture Program.

Librarians, archivists and curators have non-teaching faculty status at the University of Calgary and work with teaching faculty and students across campus. They have professional degrees or equivalent and generally graduate or undergraduate degrees in subject specific areas that contribute significantly to their subject expertise. The expectations for professional practice, service, and research are clearly outlined in position descriptions, by rank (Assistant, Associate, and Full Archivist, Curator, and Librarian) and the performance of tenured and non-tenured LCR faculty is evaluated in relationship to those descriptions. Other staff groups that support the architecture program may fall into the categories of management and professional or support staff. Each of these positions would have written position descriptions, receive job specific training, funds available for continuing education opportunities.

Facilities

Libraries and Cultural Resources moved into the Taylor Family Digital Library (TFDL) in 2011. This building was purpose-built and is a state-of-the-art facility that provides more than adequate space for all activities related to providing services and access to collections in a modern academic library setting. Besides Service areas, book stacks and study spaces, the TFDL houses teaching classrooms, and collaborative work areas. The building is attractive, well-lit, and provides a welcoming, clean, and well-maintained environment for users. Public stack areas have motion-controlled lighting, are not overcrowded with books, and are easily accessible. The TFDL has LEED Gold certification.

The archival, rare book, and museum collections that are housed in the TFDL are in state-of-the-art storage facilities with proper environmental controls. The addition of the High Density Library as an integral component of the development of the programming of the TFDL has been fundamental to its success. Also a state-of-the-art storage facility with proper temperature, humidity, and lighting controls, this building has provided the additional space needed to build and retain a research collection necessary to support an academic institution. It also houses books, periodicals, archival and museum collections, future additions will ensure there is more than adequate space to continue to grow the collections of Libraries and Cultural Resources. There is next-day delivery of any material requested by staff and researchers.

The following service points support the Architecture Program:

Archives and Special Collections (including the Canadian Architectural Archives)
http://asc.ucalgary.ca/
Reading Room Open: 10-430, Monday to Friday (Open: 11-430, Monday to Friday, Summer months). Closed holidays.

Digital Media Commons
http://library.ucalgary.ca/dmc
Digital Media Commons is intended to be a place to facilitate and provide support for exploration and creation of new media forms such as animation, soundscapes, graphics design, and digital video and maintaining a progressive position in new media applications within an academic environment.
Open: 9-4, Monday to Friday.

Learning Commons
http://library.ucalgary.ca/lc
The Learning Commons is available to everyone and provides reference support, circulation services, general help and technical assistance to students, faculty, staff and visitors. The Learning Commons is jointly supported by Libraries and Cultural Resources and Information Technologies. The Learning Commons also collaborates with the Student Success Centre to provide drop-in writing support. The facility includes computer workstations and a variety of study spaces. While the facility is generally a collaborative area, there is a quiet study room on the second floor.
Open: 8-9pm, Monday to Thursday; 8-6pm, Friday; 10-6pm, Saturday; 10-8pm, Sunday.

Microforms
http://library.ucalgary.ca/microforms
Open: 830-430, Monday to Friday.

Nickle Galleries
http://nickle.ucalgary.ca/
Open: 10-5, Monday to Friday.

Spatial and Numeric Data Services
http://library.ucalgary.ca/sands
Open: 10-4, Monday to Friday.

Student Success Centre

http://www.ucalgary.ca/ssc/
The Student Success Centre provides advising, learning, and writing support to undergraduate, graduate, international, and open studies students.
Open: 9-4, Monday to Friday.

Visualization Studio
http://www.ucalgary.ca/ssc/
Open: 9-4, Monday to Friday.

The Master of Architecture program is also supported by the general LCR services, such as reference, circulation, reserve, microforms and inter-library loan and document delivery.

(Section 3.8 prepared by Linda Fraser, Libraries and Cultural Resources)

3.9 Financial Resources

A Operating

The primary source of funding for Faculty of Environmental Design operations is the University operating grant from the Government of Alberta. The MArch Program budget is developed and managed by the Associate Dean (Academic - Architecture), in consultation with the Dean and the Finance Partner. The following set of figures shows MArch Program allocation and expenditures separately from those of the Faculty. In comparing MArch Program budget to the total EVDS budget, numbers have been pro-rated at 50 percent, which is the approximate ratio of architecture students and architecture faculty to the total numbers of students and faculty members in EVDS.

Faculty of Environmental Design income 2016-2017	
Operating Allocation	$5,656,984
Credit Tuition	$473,653
Other Fees	$118,428
Endowment Income	$79,900
Carry Over (Faculty Debt)	$330,830
Total	**$6,659,795**

Approved 2016-2017 Faculty Budget			
Item	Overall Faculty Budget ($)	Attributable to MArch Program ($)	Attributable to MArch Program (%)
Academic Salaries/Benefits	$4,528,958	$2,264,479	50
Sessional Salaries/Benefits	$295,293	$112,534	38
Support Staff Salaries/Benefits	$979,348	$489,674	50
Teaching Assistants	$169,684	$97,003	57
Scholarships, Grants and Awards	$310,000	$58,750	19
Operations	$557,862	$74,069	13
Total	**$6,841,145**		

Expenditures

Program-specific expenditures currently budgeted for the Master of Architecture Program in 2016-2017, and listed under "Operations" in the table above, are broken down as follows:

ACSA Dues	$6,500
CCUSA Dues	$11,000
ARCC Dues	$250
CCUSA/ACSA Travel	$6,000
CASA Student Representative Travel	$2,000
Final Studio Critics	$14,969
Faculty/Student Travel Support	$2,000
Recruitment/Promotion	$2,000
Receptions/Retreats	$2,000
Honoraria for Guest Lectures, etc.	$5,400
Other Hospitality	$2,000
Print Materials	$3,000
Gillmor Theory Seminar Program	$5,000
Taylor Charrette	$5,000
Other Course Expenses	$6,950
Total	**$74,069**

B Endowments and Scholarships

The Faculty administers a number of endowment funds that provide both scholarship and special projects money for students and faculty members. In addition, a portion of EVDS operating funds are devoted to entrance and continuing scholarships (as in the Faculty Budget table, above). Scholarships for MArch students and actual numbers paid out in 2015-2016 include:

Award Name	Amount
Riddell Kurczaba Architecture Engineering Interior Design Ltd Graduate Scholarship In Sustainable Architecture	$3,000
SSEF Excellence Award in Steel Design	$3,000
West Canadian Scholarship in Architecture	$2,500
GEC Award of Excellence in Comprehensive Design	$2,500
Alberta Building Envelope Council (ABEC) South Award	$2,000
Shirley Bird Memorial Award	$1,500
D.S. Stevens Memorial Scholarship	$1,400
Illuminating Engineering Society Chinook Selection Scholarship	$1,000
Masonry Contractors Association of Alberta Award	$1,000
N. Bruce Spankie Architectural Scholarship	$900
Kenneth Victor Nasedkin Memorial Award	$800
Alberta Association of Architects – Norman Fleming Award	$500
Waugh Scholarship in Architecture	$6,400
Cohos Evamy Partners Travel Scholarship	$4,900
Richard Singleton Bursary in Architecture (GAC)	$1,250
AAA Cecil Scott Burgess Scholarship	$500
Cuthbertson entrance	$5,000
Waterman (all)	$87,900
EVDS Entrance	$20,000
QEII (Provincial), Entering students	$28,800
EVDS Continuing	$38,000
AGSS (Provincial), continuing students	$63,000
EVDS Travel	$750
Total	**$276,600**

3.10 Administrative Structure

A The University

The University of Calgary is authorized by the Province of Alberta as a degree granting institution. Like other Canadian universities, it is not accredited as a whole by anybody or authority. The University of Calgary is a member of the Association of Canadian Universities and Colleges**,** and is recognized by its peers as a major Canadian university with respect to its size, facilities and the breadth and quality of its programs.

The University has two governing bodies:

the Board of Governors is the corporate body charged with the management and control of the University, its property, revenue, business and affairs; and,

the General Faculties Council (GFC) is primarily responsible for the academic affairs of the University, subject to the authority of the Board of Governors.

B The Faculty

The Faculty of Environmental Design is one of fourteen Faculties, which constitute the University's academic organization. The Deans' Council of the University provides the Dean of the Faculty of Environmental Design with a forum for discussion and advice regarding the relationship of the Faculty to the University. Each Faculty has a Faculty Council empowered to determine that Faculty's programs of study, provide for the admission of students, set conditions of withdrawal, and authorize the granting of degrees subject to conditions imposed by the General Faculties Council. The Faculty Councils, as the official legislative body of each Faculty, strike committees, both standing and ad-hoc, which report to Council and administer affairs within its jurisdiction (such as Awards, Promotion, and Student Appeals). As a graduate faculty, the Faculty of Environmental Design operates under the regulations of the Faculty of Graduate Studies, which establishes policies related to students.

Within EVDS, the administrative structure reflects the realities of academic democracy. The management of the Faculty consists of the Dean, three Associate Deans, and the Manager of Faculty Operations. The Faculty of Environmental Design is a non-departmentalized unit, though each professional program maintains autonomy in areas of budget, curriculum, teaching assignments, and so on. Program decisions are further discussed at Faculty Forum and ratified by the Faculty Council. As legislative decisions regarding requirements, regulations and procedures ultimately are a Faculty responsibility, the MArch Program is required to be properly reflective, articulate and persuasive about its goals and values as it presents them.

The Faculty's executive leadership group consists of the Dean and three Associate Deans (including the Associate Dean (Academic – Architecture). Regular Dean-Associate Deans meetings allow the group to monitor the operation of the Faculty, to resolve problems, and to develop initiatives that

can be handled at the administrative level. Issues of faculty, student, or public concern may be reviewed first by this body, before being brought forward to Program meetings, Faculty Forum, or Faculty Council, or issues may be brought forward from Program discussions to the leadership group. Because of the Faculty's non-departmental structure, discussions of broad interest or significance occur a number of times each year within the interdisciplinary collective of Faculty Forum, comprised of the academic staff and student representatives. Decisions are formally ratified by the Faculty Council. Business plans and budgets are developed annually by the Dean.

Within this framework the MArch Program has the autonomy to establish its own strategic objectives, curriculum, and standards, subject to approval by EVDS and the Faculty of Graduate Studies. The Faculty of Environmental Design operates (as do all graduate units at the University of Calgary) under the regulations of the Faculty of Graduate Studies, which governs curricular changes, degree requirements, student discipline, and other policy areas.

The Associate Dean (Academic – Architecture) is appointed by the Dean with overall responsibility and accountability for curriculum, professional accreditation, student advising, professional liaison, teaching assignments, faculty performance assessment, financial and administrative planning within the MArch Program. The Associate Dean (Academic – Architecture) works with the Dean and other Associate Deans to establish long range strategic planning, teaching models, research collaborations, and overall fiscal planning for EVDS. While students are assigned to a specific Program, and much of the Faculty's business is conducted at the program level, final authority for academic programs and budget rest with the Dean—this means that the "recognized academic unit", for the purposes of accreditation, is the Faculty, and not the MArch Program.

C Recognized Program Type

The accredited degree offered by the Faculty of Environmental Design is the Master of Architecture. The degree is of three years duration, including a one-year Foundation program, if needed by the student. Students are normally admitted to the Foundation Year following a Bachelor's degree in any field. With satisfactory performance, they proceed into MArch Year One without having to re-apply to the degree. Each year, a number of candidates also directly enter MArch Year One with pre-professional degrees from North American universities —including students from the Minor in Architectural Studies at the University of Calgary— or professional degrees from elsewhere in the world.

D Other Programs

i Graduate Programs in EVDS

The Faculty of Environmental Design offers three professional Master's degrees, the MArch, MPlan, and the MLA. In addition, there are two thesis-based research degrees, the Master of Environmental Design (MEDes) and the PhD in Environmental Design. All graduate programs at the University of Calgary come under the regulations of the Faculty of Graduate Studies.

All programs are housed in the Faculty of Environmental Design section of the Professional Faculties Building. A number of faculty cross program boundaries for teaching, supervision, and research. The physical and intellectual presence of the other programs in EVDS is seen as a valuable resource to the MArch Program.

ii Undergraduate Minor in Architectural Studies (ARST)

The Minor in Architectural Studies (ARST) was approved by the University and the Province in 1999. The proposal received strong support throughout the University, and was fast tracked because of its alignment with the overall strategic directions of the institution to increase access to professional programs, to decrease time-to-degree, and improve inter-Faculty cooperation. Although EVDS is a graduate Faculty, the Minor program is housed within the Faculty after being patriated in 2013 from the Faculty of Arts. The Minor is coordinated by the Associate Dean (Academic – Architecture). Undergraduate program advisors assist in recruitment for the Minor, as Minor students must have a Major in another Faculty. Most Minor students major in the Faculty of Arts, though some are in the Science or Business Faculties.

The Minor can be taken as part of a number of four-year undergraduate degree programs at the University of Calgary and is intended as preparation for the professional program. The Minor consists of the same courses taken by students in the Foundation Year of the professional MArch. Students enrolled in the Minor take these cross-listed courses alongside students in the Foundation year of the MArch program and can apply for admittance to the MArch upon completion of undergraduate program requirements.

The Minor in Architectural Studies has benefited the MArch Program in the following ways: improved visibility of the Program through an increased number of undergraduate students taking courses in architecture; increased accessibility to the professional degree program; improved admission procedures with an increase in retention ratios as students can apply after having some experience in the field; reduction in time to degree from high school from seven years to six years (four years undergraduate and two years graduate); improved competitiveness of the Program with respect to other institutions via a clear route from high school and a decreased time to degree; decreased costs for students due to the potential reduction in overall program length.

At the time it was established, the Minor required no new courses to be mounted, and the additional sections of studio courses that it required have increased the diversity of the program by bringing in more students and sessionals. The MArch Program retains total control of the curriculum and can use the students' achievement in these courses as the basis for admission into the program. Finally, the Minor offers the opportunity to collaborate with other post-secondary institutions in Western Canada by providing an effective conduit for students wishing to pursue an architecture degree. Students will be able to stay at their home institution for the first 1-2 years of their Bachelor’s degree and, provided these courses meet the curriculum requirements, transfer to the University of Calgary and take the Minor.

3.11 Professional Degrees and Curriculum

The Faculty of Environmental Design offers a professional program leading to the degree Master of Architecture (MArch). The MArch degree is reserved for students completing a program of study in architecture that meets the CACB criteria for accreditation.

The Faculty of Graduate Studies calendar entry included above lists required courses for the MArch degree. Students seeking the MArch degree complete a specific and controlled Program of Study established by the Faculty in conjunction with the CACB Accreditation process. This required curriculum is augmented and enriched with elective studios, seminars, and Block Week courses, especially in MArch Year Two. Incoming students may apply for advanced standing or advanced credit for courses in which they can demonstrate full equivalency; this does not apply to studio courses or electives.

The course list on the following pages is organized by semester in the Program. It is followed by qualitative descriptions of the general, professional, and specialized coursework offered in EVDS.

Professional Program Curriculum 2016-2017

The three-year curriculum leading to a professional Master of Architecture degree. F = Full course (6 hours/week); H = Half Course (3 hours/week); Q = Quarter Course (1.5 hours/week)

FOUNDATION YEAR: FALL SESSION (2.5 full course equivalents)

Design	EVDS 580	Studio I (Design Thinking)	F
Technology	EVDS 523	Sustainability in the Built Environ.	H
History/Theory	EVDA 523.01	History of Architecture I	H
Communications	EVDA 541	Graphics Workshop I	H

FOUNDATION YEAR: WINTER SESSION (2.5 full course equivalents)

Design	EVDA 582	Studio II in Architecture	F
Technology	EVDA 511	Building Science and Technology I	H
History/Theory	EVDA 523.02	History of Architecture II	H
Communications	EVDA 543	Graphics Workshop II	H

MArch YEAR ONE: FALL SESSION (2.5 full course equivalents)

Design	EVDA 682.02	Intermediate Studio	F
Technology	EVDA 613	Structures for Architects I	H
	EVDA 617	Architectural Lighting Design	Q
History/Theory	EVDA 621	Introduction to Design Theories	H
Pro. Practice	EVDS 697.86	Leadership and Architecture	Q

MArch YEAR ONE: WINTER SESSION (2.5 full course equivalents)

Design	EVDA 682.04	Comprehensive Studio	F
Technology	EVDA 619	Structures for Architects II	H
	EVDA 611	Building Sci. and Technology II	H
	EVDA 615	Environmental Control Systems	H

M.ARCH YEAR TWO: FALL SESSION (2.5 full course equivalents)

Design	EVDA 782.xx	Senior Studio in Arch. I	F
Electives	Elective	Urban Systems/Urban Theory	H
	Elective	Seminar/Directed Study	H
	Elective	Seminar/Directed Study	H

M.ARCH YEAR TWO: WINTER SESSION (2.5 full course equivalents)

Design	EVDA 782.xx	Senior Studio in Arch. II	F
Pro. Practice	EVDA 661	Architectural Pro. Practice	H
Electives	Elective	Seminar/Directed Study	H
	Elective	Seminar/Directed Study	Q
	Elective	Gillmor, Somerville, Taylor, etc.	Q

Students are required to take at least one of the block course offerings, the Gillmor Theory Seminar, Somerville Design Charrette, Taylor Design, or makeCalgary workshops.

COURSE / ELECTIVE LIST 2016-2017

	(F) Fall (W) Winter	Faculty Responsible
Design		
EVDA 580: Studio I (Design Thinking)	F	Jason Johnson, Catherine Hamel, Barry Wylant, Jodi James
EVDA 582: Studio II in Architecture	W	Josh Taron, John Brown, Jason Johnson, Dustin Couzens
EVDA 682.02: Intermediate Studio	F	Vera Parlac, Josh Taron, Branko Kolarevic, Phil Vandermey
EVDA 682.04: Comprehensive Studio	W	Brian Sinclair, Keir Stuhlmiller, Alan Collyer, Mauricio Soto Rubio
EVDA 782.xx: Senior Studio I	F	**Portland**:Graham Livesey, Francisco Alaniz Uribe, **Tokyo/Melbourne**: Brian Sinclair, Alysia Bennett, Jenny Rayment **Barecelona**: Rafael Gomez-Moriana, Arturo Frediani
EVDA 782.xx: Senior Studio II	W	Catherine Hamel, Vera Parlac, Barry Wylant, Jessie Andjelic
Technology		
EVDS 523: Sustainability in Built Enviro.	F	Caroline Hachem-Vermette
EVDA 511: Bldg. Sci. and Tech. I	W	Tang Lee
EVDA 611: Bldg. Sci. and Tech. II	W	Chris Roberts
EVDA 613: Structures for Architects I	F	Mauricio Soto Rubio
EVDA 619: Structures for Architects II	W	Mauricio Soto Rubio
EVDA 615: Enviro. Control Systems	W	Caroline Hachem-Vermette
EVDA 617: Arch'al Lighting Design	F	Caroline Hachem-Vermette
History and Theory		
EVDA 523.01: Hist. of Arch. I	F	David Monteyne
EVDA 523.02: Hist. of Arch. II	W	Graham Livesey
EVDA 621: Intro. To Design Theories	F	Vera Parlac, Josh Taron
Communication		
EVDA 541: Graphics Workshop I	F	Jason Johnson, Matthew Parker
EVDA 543: Graphics Workshop II	W	Branko Kolarevic, Matt Knapik
Professional Practice		
EVDA 661: Arch'al Pro. Practice I	W	Tang Lee, Katherine Wagner
EVDS 697.86: Leadership and Architecture	F	Catherine Hamel, Norbert Lemermeyer
Electives		
EVDB 697.xx: Somerville, Gillmor or Taylor	F/W	**Somerville**: Vera Parlac, **Gillmor:** Josh Taron, **Taylor:** Jason Johnson
EVDS 675: Urban Systems / UD Theory	F	**Calgary**: Bev Sandalack, **Melbourne:** Jenny Rayment, **Barcelona:** Suzanne Strum
EVDS 683: Housing and the Domestic	F	John Brown
EVDS 683: Solar Build Envelope Design	W	Caroline Hachem-Vermette
EVDS 683: Architecture & Anonymity	W	Josh Taron
EVDS 683: Integrated Design	W	Branko Kolarevic
EVDS 683: Building Information Modeling	W	David Burch
EVDS 621: Health in the Built Environment	W	Tang Lee
EVDS 697: Tensile Membrane Structures	F	Mauricio Soto-Rubio
EVDS 697: Responsive Architecture	W	Vera Parlac
EVDB 697: Design Drawing	W	Barry Wylant
EVDL 629: History of Landscape Architecture	W	David Monteyne
EVDB 697: Los Angeles Field Trip	W	John Brown
EVDS 783/703: Directed Study	F/W	Faculty
EVDS 797: Preceptorship	F/W	Faculty

Curriculum Notes

i Course Weights

The academic year consists of two regular sessions of **12** weeks duration (excluding block weeks).

According to the University, a **half course** consists of 3 class hours per week for **12** weeks.

A **full course** consists of 3 class hours per week for **24** weeks (2 sessions) for non-studio or non-lab courses. Studio courses in EVDS involve 16 hours per week (including lecture and "lab" time) over one session, which makes them full course equivalents.

A **quarter course** consists of 18 contact hours. A quarter course delivered over either **6 or 12** weeks, or as an intensive Block Week course.

ii Block Courses

Three times each year the Faculty suspends regular classes so that special topics courses, or Block Courses, can be taught in an intensive 4-5 day format. The Faculty offers Block Courses in October, January and February each academic year. The Block Courses are used for elective coursework in the MArch Program. Because the Block Course format often precludes out of class preparation or homework assignments, some Block Courses are not formally evaluated (students are awarded a CR grade, which stands for "Credit"). Such courses are designated by the prefix EVDB. Block Courses which are evaluated with a letter grade are designated with the prefix EVDS and EVDA. Since most Block Courses cannot be used to demonstrate proficiency, the MArch Program treats them as enrichment opportunities.

iii Course Equivalents

Under special (and approved) circumstances, course requirements for the professional program may be met by means other than the designated courses. A student may substitute courses taken elsewhere, provided that they have been approved by the MArch Program. Such substitutions are sometimes required in the case of student exchange terms at another institution.

iv Advanced Placement

The criteria and process for the assessment of courses for advanced placement in the MArch Program is discussed below in Section 4.2, D.

v Architectural Studies Minor Equivalencies

Note that the Foundation Year of ten half course equivalents is shared with the Minor in Architectural Studies, as in the following Table. Students who complete these courses as undergraduates may apply for admission into MArch Year One.

MArch Foundation Year Courses Cross-listed with Minor in Architectural Studies (ARST) Courses **(total of 5 full course equivalents)**:

Design		
EVDS 580	Studio I (Design Thinking)	ARST 485
EVDA 582	Studio II in Architecture	ARST 444
Technology		
EVDA 511	Building Science and Technology I	ARST 449
EVDS 523	Sustainability in the Built Environ.	ARST 423
History/Theory		
EVDA 523.01	History of Architecture I	ARST 457.01
EVDA 523.02	History of Architecture II	ARST 457.02
Communications		
EVDA 541	Graphics Workshop I	ARST 451
EVDA 543	Graphics Workshop II	ARST 453

MArch Curriculum Analysis

The Faculty and the MArch Program share the CACB's perspective that architectural education requires a judicious blend of disciplinary competence enriched by the cultural and technical knowledge gained from a broad liberal arts background. We recognize the responsibility to prepare graduates with immediately useful professional skills and understanding, as well as life-long strategies and capacities for defining diverse career paths in a rapidly changing social context. To achieve these pedagogical goals, the MArch curriculum is characterized by general, professional, and elective studies.

A General Studies

Students in the MArch degree normally will possess a Bachelor's degree from a recognized university or post-secondary institution. Having observed over the years that the most successful students come from a wide range of backgrounds, the Faculty requires no prerequisites regarding undergraduate programs or courses. It is clear that this requirement for an undergraduate degree or its equivalent provides the student with a substantial portion of the fundamental knowledge of the world that is necessary as a basis for the study of Architecture. It also provides the Faculty with mature students with proven academic records, allowing the teaching program to rely, in part, on the students' ability for self-directed study. Therefore, the CACB's requirement for "general studies" primarily is met by the prerequisite undergraduate degree. The general studies requirements are also partially covered within the program by courses in history and theory, sustainability, and other core and elective courses.

B Professional Studies

The core of the professional program leading to the MArch degree consists of a series of required courses that satisfy the CACB Performance Criteria. To facilitate the legibility of the curriculum structure, the courses are organized into the following thematic categories: Design, Technology, History/Theory, Communications, and Professional Practice. In recognition that the distinctiveness of these categories largely dissolves within the realities of professional life, the structure of the Professional Program offers multiple opportunities for students to explore the integration of these areas of competency.

i Design

The professional program develops design ability as both a theoretical enterprise and a constructive discipline through a studio sequence of increasingly complex projects and design issues. The first four studios (offered over two years of study, including the Foundation Year) provide a basic set of skills and prepare the student for more advanced design work in the final year (MArch Year Two). To reinforce the integrated nature of design, each of the studios is linked with specific courses.

The following outlines the thematic structure for the design studio sequence in the MArch degree. While intended as a framework for the studios, the non-studio core courses also support this thematic structure in specific and appropriate cases.

FOUNDATION (Fall Term): ECOLOGY 1

Ecology 1 introduces the concept of ecology as a framework for design thinking. Ecologies, made up of physical, environmental, behavioral, economic and political factors, are explored through iterative design explorations. Particular emphasis is placed on the study of landscape and domestic environments and the fundamental interactions between organisms and their contexts. Precedent analysis, observation, measuring and the introduction of programming strategies are studied and understood as the basis for a generative design processes. These processes include basic programming, an understanding of complex systems, site selection and formal studies as the means for exploring a set of design problems at various scales.

Skills/Knowledge: fundamental design and graphic skills, critical thinking, collaboration, ecological systems, site analysis and interpretation, precedents

FOUNDATION (Winter Term): ECOLOGY 2

Ecology 2 situates design within the context of the social, communal and political aspects of designed environments with an emphasis on dwelling in urban contexts. Individual dwelling units are explored in relation to urban-scale patterns and infrastructures. Emphasis is placed on elements of space and architecture as well as the social organizational systems (program, performance, phenomena, information, and occupation) that constitute design problems in urban environments.

Skills/Knowledge: develop design and graphic skills, introduction to singular vs aggregated programs, introduction to residential and urban design, sustainability, social and political ecologies, organizational systems, programming

M1 (Fall Term): ECOLOGY 3

Ecology 3 synthesizes the scalar, systematic and material aspects of architecture through the application of theoretical frameworks to the design of a complex urban building. Urban context analysis, program development, the production of prototypes, and the exploration of various design media are used to understand the material and technical complexity of human environments. The term focuses on design as producing complex ecological systems at multiple scales.

Skills/Knowledge: materiality, fabrication/construction, complex building typologies, understanding environmental systems, materials and assemblies, program preparation

M1 (Winter Term): ECOLOGY 4

Ecology 4 integrates technological systems into designed environments. These systems include those embedded within the processes, construction and climatic control of buildings, and their related environments. The design of a building and its systems are explored through the comprehensive development of spatial, structural, and mechanical systems internal to the building and the social, climatic, regulatory and cultural components that form its context.

Skills/Knowledge: comprehensive design, life safety and service systems, envelope systems, systems integration, building codes, detailed design development, technical documentation

M2 (Fall Term): ECOLOGY 5

Ecology 5 immerses students in dense built environments, networks, and systems that produce the ecologies of contemporary cities around the world. Many students participate in the Faculty's study abroad programs in Barcelona (Spain) or Melbourne (Australia), while others undertake urban-focused design research in the Calgary region. Urban issues and urban sites are experienced, and a building or intervention is designed, in relation to social and cultural contexts, but also in terms of infrastructure, public space, and environmental impacts.

Skills/Knowledge: architecture and the city, public space, urban politics and social issues

M2 (Winter Term): ECOLOGY 6

Ecology 6 leverages the skills and knowledge gained throughout the previous terms towards the production of focused research within the context of a studio environment. Projects can be theoretical or practical in nature, ranging from highly speculative to design-build projects. General parameters, such as thematic focus, technique, and contemporary research, provide the studio framework in which students develop their work.

Skills/Knowledge: design research, speculative inquiry, professional practice

ii Technology

The professional program develops technical competence through a set of building science course streams, and by integrating technological realities into the constructive discipline of the design studio, particularly in EVDA 682.04: Comprehensive Studio. The technology courses are organized into streams in materials and methods, structures, systems, and sustainability (in 2002-2003 the Program introduced a required course in sustainability).

Materials and Methods

Building Science and Technology I	EVDA 511
Building Science and Technology II	EVDA 611

Structures

Structures for Architects I	EVDA 613
Structures for Architects II	EVDA 619

Systems

Environmental Control Systems	EVDA 615
Architectural Lighting Design	EVDA 617

Sustainable Design/Site Design

Sustainability in the Built Environment	EVDS 523

iii History/Theory

The professional program recognizes that technical proficiency must be combined with a commitment to architecture as a cultural activity. This can only occur in an atmosphere that embraces a multiplicity of viewpoints and attitudes. To this end, the required history and theory courses provide a basic groundwork from which individual interests are to be developed through studio explorations and a range of elective options. The urban systems/urban theory courses offered in each location (Barcelona, the Pacific Rim, and Calgary) must be taken by the students in those locations.

Architectural History

History of Architecture and Human Settlements I:	
Pre-modern Traditions of the World	EVDA 523.01
History of Architecture and Human Settlements II:	
The Western Tradition 1400 - Present	EVDA 523.02

Architectural Theory

Introduction to Design Theories	EVDA 621
Urban Theory/Urban Systems	EVDS 671/675

iv Communications

The ability to apply a range of skills to the study, illustration, and documentation of design ideas, and the effective exchange of ideas with others throughout the design process, are important elements of the professional program. Throughout the required courses, students gain basic competency in the primary media available to the architect. These skills are reinforced in the design studio, and in elective opportunities for students to pursue advanced work. The following courses develop manual and digital skills in architectural representation of all kinds:

Graphics Workshop I	EVDA 541
Graphics Workshop II	EVDA 543

v Professional Practice

The MArch Program appreciates that, in addition to the theoretical and technological dimensions, architecture is also a professional practice and a business. The Program teaches the current practices and processes around internship and registration, prepares students for legal and financial ramifications of business, and also develops new strategies for educating students about the demands and potentials of future practice. The following courses address professional practice:

Professional Practice	EVDA 661
Leadership and Architecture	EVDS 697.86

C Electives

Augmenting the required curriculum are elective courses (four half course equivalents, or HCE) from which each student can customize their architectural education according to their diverse interests or needs. Electives are offered in many of the same thematic categories identified in the core curriculum, allowing them to develop an informal area of concentration if so desired. Elective requirements can be met through a combination of Program courses, Faculty courses in a related discipline, or courses selected from the broad spectrum of Faculties within the University or elsewhere. However, students are required to complete at least three of their four half-course equivalent electives in courses which have been approved by the MArch Program.

Students also are required to take one of the following visiting lectureship courses (they can be also taken for elective credit): The William Lyon Somerville Visiting Lectureship (January Block Course), the Douglas Gillmor Visiting Lectureship (October Block Course), the Dale Taylor Visiting Lectureship (February Block Course), or the makeCalgary Design Charrette (offered occasionally). The William Lyon Somerville Design Charrette is open to all students beyond the Foundation Year, and involves an internationally recognized visiting architect conducting a five-day design charrette on a topic of their choice. The Gillmor Theory Seminar is open to all students and involves a prominent historian or theoretician addressing contemporary design topics. The Taylor Lectureship involves an advanced design workshop in digital design and fabrication. The theme of the makeCalgary course offering changes on an annual basis.

The study abroad programs include elective course offerings, usually in the form of Block Week courses. Students can also take special topics or directed studies courses as electives. The following are the elective courses approved for MArch students during 2016-2017 (offerings vary from year to year):

- **EVDS 683** *Housing and the Domestic*
- **EVDS 683** *Solar Build Envelope Design*
- **EVDS 683** *Architecture and Anonymity*
- **EVDS 683** *Integrated Design*
- **EVDS 683** *Building Information Modeling (BIM)*
- **EVDS 621** *Health in the Built Environment*
- **EVDS 697** *Tensile Membrane Structures*
- **EVDS 697** *Responsive Architecture*
- **EVDB 697** *Design Drawing*
- **EVDL 629** *History of Landscape Architecture*
- **EVDB 697** *Los Angeles field study*
- **EVDS 783/703** *Directed Study* with MArch program member supervising
- **EVDS 797** *Preceptorship* with MArch program member supervising

D Required Course Master List 2016-2017

Course	Title	Instructor	Hours/Wk & Type
EVDA 580	Studio I (Design Thinking)	Johnson	16 Lab
EVDA 511	Building Science and Technology I	Lee	3Lec./1 Lab
EVDA 523.01	History of Architecture and Human Settlements I	Monteyne	3 Lec
EVDA 523.02	History of Architecture and Human Settlements II	Livesey	3 Lec
EVDA 541	Graphics Workshop I	Johnson	8 Lab
EVDA 543	Graphics Workshop II	Kolarevic	8 Lab
EVDA 582	Studio II in Architecture	Taron (Coordinator)	16 Lab
EVDA 611	Building Science and Technology II	Roberts	3Lec./1 Lab
EVDA 613	Structures for Architects I	Soto Rubio	3 Lec
EVDA 615	Environmental Control Systems	Hachem-Vermette	1.5 Lec
EVDA 617	Architectural Lighting Design	Hachem-Vermette	1.5 Lec
EVDA 619	Structures for Architects II	Soto Rubio	3 Lec
EVDA 621	Introduction to Design Theories	Parlac, Taron	3 Lec
EVDA 661	Architectural Professional Practice	Lee, Sessional	3 Lec
EVDA 682.02	Intermediate Architecture Design Studio	Parlac	16 Lab
EVDA 682.04	Comprehensive Architecture Design Studio	Sinclair (Coordinator)	16 Lab
EVDA 782.xx	Senior Studio in Architecture	EVDS Faculty	16 Lab
EVDS 523	Sustainability in the Built Environment	Hachem-Vermette	3 Lec
EVDS 697.86	Leadership and Architecture	Hamel	1.5 Lec
EVDS 783.xx	Directed Study in EVDS	Various	3 Lab
EVDB 697.xx	Somerville Charrette	Parlac (Manager)	Block
EVDB 697.xx	Gillmor Theory Seminar	Taron (Manager)	Block
EVDB 697.xx	Taylor Charrette	Johnson (Manager)	Block

3.12 Student Performance Criteria

The MArch Program strives for a balanced approach to the integration of Student Performance Criteria (SPC) in the curriculum. The majority of the SPC are addressed through the first two years of the Program (Foundation Year and MArch Year One), with the remaining year devoted to senior elective studios and seminars, plus the Professional Practice course. The Foundation Year emphasizes basic design skills (including site interpretation and housing design) and graphic communication, and introduces students to architectural history, sustainability, and building science. MArch Year One develops design skills with an emphasis on medium to large sized public buildings, building science (particularly in the Comprehensive Studio), and architectural theory and leadership. The courses presented in the three years of the MArch degree address the CACB's SPC according to the following matrix and qualitative descriptions of each criterion.

Master of Architecture Program
Faculty of Environmental Design
University of Calgary
2016

Student Performance Criteria
Graphic Matrix

● Primary Emphasis
❍ Secondary Emphasis

	F – Full, H – Half, Q – Quarter Course	A1.Critical Thinking Skills	A2. Resaerch Skills	A3. Graphic Skills	A4. Verbal and Writing Skills	A5. Collaborative Skills	A6. Human Behaviour	A7. Cultural Diversity	A8. History and Theory	A9. Precedents
Ability/Understanding		A	A	A	A	A	U	U	U	A
Design										
EVDA 580: Studio I (Design Thinking)	F	❍		●	❍	❍				❍
EVDA 582: Studio II in Architecture	F			●		❍		●		❍
EVDA 682.02: Intermediate Studio	F	❍		●						
EVDA 682.04: Comprehensive Studio	F		❍	●		●				❍
EVDA 782.xx: Senior Studio I	F			❍						
EVDA 782.xx: Senior Studio II	F			❍						
Technology										
EVDS 523: Sustainability in Built Enviro.	H	❍		❍			●			
EVDA 511: Bldg. Sci. and Tech. I	H						❍			
EVDA 611: Bldg. Sci. and Tech. II	H									
EVDA 613: Structures for Architects I	H									
EVDA 619: Structures for Architects II	H									
EVDA 615: Enviro. Control Systems	H									
EVDA 617: Arch'al Lighting Design	Q									
History and Theory										
EVDA 523.01: Hist. of Arch. I	H	●	❍		●		❍	●	●	❍
EVDA 523.02: Hist. of Arch. II	H	●	●		●		❍	❍	●	●
EVDA 621: Intro. To Design Theories	H	●	●		●		●		●	●
Communication										
EVDA 541: Graphics Workshop I	H			●						
EVDA 543: Graphics Workshop II	H			●						
Professional Practice										
EVDA 661: Arch'al Pro. Practice I	H					●				
EVDS 697.86: Leadership and Architecture	Q	❍	❍		❍	❍				
Electives										
EVDB 697.xx: Somerville, Gillmor or Taylor	Q	❍								
Electives (4 Half Course Equivalents)										
EVDS 675: Urban Systems / UD Theory	H						❍	❍	❍	❍

Master of Architecture Program
Faculty of Environmental Design
University of Calgary
2016

Student Performance Criteria
Graphic Matrix

● Primary Emphasis
❍ Secondary Emphasis

	F – Full, H – Half, Q – Quarter Course	B1. Design Skills	B2. Program Preparation	B3. Site Design	B4. Sustainable Design	B5. Accessibility	B6. Life Safety Systems etc.	B7. Structural Systems	B8. Environmental Systems	B9. Building Envelopes	B10. Building Service Systems	B11. Building Materials etc.	B12. Building Economics etc.
Ability/Understanding		A	A	A	A	A	U	U	U	U	U	U	U
Design													
EVDA 580: Studio I (Design Thinking)	F	●	●	●	❍								
EVDA 582: Studio II in Architecture	F	●	❍	●	❍								
EVDA 682.02: Intermediate Studio	F	●	●	●	❍			❍				❍	
EVDA 682.04: Comprehensive Studio	F	●	●	❍	❍	●	●	●	●	●	●	●	
EVDA 782.xx: Senior Studio I	F	●											
EVDA 782.xx: Senior Studio II	F	●											
Technology													
EVDS 523: Sustainability in Built Enviro.	H	❍		●	●				❍	❍		❍	
EVDA 511: Bldg. Sci. and Tech. I	H				●		❍		●	●		●	
EVDA 611: Bldg. Sci. and Tech. II	H			❍	❍	●	❍		❍	●	❍	●	❍
EVDA 613: Structures for Architects I	H	❍						●				●	
EVDA 619: Structures for Architects II	H							●				●	
EVDA 615: Enviro. Control Systems	H				❍		●		●		●		❍
EVDA 617: Arch'al Lighting Design	Q								●		❍		
History and Theory													
EVDA 523.01: Hist. of Arch. I	H												
EVDA 523.02: Hist. of Arch. II	H												
EVDA 621: Intro. To Design Theories	H												
Communication													
EVDA 541: Graphics Workshop I	H	❍											
EVDA 543: Graphics Workshop II	H	❍											
Professional Practice													
EVDA 661: Arch'al Pro. Practice I	H					❍	❍						●
EVDS 697.86: Leadership and Architecture	Q												
Electives													
EVDB 697.xx: Somerville, Gillmor or Taylor	Q	❍											
Electives (5 Half Course Equivalents)													
EVDS 675: Urban Systems / UD Theory	H			❍	❍								

Master of Architecture Program
Faculty of Environmental Design
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2016

Student Performance Criteria
Graphic Matrix

● Primary Emphasis
❍ Secondary Emphasis

	F – Full, H – Half, Q – Quarter Course	C1. Detailed Design Development	C2. Building Systems Integration	C3. Technical Documentation	C4. Comprehensive Design	D1. Leadership and Advocacy	D2. Ethics and Pro. Judgement	D3. Legal Responsibilities	D4. Project Delivery	D5. Practice Organization	D6. Professional Internship
Ability/Understanding		A	A	A	A	U	U	U	U	U	U
Design											
EVDA 580: Studio I (Design Thinking)	F					❍					
EVDA 582: Studio II in Architecture	F										
EVDA 682.02: Intermediate Studio	F	●									
EVDA 682.04: Comprehensive Studio	F	●	●	●	●						
EVDA 782.xx: Senior Studio I	F										
EVDA 782.xx: Senior Studio II	F										
Technology											
EVDS 523: Sustainability in Built Enviro.	H		❍				❍				
EVDA 511: Bldg. Sci. and Tech. I	H		❍	❍							
EVDA 611: Bldg. Sci. and Tech. II	H	●	●	●	❍			❍	❍	❍	
EVDA 613: Structures for Architects I	H										
EVDA 619: Structures for Architects II	H	❍	❍		❍						
EVDA 615: Enviro. Control Systems	H	❍	●		❍						
EVDA 617: Arch'al Lighting Design	Q	❍	●	❍	❍						
History and Theory											
EVDA 523.01: Hist. of Arch. I	H										
EVDA 523.02: Hist. of Arch. II	H										
EVDA 621: Intro. To Design Theories	H										
Communication											
EVDA 541: Graphics Workshop I	H			❍							
EVDA 543: Graphics Workshop II	H			●							
Professional Practice											
EVDA 661: Arch'al Pro. Practice I	H					●	●	●	●	●	●
EVDS 697.86: Leadership and Architecture	Q					●	●			●	
Electives											
EVDB 697.xx: Somerville, Gillmor or Taylor	Q										
Electives (5 Half Course Equivlents)											
EVDS 675: Urban Systems / UD Theory	H										

Qualitative Descriptions of SPC

A Critical Thinking and Communication

A1. Critical Thinking Skills

Ability *to raise clear and precise questions, use abstract ideas to interpret information, consider diverse points of view, reach well-reasoned conclusions, and test them against relevant criteria and standards.*

The disciplinary knowledge required to properly analyze and evaluate the built environment is acquired throughout the curriculum. The synthesis of this information into a critical discourse is introduced in the two history courses **EVDA 523.01** and **EVDA 523.02**: History of Architecture and Human Settlements I and II, and in **EVDA 621**: Introduction to Design Theories. These are rigourous courses devoted to students' assessment and mobilization of diverse ideas. These skills are also emphasized throughout the studio courses, but particularly in **EVDA 580**: Studio I (Design Thinking) and **EVDA 682.02**: Intermediate Studio. Critical thinking is developed as well in **EVDS 523**: Sustainability in the Built Environment, **EVDS 697.86**: Leadership in Architecture, and in the Block Courses.

	Foundation Year	MArch Year One	MArch Year Two
Primary Emphasis	**EVDA 523.01** **EVDA 523.02**	**EVDA 621**	
Secondary Emphasis	**EVDA 580** **EVDS 523**	**EVDA 682.02** **EVDS 697.86**	**EVDB 697.xx**

A2. Research Skills

Ability *to employ basic methods of data collection and analysis to inform all aspects of the programming and design process.*

Undergraduate degrees introduce students to basic research skills and methods of intellectual inquiry. In addition to the general requirements for research skills to be deployed in most graduate-level studios and lecture courses, specific coursework addresses this criterion. Research skills are emphasized in **EVDA 523.02** History of Architecture and Human Settlements II, and in **EVDA 621**: Formal Strategies in Architecture. Substantial research projects are required in these two courses. Research skills also are developed in **EVDA 523.01**: History of Architecture and Human Settlements I, **EVDS 697.86**: Leadership in Architecture, and in the Comprehensive Studio, **EVDA 682.04**.

	Foundation Year	MArch Year One	MArch Year Two
Primary Emphasis	**EVDA 523.02**	**EVDA 621**	
Secondary Emphasis	**EVDA 523.01**	**EVDA 682.04** **EVDS 697.86**	

A3. Graphic Skills

Ability *to employ appropriate representational media to convey essential formal elements at each stage of the programming and design process.*

The theory and principles of communication are taught through a sequence of graphics and studio courses. **EVDS 580**: Studio I (Design Thinking), the first studio course, involves extensive work in drawing and making models, supported by instruction in workshop skills; this course is partnered with **EVDA 541:** Graphics Workshop I where students are introduced to orthographic drawing and 3-D techniques (manual and digital). **EVDA 582**: Studio II in Architecture is paired with **EVDA 543:** Graphics Workshop II, where more advanced digital skills are developed. Communication skills in drawing, physical modeling, and computer modeling are reinforced throughout the studio instruction sequence, particularly in MArch Year One. Representational techniques related to site design are covered in **EVDS 523**: Sustainability in the Built Environment.

	Foundation Year	MArch Year One	MArch Year Two
Primary Emphasis	**EVDA 541** **EVDA 543** **EVDS 580** **EVDA 582**	**EVDA 682.02** **EVDA 682.04**	
Secondary Emphasis	**EVDS 523**		**EVDS 782.xx** **EVDA 782.xx**

A4. Verbal and Writing Skills

Ability *to speak and write effectively on subject matter contained in the professional curriculum.*

Beyond the undergraduate degree, and in addition to the general education in these areas achieved by three MArch years of critical discussions and presentations of student work, specific required coursework addresses this criterion. The two history courses require significant written work, which confirm a student's ability to write effectively and professionally at the graduate level: **EVDA 523.01** and **EVDA 523.02**: History of Architecture and Human Settlements I and II. Verbal and writing skills also have a central role in **EVDA 621**: Introduction to Design Theories. Other courses with an emphasis on this criterion include **EVDS 580**: Studio I (Design Thinking) and **EVDS 697.86**: Leadership in Architecture.

	Foundation Year	MArch Year One	MArch Year Two
Primary Emphasis	**EVDA 523.01** **EVDA 523.02**	**EVDA 621**	
Secondary Emphasis	**EVDA 580**	**EVDS 697.86**	

A5. Collaborative Skills

Ability *to identify and assume divergent roles that maximize individual talents, and to cooperate with others when working as members of a design team and in other settings.*

In the MArch degree, **EVDA 682.04**: Comprehensive Studio and **EVDA 661**: Architectural Professional Practice, provide the primary opportunities for students to learn about team work. Teamwork is also emphasized, particularly in role-playing and leadership exercises, in **EVDS 697.86**: Leadership in Architecture. Team exercises play a role in other courses, such as the Foundation Year studios.

	Foundation Year	MArch Year One	MArch Year Two
Primary Emphasis		**EVDS 682.04**	**EVDA 661**
Secondary Emphasis	**EVDA 580** **EVDA 582**	**EVDS 697.86**	

A6. Human Behaviour

Understanding *of the relationship between human behaviour, the natural environment and the design of the built environment.*

This topic is of importance to the history and conceptual framework of the Faculty of Environmental Design and is addressed primarily within the courses **EVDS 523**: Sustainability in the Built Environment, and **EVDA 621**: Formal Strategies in Architecture. Human behaviour also is vital to the pedagogy of architectural history and theory in the Program, as reflected in **EVDA 523.01** and **EVDA 523.02**: History of Architecture and Human Settlements I and II, and in **EVDS 671/675**, the urban systems course taken in the study abroad term. **EVDA 511**: Building Science and Technology I also takes human behaviour into account for designing interior environments.

	Foundation Year	MArch Year One	MArch Year Two
Primary Emphasis	**EVDS 523**	**EVDA 621**	
Secondary Emphasis	**EVDA 511** **EVDA 523.01** **EVDA 523.02**		**EVDS 671/675**

A7. Cultural Diversity

Understanding *of the diverse needs, values, behavioural norms, and social/spatial patterns that characterize different cultures and individuals, as well as the implications of this diversity on the societal roles and responsibilities of architects.*

Beyond the knowledge and experiences gained by students in their undergraduate degrees, the MArch Program provides education around cultural diversity in both studio and lecture courses. Specific architectural examples are discussed and written about in **EVDA 523.01**: History of Architecture and Human Settlements I, and to a lesser extent in **EVDA 523.02**: History of Architecture and Human Settlements II. In the second semester, diverse histories are operationalized in the multi-unit housing project in **EVDA 582**: Studio II in Architecture. Finally, students are exposed in person to cultural diversity within a pedagogical context in their study abroad/urban studio, and urban theory course of MArch Year Two.

	Foundation Year	MArch Year One	MArch Year Two
Primary Emphasis	**EVDA 523.01** **EVDA 582**		
Secondary Emphasis	**EVDA 523.02**		**EVDS 671/675**

A8. History and Theory

Understanding *of diverse global and local traditions in architecture, landscape, and urban design, as well as the factors that have shaped them.*

Learning about past design traditions, theories, practices, and contexts is covered in **EVDA 523.01** and **EVDA 523.02**: History of Architecture and Human Settlements I and II, and in **EVDA 621**: Introduction to Design Theories. Urban design traditions are explored in different global contexts in the required urban theory courses during the MArch Year Two Fall semester when students gain experiences outside of Calgary.

	Foundation Year	MArch Year One	MArch Year Two
Primary Emphasis	**EVDA 523.01** **EVDA 523.02**	**EVDA 621**	
Secondary Emphasis			**EVDS 671/675**

A9. Precedents

Ability *to make a comprehensive analysis and evaluation of a building, building complex, or urban space.*

Precedents are a significant focus of **EVDA 621**: Introduction to Design Theories, with the major assignment being a philosophical, social, and spatial analysis of an existing design. In addition, **EVDA 523.02**: History of Architecture and Human Settlements II spends a great deal of time on focused analysis of significant 20th century precedents. Precedents are also covered in **EVDA 523.01**: History of Architecture and Human Settlements I, and **EVDS 671/675**: Urban Systems/Theory. Precedents are mobilized in research and design in studio courses across the Foundation Year and also including **EVDA EVDA 682.04**: Comprehensive Studio.

	Foundation Year	MArch Year One	MArch Year Two
Primary Emphasis	**EVDA 523.02**	**EVDA 621**	
Secondary Emphasis	**EVDA 523.01** **EVDA 580** **EVDA 582**	**EVDA 682.04**	**EVDS 671/675**

B Design and Technical Skills

B.1 Design Skills

Ability *to apply basic organizational, spatial, structural, and constructional principles to the conception and development of spaces, building elements, and tectonic components.*

The principles of design are introduced through the full sequence of six studio courses, as listed below, by providing the students with increasingly complex architectural problems and scales.

Site-related design skills are covered in **EVDS 523**: Sustainability in the Built Environment. These skills are reinforced, developed, and deployed in **EVDA 541** and **EVDA 543**: Graphics Workshop I and II (linked to the Foundation studio courses in their respective semesters) and also in **EVDA 613**: Structures for Architects I.

	Foundation Year	MArch Year One	MArch Year Two
Primary Emphasis	**EVDA 580** **EVDA 582**	**EVDA 682.02** **EVDA 682.04**	**EVDA 782.xx** **EVDA 782.xx**
Secondary Emphasis	**EVDA 541** **EVDA 543** **EVDS 523**	**EVDA 613**	**EVDS 697.xx**

B2. Program Preparation

Ability *to prepare a comprehensive program for an architectural project that accounts for client and user needs, appropriate precedents, space and equipment requirements, the relevant laws and standards, and site selection and design assessment criteria.*

Students learn about and prepare building programs in the design studio sequence, in particular **EVDA 503**: Studio I (Design Thinking), **EVDA 682.02**: Intermediate Studio, and **EVDA 682.04**: Comprehensive Studio. Programming also is a secondary consideration in **EVDA 582**: Studio II in Architecture.

	Foundation Year	MArch Year One	MArch Year Two
Primary Emphasis	**EVDA 580**	**EVDA 682.02** **EVDA 682.04**	
Secondary Emphasis	**EVDS 582**		

B3. Site Design

Ability *to analyze and respond to context site conditions in the development of a program and in the design of a project.*

Primary responsibility for the basic knowledge and skills for analyzing site conditions is a key component and assignment in **EVDS 523**: Sustainability in the Built Environment. The design studio sequence offers multiple opportunities to apply these skills to a variety of site typologies. In particular, **EVDS 580**: Studio I (Design Thinking), **EVDA 582**: Studio II in Architecture, and **EVDA 682.02**: Intermediate Studio all include primary site design modules. Site factors are also addressed in **EVDA 682.04**: Comprehensive Studio and the associated course **EVDA 611**: Building Science and Technology II. Finally, precedents for site design are covered in the urban theory courses of MArch Year Two.

	Foundation Year	MArch Year One	MArch Year Two
Primary	**EVDA 523**	**EVDA 682.02**	
Emphasis	**EVDS 580**		
	EVDA 582		
Secondary		**EVDA 611**	**EVDS 671/675**
Emphasis		**EVDA 682.04**	

B4. Sustainable Design

Ability *to apply the principles of sustainable design to produce projects that conserve natural and built resources, provide healthy environments for occupants/users, and reduce the impacts of building construction and operations on future generations.*

Ecology and sustainability are core themes throughout the six studios of the three-year MArch degree. The Foundation Year courses **EVDS 523**: Sustainability in the Built Environment and **EVDA 511**: Building Science and Technology I address environmental conservation in a primary manner. Principles of sustainability are of importance in the Comprehensive semester where they are incorporated across technical courses —**EVDA 611**: Building Science and Technology II, **EVDA 615**: Environmental Control Systems— and the studio project in an integrated manner. Prior to the Comprehensive semester, sustainable design is promoted across the first three studios, as listed below.

	Foundation Year	MArch Year One	MArch Year Two
Primary	**EVDS 523**		
Emphasis	**EVDA 511**		
Secondary	**EVDA 580**	**EVDA 611**	**EVDS 671/675**
Emphasis	**EVDA 582**	**EVDA 615**	
		EVDA 682.02	
		EVDA 682.04	

B5. Accessibility

Ability *to design both site and building to accommodate individuals with varying physical and cognitive abilities.*

The basic principles of accessibility are introduced in **EVDA 611**: Building Science and Technology II and **EVDA 661:** Architectural Professional Practice I, in conjunction with a demonstration of the students' design ability in this area in **EVDA 682.04**: Comprehensive Architecture Design Studio.

	Foundation Year	MArch Year One	MArch Year Two
Primary Emphasis		**EVDA 611** **EVDA 682.04**	
Secondary Emphasis			**EVDA 661**

B6. Life Safety Systems, Building Codes and Standards

Understanding *the basic principles that inform the design and selection of life-safety systems in buildings and their subsystems: the codes, regulations and standards applicable to a given site and building design project, including occupancy classifications, allowable building heights and areas, allowable construction types, separation requirements, occupancy requirements, means of egress, fire protection, and structure.*

Responsibility for teaching basic principles of life safety is assigned to **EVDA 615**: Environmental Control Systems, while the theory is applied in **EVDA 682.04**: Comprehensive Architecture Design Studio. The principles of life safety systems are also covered secondarily in **EVDA 511** and **EVDA 611**: Building Science and Technology I and II, and in **EVDA 661**: Professional Practice.

	Foundation Year	MArch Year One	MArch Year Two
Primary Emphasis		**EVDA 615** **EVDA 682.04**	
Secondary Emphasis	**EVDA 511**	**EVDA 611** **EVDA 661**	

B7. Structural Systems

Understanding *of the principles of structural behavior in withstanding gravity and lateral forces, and the evolution, range and appropriate applications of structural systems.*

Responsibility for basic theory and application of this criterion is assigned to the structures stream: **EVDA 613** and **EVDA 619**: Structures for Architects I and II**.** Structural systems are introduced to the design context in **EVDA 682.02**: Intermediate Studio, and then become a primary factor in **EVDA 682.04**: Comprehensive Studio.

	Foundation Year	MArch Year One	MArch Year Two
Primary Emphasis		**EVDA 613** **EVDA 619** **EVDA 682.04**	
Secondary Emphasis		**EVDA 682.02**	

B8. Environmental Systems

Understanding *of the basic principles that inform the design of environmental systems, including acoustics, illumination and climate modification systems, building envelopes, and energy use with awareness of the appropriate performance assessment tools.*

Basic principles of control systems are introduced in **EVDA 511** and **EVDA 611**: Building Science and Technology I and II, and to some extent in **EVDA 523**: Sustainability in the Built Environment. They are then developed and applied in **EVDA 617**: Architectural Lighting Design, and in **EVDA 682.04**: Comprehensive Studio, with the associated course specifically focused in this area, **EVDA 615**: Environmental Control Systems.

	Foundation Year	MArch Year One	MArch Year Two
Primary Emphasis	**EVDA 511**	**EVDA 615** **EVDA 617** **EVDA 682.04**	
Secondary Emphasis	**EVDS 523**	**EVDA 611**	

B9. Building Envelopes

Understanding *of the basic principles involved in the appropriate application of building envelope and associated assemblies relative to fundamental performance, aesthetics, moisture transfer, durability, and energy and material resources.*

Basic understanding of building envelope systems is achieved in **EVDA 511**: Building Science and Technology I, and to a lesser extent in **EVDS 523**: Sustainability in the Built Environment. Application is explored in the integrated courses **EVDA 611**: Building Science and Technology II and **EVDA 682.04**: Comprehensive Studio**.**

	Foundation Year	MArch Year One	MArch Year Two
Primary Emphasis	**EVDA 511**	**EVDA 611** **EVDA 682.04**	
Secondary Emphasis	**EVDS 523**		

B10. Building Service Systems

Understanding *of the basic principles that inform the design of building service systems, including plumbing, electrical, vertical transportation, communication, security, and fire protection systems.*

Primary responsibility for basic principles in this area is assigned to **EVDA 615**: Environmental Control Systems, with additional attention given in **EVDA 617**: Architectural Lighting Design and **EVDA 611**: Building Science and Technology II. The principles of building service systems are applied in a design context in **EVDA 682.04**: Comprehensive Studio.

	Foundation Year	MArch Year One	MArch Year Two
Primary Emphasis		**EVDA 615** **EVDA 682.04**	
Secondary Emphasis		**EVDA 611** **EVDA 617**	

B11. Building Materials and Assemblies

Understanding *of the basic principles utilized in the appropriate selection of construction materials, components, and assemblies, based on their inherent characteristics and performance.*

This criterion is addressed across the curriculum, beginning in Foundation Year with basic knowledge presented in **EVDA 511**: Building Science and Technology I and secondarily in **EVDS 523**: Sustainability in the Built Environment. In MArch Year One, application is introduced in **EVDA 682.02**: Intermediate Studio, and becomes a primary factor in **EVDA 611**: Building Science and Technology II, both **EVDA 613** and **EVDA 619**: Structures for Architects I and II, and in **EVDA 682.04**: Comprehensive Studio.

	Foundation Year	MArch Year One	MArch Year Two
Primary Emphasis	**EVDA 511**	**EVDA 611** **EVDA 613** **EVDA 619** **EVDA 682.04**	
Secondary Emphasis	**EVDS 523**	**EVDA 682.02**	

B12. Building Economics and Cost Control

Understanding *of the fundamentals of development financing, building economics, and construction cost control, and life-cycle cost accounting.*

Building economics and cost controls are primary subjects in **EVDA 661**: Architectural Professional Practice. The criterion is also addressed in **EVDA 611**: Building Science and Technology II and **EVDA 615**: Environmental Control Systems.

	Foundation Year	MArch Year One	MArch Year Two
Primary Emphasis		**EVDA 661**	
Secondary Emphasis		**EVDA 615** **EVDA 611**	

C Comprehensive Design

C1. Detailed Design Development

Ability *to assess and detail as an integral part of the design, appropriate combinations of building materials, components, and assemblies.*

Detailed design development occurs in **EVDA 682.02**: Intermediate Studio**,** and in **EVDA 682.04**: Comprehensive Studio in conjunction with **EVDA 611**: Building Science and Technology II. Aspects of this criterion are covered in **EVDA 615**: Environmental Control Systems, **EVDA 617**: Architectural Lighting Design, and **EVDA 619**: Structures for Architects II.

	Foundation Year	MArch Year One	MArch Year Two
Primary Emphasis		**EVDA 682.04** **EVDA 682.02** **EVDA 611**	
Secondary Emphasis		**EVDA 615** **EVDA 617** **EVDA 619**	

C2. Building Systems Integration

Ability *to assess, select, and integrate structural systems, environmental systems, life safety systems, building envelope, and building service systems into building design.*

Ability in building systems integration is demonstrated in the Comprehensive semester through the courses integrated with **EVDA 682.04**: Comprehensive Studio. The role of specific building systems in architectural design is taught in respective technical lecture courses: **EVDA 611**: Building Science and Technology II, **EVDA 615**: Environmental Control Systems, and secondarily in **EVDA 619**: Structures for Architects II. Building systems integration also is a primary component of **EVDA 617**: Architectural Lighting Design, taught in the previous semester. The topic is introduced in Foundation Year courses **EVDA 511**: Building Science and Technology I and **EVDS 523**: Sustainability in the Built Environment.

	Foundation Year	MArch Year One	MArch Year Two
Primary Emphasis		**EVDA 682.04** **EVDA 611** **EVDA 615** **EVDA 617**	
Secondary Emphasis	**EVDA 511** **EVDA 523**	**EVDA 619**	

C3. Technical Documentation

Ability *to make technically precise descriptions and documentation of a proposed design for purposes of review and construction.*

In Foundation Year, the courses **EVDA 541**: Graphics Workshop I and **EVDA 543**: Graphics Workshop II introduce the students to a range of drawing types, both manually and digitally. Then in MArch Year One, the integrated pedagogy of **EVDA 682.04**: Comprehensive Architecture Design and **EVDA 611**: Building Science and Technology II requires the technical documentation of the student's design work. Ability to make technical drawings also is developed to a lesser extent in **EVDA 511**: Building Science and Technology I and **EVDA 617**: Architectural Lighting Design, and **EVDA 619**: Structures for Architects II.

	Foundation Year	MArch Year One	MArch Year Two
Primary Emphasis	**EVDA 543**	**EVDA 682.04** **EVDA 611**	
Secondary Emphasis	**EVDA 511** **EVDA 541**	**EVDA 617**	

C4. Comprehensive Design

Ability *to project design based on an architectural idea, a building program and a site. The design or designs should integrate structural and environmental systems, building envelopes, building assemblies, life-safety provisions, and environmental stewardship.*

Ability in comprehensive design is the focus of an entire semester of courses that revolve around **EVDA 682.04**: Comprehensive Architecture Design. This course works in parallel with **EVDA 611**: Building Science and Technology II, **EVDA 615**: Environmental Control Systems, and **EVDA 619**: Structures for Architects II to satisfy this criterion. Comprehensive design also is discussed in **EVDA 617**: Architectural Lighting Design.

	Foundation Year	MArch Year One	MArch Year Two
Primary Emphasis		**EVDA 682.04**	
Secondary Emphasis		**EVDA 611** **EVDA 615** **EVDA 617** **EVDA 619**	

D Leadership and Practice

D1. Leadership and Advocacy

Understanding *of the techniques and skills for architects to work collaboratively with allied disciplines, clients, consultants, builders, and the public in the building design and construction process, and to advocate on environmental, social, and aesthetic issues in their communities.*

Responsibility for the criterion relating to professional leadership is assigned to the professional practice courses, **EVDS 697.86**: Leadership and Architecture and **EVDA 661**: Architectural Professional Practice I. This topic is also addressed in **EVDA 580**: Studio I (Design Thinking).

	Foundation Year	MArch Year One	MArch Year Two
Primary Emphasis		**EVDS 697.86**	**EVDA 661**
Secondary Emphasis	**EVDA 580**		

D2. Ethics and Professional Judgment

Understanding *of the ethical issues involved in the formation of professional judgment regarding social, political and cultural issues in architectural design and practice.*

Students acquire an understanding of professional ethics via **EVDA 661**: Architectural Professional Practice I, and **EVDS 697.86**: Leadership and Architecture. This criterion is also a secondary topic in **EVDS 523**: Sustainability in the Built Environment.

	Foundation Year	MArch Year One	MArch Year Two
Primary Emphasis		**EVDS 697.86**	**EVDA 661**
Secondary Emphasis	**EVDS 523**		

D3. Legal Responsibilities

Understanding *of the architect's responsibility to the client and the public under the laws, codes, regulations and contracts common to the practice of architecture in a given jurisdiction.*

Beyond the general introduction to codes offered in **EVDA 611**: Building Science and Technology II, the legal responsibilities of architects primarily are taught in **EVDS 661**: Architectural Professional Practice I.

	Foundation Year	MArch Year One	MArch Year Two
Primary Emphasis			**EVDA 661**
Secondary Emphasis		**EVDA 611**	

D4. Project Delivery

Understanding *of the different methods of project delivery, the corresponding forms of service contracts, and the types of documentation required to render competent and responsible professional service.*

Beyond the technical documentation required in **EVDA 611**: Building Science and Technology II, responsibility for the criterion relating to contracts and services is assigned to **EVDA 661**: Architectural Professional Practice I.

	Foundation Year	MArch Year One	MArch Year Two
Primary Emphasis			**EVDA 661**
Secondary Emphasis		**EVDA 611**	

D5. Practice Organization

Understanding *of the basic principles of practice organization, including financial management, business planning, marketing, negotiation, project management, risk mitigation, and as well as an understanding of trends that affect practice.*

Responsibility for student learning related to practice management is assigned to the professional practice courses, **EVDS 697.86**: Leadership and Architecture and **EVDA 661**: Architectural Professional Practice, with some further discussion of this in **EVDA 611**: Building Science and Technology II.

	Foundation Year	MArch Year One	MArch Year Two
Primary Emphasis		**EVDS 697.86**	**EVDA 661**
Secondary Emphasis		**EVDA 611**	

D6. Professional Internship

Understanding *of the role of internship in professional development, and the reciprocal rights and responsibilities of interns and employers.*

The curricular responsibility for the criterion related to the process and meaning of internship is assigned to **EVDA 661**: Architectural Professional Practice I.

	Foundation Year	MArch Year One	MArch Year Two
Primary Emphasis			**EVDA 661**
Secondary Emphasis			

4. SUPPLEMENTAL INFORMATION

4. SUPPLEMENTAL INFORMATION

4.1 Introduction to the Institution and Program History

4.1.1 History, Description and Mission of the Institution

The institution that became the University of Calgary, initially was established in 1945 as an extension of the University of Alberta in Edmonton. In 1966, the city, and the southern Alberta region, finally achieved a long-term goal when the University of Calgary was given its new name and its autonomous status. This developed coincidentally with Calgary's emergence as an international business centre for energy, agriculture, communications, transportation and tourism. Calgary is rich in cultural and artistic activity, and an exceptionally high level of education leads its people to take a lively interest in their University. The University combines the best of long-established university traditions with the freshness, originality and independence of Calgary's entrepreneurial environment. The University of Calgary has been celebrating its 50th Anniversary in 2016, with a series of special events.

Although the institution has occupied its present 213-hectare north-west Calgary campus since 1960, the years from 1965 to 1976 defined the major period of growth for the University, seeing the establishment of programs in Engineering (1965), Social Welfare (1966), Business and Fine Arts (1967), Nursing (1969), Medicine (1970), Environmental Design (1971), Law (1975), Science (1976), Social Science (1976), Humanities (1976), General Studies (1981), and Veterinary Medicine (2008). Today it is a comprehensive research and teaching university with a broad range of Faculties, over 200 academic departments and major program areas, as well as major research institutes and centres.

The U of C has over 30,000 full-time students, and more than 1,800 faculty members actively engaged in research, scholarship and teaching in Canada and around the world. More than 3,000 staff make it one of the largest employers in Calgary. About two-thirds of our 160,000 alumni live in the Calgary area. The university produces an economic impact of almost $8 billion in the Calgary area alone. The University of Calgary is part of an increasingly interdependent system of colleges and universities called Campus Alberta, which provides public access to a range of educational programs. The University is committed to participating in this system cooperatively so as to serve the best interests of the people of Alberta.

On July 1, 2010, Dr. Elizabeth Cannon officially became the President of the University of Calgary, and she currently is serving her second term in that role. She led the crafting of the University's five-year strategic plan, known as "Eyes High": http://www.ucalgary.ca/eyeshigh/

The U of C currently is in the midst of its largest capital expansion ever, with all projects intended to create new and better spaces for teaching, learning and research in high-demand areas. The Taylor Family Digital Library re-engineered the University's library system when it opened in 2011, and provides a community for intellectual and scholarly activity by providing access to digital and other information sources, including the Nickle Arts Museum. This building expanded the Information Commons,

and provided significantly more collaborative, team and project space, including a cutting-edge Visualization Studio.

The Downtown Campus is a newer facility in the heart of Calgary that welcomed its first students in Fall 2010, mostly in Continuing Education and Business courses. It is also the site of the Faculty of Environmental Design's Design Matter Lecture Series and other public events. Other new facilities opened since the last accreditation visit include the Energy, Environment, and Experiential Learning (EEEL) building which offers students improved opportunities for experiential learning in laboratory fields. There are two new residences opened in the last three years, including a substantial graduate student residence, Crowsnest Hall, where many EVDS students live. A major addition and renovation of the Engineering complex, supported by a large donation from a local resources company, will be complete in Fall 2016. Completed and opened in Spring of 2016, the Taylor Institute for Teaching and Learning is the first building of its kind in Canada, its devoted to studying, promoting, and improving the quality of university pedagogy.

University of Calgary Academic Plan

The mission of the institution is reflected in the University of Calgary Academic Plan, which outlines the core principles that guide the university's activities, govern priorities, and influence the strategic allocation of resources. The Plan was developed in 2012 in a University-wide process. The following is sourced from the Academic Plan: http://www.ucalgary.ca/provost/files/provost/academicplan2012.pdf

Through our consultation process we identified seven major academic priorities that will guide our actions and define the nature of our discoveries, creative endeavors, and innovations. These priorities are:

- Talent Attraction, Development, and Retention
- Teaching and Research Integration
- Interdisciplinarity
- Leadership
- Internationalization
- Connection with Community
- Sustainability

As a result of a focus on these academic priorities, graduates from the University of Calgary will have experienced high quality, engaging academic programs and will be thoughtful, communicative citizens and leaders of their respective communities, with abilities to think critically and creatively to solve issues of the day. They will understand the value of collaboration and partnerships, and will be used to working with others who are considered traditionally outside of their fields of expertise. They will also appreciate different cultures and see value in diversity—of opinion, thought, gender, race, and culture. They will appreciate the limited resources available on Earth, and work and live to create a sustainable future. Importantly, they will recognize the content and skills they learn during their time at the University of Calgary will change with new discoveries, and as a result they will be life-long learners.

Through a focus on our academic priorities, we will work with the City of Calgary and surrounding communities in Alberta to enhance the strategic advantage already in place. We will work with community leaders, corporate partners, non-profit organizations, alumni and the public to inspire and ensure a positive future. We aspire to work with international communities to solve problems of global relevance. In working with these diverse communities near and far, we will develop a comprehensive model for ethical, socially responsible, sustainable partnerships that will focus on mutual benefit for all.

4.1.2 Program History

The Faculty of Environmental Design was established in 1971 in response to a campaign by the Alberta Association of Architects for a school of architecture in the province. Its non-departmental structure housed academic programs in Architecture, Environmental Science and Urbanism. The intention of both the University and the Association, in establishing such an academic unit, was to meet the increasing demands being placed on the profession and on the environment through the education and training of professionals for a greater variety of design roles in an academic environment that not only encouraged but required interdisciplinary group approaches to teaching and research.

Prof. William T. Perks, from Ottawa's National Capital Commission, was founding Dean of the Faculty (1971-1981) and Professor R. Douglas Gillmor, FRAIC, from the University of Manitoba, the founding Director of the Architecture Program. The early challenges facing the Program were the professional liaison and curriculum development necessary to implement the professional programs of study while at the same time developing the interdisciplinary links within the Faculty. Among the accomplishments of this period was the development of the theoretical and pedagogical foundations of the program and the recruitment of students and faculty committed to the idea of interdisciplinary studies. In addition to Doug Gillmor, the Directorship was held in this period by James McKellar, FRAIC and Dr. Michael McMordie.

Dr. Don Detomasi moved from the Planning Program in EVDS to serve as Dean from 1981 to 1989. During his tenure, the Directorship of the Architecture Program was held successively by Dale Taylor FRAIC, Doug Gillmor, and Robert Kirby. In response to the evolving needs of the profession, the Architecture Program began to shift towards incorporating national standards and procedures expressed through certification into a curriculum to be followed by a student body who were increasingly focused and less inclined to explore the periphery. This was also a period of declining

resources and expanding national and international initiatives. A range of revenue generating research projects in Bangkok and Peru enabled the Faculty to manage the gradual decline in government support over this period. Dean Detomasi initiated a proposal for a new building to house this Faculty and three other professional faculties before his departure in 1989 to become Associate Vice President (Planning) for the University. Prof. Doug Gillmor, of the Architecture Program, served as Acting Dean from 1989 to 1990 as the Faculty began to develop a strategic plan for the coming decade.

Dr. Robert Page from Trent University served as Dean from 1990-1996, and directed the Faculty through the difficult task of managing significant budget cuts while maintaining the integrity of the professional programs. John Brown, MRAIC, and Dale Taylor, FRAIC, served as Directors of the Architecture Program during this period and prepared the Program for the process of accreditation by the CACB. Despite significant budgetary constraints and the loss of one faculty position, the Program instituted a number of enrichment opportunities including exchange programs in India and the study abroad program in Barcelona, Spain. The current building became the Faculty's new home in January 1994.

Following the retirement of Dale Taylor, the Directorship of the Program was shared by John Brown, MRAIC, and James Love, MRAIC. This was done to recognize the significant administrative duties of the Director while still allowing these key faculty members to continue their teaching and research activities. In 1997, under Acting Dean Dr. Ron Wardell, the Faculty underwent a reorganization of its administrative structure.

The appointment of Dr. Mary Ellen Tyler as Dean in 1998 heralded a new period in the Faculty. Issues of administrative restructuring were addressed and the Architecture Program enjoyed a renewed commitment from the Faculty. Key initiatives included the establishment of a Minor in Architectural Studies (ARST) within the Faculty of Communication and Culture (formerly the Faculty of General Studies) in 1999, the consolidation of the study abroad term in Barcelona (Spain), and the inauguration of an annual architecture student publication *In Situ*.

Prof. Graham Livesey, AAA, MRAIC assumed the Program Directorship from 2000 to 2006. He focused on promotion, redefining the vision, curriculum changes, and growing the program. In 2003, an Access proposal was developed for the Alberta government that outlined the Architecture Program's growth objectives. This proposal was accepted in 2005, and funds came to the program that allowed for the hiring of new faculty and augmenting the facilities to accommodate the growth of the overall program. These changes doubled the total number of students.

In 2003, Prof. Brian R. Sinclair assumed the Dean's position in the Faculty. An alumnus of the Architecture Program, he focused on strengthening the Faculty through fundraising, promotion, and significant outreach initiatives. He continued in the role until 2007. Under Dean Sinclair, Prof. Loraine Fowlow served as Associate Dean Academic, overseeing the academic administration of both the Architecture and Environmental Design programs. She then served as Interim Dean for one and a half years from 2007 until 2009.

During Fowlow's tenure, the Faculty underwent a significant re-structuring that led to its being comprised of two Master's programs, each coordinated by an Associate Dean: the professional Master of Architecture Program and the non-professional Master of Environmental Design Program (plus the PhD program that was established in 1999). Since that time, urban and regional planning education in the Faculty was restructured into an MPlan degree, accredited in 2013. A new Master of Landscape Architecture degree accepted its first students in Fall 2015.

Prof. Marc Boutin directed the Architecture Program from 2006-2009, and with an administrative restructuring, became the first Associate Dean (Academic – Architecture). During this period the Faculty of Environmental Design came under the administration of the Faculty of Graduate Studies, which led to a number of changes. Among these was the decision to reduce the professional MArch Program to three years.

In 2009-10, Graham Livesey assumed the position of Associate Dean (Academic - Architecture) for a one-year term, during which the Program revised its vision statement, consolidated the three-year curriculum, developed a Strategic Plan (2010-2015), and worked on promotion. In 2010, Dr. Nancy Pollock-Ellwand was appointed to the position of Dean of the Faculty of Environmental Design for a five-year term; she is now in her second term as Dean.

Dr. Branko Kolarevic assumed duties as the Associate Dean (Academic – Architecture) from 2010-2013; he was in the role for the last accreditation visit for the MArch Program. Dr. David Monteyne served as Associate Dean (Academic – Architecture) from 2013-2015. Graham Livesey resumed the role of Associate Dean (Academic – Architecture) in 2015 for a three-year term, continuing a long tradition of drawing program leadership from within the faculty ranks. Over the past six years, the MArch Program has focused on Improving internal processes and student satisfaction, massaging the three-year curriculum, developing a second study abroad option in the Pacific Rim, and providing more design-build opportunities.

Driven by an energetic and dedicated group of faculty members, and supplemented by generous enrichment programs for its students, the MArch Program currently is in an exciting period in its history, and is well poised to assume an ever more significant role in the coming decade. During the last several years faculty, students, and alumni have received widespread recognition for their achievements in local, regional and national media and awards programs.

4.2 Student Progress Evaluation

A Grading System

The Faculty of Environmental Design evaluates student work in accordance with the University's letter grading system. This is a four-point system as follows:

A+	4.0	
A	4.0	Excellent
A-	3.7	
B+	3.3	
B	3.0	Good
B-	2.7	
C+	2.3	
C	2.0	Satisfactory
C-	1.7	
D		
F		

According to the regulations of the Faculty of Graduate Studies, students must maintain a 3.0 (B) average; all course grades must be B- or higher to count toward a graduate degree at the University of Calgary.

B Review of Student Progress

At the end of each academic session, MArch Program faculty members meet to review the record of student performance (Mid-Year Review and Year-End Review); the decisions of the Program are ratified by the EVDS Faculty Council. This review identifies both exemplary and deficient performance. Letters of commendation are sent to deserving students after each semester. Scholarship decisions also are made at Year-End Review for awards having academic merit as the primary scholarship criterion (e.g., as opposed to a proposal or project submission). Letters of recognition may also be sent for improved performance when students have previously been cited for poor performance.

Students are evaluated in these Reviews against published Faculty of Graduate Studies criteria of minimum course grades and grade point averages, and with an overall view for satisfactory progress in their architecture courses, especially the design studio courses. The academic staff discuss cases of unsatisfactory progress at length, to ensure that pertinent information from all instructors is heard. Students are asked to inform their course instructors, or the Associate Dean (Academic – Architecture), of mitigating personal circumstances that may have affected their performance during the semester.

Under certain conditions, remedial coursework or degree extensions may be granted to enable a student to continue in the Program. The Reviews also may determine that a student's performance indicates that they should be required to withdraw from the Faculty. In all such cases, the student has the right to address an appeal, either informally to the Associate Dean (Academic – Architecture), or formally to the Faculty of Graduate Studies.

C Graduation

Students are nominated officially for the MArch degree before the EVDS Faculty Council. Degrees are awarded by the University at Convocation ceremonies in June and November. Successful candidates must have completed the curriculum published in the University Calendar, which includes the Faculty core and the courses required for the MArch degree.

D Advanced Standing: Waivers and Exemptions from Courses

The MArch Program recognizes prior academic work that is replicated in its non-studio courses. There are two common cases: students who have completed relevant courses in anticipation of pursuing architectural studies; and students who hold a previous, non-professional degree in design.

In these cases, the student makes a documented application to the course manager/instructor, who judges equivalency of prior course content and objectives in comparison to the EVDS course for which advanced standing is desired. Each student's situation is therefore considered individually by the instructor, and all situations involving advanced standing are approved by the Associate Dean (Academic – Architecture). The student provides documentation in the form of course outlines and assignments, and transcripts, officially translated into English if necessary. Generally, students are granted advanced standing in a non-studio course if they can demonstrate, on a case-by-case basis, they have taken the equivalent material at another institution and have received at least a B- grade for the course or courses used in the application.

If equivalency is granted, the process is slightly different depending whether the student has been accepted into Foundation Year or to MArch Year One. For Foundation Year students, a course waiver is indicated in cases of advanced standing. Regardless whether the previous course(s) were taken as part of a previous degree, no substitution or making up of the credit is required.

Students applying into MArch Year One from EVDS' Architectural Studies Minor program typically have taken the entire set of Foundation Year courses (as ARST courses). Students applying into the MArch Year One from other institutions with pre-professional or professional architecture degrees are automatically granted advanced standing for the following courses: EVDA 580, EVDA 582, EVDA 541, and EVDA 543 (the Foundation Year studio and graphics courses); in order to receive advanced standing in the other Foundation Year courses, they must demonstrate equivalency in EVDS 523 (Sustainability), EVDA 523.01/523.02 (History I and II), and EVDA 511 (Building Science and Technology I). Their status in relation to advanced standing in these course is included in their admission offer letter. Occasionally, students

accepted into MArch Year One from other institutions have been able to receive advanced standing in MArch Year One courses such as EVDA 613 (Structures I) or EVDA 617 (Architectural Lighting Design). In principle, the MArch Program does not give advanced standing for any of the technical courses integrated with the Comprehensive Studio in the second semester of MArch Year One.

Regarding what appears on the student's transcript, there are two possibilities:

a) if the course was taken as part of a previous degree, advanced standing is noted on the transcript, but the equivalent University of Calgary course does not appear on the transcript.

b) if the course was taken elsewhere, but *not* as part of a previously-completed degree, credit is granted for the University of Calgary course and this is noted on the student's transcript.

4.3 Current Course Descriptions

Master of Architecture Program Faculty of Environmental Design University of Calgary 2016 **Course Outlines**	**Design** ARST 484 / EVDA 580: Studio I (Design Thinking) **Faculty Responsible:** Jason Johnson, Catherine Hamel, Barry Wylant, Jodi James Fall **Full Course**

Co-requisites: EVDA 541: Graphics Workshop I

Overview

Instruction and supervised experience in drafting, sketching and rendering; drawing and presentation conventions. A variety of instruction may be offered to accommodate the varied level of student development.

Learning Objectives

• To acquire a basic knowledge of the design process based on the relationship between critical thinking and design thinking as a means of translating complex bodies of knowledge into innovative design solutions.
• To acquire a basic knowledge of the language of architectural space and form, and an understanding of the architectural conventions in the description and exploration of space and form.
• To acquire the knowledge to reveal intentions in architecture through the process of deconstruction and interpretation.
• To acquire the understanding and skills to develop an analysis and interpretation of site and its related climatic, social, programmatic and other key contextual aspects as a precondition to intervention.
• To develop individual and collaborative (interdisciplinary) skills in design process and representation.
• To learn about and develop the ability to explore the inter-relationships between design, architecture and context.

Course Requirements

Students are expected to complete studio projects by the assigned date, pinned up and ready to start at the beginning of the scheduled class time. Students are expected to present their work to the group and to participate in class discussions.

Studio projects	90%
Digital portfolio	10%
Total	100%

CACB Criteria

Primary: A3. Graphic Skills, B1. Design Skills, B2. Program Preparation, B3. Site Design
Secondary: A1.Critical Thinking Skills, A4. Verbal and Writing Skills, A5. Collaborative Skills, A9. Precedents, B4. Sustainable Design, D1. Leadership and Advocacy

Course Content: Topic Areas

Module One 4 weeks (30% of Final Grade)

• Project 1: (2 weeks) Precedent Analysis and Interpretation: Explorations in Architectural Intentionality.
Students will work in teams of two and analyze and deconstruct an architectural precedent. Through a rigorous drawing and modeling process, students will explore the intentions of the precedent, and develop an analytical and interpretive framework for architectural order, space, form, and the architecture's connection to site.
• Project 2: (2 weeks). Contexts: Developing a Comprehensive Understanding of the Landscape.
Student groups discuss the fundamental aspects of a given site and come to an understanding of an overall vision of this context. Drawing and modeling is then used in translating the diverse knowledge developed from a site analysis into a comprehensive two-dimensional representation of site. Graphic strategies are utilized to explore the site as a complex, layered entity. This comprehensive site documentation is the basis for future project work.

Module Two. 8 weeks (60% of Final Grade)

• Project 3: (1 week). The Programme: The Stage for Spatial, Functional, and Conceptual Relationships.
Students will develop a comprehensive spatial and functional programme intended for their final design project. This project will involve the interview of a fellow classmate towards understanding how they live, structured through critical enquiry, and the translation of this information into a set of spatial, programmatic, and functional relationships.
• Project 4: (7 weeks divided into 4 related explorations). The Design of a House Design: Synthesis.
Students will design a house within the site analyzed in Project 2 and utilizing a fellow classmate's Programme developed in Project 3. This project will engage the framework developed during Project 1 in exploring domestic space, the design process, spatial, formal, tectonic and material order, and the integration of architecture within the context of a site. The project is divided into 4 related studies:
• Conceptual Definition
• Plan and Section Order
• Tectonic and Material Order
• Final Project Resolution

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Course Outlines

Design

ARST 444 / EVDA 582: Studio II in Architecture

Faculty Responsible: Josh Taron, John Brown, Jason Johnson, Dustin Couzens

Winter

Full Course

Co-requisites: EVDA 543: Graphics Workshop II

Overview

This studio begins with the assertion that the choices in forms of residential modes of living currently presented to us are both insufficient and unimaginative – posing a real threat to the future of architecture, cities and their inhabitants. The studio also acknowledges that many of our own banal assumptions about the city pose the same threat to our own designs. In response to the problem, the studio proposes an alternative in the form of a radical redistricting of the city in an effort to wake architecture from its slumber – reimagining its possible futures. Within these districts, new hybrid modes of dwelling will be explored – examining the ways in which architecture and its inhabitants might adapt to the emergent and imposed axiomatic demands of the city. Each studio section will operate within its own district of a provided master plan (addressed in the first day of class). These districts are designed to establish the context for each studio while creating a legible connection across the studio at large.
This course is the second studio in the Master of Architecture Program sequence. It examines formal, material, spatial and social aspects of urban dwelling by addressing the design of a medium-sized mixed use (residential + 1 additional program theme) project (2,000 m2) sited within the city of Calgary.

Learning Objectives

- To develop design skills through the design of a medium sized mixed use project with a two-part (residential + 1) program.
- To develop introductory knowledge of massing, siting, programming, and material assemblies.
- To develop skills in architectural orthographic representation.
- To develop speculative models of dwelling within urban environments.
- To develop site design, graphic, concept design, and design development skills.

Course Requirements

Students will be expected to follow all assignments, to be present in studio on Tuesdays and Fridays (and as otherwise required by the schedule), and attend all lectures and reviews. Students will also be expected to read any assigned readings. Detailed project descriptions will be provided throughout the term by the various instructors. The following is the general breakdown of assignments:

Phase 1: Site Analysis/Massing/Siting	20%
Phase 2: Spatial Subdivision/Space Planning	20%
Phase 3: Materiality & Assemblages	20%
Phase 4: Synthesized Designs/Final Review	30%
Phase 5: Final Portfolio	10%
Total	100%

CACB Criteria

Primary: A3. Graphic Skills, A7. Cultural Diversity, B1. Design Skills, B3. Site Design
Secondary: A5. Collaborative Skills, A9. Precedents, B2. Program Preparation, B4. Sustainable Design

Course Content: Topic Areas

Hybrid Dwelling
Speculative Dwelling
- How are social-economic divisions / lines in the city reinforced or blurred by current forms and distributions of housing?
- How does the pursuit of profit affect cultural integration and the preservation of cultural values in residential conditions?
- How can we exploit the current economic systems in the provision of domestic architecture?
- What are the benefits and opportunities of the contemporary residential market?

Total City: Dwelling in Ruraltopia
- Postulates that one possible explanation could be the incongruence between the way(s) in which we used to dwell in rural villages vs. how we dwell in urban cities.
- What if we revisited the best attributes of the village and the city, superimposing them to produce a hybrid metric or template that proposed possible formal strategies or futures for how we dwell in the city?
- How could these formal strategies inform new modes of dwelling (i.e. residential typologies)
- How could these new forms of dwelling contribute to mending the diminishing social, cultural, political and economic ecologies in our society?
- How could these formal strategies influence/change the current relationship between architecture and the city?
- Can these formal strategies be extrapolated to inform the design of our future cities?

Contd. Below

Formal City

Cities very much emerge out of the formal mechanisms that govern them. The studio engages in a speculative future whereby the built environment is articulated through a series of automated formal operations. These operations will be researched, developed and applied during Phase 1 of the studio. Through an ongoing discussion taking place at the level of the studio section, a narrative will emerge that will serve to further define the context for the studio projects.

- Capitalism is constraining the productive and creative forces of technology
- Force is a diagram of form
- Architecture is limited by its own capacity to model form

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Course Outlines

Design

EVDA 682.02: Intermediate Architecture Design Studio

Faculty Responsible: Vera Parlac, Josh Taron, Branko Kolarevic, Phil Vandermey

Fall

Full Course

Co-requisites: EVDA 621: Introduction to Design Theories

Overview

This course is the third studio in the Master of Architecture Program sequence and examines scalar, systemic, and material aspects of ecosystems by addressing the design of a medium sized multi-purpose urban facility (20,000 m2). For this year, the program for the studio includes office (30-50%), culture (30-50%), commercial (10-20%), and public space (5-10%). The impact that human constructions and infrastructures have had on global ecosystems (and vice versa) requires a comprehensive understanding of the material and technical complexity of built environments in order to reduce the consumption of vital resources and to respond to various environmental challenges. The project sites for the term will be determined by individual instructors, and will involve urban contexts. Courses, during this semester, focus on buildings as reflexive ecological constructs produced within dynamic systems at multiple scales. The following topics will be introduced conceptually during the semester: materials and assemblies, structural systems, medium sized building typologies, and environmental systems. This course operates with other courses during the semester including EVDA 613: Structures for Architects I, EVDA 617: Architectural Lighting Design, and EVDA 621: Introduction to Design Theories.

Learning Objectives

• To develop design skills through the design of a medium sized project with a complex program.
• To develop introductory knowledge of programming, materials and assemblies, building systems, and structural concepts.
• To understand the concept that buildings are ecologies that participate in larger ecologies (flow systems), and to understand the role that technology plays in this interface.
• To develop site design, graphic, concept design, and design development skills.

Course Requirements

Students will be expected to follow all assignments, to be present in studio on Tuesdays and Fridays (and as otherwise required by the schedule), and attend all lectures and reviews. Students will also be expected to read any 2 assigned readings. Detailed project descriptions will be provided throughout the term by the various instructors. The following is the general breakdown of assignments:

Phase 1 Research, Site Analysis/Planning, Programming, Concept Basic hand and machine tool exercises. (4 weeks)	30%
Phase 2 Design Development (3 weeks)	20%
Phase 3 Construction/Object/Model Charrette (1 week)	10%
Phase 4 Final Design and Presentation (3 weeks)	30%
Phase 5 Final Portfolio	10%
Total	100%

CACB Criteria

Primary: A3. Graphic Skills, B1. Design Skills, B2. Program Preparation, B3. Site Design, C1. Detailed Design Development
Secondary: A1. Critical Thinking Skills, B4. Sustainable Design, B7. Structural Systems, B11. Building Materials etc.

Note: students entering M1 from other institutions are required to take the Workshop Skills course.

Course Content: Topic Areas

In this studio there will be four sections, each covering the same basic material, but through different projects, sites, and pedagogical approaches (students will have the opportunity to select their section during the first class). Each instructor will provide detailed project descriptions throughout the semester. Guidance and feedback will be provided during desk, informal, lectures, and formal reviews. The work will be done individually (with some research work done in small groups). The studio will be process oriented, allowing students some latitude to develop their own design methodologies.

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Course Outlines

Design

EVDA 682.04: Comprehensive Studio

Faculty Responsible: Brian Sinclair, Keir Stuhlmiller, Alan Collyer, Mauricio Soto Rubio

Winter

Full Course

Co-requisites: EVDA 619: Structures for Architects II, EVDA 611: Building Science and Technology II, EVDA 615: Environmental Control Systems

Overview

The world is now more urban than rural, with significant implications for the design disciplines. Coupled with growing urban realms is our increasing awareness of climate change and its many implications. Cities and buildings stand as major contributors to such phenomenon. However, they also loom as tremendous instruments to change directions. Urban and Architectural design hold fundamental places in our society. Architects and Urbanists have real obligations and opportunities at the present juncture. The "Centre for Urban + Architectural Studies" presents us with a project through which pressing dilemmas can be critically considered and meaningfully explored. A major objective of the present studio is to develop designs that, while proving technically competent and viable, also push our understanding concerning the potential of design to make a difference to a world in need.

Learning Objectives

• The basic curricular objective is the overall formal, spatial, and tectonic resolution of a moderately complex building of approximately 2000 m2, situated in an urban context, including appropriate allocation of the program, resolution of circulation and proper means of egress, as well as a basic articulation of building structure, environmental systems, assembly, and envelope, and adherence to the building codes.
• Equal consideration will be given to user needs and human dimensions, including environmental perception, symbolism and meaning, ergonomics and adaptability, cultural sensitivity and place-making.
• The studio will explore the relationships between architectural form, its tectonic and material articulation, its cultural resonance and its environmental impacts.
• The emphasis of the Comprehensive Studio is especially on the cultural and environmental (i.e. sustainability) potential of novel design and building technologies.

Course Requirements

In addition to normative drawings (plans, sections, elevations) and digital 3D models and renderings, various physical scale models may, at the instructor's discretion, be expected at specific stages. In addition to a developed design of the project's spaces and areas, its structural and environmental systems will have to be sufficiently articulated and adequately documented. A selected segment of the building's envelope will be developed and modeled in greater detail.

Reviews will occur at the end of each assignment and grades will be given at each of those points. Grades will be cumulative through the semester, and will count according to time allotment for each assignment. Students are expected to meet all requirements for each assignment to receive a passing grade. Grades will be based on the following (depending on the topic and the assignment):

Development (process)	30%
Conclusion (product)	30%
Presentation	30%
Attendance and participation	10%
Total	100%

CACB Criteria

Primary: A3. Graphic Skills, A5. Collaborative Skills, B1. Design Skills, B2. Program Preparation, B5. Accessibility, B6. Life Safety Systems etc., B7. Structural Systems, B8. Environmental Systems, B9. Building Envelopes, B10. Building Service Systems, B11. Building Materials etc., C1. Detailed Design Development, C2. Building Systems Integration, C3. Technical Documentation, C4. Comprehensive Design
Secondary: A2. Resaerch Skills, A9. Precedents, B3. Site Design, B4. Sustainable Design

Course Content: Topic Areas

• Conceptual Design (including site analysis, interpretation & planning, plus programming)
• Design Development & Integration
• Building Systems Advanced Integration
• Technical Documentation

Master of Architecture Program Faculty of Environmental Design University of Calgary 2016 **Course Outlines**	**Design** EVDA 782.xx: Senior Studio in Architecture I **Faculty Responsible:** ***Portland***-Graham Livesey, Francisco Alaniz Uribe, ***Barcelona***-Rafael Gomez-Moriana, Arturo Frediani, ***Tokyo / Melbourne***- Brian Sinclair, Alysia Bennett, Janny Rayment Fall

Full Course

Co-requisites: None

Overview

The Senior Architecture Design Studios in the Fall semester focus on urban design in complex urban settings (Barcelona, Tokyo/Melbourne, and Portland). They immerse students in dense built environments, networks, and systems that comprise the ecologies of contemporary cities. Urban issues and urban sites are experienced, and a building or intervention is designed, in relation to social and cultural contexts, but also in terms of infrastructure, public space, and environmental impacts for sustainable communities (residential, employment, commercial, and cultural/institutional). Cities such as Barcelona, Melbourne, and Portland have gained international reputations as progressive cities that have innovated in many areas including growth management, transit-oriented communities, district revitalization, sustainable infrastructure, public space design, and urban design. This senior studio will allow students to work on a complex urban design scheme, where students will engage with a wide variety of consultants and information in order to produce urban design projects (the Pacific Rim and Pacific NW options will involve some interdisciplinary team work). Topics could include: waterfront revitalization, densification, functionality, optimizing transit, developing green infrastructure, environmental factors, alternative typologies, integrating ecologies, green space systems design, etc.

Studio, while developing skills, is also seen as being a site for discovery through analysis, process, and experimentation. The studio will explore the nature of contemporary urban design, with respect to program, site analysis, cultural and social forces, technology, ecology, etc. The studio will involve the integration of consultation, research, readings, field trips, lectures, precedent studies, etc. Students are expected to use a variety of media in their design development. Handouts will be given out during the term as required.
The final product of the studio will be developed into a small publication.

Learning Objectives

- To understand the principles of sustainable urban design, with an emphasis on innovative urban form and high quality public realm, and to understand the inter-relationship between architecture, public space, and infrastructure in cities.
- To develop and refine urban design skills for dense, mixed-use, and highly complex urban environments.
- To demonstrate an ability in relevant drawing, modeling, and presentation skills.
- Understand how critical observation, analysis, and experimentation apply to urban design processes.
- To learn to work effectively in interdisciplinary teams (as required).
- To learn about urban design approaches as practiced in cities such as Barcelona, Tokyo, Melbourne, and Portland.

Course Requirements

Varies by section

CACB Criteria

Primary: B1. Design Skills
Secondary: A3. Graphic Skills

Course Content: Topic Areas

Varies by section

Master of Architecture Program Faculty of Environmental Design University of Calgary 2016 **Course Outlines**	**Design** EVDA 782.xx: Senior Studio in Architecture II **Faculty Responsible:** Catherine Hamel, Vera Parlac, Barry Wylant, Jessie Andjelic Winter

Full Course

Co-requisites: None

Overview

The Senior Architecture Design Studios in the Winter semester focus on expanding upon the skills and knowledge gained throughout the previous terms towards the production of focused research within the context of a studio environment. Projects can be theoretical or practical in nature, ranging from highly speculative to design-build projects. General parameters, such as thematic focus, technique, and contemporary research, provide the studio framework in which students develop their work.

Studio, while developing skills, is also seen as being a site for discovery through analysis, process, and experimentation. The studio will explore a variety of contemporary design challenges, with respect to program, site analysis, cultural and social forces, technology, ecology, etc. as established by the instructor. Students will have the opportunity to select their preferred choice of studio at the beginning of the semester. The studio will involve the integration of consultation, research, readings, field trips, lectures, precedent studies, etc. Students are expected to use a variety of appropriate media in their design development.

Handouts will be given out during the term by instructors as required. Students are expected to produce a document recording their design processes and projects.

Learning Objectives

- To critically develop and refine design skills in the context of a senior research-oriented studio.
- To understand the relationship between theory and practice in a more advanced context.
- To demonstrate an ability in relevant drawing, modeling, and presentation skills.
- Understand how critical observation, analysis, and experimentation apply to design processes.

And those objectives set out by the instructor in their handouts.

Course Requirements

Varies by section

CACB Criteria

Primary: B1. Design Skills
Secondary: A3. Graphic Skills

Course Content: Topic Areas

Varies by section

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Course Outlines

Technology

ARST 423 / EVDS 523: Sustainability in Built Environment

Faculty Responsible: Caroline Hachem-Vermette

Fall

Half Course

Co-requisites: None

Overview

Sustainable development has historically been defined (Brundtland, 1987) as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." Since the publishing of "Our Common Future" several decades back, governments, corporations, organizations and citizens have been struggling to understand the implications of industrialization, population growth, resource depletion, information technology and other factors on our health, happiness and quality of life. Given the issues at play and the global scale of activity, the idea of sustainability has been allusive and complex, yet increasingly demanding and urgent.
The principle of sustainability recognizes people as temporary stewards of their environments, working toward a respect for natural systems and a higher quality of life. Examination of the built environment and the tools to achieve a stable, balanced and, regenerative ecosystem in a process of responsible consumption, wherein waste is minimized and the built environment interacts with natural environments and cycles. Healthful interior environments, resource efficiency, ecologically benign materials, renewable energies and social justice issues are examined.
This course may not be repeated for credit.

Learning Objectives

- To gain exposure to theories, principles and practices focused on sustainability in the built environment.
- To understand the underlying principles for planning healthy and sustainable neighbourhoods.
- To discover new ways to integrate development with natural systems.
- To provide straightforward and practical examples of how sustainability can be achieved.
- To begin to formulate personal and professional positions concerning sustainability.

Course Requirements

The course evaluation will be based on the following assignments completed during the term, which includes a journal, site project, sustainability initiative and paper. There will be no final examination.

Site Planning + Design Project & presentation	40%
Sustainability Initiative	30%
Sustainability Framework Paper	30%
Total	100%

CACB Criteria

Primary: A6. Human Behaviour, B3. Site Design, B4. Sustainable Design
Secondary: A1.Critical Thinking Skills, A3. Graphic Skills, B1. Design Skills, B8. Environmental Systems, B9. Building Envelopes, B11. Building Materials etc., C2. Building Systems Integration, D2. Ethics and Pro. Judgement

Course Content: Topic Areas

- Overview of Sustainability (especially considering Architecture & Environmental Design)
- Climate change | Human effects| GHG emissions
- Sustainable development | Sustainable site planning and Analysis
- Energy | Resources
- Sustainable neighborhood design | Natural flow | Ecology | Landscapes
- Sustainable building initiatives (Green Buildings, PassiveHaus, NZEB)
- Refurbishment for sustainability
- Building material & building construction and their environmental impact
- Sustainable building services | Smart technologies
- Measuring sustainability | Environmental Quality | Integration

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Course Outlines

Technology

ARST 449 / EVDA 511: Building Science and Technology I

Faculty Responsible: Tang Lee

Winter

Half Course

Co-requisites: None

Overview

This course is an introduction to building science principles and properties of materials. It will enable students to recognize factors which affect the performance of the building enclosure, and predict the probable service life of the assemblies. The course stresses an understanding of building elements and their sub-assemblies under absolute and differential temperature and pressure stresses, and hygrometric condition. The course deals with functions of building enclosures, occupant comfort and building materials. Design principles for optimizing lighting, acoustics, indoor air quality and thermal comfort are presented in the form of case studies and best practices.
Also included are properties of building materials and their performance when subjected to cyclic conditions and stresses. Finally, specific parts of the building enclosure such as windows and roofs are analyzed to determine its design principles.

Learning Objectives

- Introduction to principles of building science and its importance to contemporary practice.
- To acquire a basic understanding of building enclosures as environmental barriers.
- To understand the behaviour of building elements and their assemblies under differential temperature and pressure stresses.
- To acquire an understanding of the function, properties, costs, durability, availability and visual performance of materials.
- To develop a capability to understand the responses of building materials to climatic cycles -- radiation, precipitation, heating and cooling through a systematic analysis of various assemblies in differing contexts.
- To understand the implication of building regulations and codes governing the selection and arrangement of building materials.

Course Requirements

Team Project 1: Acoustics	20%
Team Project 2: Building Failures	30%
Class presentation of Project 2	10%
Final Exam (Registrar-scheduled final exam)	40%
Total	100%

CACB Criteria

Primary: B4. Sustainable Design, B8. Environmental Systems, B9. Building Envelopes, B11. Building Materials etc.
Secondary: A6. Human Behaviour, B6. Life Safety Systems etc., C2. Building Systems Integration, C3. Technical Documentation

Course Content: Topic Areas

- Introduction, Building Regulations
- Functions of The Building Enclosure
- Design and Service Life - Durability
- Architectural Acoustics
- Environmental Conditions
- Comfort/ IAQ
- Indoor Air Quality
- Air Flow and Stack Effect
- Thermal Considerations and Heat Flow
- Insulation Materials
- Water Vapour, Condensation and Freezing
- Building Envelope Failures
- Properties of Materials (Wood)
- Properties of Materials (Concrete)
- Properties of Materials (Masonry)
- Metals
- Wall Design Principles
- Properties of Materials (Cladding)
- Roof Design Principles
- Window Design Principles and Solar
- Fire and The Building Envelope
- Structurally Insulated Panel (SIP)

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Course Outlines

Technology

EVDA 611: Building Science and Technology II

Faculty Responsible: Chris Roberts

Winter

Half Course

Co-requisites: EVDA 682.04: Comprehensive Studio, EVDA 619: Structures for Architects II, EVDA 615: Environmental Control Systems

Overview

Application of building science theory to building enclosure, examination of building elements and the application of building components to specific problems in architecture. It examines various types of building elements in manners appropriate to their intended functions and performances. The understanding of building enclosures requires a familiarity with individual components that make up the total structure. Each component interacts and interrelates with one another. This course examines the function and configuration of building components from footings to wall and roofing systems.

Learning Objectives

• To develop a sound understanding of building envelope components and their influence on building performance, design intent and sustainability.
• To develop an understanding of the building process from soils investigation and foundation design to the design and execution of building enclosure systems.
• To become familiar with the basic requirements of the National and Alberta Building Code that most impact design including rules for exiting, handicap accessibility, fire ratings and separations.
• To acquire necessary skills to read, design and illustrate certain architectural details as an effective means of communication.

Course Requirements

The first part of this course is presented in a lecture format. The second half of this course will consist of a combination of lectures, desk crits, and classroom discussions focused on the application of these systems to a student's specific studio project. Proficiency in the course is demonstrated by the student's ability to analyze and detail building assemblies and discuss the merits and deficiencies of the various materials for particular applications. Final evaluation is based on the following:

Mid Term Exam	30%
Studio Project	70%
Total	100%

CACB Criteria

Primary: B5. Accessibility, B9. Building Envelopes, B11. Building Materials etc., C1. Detailed Design Development, C2. Building Systems Integration, C3. Technical Documentation
Secondary: B3. Site Design, B4. Sustainable Design, B6. Life Safety Systems etc., B8. Environmental Systems,
B10. Building Service Systems, B12. Building Economics etc., C4. Comprehensive Design, D3. Legal Responsibilities, D4. Project Delivery, D5. Practice Organization

Course Content: Topic Areas

Building Code requirements; Soils, Footings and Foundations; Masonry, Curtain Wall, Metal & Metal Composite Wall Systems; Roofing Systems; High Humidity Considerations; Insulation Types; Drawing Conventions.

• Introduction: Geotechnical Overview
• Foundation Design Overview: Building Code Overview Parts 3 -- fire ratings & separations, exiting, occupant loads, etc.
• Building Code Overview -- spatial separations, interconnected space, handicap accessibility, etc.,
• Basic Building Envelope Theory - air & vapour barriers, temperature gradients/dew points, high humidity considerations, etc.
• Glazed Wall Systems Overview - curtain wall, structural glazing, Kallwall, etc.
• Panelized Cladding Systems Overview -- metal panels, flat & composite, insulated. Cement composite, precast, etc.
• 'Flat' Roofing Systems Overview -- exposed & inverted membranes, green roofs. Technical Team Review
• Floor Plan Building Code Review - Classroom Crit
• Sloped/Complex Roofing Overview
• Insulation Types: Glass Selection Criteria
• Drawing Conventions: Desk Crits, Technical Team Review

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Course Outlines

Technology

EVDA 613: Structures for Architects I

Faculty Responsible: Mauricio Soto Rubio

Fall

Half Course

Co-requisites: None

Overview

This course focuses on the fundamental principles that affect the structural behavior of buildings. Through lectures, exercises and hands on experiments, students will learn analytical techniques for measuring and evaluating the flow of forces through structural systems. They will also begin to appreciate the factors involved in choosing an appropriate structural system for their designs. Students will learn to consider the structural behavior of buildings as a fundamental factor in the design of architectural proposals.

Learning Objectives

- To learn the fundamentals principles that affect the structural behavior of buildings.
- To learn analytical techniques to measure and evaluate the flow of forces through structural systems.
- To develop the ability to evaluate and determine the appropriateness of structural systems and materials.
- To understand the importance of considering the structural behavior of buildings in the design of architectural proposals.

Course Requirements

Quizzes and exams are closed book; however, 1 page of notes (front and back) is allowed. Quizzes must be completed in the first 15 minutes of lecture class. Therefore, attendance to lecture is required. Absences will not count toward an administrative fail but students are responsible for any missed work. Missed quizzes and exams due to un-excused absences will receive no credit.

Group projects	40%
Weekly quizzes on required readings and lectures	25%
Final exam	25%
Participation in class	10%
Total	100%

CACB Criteria

Primary: B7. Structural Systems, B11. Building Materials etc.
Secondary: B1. Design Skills

Course Content: Topic Areas

- Course Introduction
- Loads, Acting loads on buildings: Live loads, dead loads, wind loads, snow loads, earthquakes, and thermic loads, Static Fundamentals
- Forces, Composition and decomposition of forces, Reduction of force systems, Static Equilibrium
- Free body diagram, Types of Restrains, Moment, Pair of forces
- Stability and Determination of Forces, Reaction forces in isostatic structures
- Reaction forces in isostatic structures (cont.)
- Internal forces, Shear and Moment diagrams
- Section Properties and allowable material capacity
- Section Properties and allowable material capacity (cont.)
- Vector Active (truss) behavior and Analysis
- Truss analysis, Method of joints, Method of sections
- Truss Analysis, Graphic method

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Course Outlines

Technology

EVDA 619: Structures for Architects II

Faculty Responsible: Mauricio Soto Rubio

Winter

Half Course

Co-requisites: EVDA 682.04: Comprehensive Studio, EVDA 615: Environmental Control Systems, EVDA 611: Building Science and Technology II

Overview

This course explores different structural systems and materials commonly used in contemporary architecture. The course revisits some of the structural principles learned in Structures for Architects I and provides students with the analytical tools to evaluate the system's characteristics, behavior, and specific physical requirements. This course is part of the EVDS building technology sequence and it is designed to support Comprehensive Building Design Studios.

Learning Objectives

- Understand structures as an integral part of any architectural project.
- Identify structural and non-structural components of buildings, their specific roles and physical requirements.
- To develop the ability to evaluate and determine the appropriateness of structural systems and materials.
- Interpret the different loads applied to a structure.
- Describe the factors affecting the choice of structural system in a project.

Course Requirements

The course is divided into two broad areas: Structural Analysis and Structural Design. Individual course topics are presented mainly though lectures. Weekly required readings, assignments, discussions of student work, and videos supplement the material presented in lectures.

Quizzes and exams are closed book; however, 1 page of notes (front and back) is allowed. Quizzes must be completed in the first 15 minutes of lecture class. Therefore, attendance to lecture is required. Absences will not count towards administrative fail but students are responsible for any missed work. Missed quizzes and exams due to un-excused absences will receive no credit.

Students will be evaluated though group projects	40%
Weekly quizzes on recommended readings and lectures	25%
Final exam	25%
Participation in class	10%
Total	100%

CACB Criteria

Primary: B7. Structural Systems, B11. Building Materials etc.
Secondary: C1. Detailed Design Development, C2. Building Systems Integration, C4. Comprehensive Design

Course Content: Topic Areas

- Course Introduction, Type of Structural Systems, Structural Analysis vs. Structural Design
- Ground, Foundations, Retaining Walls
- Reinforced Concrete Structures
- Solid Armature, Monolithic Structures, Surface Active Structures
- Steel Structures
- Open Armature, Vector Active Structures, Trusses
- Wood Structures
- Filigree Structures, Light Wood Framing
- Tensile, Lightweight and Deployable Structures
- Final Case Study Analysis Presentation
- Final Exam

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Course Outlines

Technology

EVDA 615: Environmental Control Systems

Faculty Responsible: Caroline Hachem-Vermette

Winter

Half Course

Co-requisites: EVDA 682.04: Comprehensive Studio, EVDA 611: Building Science and Technology II, EVDA 619: Structures for Architects II

Overview

Comfortable indoor environment is a major goal in the design of buildings, and achieving this may be challenging in cold climate where several factors should be considered simultaneously. This course addresses design of buildings for cold climate to provide comfortable and productive environments while reducing the negative environmental effects at the global level (by reducing demands for fossil fuels).

The course will be presented in lecture and workshop mode. The course is connected with the Comprehensive Studio through the required development of building system concepts. Typical approaches to systems design will be reviewed in terms of air distribution, approach and spatial organization. The assignment is conceptual design of a ventilation and thermal control system for the studio project, using rules of thumb for sizing.

Learning Objectives

- To develop architectural designs that integrate large mechanical systems, using approximate methods (for sizing of ducts and other components).
- To understand the basic principles of heat transfer mechanisms and to perform simple heat loss calculations.
- To understand the organization of major mechanical system components in relation to other systems, including structure, enclosure, lighting, movement, plumbing and fire safety.
- To understand the principles of ventilation in cold climates (including natural ventilation, heat recovery, etc.).
- To comprehend the design considerations of building systems for thermal and air quality control, including thermal comfort, climate, as well as noise issues (especially those related to mechanical systems).
- To acquire awareness of issues related to energy efficiency and renewable energy applications for cold climate buildings.

Course Requirements

Design Project	60%
Mid-term exam	20%
Final exam	20%
Total	100%

CACB Criteria

Primary: B6. Life Safety Systems etc., B8. Environmental Systems, B10. Building Service Systems, C2. Building Systems Integration
Secondary: B4. Sustainable Design, B12. Building Economics etc., C1. Detailed Design Development, C4. Comprehensive Design

Course Content: Topic Areas

The functions and characteristics of thermal and ventilation systems will be reviewed, together with their place in the development of design concepts. Components and terminology will be discussed, as well as quantitative design methods and elementary sizing procedures. Factors in systems selection will be examined, including:

- Thermal comfort and air quality
- Types of ventilation and thermal control systems
- Performance criteria for the evaluation of systems, (e.g., system capabilities, cost, energy efficiency, energy codes)
- Visual treatment of systems
- Interrelationship of systems (e.g., envelope and active thermal control)
- Heat transfer processes
- Other issues: noise considerations, mechanical movement systems

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Course Outlines

Technology

EVDA 617: Architectual Lighting Design

Faculty Responsible: Caroline Hachem-Vermette

Fall

Quarter Course

Co-requisites: None

Overview

Lighting design can significantly affect the architectural perception of a space. Understanding the principles of architectural lighting are a basic step towards achieving comfortable, healthy, and environmentally responsible designs. In this course, lighting design will be addressed as part of the broader process of designing the visual experience in architecture. Both daylighting and electric lighting will be covered.

Learning Objectives

- To develop illumination schemes that enhance an architectural design.
- To model and analyze designs quantitatively.
- To understand daylighting and electric illumination systems and design techniques.
- To recognize light as a physical phenomenon.
- To understand the physical modeling procedures for electric and daylighting design.
- To acquire awareness of sustainable lighting design.

Course Requirements

Lighting Design Project	50%
Assignments	10%
Charrette	15%
Test	25%
Total	100%

CACB Criteria

Primary: B8. Environmental Systems, C2. Building Systems Integration
Secondary: B10. Building Service Systems, C1. Detailed Design Development, C3. Technical Documentation, C4. Comprehensive Design

Course Content: Topic Areas

The functions and characteristics of lighting systems will be reviewed, together with their place in the development of design concepts. Components and terminology will be discussed, as well as quantitative design methods. Factors in systems selection will be examined, including:

- Visual perceptions and the illumination of interiors
- Terminology and measurement units in illumination
- Electric light sources
- Daylighting
- Basic calculations for lighting
- Computer modeling of lighting designs

- Introduction to Lighting Design; Physical characteristics of light, Eye and vision
- Lighting metrics. Introducing Assignment, I; Introducing Lighting project
- Design process: 5 layers approach, Design charrette; Task Illuminance, Lamps and lighting Equipment I; Introducing Assignment II
- Lighting equipment II Lamps and Luminaires; Light map process, lighting graphics; Design Charrette part II
- Simulation tutorial: artificial lightings. Daylighting (Definition and benefits)
- Daylighting surfaces, Daylighting design; Submission of Project part I
- Simulation tutorial: Daylighting Lighting specs and cut sheets, lighting calculations, sustainable lighting

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Course Outlines

History & Theory

ARST 457.01 / EVDA 523.01:
History of Architecture and Human Settlements I

Faculty Responsible: David Monteyne

Fall

Half Course

Co-requisites: None

Overview

A survey history of architecture and human settlement from the prehistoric times until the present. The first course addresses the pre-modern traditions of the major world cultures. The second course explores the traditions of the Western world from the beginning of the Italian Renaissance until the present. This course will examine the changes in world-view that have altered the course of architecture through the study of selected works of architecture and urbanism. In parallel with the Ecology I framework in this semester's design studio, the history course emphasizes program, site, precedent, and form as design decisions predicated on natural and social environments.

Learning Objectives

- To develop knowledge of the history and significance of built environments in different eras and places in the world, in relation to cultural values and practices.
- To learn the basic characteristics and examples that define some of the major architectural traditions of the world.
- To develop and refine skills in research, critical reading and discussion, synthesis of ideas, visual analysis, oral and written communication.

Course Requirements

This course will consist of lectures, guest lectures, and discussions. Each student will produce four short papers (typically 3-5 pages) during the semester. The papers are based on the current subject matter in the course, and are designed to be building blocks toward effective written communication about architecture and urbanism. There will also be brief writing and other assignments in-class, and discussion, all of which will be reflected in the portion of the grade for participation. There is no final exam.

Participation / Discussion / In-Class Assignments & Group Work / Attendance	20%
Paper 1	20%
Paper 2	20%
Paper 3	20%
Paper 4	20%
Total	100%

CACB Criteria

Primary: A1.Critical Thinking Skills, A4. Verbal and Writing Skills, A7. Cultural Diversity, A8. History and Theory
Secondary: A2. Resaerch Skills, A6. Human Behaviour, A9. Precedents

Course Content: Topic Areas

- Prehistoric spaces
- Early North American traditions
- Early urbanism
- Egypt; Greece; Rome; early Christian and Islamic architecture;
- Asian traditions and religious architecture;
- China; Japan; Islamic empires;
- Romanesque churches;
- Gothic architecture and urbanism;
- Mesoamerican building.

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Course Outlines

History & Theory

ARST 457.02 / EVDA 523.02:
History of Architecture and Human Settlements II

Faculty Responsible: Graham Livesey

Winter

Half Course

Co-requisites: None

Overview

This is the second course (including EVDA 523.01/ARST 457.01) in a survey examining the history of architecture and settlement from the prehistoric world until the present. This course will address the traditions of the Western world from the Industrial Revolution until the present, and will be delivered in a lecture format. The course examines technological, social, and political changes that have transformed the history of architecture since the late eighteenth century. It also presents major movements, figures, and building typologies, along with a particular emphasis on the evolving city during the nineteenth and twentieth centuries in support of the Ecology II framework in the design studio. New approaches to representation and its impacts on architecture are studied, along with the changing role of the architect (including the history of women in architecture). Broad cultural questions of modernity and post-modernity are explored, including such critiques of modernism as critical regionalism (with an emphasis on Japan and Canada).

Learning Objectives

- Students are expected to learn of the changes in worldview that have altered the course of Western architecture and to become familiar with important works, practitioners, theorists and themes. Slide tests are used as the method for evaluating this.
- As history courses are a required part of a professional architecture program, architectural history is understood to be necessary for understanding diverse culture and behaviours. In a multi-cultural world, history provides a dynamic source for the exploration of questions relevant to contemporary architectural practice. The book review and term paper are intended to be articulate studies of questions addressed to historical works.
- To develop and refine skills in research, critical reading, synthesis, visual analysis, oral and written communication.

Course Requirements

Slide Tests: Two tests will be given during the term to evaluate students understanding of the key concepts covered in the course. Each test will involve writing short essay-type responses to five pairs of images. Book Review: Write a 1000-word book review based on a treatise on architecture, urbanism, or gardens (suggestions are found elsewhere in this outline). Term Paper: Write a 3000-4000-word research paper based on a topic related to the course material. It is recommended that you discuss the topic with the instructor.

Book Review	20%
Term Paper	40%
Test 1	20%
Test 2	20%
Total	100%

CACB Criteria

Primary: A1.Critical Thinking Skills, A2. Resaerch Skills, A4. Verbal and Writing Skills, A8. History and Theory, A9. Precedents
Secondary: A6. Human Behaviour, A7. Cultural Diversity

Course Content: Topic Areas

- A thematic approach to history. Importance of history for contemporary practice
- Nineteenth Century 1: Revivalism, Nationalism, and New Building Types
- Nineteenth Century 2: Rationalism, the Influence of Engineering, and New Materials
- Nineteenth Century 3: The Arts and Crafts Movement
- Nineteenth Century 4: American Architecture, the Chicago School, and the Skyscraper. Form follows Function
- Nineteenth Century City: Paris and Baron Haussmann (1809-1891); Barcelona and Ildafonso Cerda (1815-1876); Daniel Burnham (1846-1912) and the City Beautiful Movement
- Ebenezer Howard (1850-1928) and the Emergence of the Garden City
- Art Nouveau architecture and the search for new forms
- Frank Lloyd Wright (1867-1959) and new concepts of architectural space
- Representation from 1400 to the Present: Perspective to Cubism
- The Influence of Painting and Sculpture 1: The Avant-Garde Movements (Deutscher Werkbund, Expressionism, the Bauhaus)
- The Influence of Painting and Sculpture 2: The Avante-Garde Movements (Cubism, Futurism, De Stijl, Constructivism).
- Le Corbusier (1887-1965), Form, and the Mechanical Analogy
- New Objectivity, the International Style and the Modernist City (CIAM)
- Masters of Modern Architecture: Mies van der Rohe (1886-1969), Alvar Aalto (1896-1976), and Louis Kahn (1901-1974)
- Architecture and the State. Berlin and the Third Reich, 1929-41. Fascist Rome, 1931-42. Soviet Moscow, 1931-38

Contd. Below

- Critiques of Modernism 1: New Brutalism, Team 10, Rationalism
- Critiques of Modernism 2: Post-Modernism/Populism, High-Tech (Archigram, Metabolism), Deconstruction
- Critiques of Moderns 3: Critical Regionalism
- Modern Architecture in Canada 1: West Coast, Central Canada, and Expo 67
- Modern Architecture in Canada 2: The Prairies
- A Brief History of Women in Architecture

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Course Outlines

History & Theory

EVDA 621: Introduction To Design Theories

Faculty Responsible: Vera Parlac, Josh Taron

Fall

Half Course

Co-requisites: EVDA 682.02: Intermediate Architectural Design Studio

Overview

Introduction to Design Theories (IDT) is a required lecture/seminar course in the Master of Architecture program devoted to the examination of significant thematic developments in architectural discourse from 1900, through a contemporary lens. The course addresses the transition from singular and centralized models of authorship and control toward distributed models of interaction, collaboration and integration within complex ecological environments in order to prepare students for present and future challenges facing the built environment. Toward this end, the course emphasizes critical diagrammatic analysis as a tool for learning, discovery and design. The course themes of formation(s), communication(s), production(s), and sensation(s) structure the course into four discrete sections that facilitate a discovery of the complex and contradictory problems that define the always changing discipline of architecture. The course consists of the following components: lectures, critical evaluations, required readings, in-class discussion sessions, and term project.

Learning Objectives

- Develop an understanding of critical architectural theory in order to recognize historical precedents and contexts for issues of contemporary concern.
- Explore developments in 20th century architecture through a series of thematic lenses.
- Develop a general comprehension of and familiarity with historical architectural debates that have occurred over the course of the past century.
- Develop an understanding of contemporary architectural works through an analysis of the theoretical views that motivated their development and production.
- Develop the ability to understand, develop and participate in significant and sustained theoretical discussions.
- Develop a sense of the critical issues that shape theoretical debates and cultural evolution in the visual and performing arts, humanities and science in relation to architecture.

Course Requirements

The course evaluation is based on assignments completed during the term including: student group presentations, critical evaluations, in-class discussion sessions, and term project assignments 1-4. Each assignment must be completed by its assigned due date in order to pass the course. The following weights are applied to each assignment category:

Research Development Tools	25%
In-class Discussions	10%
Term Project Assignment 1	10%
Term Project Assignment 2	20%
Term Project Assignment 3	20%
Term Project Assignment 4	15%
Total	100%

CACB Criteria

Primary: A1.Critical Thinking Skills, A2. Resaerch Skills, A4. Verbal and Writing Skills, A6. Human Behaviour, A8. History and Theory, A9. Precedents
Secondary:

Course Content: Topic Areas

The course is divided into four themes: formation(s), communication(s), production(s), and sensation(s). Each theme is explored through a series of lectures by the course instructors that investigate specific questions and problems.

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Course Outlines

Communication

ARST 451 / EVDA 541: Graphics Workshop I

Faculty Responsible: Jason Johnson, Matthew Parker

Fall

Half Course

Co-requisites: EVDA 580: Studio I (Design Thinking)

Overview

Design Media and Exploration I is a skill-building course, taught in conjunction with Studio I. The course begins by framing the notion of representation, the drawings and models that are the architect's tools to explore, communicate and ultimately anticipate a future. To this end, the course covers a range of digital and analog techniques for communication, production and design thinking. Three modes of representation will be developed: descriptive explorations, interpretive explorations, and transformative explorations. The course offers a series of graphic exercises with an emphasis placed on the connections between design thinking and making for communication, design iteration, and design resolution from ideation to fabrication.

Learning Objectives

- To develop a critical understanding of representation and its connection to worldviews and intentionality in architecture.
- To develop communication skills across a number of platforms (digital and physical drawing and making).
- To connect critical thinking with design thinking through the development of design processes and the application of strategic tools to assess, interpret, transform and create bodies of knowledge.
- To develop critical-productive positions regarding the use of various techniques and technologies as they relate to architectural design.
- To develop skills and familiarity around the use of diagramming, orthographic projection, constructed drawings, scale and measurement, visual notes and sketching, composition and layout, modeling by hand and by machine, and material communication, as well as familiarity with the software packages Illustrator, Photoshop, In-Design, AutoCad and Rhinocerous.

Course Requirements

The course is taught through the use of lectures, tutorials and hands-on production. Typically, a lecture in the specific topic will be given alongside a related assignment handed out at the conclusion of the lecture. The following class, a series of tutorials and demonstrations by the course Teaching Assistants will introduce techniques for completing the assignments. The faculty team and Teaching Assistants will provide desk crits, tutorials and reviews of work as specified in each problem statement. Students should be productive during the time allotted in the course for working on projects and should expect to spend additional time outside of the class completing the assignments. Sketching will be deployed throughout the term and within projects as a means to evaluate and iterate ideas around each graphics project. A portfolio of sketching will be maintained throughout the term. Completed graphic work is to be posted by the students to the course blog.

The course evaluation will be based on the assignments completed during the term. Each assignment has to be completed in order to pass the course. The late work will receive 10% reduced grade per week. Students are required to post all assignments to the class blog. Evaluation will be as follows:

Weekly assignments	70%
Shop Assignment	10%
Presentation Booklet	10%
Sketching Portfolio	10%
Total	100%

CACB Criteria

Primary: A3. Graphic Skills
Secondary: B1. Design Skills, C3. Technical Documentation

Course Content: Topic Areas

- Considering the Object: Descriptive Explorations, Introduction to Representation, Plane and Parallel Projections
- Tutorial: Plans, Sections, Elevations, Axonometric
- Digital Drafting Basics
- Tutorial: Rhino, Illustrator
- Considering Context: Descriptive, Interpretive and Transformative Explorations, Mapping Immaterial Dimensions: Processes, Flows, Senses
- Tutorial: Photoshop, Illustrator
- Mapping Physical Dimensions
- Tutorial: Physical Modeling
- Considering Synthesis: Interpretive and Transformative Explorations, Formal Intersections (Manipulating Form in Rhino)
- Tutorial: Rhino

Contd. Below

- Visual Communication: Rendering Materiality, Form and Light
- Tutorial: Rendering Techniques – Teaching Assistants Considering the Tectonic and Technical: Descriptive and Interpretive Explorations Tectonics (Intentionality)
- Tutorial: Parametric Modeling W04 Tectonics (Descriptive Technique & Articulation)
- Considering the Argument, Communication through Layout
- Tutorial: InDesign, Illustrator & Photoshop
- Layout Review
- Considering Fabrication, Measured Drawings Part 2 – Drawing for Making
- Photoshop, Illustrator, Rhino as CAD
- Making
- Review of Models, OPEN for Review of Studio Deliverables

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Course Outlines

Communication

ARST 453 / EVDA 543: Graphics Workshop II

Faculty Responsible: Branko Kolarevic, Matt Knapik

Winter

Half Course

Co-requisites: EVDA 582: Studio II in Architecture, EVDA 541: Graphics Workshop I

Overview

Graphics II is an architectural communications course focused on building skills in graphic composition, technical documentation, craft, and visualization. It will build on the skills and techniques introduced in Graphics Workshop I, and introduce new concepts and approaches to the methods of production and representation in architecture.

Learning Objectives

• COMPOSITION – Composition refers to the arrangement of parts in the work. Do the elements tell a coherent story? Does the tone suit the content? Is the project visually resolved? Students will organize, critique, and construct compositions that arrange and synthesize information into complete and compelling stories.
• TECHNICAL DOCUMENTATION – Technical documentation refers to the degree to which the work communicates information with clarity, correctness, and appropriate detail. Students will read, interpret, and produce technically-precise descriptions and documentation of building elements.
• CRAFT – Craft refers to the quality of assembly and presentation. Are the assignment deliverables completed? Are they presented with care? Students will demonstrate precision and intention in the execution of drawings, presentations, and digital & physical models.
• VISUALIZATION – Visualization refers to the quality of rendered outputs in the work, including diagrams, rendered scenes, line work, and composites. Are the outputs clear? Emotive? Do they demonstrate a sophisticated use of the tools? Students will apply advanced techniques to produce digital visualizations, including renderings, photo composites, and diagrams.

Course Requirements

Projects generated in this class will be evaluated according to the categories outlined below. Weighting among these sections will vary between assignments, but the sections themselves will remain consistent. Individual assignment briefs will contain rubrics outlining the weighting at the outset of each module.

Participation (warm-up exercises, activities, peer evaluation)	20%
2D Drafting	5%
3D Modelling & Documentation	15%
The Language of Information Modelling	5%
Parametric Fundamentals	10%
Building Information Modelling	20%
Proposals	10%
Group Installation	15%
Total	100%

CACB Criteria

Primary: A3. Graphic Skills, C3. Technical Documentation
Secondary: B1. Design Skills

Course Content: Topic Areas

VISUALIZATION
In each of these three modules, a series of tutorials and deliverables will help students develop visualization and rendering skills as outputs from a variety of modelling workflows.

- Technical Drawing
- Information Modelling
- Fabrication

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Course Outlines

Professional Practice

EVDA 661: Architectural Professional Practice I

Faculty Responsible: Tang Lee, Katherine Wagner

Winter

Half Course

Co-requisites: None

Overview

This course discusses the nature of professional practice for architects. It examines the roles of participants in the building industry – their responsibilities and the dynamic relationship among stakeholders. The course will examine the theoretical framework of the architect's role in society and how this is realized in the practical world of managing a practice. Topics will include the structure of the profession, regulation and self-governance, ethics, project management, office administration, industry trends, liability exposure, project control cost analysis and estimating techniques, cost control during design and construction, modes of project delivery and the building regulations.

The nature and detail of architectural practice is changing and evolving. There has been an increasing marginalization of the role the architect has traditionally played in the development of a building, yet the key ingredients of our training and education remain relevant and necessary. The practice of architecture remains a positive influence on our society and on the built environment.

Learning Objectives

- To understand the various instruments used during design, approval, documentation and construction phases of a project.
- To understand the legal and legislative underpinnings of the profession.
- To understand and appreciate the ethical, legal and technical standards of practice.
- To understand the principals and procedures for the management of projects and the ability to apply cost control techniques.
- To develop an awareness of the issues and challenges facing contemporary professional practice.
- To explore the meaning and application of ethical conduct in professional and business affairs and its relationship to personal integrity & reputation.
- To understand the application of the Building Code and its impact on design.
- To develop an awareness of the many roles and contexts in which architects operate.
- To develop an appreciation for the key role of collaborative thinking and teamwork in the profession.

Course Requirements

Assignments will demonstrate the student's understanding of the building process, its tools and the philosophical underpinning of design methodology and practice. Class presentations will be evaluated on innovation, understanding of the roles of allied professionals.
Note: A passing grade in all assignments is required in order to pass the course as a whole.

Alberta Architects Act and General Regulation	25%
Building code analysis and solutions	25%
Cost estimating	25%
Response to Request for Proposal	25%
Total	100%

CACB Criteria

Primary: A5. Collaborative Skills, B12. Building Economics etc., D1. Leadership and Advocacy, D2. Ethics and Pro. Judgement, D3. Legal Responsibilities, D4. Project Delivery, D5. Practice Organization, D6. Professional Internship
Secondary: B5. Accessibility, B6. Life Safety Systems etc.

Course Content: Topic Areas

- *Structure of the Profession:* Legal and regulatory framework, qualification process
- *Construction Methodologies:* The construction contract, modes of delivery, design bid build, design build, construction management, private public partnership, forms of contract and architect's role, contract documents, specifications, bid process
- *Clients + Services:* Clients, architect responsibility, project team, community, authorities
- *Building Process + Regulation:* Development/building permit process, land use bylaw, planning regulations, Alberta building code– objective based, authorities, accessibility and the built environment, principle and rationale, access design standards, mobility, vision cognitive, hearing
- *Construction Contract + Cost Control:* Scope of services, APPEGA AAA defined scope of basic services, additional services, traditional breakdown and implications, the construction contract, the process: change orders, construction communications, site review reports, certificate for progress payment, commissioning and turnover, cost control, overview of building cost estimating, in-house estimating, value engineering process, review

Contd. Below

• *Structure of The Profession:* Remuneration, scope and liability, APPEGA AAA recommended conditions of engagement + schedule of fees, fee negotiation, competition and fees, effects on practice and professional organization, liability exposure and liability insurance, why cost matters
• *Practice Management + Business of Architecture:* Practice organization and management, modes of practice; sole proprietorship, partnership, corporate models, joint ventures, joint practice (architecture and engineering), organizational structures, operating profitably, managing staff, marketing architectural services, politics, community involvement, niche markets
• *Allied Professions:* Working with allied professionals, integrated design and collaboration, landscape architects, urban designers, planners, engineers, education of allied professionals, how allied professionals are governed, engaging allied professionals, working with allied professionals
• *Architectural Practice from Client Perspective + Project Acquisition:* understanding the role of client, client expectations, relationships and modes of interaction with client, architect responsibilities to project communication, client project management responsibilities, request for proposal, scope of work, range of services, special considerations
• *Structure of The Profession:* The changing nature of the profession and alternative modes of practice, various roles for architects, information manager, para-professionals and roles, overlap and competition for scope
• *The Nature of Practice + Future Opportunities*

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Course Outlines

Professional Practice

EVDS 697.86: Leadership and Architecture

Faculty Responsible: Catherine Hamel, Norbert Lemermeyer

Fall

Quarter Course

Co-requisites: None

Overview

This course exposes students to a range of themes on leading ideas through architecture. Leadership is not reduced to its definition as superiority or authoritative management, rather is embraced as a creative way to flourish and practice towards desired objectives. Architecture is not just a service but a relevant act. In addition to applied strategic planning in the business models of leadership, leadership in architecture is explored from a variety of angles and scales.
Architecture, and its practice deal with complex design requirements assimilating changing processes, contexts and tools of production. There are numerous individuals and firms that identify opportunities and are designing successful practices to integrate research, design and change beyond externally imposed restrictions. Some maneuver a path through collaboration, foresight and precision of implementation. Others find ways to dilute existing systems to successfully allow for innovation and experimentation.
Entrepreneurs, practicing architects, academic rebels and business capitalists will discuss their visions of leadership in architecture and its implementation. Responding to the themes, students will develop a strategic path towards a desired outcome of their concept of architectural leadership using some of the applied skills developed in the class.

Learning Objectives

- To understand roles and scales of leadership in architecture.
- To set frames of reference for students that seek to prepare themselves for ranging shapes of practice in architecture.
- To develop a vision and strategic plan to implement a conceptual framework.
- To develop marketing and communication skills.
- To dare to dream and dissolve the myth that reality cannot be a place for creativity.

Course Requirements

Evaluation will be based on participation and assignments completed during the course. These include written assignments, presentation of work and facilitating discussions. There will be no final examination.

Class Participation	15%
Workbooks	15%
Strategic Plans	25%
Final Project Presentation	45%
Total	100%

CACB Criteria

Primary: D1. Leadership and Advocacy, D2. Ethics and Pro. Judgement, D5. Practice Organization
Secondary: A1.Critical Thinking Skills, A2. Resaerch Skills, A4. Verbal and Writing Skills, A5. Collaborative Skills

Course Content: Topic Areas

There will be lectures, panel discussions, question and response sessions. In addition, a series of developmental assignments will be produced to progress the students' final case study presentations. Students will be exposed to both themes and skill developments to envision a potential architectural leadership direction and possible ways to implement it.
Each class will be divided into 3 sections;
- Thematic Directions
- Skills Development
- Applied Evaluations

- Leadership in Architecture
- The thought leader and the practical builder
- Strategic Plan
- Some visions detailed, others derailed
- I Tell You, Dream
- The three-year plan: still not awake
- One little Architect Went to the Market
- Identity, marketing and strategy
- The Science of Story Telling
- Developing a communication plan to motivate imaginations
- The Dragon's Den - The Beaver's Dam
- The Architectural potential: student presentations

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Course Outlines

Electives

EVDB 697.xx: Somerville Charette

Faculty Responsible: Vera Parlac

Fall / Winter

Quarter Course

Co-requisites: None

Overview

The William Lyon Somerville Visiting Lectureship was established by an endowment given to the University of Calgary by the late Mrs. A.G. Burton of Calgary in memory of her father. The gift was matched by the University to create a fund for the maintenance of an annual visiting distinguished lectureship program in Architecture, within the Faculty of Environmental Design.

William Lyon Somerville, ARCA, FRAIC, FRIBA was a distinguished Toronto architect born in Hamilton, Ontario in 1886. He was educated at the Ecole des Beaux-Arts of America (New York City) and began his career with the New York firm of Dana and Murphy. He had a long, energetic and successful career based in Toronto, practicing for a substantial period under the well-known firm name Somerville, McMurrich and Oxley. Mr. Somerville was elected an Associate of the Royal Canadian Academy of the Arts, a Fellow of the Royal Architectural Institute of Canada, and a Fellow of the Royal Institute of British Architects. He received a honourary Bachelor of Laws degree form McMaster University in Hamilton, Ontario.

The William Lyon Somerville Visiting Lectureship is designed to bring a visiting practitioner, academic or critic to the Architecture program annually, and that coincidental with the visit, an annual lecture be given by the distinguished guest for the benefit of the University and the Community it serves, concerning the subject of Architecture. The annual lecture is to be known as the William Lyon Somerville Lecture, and is to be published alongside some continuing scholarship regarding Mr. Somerville's work. The program was inaugurated in February 1992.

This course explores contemporary issues in architectural design through an intense 5-day design charrette. This is led by the William Lyon Somerville Visiting Lecturer, an architect of international reputation. The visitor sets the theme and structure for the charrette in consultation with the course manager. The course is offered one a year, during the January block week, and is considered an important event in the annual cycle of the MArch curriculum. It is open to MArch 1 and MArch 2 students (Foundation Year students may take the course with the permission of the manager) as an elective course.

Learning Objectives

Students are to participate in a design charrette (typically in groups), the subject of which is determined by the visiting lecturer.
A detailed project handout will be given out at the beginning of the course.

- To gain insight and experience in contemporary issues in architecture and design.
- To learn of alternative strategies in contemporary design.
- To develop skills in teamwork, 2D and 3D representation, and fabrication.

Course Requirements

Varies by year and guest instructor, assessment is by credit/non-credit.
Students are required to follow course readings and to participate in seminar discussions.

CACB Criteria

Primary:
Secondary: A1.Critical Thinking Skills, B1. Design Skills

Course Content: Topic Areas

The course Content is defined each year by the visitor (William Lyon Somerville Visiting Lecturer). Typically, the charrette has a strong design focus and is organized in a studio format, whereby contemporary issues are explored through a project or projects (usually in teams). The visiting guest also presents their work, informally to the charrette group and in a public forum, as a way of conveying their themes and approaches. The final review creates a forum for students and guests to share their work.

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Course Outlines

Electives

EVDB 697.xx: Gillmor Theory Seminar

Faculty Responsible: Josh Taron

Fall / Winter

Quarter Course

Co-requisites: None

Overview

The Douglas Gillmor Visiting Lectureship was established to recognize the contributions of Emeritus Professor Douglas Gillmor, the founding Director of the Architecture Program. The lectureship allows the Program to bring to The University of Calgary, on an annual basis, an architect or architectural educator to deliver a series of seminars in architectural history and/or theory. The recipient of the Lectureship will also deliver a public lecture. Students in the Architecture Program are required to take this course at least once, it may be repeated for elective credit. This course is only available to students in the Architecture Program, and by special permission of the course manager.

Learning Objectives

Students are to explore in detail, during a series of seminars, a topic in architectural history and/or theory.

Course Requirements

Varies by year and guest instructor, assessment is by credit/non-credit.
Students are required to follow course readings and to participate in seminar discussions.

CACB Criteria

Primary:
Secondary: A1.Critical Thinking Skills**,** B1. Design Skills

Course Content: Topic Areas

Course content is defined each year by the visiting lecturer.

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Course Outlines

Electives

EVDB 697.xx: Taylor Seminar

Faculty Responsible: Jason Johnson

Fall / Winter

Quarter Course

Co-requisites: None

Overview

The Dale Taylor Visiting Lectureship is an intensive one-week workshop course offered to senior students who wish to gain exposure to the work and techniques of Andrew Kudless.

Learning Objectives

Varies by year and guest instructor.

Course Requirements

Varies by year and guest instructor, assessment is by credit/non-credit.
Students are required to follow course readings and to participate in seminar discussions.

CACB Criteria

Primary:
Secondary: A1.Critical Thinking Skills, B1. Design Skills

Course Content: Topic Areas

Course content is defined each year by the visiting lecturer.

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Course Outlines

Electives

EVDS 675: Urban Systems / Urban Design Theory

Faculty Responsible: ***Calgary***-Bev Sandalack
Melbourne/Tokyo-Jenny Rayment
Barcelona-Suzanne Strum

Fall

Half Course

Co-requisites: None

Overview

These courses are intended to provide students with an introduction to theories, concepts, methods, and contemporary issues in urban design. The courses consist of lectures, tours, field trips, seminars, and a short project.

Learning Objectives

- To develop the skills, techniques & vocabulary to describe, analyze and understand urban form and its evolution.
- To critically review theories, methods and concepts in urban design.
- To understand contemporary issues affecting urban development, urban quality and urban life.
- To be able to critically analyze urban form in Calgary and other locations, and to compare and contrast in terms of various qualities and metrics.

Course Requirements

Varies by instructor and locale.

CACB Criteria

Primary:
Secondary: A6. Human Behaviour, A7. Cultural Diversity, A8. History and Theory, A9. Precedents, B3. Site Design, B4. Sustainable Design

Course Content: Topic Areas

Varies by instructor and locale.

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Course Outlines

Electives

EVDS 683: Housing and the Domestic

Faculty Responsible: John Brown

Fall

Half Course

Co-requisites: None

Overview

North American architects have a shameful history of irrelevance in the world of single family housing. Almost all of the profession's involvement has been, and remains, at the extreme high end of the market, creating boutique houses for wealthy patron clients. The two most widely known, and historically significant, attempts by the profession to meaningfully engage in mass market housing for the middle class failed. For a variety of reasons, neither the California Case Study House Program in the 1940's nor Frank Lloyd Wright's Usonian House Project in the 1950's captured the imagination of the public or, more significantly, the interest of the residential construction industry. Since then very little of substance has been ventured by the profession and almost nothing has been gained.
As a result, it's estimated that up to 95% of the single family houses built, and being built, in North America have not been designed by an architect. Many have no professional design involvement whatsoever. The result is what the Sierra Club calls the 'Dark Side of the American Dream.' On the surface these houses, and the suburbs in which they sit, appear easy, cheap, and cheerful. Too often, however, this marketing veneer masks a world of thoughtless design, careless construction, and ecological waste that, as we learned from the housing collapse of 2008, has little real enduring value.
The profession's abandonment of the middle class single family house is a gross abrogation of our public responsibility on a cultural, social, and environmental level. Houses are too important to an individual's well-being, too significant a cost for most families, comprise too large a land use in our cities, and have far too big an environmental footprint to be ignored by architects. For too long we have taken the easy way out, treating cookie-cutter suburban housing with disdain without offering any sort of real alternative that makes sense in the lives of the everyday middle class homeowner.
The goal of this seminar course is to explore potential strategies for the profession to meaningfully engage this middle ground - that vast, formless, un-designed place where almost everyone lives.

Learning Objectives

• To gain an understanding of the current conditions in the housing industry from a financial, material culture, and media perspective.
• To gain an understanding of the domestic as a conceptual framework, that has influenced design professionals for the past one hundred and fifty years.
• To gain an awareness of the principles and practices of architectural entrepreneurship and how they can be applied in a residential practice.

Course Requirements

Workings in small groups, students will prepare a 60 min presentation and lead a 30-minute discussion on a topic determined by the instructor. Working individually, students will also prepare a major paper on a topic of their choosing and approved by the instructor. Topic details and due dates to be provided in class.

Group Seminar Presentation	40%
Individual Major Paper	60%
Total	100%

Course Content: Topic Areas

• *Seminar Presentations:*
Heidegger and the Domestic
City Legislation and Housing
Market Drivers in the Housing Market
The House as Financial Instrument
Homelessness and Affordable Housing
The Residential Real Estate Industry

• *Off-Site Tours:*
Single Family Greenfield Housing
Custom home Brownfield Housing
Mid-density Residential Infills
High-rise Residential Towers
The High-End Architectural House

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Course Outlines

Electives

EVDS 683: Solar Build Envelope Design

Faculty Responsible: Caroline Hachem-Vermette

Winter

Half Course

Co-requisites: None

Overview

This course consists of two main parts. The first part is analytical in nature, aiming at the study and characterization of the energy performance (energy consumption versus energy generation potential) of existing and prospective envelope /curtain wall systems. In the second part, guidelines and tools are applied in a creative approach to the design of energy efficient and energy generating envelopes.
The course will review building envelope/curtain wall components as well as existing and new technologies, including building integrated photovoltaic (PV), semitransparent PV systems and hybrid PV/thermal systems. The concept of solar communities, and performance of buildings within them will be introduced as well. Effect of envelope geometrical design and the integration of advanced technologies on capturing solar energy and on the energy performance of a building will be analyzed. Issues of integration of PV and semitransparent PV with the envelope and building systems will be discussed. Simple modeling of the envelope system will support the analysis, using Scketchup/OpenStudio Plugin (as interface to EnergyPlus). Students will be encouraged to create new building envelopes that combine aesthetic, function and advanced technologies.

Learning Objectives

This course will enhance the understanding of the integrated design process and will highlight the effect of building design on sizing building systems.

• Understanding of the main effect of building envelope on heat transfer, heating and cooling loads and therefore on building systems (e.g. HVAC and lighting).
• Acquiring knowledge of available state of the art curtain wall technologies, including window design, glazing types, insulation and photovoltaic technologies (e.g. semitransparent PV, hybrid PV/thermal systems).
• Acquiring awareness of the integrated design of building envelope with the design of building systems (such as HVAC and lighting) and technologies.
• Ability to perform simple calculations of electricity and heat generation by different type of photovoltaic systems.
• Ability to model and analyze quantitatively building envelope design effect on heating, cooling and electricity and heat generation.
• Developing creative design methodologies for building envelope that integrate building technologies together with aesthetical and functional aspects.

Course Requirements

The student work will be conducted in teams of two students. It contains two assignments:

Assignments and presentations	40%
Project: Development of new building envelope design	60%
Total	100%

Course Content: Topic Areas

The course will be presented in lecture and workshop modes. The weekly meetings will comprise lectures, group work/discussion and active learning components. The workshops will cover development and modeling of building envelope designs employing computer-based design aids.

• Introduction to building envelope, examples of various building skin technologies (intelligent, adaptable, passive, etc.); overview of expected work in the course. Introducing first assignment
• Building envelope design; Review of heat transfer through building envelope, thermal properties of building envelope components, thermal capacity, passive heat gains
• Solar capture and solar control: Main factors that affect the potential of buildings (isolated and in neighbourhoods) to capture and utilize solar radiation; Shading devices and heat gain control
• Students' presentation and discussion: Review of research on advanced building envelope
• Curtain wall systems and high performance facades- Review of main components and their properties, discussion on windows and advancement in window design and window materials. Introducing the design project
• Energy simulation package tutorial, brief introduction to EnergyPlus, learning to perform basic simulations of building envelope, employing Energyplus in conjunction with Scketchup/Openstudio plugin
• Energy simulation (EnergyPlus (cont.))
• Solar access and laws/ legislations in Calgary (or other Canadian cities)- Brief report and student presentations + open discussion
• PV technologies 1 – Introduction to PV technologies, state of the art in the world, and presentation of successful design of building integrated PV systems

Contd. Below

• PV technologies 2 – Overview of the technical aspects of PV systems, simple calculation of electricity generation, Hybrid PV/thermal systems, Energy generation using simulation tool
• Integration issues of PV technologies within the building envelope, and of building envelope with the building systems (HVAC, lighting systems)
• Introduction to solar communities – Main principles in the design of solar communities, effect of various community designs on the shape and performance of the building envelope, case studies
• Students' final presentation

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Course Outlines

Electives

EVDS 683: Architecture & Anonymity

Faculty Responsible: Josh Taron

Winter

Half Course

Co-requisites: None

Overview

While indeterminacy and emergence have come into the mainstream of architectural discourse, it has done so with a great deal of friction with modern conventions such as certainty, authority, authorship and autonomy – all of which are projected upon the figure of the architect. Central to these problems has been a cultural transition from autonomy and identity toward multiplicities and anonymity. But anonymity is a multivalent thing, at once both a threat to the possibility of imagining new futures while providing an exceptional incubatory space for possibilities to develop. Never something knowable but fundamentally something that is thinkable, anonymity is perhaps the most valuable and controversial "natural" resource of the information age.

Using Quentin Meillassoux's essay, "After Finitude", as a point of departure, this elective explores a variety of philosophical and architectural perspectives that problematize the material production of anonymity in the context of a call for a fundamentally new approach to the discipline of architecture. The course begins by asking the question, "why anonymity in architecture?" What follows is an investigation into how anonymity might have been made throughout time – and how we might be able to make and make use of it in the future.

Learning Objectives

- Explore philosophical and architectural positions relating to anonymity as an architectural problem.
- Reconsider disciplinary boundaries and objectives of architecture in the context of anonymity.
- Explore new techniques and uses for the production of anonymity through architecture.

Course Requirements

Critical Evaluations	30%
Participation in Class Discussions	30%
Term Project	40%
Total	100%

Course Content: Topic Areas

A typical week consists of an assigned reading(s), lecture, and discussion session. Students will also develop a small project during the second half of the term. Mondays will be lecture-based classes consisting of a 45-minute lecture followed by discussion. Wednesdays will be discussion-based classes used to develop problems emerging from the weekly reading. For the sake of legibility, every 2-week period of the course will be divided into two equal parts. Part 1 will address a problem from a philosophical source. Part 2 will address a related problem from an architectural source.

- *Introduction:* What's so different about a speculative approach? (Bryant, Srnicek, Harman)
- *Materiality of Thought:* Ancestrality and the Arche-fossil (Meillassoux), Architecture of the City (Rossi)
- *Absolute Fragmentation*: Principle of Unreason (Meillassoux), Post-critical Origins (Corbusier, Eisenman, Koolhaas)
- *Autonomy and Anonymity:* Form, Function, Art (Heidegger, Harman, Negarestani), Between Autopoeisis and Automation (Schumacher, Bratton)
- *Disappearance of Power*: Distributed Sensations (Nealon/Foucault), Dromology (Virilio)
- *Politics and Aesthetics*: Aesthetics and Cognition (Jameson/Srnicek), Between Two Different Anaesthetics (Leach, Taron)
- *The Non-relational:* Autonomy as a model for a World Without-us (Agamben, Thacker), Architecture as a State of Exception (Aureli)

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Course Outlines

Electives

EVDS 683: Integrated Design

Faculty Responsible: Branko Kolarevic

Winter

Half Course

Co-requisites: None

Overview

This course will begin with a brief examination of the various meanings of "integrated design". We will then pursue an alternative vision of this concept, which is more open, fluid, pliable, and opportunistic in its search of collaborative alliances and agendas. We will refer to this alternative approach as integrative design in which methods, processes, techniques, and technologies are discovered, appropriated, adapted, and altered from "elsewhere."

Learning Objectives

In many ways, this course is about that which could be "borrowed" from elsewhere (i.e. from another disciplinary context) and potentially pursued as a promising trajectory in design. For example, we will examine what it means to integrate time as a dimension in design thinking, which is manifested today in very different ways, from weathering, the need to adapt to change, movable parts and reconfigurable assemblies, to time-based modeling of geometric forms using animation software. We will also look into biomimicry and how design can integrate nature by imitating or taking inspiration from its systems, processes, and elements to address particular design issues (such as sustainability, for example).

In our attempt to engage design as a broadly integrative endeavor we will "scavenge" far and wide, and deploy generative computational techniques, digital fabrication, robotics, biomimicry, material exploration, and/or performance analyses to discover and create something (a process, technique, product) that is potentially qualitatively new in design.

Course Requirements

The first half of the course has a seminar format, whereby each topic is introduced in a lecture followed by a discussion of selected readings. The second half will have a workshop format in which a potentially "integrative" proposal (approved by the instructor) will be researched through a 4,000-word paper or an exploratory project that could result in a process, technique, and/or product that will be presented at the end and possibly exhibited.

Project's development	25%
Outcome	25%
Verbal	20%
Written Presentation	20%
Active participation in discussions	10%
Total	100%

Course Content: Topic Areas

- Introduction
- Generative design techniques
- Parametricism
- Performativity
- Robotics
- Biomimicry
- Project proposals
- Consultations
- Project presentations

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Course Outlines

Electives

EVDS 683: Building Information Modeling

Faculty Responsible: David Burch

Winter

Half Course

Co-requisites: None

Overview

This course explores the Building Information Model (BIM) as a both form and process involving generation and management of digital virtual representation(s) of a building design. The resulting building information model becomes a shared resource to support decision-making about a building design from earliest conceptual stages, through design development, analysis, fabrication and construction. The BIM itself can carry through into its operational life. BIM is introduced as an enabling technological platform integrated project delivery. BIM encourages all professionals, firms and organizations in a construction project work cooperatively to create better buildings, faster delivery times, lower costs, reduced scope for or no litigation. This can form the basis of a more effective process for the entire team.

Learning Objectives

Students will learn about the essential concepts and methods associated with executing BIM projects, the various ways in which BIM has been used currently in the building industry, and its broader implications for the profession. In addition, students will acquire practical skills in using Revit (and related tools), software made by Autodesk, which is widely used in the industry today. Although we are focusing on the AutoDESK platforms, the underlying concepts are applicable to BIM projects regardless of platform.

- Understand REVIT Concepts relating to BIM Projects.
- Convert an existing Design project to REVIT LOD 300 Model.
- Understand Data relationship to BIM Projects.
- Gain an appreciation of Practice concepts of building construction and analysis.
- Understand basic 3D coordination concepts using Navisworks.
- Introductory understanding of selected International Technical Standards.

Course Requirements

BIM project's development	20%
Project outcome	20%
Completion of GET REVIT Introduction	10%
Project presentation at the end of the term	20%
Two-page paper	20%
Active participation in discussions and Labs	10%
Total	100%

Course Content: Topic Areas

The course will have both the seminar and the workshop/LAB format with supporting WEB Training from Global E Training. Monday class meetings will be devoted mostly to lectures or discussions of assigned readings; there will be a number of guest lectures in the second half of the term by leading professionals in the industry. In general, Wednesday meetings will consist of LAB Time, demonstrations of essential concepts and modeling techniques in Revit and other software, which is freely available to students through Autodesk's website. During the course students will develop an enhanced BIM (i.e. Geometry plus Data information) of either their own studio project from the Comprehensive Design Studio or a project provided by the instructor.
The Developed BIM will be used for Technical analysis using Navisworks. Strategies in 3D coordination will be explored and several test conditions will be resolved using appropriate work flow.

- Introduction to BIM / Getting Started
- Creative BIM (Branko Kolarevic)
- BIM Concepts and Methods
- Model Organization Strategy
- Parametric Concepts
- Advanced Concepts and Data
- Advanced Massing
- Andy Hammer – Extending BIM Data (CODEBOOK)
- Families
- 3D Coordination
- Adaptive Components
- Discussion of Families

Contd. Below

- Fabrication / Construction: Ellis Don
- Guest Lecture: Bruce McCallam (TBC)
- Project consultations
- Presentations

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Course Outlines

Electives

EVDS 621: Health in the Built Environment

Faculty Responsible: Tang Lee

Winter

Half Course

Co-requisites: None

Overview

This course will raise the student's awareness of indoor environmental conditions that affect occupant health and wellbeing. Indoor environments include acoustics, lighting, indoor air quality, radio-frequencies, etc. They will learn how building related problems can be mitigated. Various strategies for achieving indoor environmental quality in buildings throughout the building process from selecting a site and building design to constructing and maintaining the building is discussed.

Learning Objectives

• To introduce the student to the problems associated with building related illness caused by improper planning, building design, construction and maintenance.
• To understand the types of indoor environmental conditions such as sound, light, air contaminants and wireless communication radiations that can affect occupant health.
• To acquire a general understanding of public health issues, and related regulations and standards.
• To develop skills in examining indoor environmental quality problems in buildings through the use of proper sampling protocols and instruments.
• To develop skills at identifying sources of air contaminants, its origin, and develop practical mitigating measures.

Course Requirements

This is a lecture course with class discussions and videos. Assignments will demonstrate the student's understanding of building systems and its impact on occupant health and well-being. Class presentations will be evaluated on knowledge of indoor contaminants, rigor of indoor environmental quality investigations and developing solutions to address problems identified.

The two reports must be properly researched, analyzed and written with proper grammar, spelling and reference format. Class presentations are an integral part of acquiring and demonstrating knowledge and skills in this subject. The final grade is based on the following:

Assignment #1: Report on an indoor contaminant.	40%
Major team project: IEQ investigation (team).	40%
Presentations	20%
Total	100%

Course Content: Topic Areas

• *Introduction to health in the built environment:* Course outline, human comfort and environmental factors, Assignment #1: Report on an indoor contaminant, Indoor Environments affecting occupant health, Determinants of health and wellness, Vital signs readings: Indoor air quality and buildings
• *Air quality and air contaminants:* Sources, generation, characteristics, location and occupancies, Video: Sick Building Syndrome – Suzuki, Acoustics, lighting, seasonal affective disorder, etc., Video: Public Exposure: DNA, Democracy, and the Wireless Revolution
• *Indoor Environments affecting occupant health:* Radio frequencies, EMF, cell phones, Wi-Fi, satellite radio, wireless internet, non-ionizing radiation etc., Video: Electromagnetic Radiation: A Scientific Overview
• *Indoor air contaminants:* Airborne particles, target and acceptable concentration levels, Chemical, micro-organisms, target and acceptable concentration levels, Video: NOVA Can Buildings Make You Sick? Vital signs readings: Table of contaminants, Vital signs readings: Environmental contaminants, Sources of air contaminants, Sources, generation, characteristics, location and occupancies, Video: Environmentally Sick Schools, Vital signs readings: Sources of air contaminants
• *Ventilation, airflow*: Exhaust, supply air, re-circulation, ASHRAE guideline, building codes, Video: Taking Action & Ventilation Basics, Air cleaning devices, Types of air cleaners, portables, limitations, standards, Video: IAQ for Schools, Ventilation
• *IAQ investigation, sampling protocols and equipment:* Standards, tools and limitations, adsorption tubes, sampling bags, GC/MS, airborne particle counter, meters, calibrations, Gauss meter, airflow, temperature, humidity, bioassay, Case studies, Vital signs readings: Field protocols/Equipment description, Assignment #2: IEQ Investigation
• *Occupant health and the indoor environments:* Interaction with the physical environment, diet, air, sunlight, water, etc., chemical and allergies, epidemiology, MCS, Personal exposure and health risk to indoor air contaminants, medical intervention, environmental medicine and respiratory illness, Video: Up Close and Personal, The Nature of Things, David Suzuki, Vital signs readings: Human comfort
• *Moulds in native housing:* Types of moulds, standards and guidelines, Design, construction and maintenance and mould propagation, Video: 5th estate, Camp Hill Hospital, Moulds in schools, courthouses and hospitals, Video: W5 Moulds in portable classrooms, Video: Moulds in a Courthouse, Vital signs readings: Mitigation strategies, Moulds and its mitigation, Vital signs readings: Mitigation strategies
• *Designing and maintaining for occupant health*: Designing Healthy buildings, Video: IAQ tools for schools, Video: This clean house, Housing for the environmentally sensitive, Accommodation for those with environmental sensitivities, Video: 7 Unit apartments – Ottawa

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Course Outlines

Electives

EVDS 697: Tensile Membrane Structures

Faculty Responsible: Mauricio Soto-Rubio

Fall

Half Course

Co-requisites: None

Overview

This seminar explores the design of tensile membrane structures and their potential to address contemporary environmental issues. Through lectures and practical exercises, students learn basic design principles, become familiar with digital and physical form-finding techniques, understand detailing, manufacturing and installation procedures, as well as the potential and limitation of the different materials typically used in this type of constructions.

Learning Objectives

• To learn the fundamental principles related with the design, manufacturing, engineering, and installation of tensile membrane structures.
• To develop the necessary skills to design tensile membrane structures including digital and physical form-finding techniques.
• To become familiar with contemporary materials commonly used in tensile membrane structures.

Course Requirements

Course topics are presented mainly though lectures. Weekly required readings, discussions of student work, and videos supplement the material presented in lectures. In addition, students are required to individually develop an architectural project related with membrane structures in order to demonstrate their understanding of this kind of building technology.

The seminar includes a design exercise to be developed individually. Desk Crits, class pin-ups, and presentations are the essential components of this seminar's evaluation. Since architecture is a visual medium, this means having new and thoughtful visual work (drawings, models) each class session. If the instructor comes to you for a desk crit and finds you have no significant new visual work (a scribble in your sketch book does not count), we will move on to the next student. For desk crits of digital drawings and models, students should have a printout of the material at their desk ready to go at the time of the critique.

Adequacy of overall form	20%
Physical form-finding models	20%
Details	20%
Patterns	20%
Digital form-finding	20%
Total	100%

Course Content: Topic Areas

• Seminar Introduction
• History of tensile membrane structures, Basic design principles, Introduction of design exercise
• Detailing
• Materials
• Physical form-finding exercises
• Fabrication and Installation of tensile membrane structures
• Cable-Net Structures. Deployable tensile membrane structures
• Digital form-finding techniques
• Inflatable membrane structures
• Design pathology
• Final design review

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Course Outlines

Electives

EVDS 697: Responsive Architecture

Faculty Responsible: Vera Parlac

Winter

Half Course

Co-requisites: None

Overview

Over the past decade, there has been an increasing interest in exploring the capacity of built spaces to respond dynamically and adapt to changes in the external and internal environments and to different patterns of use. Such explorations are technologically and socially motivated, in response to recent technological and cultural developments. Advances in embedded computation, material design, and kinetics on the technological side, and increasing concerns about sustainability, social and urban changes on the cultural side, provide a background for responsive/interactive architectural solutions that have started to emerge.

The class will focus on theories behind the responsive architecture and on the field of responsive architecture in general. It will examine architecture in relation to the latest research in biology, material science, synthetic biology, bioengineering, and will address possible shifts in imagining and re-envisioning materialization of architecture. The course will underline architecture's inseparable link to technology and speculate on new possibilities for architecture that is integrated, responsive, adaptive and productive participant within larger ecologies.

Learning Objectives

- To learn about developments that had brought forward ideas of responsive architecture.
- To expand the understanding of the responsive systems and their role in architecture.
- To engage broader social and technological issues triggered by the deployment of responsive systems.

Course Requirements

This seminar course has two aspects. At the beginning of the semester there will be a series of lectures covering major topics of the course. Readings will be assigned and discussions conducted during some of the classes. Students will have an opportunity to further engage the course topic by either writing a 4000-word paper or by developing a small scale design research project focusing on dynamic systems. Consultations about their research paper or project will be conducted on a weekly basis in the second part of the semester.

Critical Evaluations	10%
Weekly Progress on Assignment	10%
Course Assignment	80%
Total	100%

Course Content: Topic Areas

As the external socio-economic, cultural, and technological context changes, so do conceptions of space, shape, form and performance in architecture. Over the past decade, we have seen an increasing interest in exploring the capacity of built spaces to respond dynamically to changes in the external and internal environments. The idea that two-way relationships could be established among the space/component/surface, the environment, and the users is not new. The first concepts of an adaptive, responsive architecture where born in the late 1960s and early 1970s, primarily as a result of parallel developments in cybernetics, artificial intelligence, and information technologies. This class is interested in the territory where the cybernetics and architecture meet. New digital technologies of modeling, fabrication and simulation, new materials and material technologies, and responsive architecture informed by mechatronics and robotics have an extensive impact on the way we build and
imagine architecture. Responsive Architecture seminar explores the importance of those new technologies in contemporary design.

The course will cover the following topics:
- Introductory lecture
- Architecture and kinetics
- Architecture and biology
- Architecture, matter and formation
- Architecture and cyborgs
- Discussion/Project proposal
- Consultation
- Review of student projects

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Course Outlines

Electives

EVDB 697: Design Drawing

Faculty Responsible: Barry Wylant

Winter

Half Course

Co-requisites: None

Overview

The aim of this course is to develop design drawing and rendering skills for design students, across disciplines. The ability to draw, and importantly, sketch, is a key communication and ideation skill for designers.

Exercises will be assigned in every class. Students are expected to participate fully in the classes and complete all excises undertaken in the course. This is essential as earlier exercises inform and provide a basis for later ones. All exercises are intended to enhance the student's ability to generate and communicate design ideas in 2D.

Learning Objectives

- To enhance visual design observation skills.
- To enhance 2D sketching and freehand drawing skills.
- To enhance drawing construction techniques.
- To introduce and enhance rendering techniques.

Course Requirements

During the course exercises will be assigned, demonstrations and lectures will be offered, and students will be expected to complete assigned exercises. A minimum level of design drawing competency must be demonstrated to pass the course. A number of exercises will be handed out daily. A portfolio of these are to be submitted at the end of class for evaluation.

The course it is evaluated as pass/fail.

Course Content: Topic Areas

- Drawing elements: e.g. Line and line weight, shapes, forms, additive and subtractive forms, shading techniques, etc.
- Drawing systems: orthographic, isometric and perspective
- Quick sketching techniques
- Perspective construction, shading and rendering techniques in different media

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Course Outlines

Electives

EVDL 629: History of Landscape Architecture

Faculty Responsible: David Monteyne

Winter

Half Course

Co-requisites: None

Overview

This course examines the theory of landscape and the history of landscape architecture. While it is not a historical survey of all times and places, the course aspires to developing a breadth of knowledge about landscape that students may transport to their own studies and discussions of specific landscapes.

Learning Objectives

• To develop knowledge of the history and significance of landscapes and landscape architecture in different eras and places in the world, in relation to cultural values and practices.
• To explore a range of historical and contemporary theories of landscape which contribute to the field of cultural landscape studies, as a mode of understanding and interpreting space and place.
• To become familiar with the key historical preoccupations of landscape designers, and with the professionalization of the discipline.
• To develop and refine skills in research, critical reading and discussion, synthesis of ideas, visual analysis, oral and written communication.

Course Requirements

Each student will produce two short papers (typically 3-5 pages), one longer paper, and one illustrated lecture (in pairs) during the semester. The papers are based on the subject matter in the course. There is no final exam.

Note: Participation grade reflects engagement in large and small group discussions in class, and in group work when assigned, as well as the completion of short in-class or pre-class assignments, and the peer review process for the last paper. Although attendance is not taken daily, note that absent students cannot participate in the above in-class activities, and this will be noted.

Course Expectations
• Attendance, preparation, and participation in discussions is expected
• Complete assigned readings by the time of the class meeting each week
• Hand in assignments on time; grades will be reduced 5% for each day assignments are late
• Academic honesty

Participation	20%
Paper 1: Experiential Analysis	20%
Paper 2: Research Essay	20%
Illustrated lecture	20%
Manifesto: an essay outlining your theory of landscape architecture	20%
Total	100%

Course Content: Topic Areas

• Introduction: Landscapes and Landscape Architecture
• Before the nineteenth century
• Olmsted and Others
• Garden Cities and other Solutions to 19th Century Issues
• Chinese and Japanese Traditions/Imperial Landscapes
• Rise of the (North American) Profession/City Beautiful Movement
• Twentieth Century Landscape Architecture
• Postwar to Postmodernism
• Landscape Architecture in Canada
• Guided Site Tours

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Course Outlines

Electives

EVDB 697: Los Angeles field Trip

Faculty Responsible: John Brown

Winter

Quarter Course

Co-requisites: None

Overview

This course is an introduction to the architecture and urban landscape of Los Angeles. Through a week long field trip students will learn about the built environment of Southern California.

Learning Objectives

- To gain an understanding and appreciation of the architecture of southern California.
- To study the various cultural and environmental forces that have shaped the city of Los Angeles.
- To gain an ability to analyze an existing architectural project and document that analysis through floor plans, photographs and diagrams.

Course Requirements

A 10-page graphic and written documentation of one of the major projects on the tour including plans, analytical diagrams, and photographs.

Course Assignment	100%
Total	100%

Course Content: Topic Areas

The specific sites to be visited in any given year are dependent on availability and interest. A tentative itinerary is as follows:

- Eames House by Charles and Ray Eames
- Neutra VDL House by Richard Neutra
- Gamble House by Greene and Greene
- Gehry House by Frank Gehry
- Disney Concert Hall by Frank Gehry
- Cathedral of Our City of Angels by Raphael Moneo
- Grand Avenue Project and Grand Park by Rios Clementi Hale
- Pershing Square by Ricardo Legorreta and Laurie Olin
- Museum of Radio & Television by Richard Meier
- Mandell Weiss Theatre by Antoine Predock
- Salk Institute by Louis Kahn
- Neuroscience Institute by Billie Tsien and Todd Williams
- San Juan Capistrano Library by Michael Graves
- Getty Museum by Richard Meier
- Schindler Chase House by Rudolph Schindler
- Laneway Housing, Venice
- Garden Housing and Canals, Venice

Master of Architecture Program Faculty of Environmental Design University of Calgary 2016 **Course Outlines**	**Electives** EVDS 783/703: Directed Study in Environmental Design MArch program member supervising **Faculty Responsible:** Faculty Fall / Winter

Co-requisites: Consent of the Faculty

Overview

Thematic research, readings or design studio project related to urban design, architecture, environmental design topics.

Learning Objectives

Varies with directed study.

Course Requirements

May be repeated for credit

Course Content: Topic Areas

Varies with directed study.

Master of Architecture Program Faculty of Environmental Design University of Calgary 2016 **Course Outlines**	**Electives** EVDS 797: Preceptorship MArch program member supervising **Faculty Responsible:** Faculty

Co-requisites: Consent of the Faculty

Overview

A Preceptorship is a study and training arrangement made between a student and an employer or an equivalent supervisor which has specific educational objectives, a method of evaluation, and is an integral part of a student's Program of Studies. Preceptorships offer a number of benefits: acquiring skills and knowledge which may be better obtained outside the University; developing first-hand experience of professional design practice; preparing for more focused studies in the Faculty; and conducting research.

Learning Objectives

Varies with preceptorship arrangement.

Course Requirements

May be repeated for credit
Not included in GPA

Course Content: Topic Areas

Varies with preceptorship arrangement.

4.4 Current Faculty Resumes

Master of Architecture Program
Faculty of Environmental Design
University of Calgary
2016

Resumes

Faculty

Francisco Alaniz Uribe

Assistant Professor, Doctoral Student

COURSES TAUGHT
Fall- EVDA 782.xx: Senior Studio I (Portland)

EDUCATION
2010- Real Estate Development Certificate, University of Calgary (In progress)
2007 Master of Environmental Design (Urban Design), University of Calgary
2004 Master in Urban Development Projects, Universidad Iberoamericana, Mexico City
1997 Bachelor of Science in Architecture, Instituto Tecnológico y de Estudios Superiores de Monterrey, Monterrey, Mexico

REGISTRATION STATUS & PROFESSIONAL MEMBERSHIPS
2013 Registered Professional Planner, Alberta Professional Planners Institute
2013 Member, Canadian Institute of Planners
1997 Registered Architect, Architectural Registration Mexico

HONOURS & AWARDS
2014 Annual Teaching Award for Sessional Instructors, University of Calgary
2010 Merit Award, Alberta Professional Planners Institute for Red Deer County Open Space Master Plan
2010 Award for Excellence - Parks and Open Space Design Alberta Recreation Industry for Red Deer County Open Space Master Plan
2009 Regional Citation Award Canadian Society of Landscape Architects for Red Deer County Open Space Master Plan
2007 National Honour Award Canadian Society of Landscape Architects for The Calgary Project: urban form / urban life
2007 National Honour Award Canadian Society of Landscape Architects for Benalto Area Redevelopment Plan
2006 National Honour Award Canadian Society of Landscape Architects for Sense of Place in Alberta
2006 Place Planning Award Environmental Design Research Association(EDRA) for Sense of Place in Alberta
2006 Calgary Heritage Lion Award City of Calgary for Sense of Place in Alberta
2002 Calli 1st Place, Category: Work Place Architecture Biennale Nuevo León with GLR Architects for APC Headquarters
2000 Calli 1st Place, Category: Multifamily Residential Architecture Biennale Nuevo León with GLR Architects for Calzada 301
1999 3rd Place International Competition for the Millennium Congress Hall in Vatican City - with Rivadeneyra Architects

PUBLICATIONS
2016 “Developing the Community Plan and Urban Design Plan for Benalto, Alberta” in Planning Canada: a case study approach with Dr. Beverly A. Sandalack. Edited by Ren Thomas, Peer book chapter
2015 More than a lab: an on-going experiment in education, research and outreach, in Design for Learning: fostering deep learning, engagement and critical thinking University of Calgary, Conference on Postsecondary Learning and Teaching, Calgary, Canada, with Dr. Beverly A. Sandalack. Peer reviewed presentation
2015 “Townscape Analysis: open space planning for a better public realm”, in 2015 Canadian Society of Landscape Architects, Congress, Mexico City, Mexico, with Dr. Beverly A. Sandalack. Peer reviewed presentation
2015 “How to Measure Public Space Quality? urban form and walkability in Calgary, Canada”, in WALK21 2015 Vienna, Austria, with Dr. Beverly A. Sandalack. Peer reviewed presentation
2015 “Walking into The Future: are kids getting the best deal with neighbourhood design?”, in WALK21 2015 Vienna, Austria, with Dr. Beverly A. Sandalack. Peer reviewed presentation
2015 “Diseño Urbano Basado en la Investigación: forma urbana sustentable como objetivo” in URBAN THINKERS CAMPUS Mexico 2015, Legal Course Towards Habitat III Mexico City online presentation with Dr. Beverly A. Sandalack. Peer reviewed presentation
2014 “Whose Water is it? climate change and politics in Southern Alberta”, in 2014 Canadian Society of Landscape Architects, Congress, Ottawa, Canada, with Dr. Beverly A. Sandalack. Peer reviewed presentation
2014 “Whose Water is it? climate change and politics in Southern Alberta” in Landscapes / Paysages, vol 16 no. 4, Canada, with Dr. Beverly A. Sandalack. Peer reviewed journal publication
2014 “Hospitality in the City” in 2014 World Town Planning Day Conference with Dr. Beverly A. Sandalack. Peer reviewed presentation
2013 “Southern Alberta Irrigation Reservoirs: when the rivers go dry” in 2013 World Town Planning Day Conference with Dr. Beverly A. Sandalack. Peer reviewed presentation
2012 “Neighbourhood Type and Walkshed Size” in Journal of Urbanism: International Research on Placemaking and Urban Sustainability with Dr. Beverly A. Sandalack, et. al. Peer reviewed
2012 “Neighbourhood Form and Vehicle Travel” City of Calgary Engineers Professional Development Day, Calgary, Canada. Invited presentation
2011 “Access to Off-Leash Parks, Street Pattern and Dog Walking Among Adults” in Journal of Public Health, with Dr. Gavin R. McCormack, et. al. Peer reviewed

Contd. Below

2011 “Neighbourhood Design and Vehicle Travel: recommendations for reduction of energy consumption” 18th International Seminar on Urban Form, Montreal, Canada. with Dr. Beverly A. Sandalack. Peer reviewed presentation
2011 “Calgary’s Middle Ring Neighbourhoods: transitioning post-World War 2 urban form to greater sustainability” 18th International Seminar on Urban Form, Montreal, Canada, with Dr. Beverly A. Sandalack. Peer reviewed presentation
2010 ‘Local Energy and Distributed Generation, panel member– Design and Efficiency’ Alberta Acts on Climate Change, Calgary, Canada, Invited Panel Member
2010 “Open Space Typology as a Framework for Design of the Public Realm” in The Faces of Urbanized Space, Architectural Volumes 1/2010 with Dr. Beverly A. Sandalack. Peer reviewed, book chapter.
2009 “Townscape Analysis: Open Space Planning for a Better Public Realm”, Community Planning Association of Alberta Annual Conference, Red Deer, Canada, with Dr. Beverly A. Sandalack. Invited presentation
2007 “Benalto Area Redevelopment Plan: townscape analysis for sustainable land use planning and urban design” 45th International Making Cities Livable Conference, Portland, United States, with Dr. Beverly A. Sandalack. Peer reviewed presentation
2007 “Transit and Sustainable Urban Design in Calgary: retrofitting inner-city neighbourhoods”, 45th International Making Cities Livable Conference, Portland, United States, Peer reviewed presentation
2007 “Urban and Rural Landscapes Planning and Design” University of Calgary, Research in Action, Calgary, Canada. Invited presentation
2007 “Round Table: The presence of the MPUD in the professional life” 10th Anniversary of the Masters in Projects for Urban Development (MPUD), Universidad Iberoamericana, Mexico City, Mexico. Invited panel member

Master of Architecture Program
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University of Calgary
2016

Resumes

Faculty

Marc Boutin
Associate Professor

EDUCATION
2000 University of Calgary, Department of Art, Masters of Art (Architectural History) Dr. Geoffrey Simmins, Thesis Advisor
1990 Emily Carr College of Art and Design, Sculpture Studio
1989 University of British Columbia, School of Architecture, Bachelor of Architecture (Honours)
1987 Ontario College of Art and Design, Sculpture Studio
1987 University of Toronto, School of Architecture, Urban Design Studio, Steven Fong, Professor, Visual Literacy Studio, Brian Boigon, Professor
1985 University of Manitoba, Faculty of Architecture, Bachelor of Environmental Studies (Honours)

REGISTRATION STATUS & PROFESSIONAL MEMBERSHIPS
2011 Elected Fellow of the Royal Architectural Institute of Canada
2011 Elected Member of the Royal Canadian Academy of Arts
2005- present Member of the Royal Architectural Institute of Canada
1997- present Member of the Alberta Association of Architects

HONOURS & AWARDS
2016 Winner of the Faculty of Environmental Design Teaching Excellence Award
2016 Winner of a Prairie Design Award of Excellence, John Fry Sports Pavilion, Edmonton, Canada
2016 Winner of a Prairie Design Award of Excellence, Memorial Drive Pathway, Calgary, Canada
2016 Winner of a Prairie Design Award of Merit, Edmonton Military Families Commemoration, Edmonton, Canada
2015 Mayor's Urban Design Award, John Fry Sports Pavilion, Edmonton, Canada
2014 Winner of a Canadian Architect Award of Merit for the Edmonton Valley Zoo, Edmonton, Canada.
2014 Winner of a Canadian Society of Landscape Architects Award of Excellence: National Honour, Poppy Plaza, Calgary, Canada
2014 Winner of a National Urban Design Award of Merit, Poppy Plaza, Calgary, Canada
2014 Winner of a Calgary Heritage Authority Lion Award, Poppy Plaza, Calgary, Canada
2014 Winner of a Mayor's Urban Design Award, 1st Street Underpass, Calgary, Canada.
2014 Winner of a Mayor's Urban Design Award, Calgary Northpointe Bus Shelter, Calgary, Canada.
2014 Winner of a Mayor's Urban Design Award, Memorial Drive Pathway, Calgary, Canada.
2013 Winner of a CEA Award of Excellence in Sustainability, Calgary Public Building, Calgary, Canada
2013 Winner of a CEA Award of Merit in Engineering, Calgary Public Building, Calgary, Canada
2012 Winner of a Canadian Architect Award of Excellence, 1st Street Underpass, Calgary, Canada
2011 Winner of a Federation of Canadian Municipalities Sustainable Communities Award, Calgary Public Building, Calgary, Canada
2011 Winner of the international design competition for the John Fry Sports Pavilion, Edmonton, Canada
2011 Winner of a Mayor's Urban Design Award for the Calgary Centre for Global Community, Calgary, Canada
2011 Winner of a Mayor's Urban Design Award for the Memorial Drive Pathway, Calgary, Canada

RESEARCH, SCHOLARSHIP, CREATIVE ACTIVITY
My research, scholarship, and creative activity are primarily manifested through my critical practice, the marc boutin architectural collaborative. The design work of this studio has been recognized regionally, nationally, and internationally in awards, publications, competition wins, and lectures/symposia. The creative work and research takes the form of built projects, exhibitions, and competitions.

ACADEMIC, PROFESSIONAL, & PUBLIC SERVICE
2012-2016 Faculty Committee Member: Faculty Promotions Committee, Faculty Visioning Committee, and Faculty Search Committees.
2007-2012 Chair or Review Team Member for CACB Accreditation Visits: Laval University, University of Montreal, McGill University, Ryerson University
2012 Member, General Promotions Committee, University of Calgary
2012 Member, Academic Review Committee, University Fund Raising Initiative

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Resumes

Faculty / Administration

John Brown

Associate Dean (Research + International)

COURSES TAUGHT
Fall- EVDS 683: Housing and the Domestic
Winter- EVDA 582: Studio II in Architecture, EVDB 697: Los Angeles Field Trip

EDUCATION
PhD, Royal Melbourne Institute of Technology, (expected 2016)
Master of Science - Building Design, Columbia University, 1984
Master of Architecture, University of Texas, 1983
Bachelor of Science - Civil Engineering, University of Manitoba, 1980

REGISTRATION STATUS & PROFESSIONAL MEMBERSHIPS
Registered Architect, Alberta
Fellow, Royal Architectural Institute of Canada

HONOURS & AWARDS
2015 Mayor's Urban Design Award – Aging-in-Place Laneway Home Project
2013 ADAPT-r European Fellowship

PUBLICATIONS
Reviews
Kolarevic, Branko, "From Mass Customisation to Design Democratisation', Mass Customized Cities, Thomas Verdebe (ed), Architectural Design, November/ December 2015, pp.49-53.
Van Schaik, Leon. "FAB House Prototype", Practical Poetics in Architecture, John Wiley & Sons, United Kingdom 2015.
Conference Proceedings
Brown, J. "Mediating the Middle Ground", ADAPT-r Creative Practice Conference, Ku Leuven, Belgium, August, 2014.
Brown, J. "Designing for Aging-in-place: Evidence-based Design Strategies to Support the Administration of Healthcare within the Domestic Environment", 2014 Aging and Society Conference, Manchester United Kingdom, November, 2014.
Brown, J. "Crystals of the Good Life: Analyzing Historical Models of Suburban Development in Canada", Imagining the Suburbs, Exeter United Kingdom, June, 2014.
Brown, J. "Integrated Design: Evaluation of the Strength of a Multi-Disciplinary team in Designing Robust and Resilient Responses to an Environmental Crisis", The Environmental Design Research Association (EDRA) Annual Conference, New Orleans La, May, 2014.
Brown, J. "Architectural Prosthetics: Designing for Change in Aging-in-place Dwellings", The Environmental Design Research Association (EDRA) Annual Conference, New Orleans La, May, 2014.
Brown, J. "Domestic Bliss: Changing Expectations in Dream Home Culture", Popular Culture Association, New Orleans La, April, 2014.
Brown J. "Slow Food Slow Homes – Expanding the Role of Architecture in the North American Housing Industry, Nordic Design Research Conference 2011 Proceedings, Nordes, Helsinki Finland, June 2011.
Brown J. "Domesticating New Media: Redefining the Designer's Relationship to the Culture of Home, Places and Themes of Interiors. Contemporary Research Worldwide, Politecnico di Milano, Milan, Italy, October 2011
Conference Presentations
Brown, J. "Cookie Cutter Suburbia Analyzing the Landscape of Middle Class Housing in North America", Middle-class Housing in Perspective: From Post-war Construction to Post-Millennial Urban Landscape, Milan, Italy, November, 2012
Brown, J. "Architecture for All—Design Education as Advocacy", 2012 Residential Architect Annual Conference, Chicago Illinois, October, 2012.
Brown, J. "Innovating Community Design and Mass Market Housing", 2012 Residential Architect Annual Conference, Chicago Illinois, October, 2012.
Brown, J. "Making Home Mass Market Design Education as an Advocacy Tool", MAKING – an International Conference on Materiality and Knowledge, Notodden, Norway, September, 2012.
Invited Lecture Presentations
"Laneway Housing Options for Older Individuals", World Town Planning Day Conference, Calgary, November 2015.
"Future Adaptive Building and the Regeneration of Suburbia". Faculty of Architecture, University of Newcastle, Newcastle Australia, October 2015
"Panel discussion and Studio Reviews", Faculty of Architecture, Yale University, New Haven Connecticut, January 2015.
"Recent Work", Faculty of Architecture, Dalhousie University, Halifax Nova Scotia, January 2014.
"The Energy Implications of Mass Market Housing", 2013 TedX Calgary, May, 2013.

Contd. Below

RESEARCH, SCHOLARSHIP, CREATIVE ACTIVITY

Research

Since 2015 I have raised over $400,000 in industry funding for the Laneway Age-in-Place Housing Research project. This interdisciplinary Project is a collaboration with the W21C research initiative at the Cumming School of Medicine and the City of Calgary. External partners include the Alberta Real Estate Foundation, Canadian Mortgage and Housing Corporation (CMHC), the Calgary Foundation, Section 23, and DIRTT Environmental Solutions.

Scholarship

After five years of PhD research I completed my doctoral dissertation entitled "Going Home: Future Adaptive Building for Aging-in-Place for defense in November 2016.

Creative Activity

I continue to maintain an active design/build residential architecture practice to explore the practical applications of my research and scholarship.

ACADEMIC, PROFESSIONAL, & PUBLIC SERVICE

Academic

2016 – present Member, W21C Executive Advisory Committee
2016 – present Co-Chair, Walk21 Conference Steering Committee
2011 – present Co-Chair, makeCalgary Steering Committee,
2011 – present Associate Dean (Research + International)

Professional

2016 – present Member, Brenda Stafford Foundation Scientific Advisory Board
2016 – present Chair, RAIC Age Friendly Housing Options Task Force
2015 – present Member, Calgary Age Friendly Housing Task Force
2015 – present Regional Director, Royal Architectural Institute of Canada
2013-2014 Committee Member, City of Calgary Flood Mitigation Task Force
2012 Jury Member, Residential Architect Design Awards

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Resumes

Faculty

Caroline Hachem-Vermette
Assistant Professor

COURSES TAUGHT
Fall- EVDS 523: Sustainability in the Built Environment, EVDA 617: Architectural Lighting Design
Winter- EVDA 615: Environmental Control Systems, EVDS 683: Solar Build Envelope Design

EDUCATION
2012- Ph.D. in Building engineering, Concordia Univer sity, Montreal, Quebec.
2008- MSc. in Building Engineering, Concordia University, Montreal, Quebec.
2005- MSc. in Architecture and Urban Planning, Technion - Israel Institute of Technology, Haifa, Israel. Graduated summa cum laude.
1999- Diplome d'Etude Superieur (DES) a combined BA-MSc degree in Architecture, Holy Spirit University, Beirut, Lebanon.

REGISTRATION STATUS & PROFESSIONAL MEMBERSHIPS
ASHRAE (American Society of Heating and Air-Conditioning Engineers);
SNEBRN (Smart Net -zero energy building research network);
IEA (International Energy Agency) Task51- Solar energy in Urban Planning

HONOURS & AWARDS
2016 Sustainability Award for the Campus as a Learning Laboratory.
Award for Outstanding Contribution: Innovative Direction in Modeling, awarded for the paper “Solar Optimized Neighborhood: Evaluation and Guidelines”, e-Sim Conference (IBPSA).
ASHRAE grant-in aid scholarship, for the year 2011-2012.
Bill Graham- NSERC scholarship, 2010-2012.

PUBLICATIONS
Refereed Journal papers
Hachem C. (2016), Impact of neighborhood design on energy performance and GHG emissions, J. of Applied Energy, in press.
Hachem C., Cubi, E. Bergerson, J. (2015). Energy performance of a solar mixed-use community, Sustainable cities and communities (Special issue).
Hachem, C., (2015), Integrated design considerations for solar communities, Journal of Green Buildings, V 10, N2.
Hachem C., A. Athienitis, P. Fazio, (2014). Energy performance enhancement in multistory residential buildings, J. of Applied Energy, 116, pp. 9-19
Hachem C., Fazio, P., and Athienitis, A., (2013). Solar optimized residential neighborhoods: Evaluation and design methodology, J. of Solar Energy, 95, 42–64.
Hachem C., A. Athienitis, (2013). Effect of Residential Building Design on Energy Performance, ASHRAE journal, Volume 55, I ssue 1, Pages 72-74.
Hachem C., A. Athienitis, P. Fazio, (2012). Evaluation of energy supply and demand in solar neighbourhoods, J. of Energy and Buildings. Volume 49, Pages 335-347.
Hachem C., A. Athienitis, P. Fazio, (2012). Design of roofs for increased solar potential of BIPV/T systems and their applica tions to housing units. ASHRAE Transactions.
Hachem C., A. Athienitis, P. Fazio, (2011), Investigation of Solar Potential of Housing Units in Different Neighborhood Designs, J. of Energy and Buildings, 43 (9).
Hachem C., A. Athienitis, P. Fazio, (2011), Parametric investigation of geometric form effects on solar po tential of housing units, Journal of Solar Energy, Volume 85, Issue 9.
Conference papers
Hachem, C., (2016) Environmental impact of neighborhood designs, SimAUD London.
MacGregor, A. and Hachem, C. (2016) Investigation of Design Strategies for Improved Ener gy Performance in Supermarkets: A Case Study, eSim 2016.
ElSayed, M. and Hachem, C. (2016). Development of optimization methodology for increased energy efficiency of PV integrate d curtain wall systems, eSim 2016.
Bigalia, E., Hachem, C., ElSayed M., and Athienitis, A. (2016). Solar energy potential for commercial building façade retrofit, eSim 2016.
Hachem C., Cubi, E. Bergerson, J. (2015). Energy performance of a solar mixed-use community, 4th Climate Change Technology Conference, Montreal, Canada.
Hachem, C., (2015), Design of a base case mixed-use community and its energy performance, 6th International Building Physics Conference, Torino, Italy.
C. Hachem, P. Fazio and A. Athienitis, (2013), Design of curtain wall facades in multistory buildings for improved solar potential and daylighting distribution, ISES, Mexico.
C. Hachem, P. Fazio and A. Athienitis, (2013), Effect of Housing Density on Energy Performance of Solar-optimized Residential Configurations, CISBAT, Switzerland.
Hachem C., Athienitis, A., and Fazio, F., Design Methodology of Solar Neighborhoods, Solar Heating and Cooling Conference, Energy Procedia, July 2012.

Contd. Below

Hachem C., Athienitis, A., and Fazio, F., Solar Optimized Neighborhood Patterns: Evaluation and Guidelines, eSim 2012, Halifax, Canada, May 2012.
Hachem C., Fazio, P., and Athienitis, A. Energy Implications and Solar Energy Potential of Housing Units 'Shapes, International Building Physics Conference (IBPC5), Kyoto, 2012.
Hachem C., Athienitis, A., and Fazio, F., Design of Roof Morphology for Increased Solar Potential of BIPV/T Systems, ISES Conference, Kassel, Germany, August 2011.
Hachem C., Athienitis, A., and Fazio, F., Evaluation of Alternative Neighborhood Patterns for BIPV Potential and Energy Performance, CISBAT, Lauzanne, Switzerland, 2011.
Hachem C., Athienitis, A., and Fazio, F., Design of Solar Optimized Neighbourhood, ASHRAE conference, Montreal, June 2011.

RESEARCH, SCHOLARSHIP, CREATIVE ACTIVITY

Leader of the project of the net- zero energy communities design as part of NSERC Smart Net -Zero Energy Building Research Network (SNEBRN) (2015-2016).
2016 Eyes High Doctoral Recruitment Scholarship
Building Excellence Research and Education Program Grant Award, BC Canada, 2016-2017.
Natural Sciences and Engineering Research Council (NSERC) Engage Grant, 2016
Natural Sciences and Engineering Research Council (NSERC) Discovery Grant, 2015-2020
EVDS MakeCalgary Grant for the year 2015
NSERC Smart Net -Zero Energy Building Research Network (SNEBRN) research grant for the years 2015-2016

ACADEMIC, PROFESSIONAL, & PUBLIC SERVICE

Selected Seminars and Invited Talks
Panelist, for screening of The City Dark, IES Calgary Section, Nov 2015
Invited speaker in the International Seminar – Arquitectura E Ingenireria De Envolventes De Edificios, schools of Architecture and Engineering of Pontifical Catholic University of Chile, Nov 2015. http://web.ing.puc.cl/~live/simposio/expositores.html
Invited speaker and chairing a session in CZEBS-iiSBE-APEC Symposium, August 2015.
Invited speaker in Open Symposium on Solar Energy in Urban Planning, Trondheim, Norway, 2015.
Invited speaker for 2013 Building Saskatchewan Green Conference, Oct 25th.
Committees, reviewers and other
Reviewer/scientific committee – esim conference 2016
Interdisciplinary congress (May 2016): Energizing communities- organization and co-chairing
A member of PhD Examining committee
Reviewer ACSA 2016
A member of 2016 and 2015 Graduate Award Competition (GAC) Scholarship committee
Solar energy consulting for new mixed use community, West Campus, Calgary.
Solar community design – feasibility study for Okotoks new community.
Associate Editor for the journal Indoor and Built Environment (2013-2016).
Reviewer for a number of refereed journals such as Applied Energy, Solar Energy, Renewable Energy, Indoor and Built environment and International Journal of Space Structures.

Master of Architecture Program
Faculty of Environmental Design
University of Calgary
2016

Resumes

Faculty

Catherine Hamel
Associate Professor

COURSES TAUGHT
Fall- EVDA 580 Studio I in Architecture – Design Thinking, EVDS 697.86: Leadership and Architecture
Winter- EVDA 782.xx: Senior Studio II

EDUCATION
Masters of Architecture (History and Theory), McGill University. Canada, 1993
Bachelor of Architecture, Pennsylvania State University. USA, 1989
Bachelor of Science, Interior Design, California State University. USA, 1985

HONOURS & AWARDS
Alberta Foundation for The Arts, 2009
URGC University of Calgary Travel Grant, 2005, 2007, 2009
URGC University of Calgary Short term Project Grant, 2006

PUBLICATIONS
"Repurposing with A Vengeance, A Dance of Restrained Acts Towards Justice." Architecture and Justice: Judicial Meanings in the Public Realm, Simon, J.Temple, S & R. Tobe, Ashgate Press, London, UK, 2013
"Six Points of Resilience" Catalogue, Alberta Foundation for the Arts, 2013
"To My Beirut of Flesh and Blood: Tearing Air to Draw Displacement." The Many Facets of Story Telling: Global Perspective on Narrative Complexity. Rohse, M., Infanti, N. and Nivargi. M. edts., InterDisciplinary Press. United Kingdom. 2012
"Listening to The Hand. Boulder Pavement: Arts and Ideas, Banff Centre Press: Canada. 2011

RESEARCH, SCHOLARSHIP, CREATIVE ACTIVITY
Theatres of Observation: Scripts for lingering, International Federation of Theatrical Research, Presenting The Theatrical Past: Interplays of Artefacts, Discourse and Practices. Sweden, 2016.
The Drawn Out Identity of Forced Displacement, The Canadian Association for Latin American and Caribbean Studies, Congress for the Humanities and Social Sciences, Canada, 2016.
Measure Twice: Once for Exclusion, Once for Inclusion. "A Vision of Revolution: Exile and Deportation in Global Perspective Conable Conference. Rochester NY, April 2015
The Target Has Not Found Its Bullet Yet. Matrices: Second International Conference on Architecture and Gender. Portugal, 2015.
Between Loss and Discovery. Image of Identity Conference. Zurich. 2015
A Life Misremembered. Creative Non-Fiction Writing by Women. Pacific Ancient and Modern Language Association Conference. Seattle, USA. 2012.
Six Points Of Resilience, Artist Talk. Prairie Art Gallery, Alberta, Canada. 2012
I speak of the house, a home today, and tomorrow a ruin, stolen and resurrected. Ethics, Evil and The State, International Conference. Inter-Disciplinary.Net . Prague. 2012.
To My Beirut of Flesh and Blood: Tearing Air to Draw Displacement. Storytelling: Global Reflections on Narrative. Inter-Disciplinary.Net International Conference. Prague. 2012.
Exhibition & Residencies
Occasions to Witness: swift hand and the digital observer. With K.Kelly-Frére. Alberta Foundation for the Arts Traveling Exhibit, 2016-2018.
Refugees and Forced Migration, Centre for Refugee Studies, York University, Canada. 2015
Six Points of Resilience, Solo, Alberta Foundation for the Arts Travelling Exhibit, 2012-14
Without End: Exploring The Lines That Keep Us Apart, Co-Curator with Todd Schaber, Group exhibit, Alberta Foundation for the Arts Traveling Exhibit, 2009-2011
Graduate Student Supervision and Examination
Kogut, V. Unportrait: identity masking of the precariat. Examiner, MFA, Faculty of Arts, 2016
Lypka, C. Divergent Femininities: Reorienting Anxious Womanhood in Modernist Fiction. Examiner, PhD candidacy examination, Department of English, 2016.
Sinnot, M. The Container: A journey through Instillation, containment and politics. Examiner, MFA Theatre Design, School of Creative and Performing Arts. 2016
Birch, R. People, Place and Spirit: pursuing the sacred in the design of the built environment, Co-supervisor, Masters of Architecture, Faculty of Environmental Design, 2014
Dmuchoska, N.The Art Of Jay Walking: a contemporary approach to Interaction, ownership and Creation in public space. Examiner, Faculty of Environmental Design, 2013
Haggag, L. Re-Territorialization: escaping the frame. Examiner, MFA, Faculty of Arts, 2013

Contd. Below

Daniali, A.A Conceptual Framework of Vulnerability Capacity Assessment Before Disaster Strikes. Examiner, Faculty of Environmental Design, 2013
Rahman, F.Interface Between the River and the City in a Historic Mixed Use Urban Context: comprehensive waterfront development design strategies in Dhaka, Bangladesh. Examiner, Faculty of Environmental Design, 2013
Tozic, D. Elegy for Every Moment. Examiner, MFA, Faculty of Arts, 2011
Landry, M. Transcending Thresholds. Chair, Supervisory Committee, Masters of Architecture, Faculty of Environmental Design, 2011

ACADEMIC, PROFESSIONAL, & PUBLIC SERVICE

Risk Reduction Group, Prevention of Sexual Harassment and Violence committee, University of Calgary, 2016
Diversity and Equity Committee. University of Calgary, 2014 -16
Manning Chair in Political Communication hiring committee, Department of Communication and Culture. Faculty of Arts. 2016
Environmental Communication hiring committee, Department of Communication and Culture, Faculty of Arts. 2016
Awards Committee, Faculty of Environmental Design, 2015-16
Tenure and Promotion Committee, Dean's Appointee, Faculty of Environmental Design, 2015
Faculty Merit Committee, Faculty of Environmental Design, 2015
Canadian Art History, Hiring Committee, Faculty of Arts. 2014
Academic Appointment Review Committee, Faculty of Environmental Design, 2014
Kasian Gallery Director. University of Calgary 2013-14
Routledge, Taylor and Francis Books, Assessor, 2012-14
Building Science and Technology Hiring Committee, chair, Faculty of Environmental Design 2013
Design Position, Hiring committee, School of Creative and Performing Arts. Faculty of Fine Arts, 2012
Joint Salary Equity Committee, University of Calgary, 2012
Admissions Committee, Architecture, Faculty of Environmental Design 2011-2012
South Health Campus Executive Arts Committee 2012- 2013
City of Calgary Public Arts Program, Juror, 2012
Theatre Architecture Working Group
The Canadian Association for Latin American and Caribbean Studies
Pacific Ancient and Modern Language Association
Architecture Humanities Research Association
Consortium for Peace Studies, University of Calgary

Master of Architecture Program
Faculty of Environmental Design
University of Calgary
2016

Resumes

Faculty

Jason Johnson

Associate Professor, Co-Director - Laboratory for Integrative Design

COURSES TAUGHT
Fall- EVDA 580: Studio I in Architecture – Design Thinking, EVDA 541: Graphics Workshop I, EVDB 697.xx: Taylor Seminar
Winter- EVDA 582: Studio II in Architecture, EVDB 697.xx: Taylor Seminar

EDUCATION
Master of Architecture and Urbanism, The Architectural Association (AADRL), London, UK
Bachelor of Architecture, Ball State University, Muncie, IN
Bachelor of Arts, Environmental Design, Ball State University, Muncie, IN

REGISTRATION STATUS & PROFESSIONAL MEMBERSHIPS
Architectural Association, Member
Association for Computer Aided Design in Architecture, Member

HONOURS & AWARDS
Mayor's Urban Design Award (2013)
The Battery Conservancy America's Design Competition: Finalist (2013)

PUBLICATIONS
Books, Volumes, Catalogs
Digital Design Exercises for Design Students, Routledge, London, UK, Johnson, Jason S, Vermillion, Joshua. (2016) 290 pp.
ACADIA 2011 Integration Through Computation: Project Catalogue of the 31st Annual Conference of the Association for Computer Aided Design in Architecture(ACADIA), ACADIA, Johnson, J. Taron, J. Kolarevic, B. Parlac, V., (2011) 206 pp.
ACADIA 2011 Integration Through Computation: Proceedings of the 31st Annual Conference of the Association for Computer Aided Design in Architecture (ACADIA), Joshua M. Taron, Jason
S. Johnson, Vera Parlac, Branko Kolarevic, ACADIA, Calgary/Banff, 2011 October, 413 pp.
Peer Reviewed Articles/Papers/Abstracts
Johnson, Jason S, Parker, Matthew, 2016. "Ubiquitous Simultaneity: A Design Workflow for an Information Rich Environment". 2016 ACSA International Conference, Santiago, Chile.
Johnson, Jason S, Parker, Matthew. 2014. "This is not a Glitch: Algorithms and Anomalies in Google Architecture." In ACADIA 2014 Design Agency: Proceedings of the 34th Annual Conference of the Association for Computer Aided Design in Architecture (ACADIA), edited by David Gerber, Alvin Huang, and Jose Sanchez, 289-298. Los Angeles: Riverside Architectural Press/ACADIA.
Johnson, Jason S., "Procedures for Community Based Parametric Design and Making", Proceedings of the 5th STS Italia Conference, A Matter of Design, Milan,
Johnson, Jason S. "Inhabiting Difference: Integrating Rule Based Design and Cultural Ritual." Atmos/6 Ecology and Design Conference, University of Manitoba, Winnipeg, 2014 February
Johnson, Jason S. "CloudSourcing." Atmos/5 Ecology and Design Conference, University of Manitoba, Winnipeg, 2013 February
Johnson, Jason S. "Proposals for Animal Housing - Multi-Species House." Atmos/5 Ecology and Design Conference, University of Manitoba, Winnipeg, 2013 February
Johnson, Jason S. "Oil Sands Remediation." Atmos/5 Ecology and Design Conference, University of Manitoba, Winnipeg, 2013 February
Johnson, Jason S, Taron, Joshua. 2011. "Cells and Infrastructure: Designing for Variable Futures." In Proceedings of the International Symposium on Algorithmic Design for Architecture and Urban Design, ALGODE TOKYO 2011, edited by Yasushi Ikeda, D501–D512. Tokyo: AIJ
Johnson, Jason S. 2011. "Catch & Release." In Cultural Defence: Scripting Designers, Scripting Cultures, edited by Mark Burry, 1st ed., 33,57. Chichester,:Wiley.
Johnson, Jason S, Marquez, William, Taron, Joshua. 2011. "Re:Connecting Devington - Parametric Agricultures." Mid: A Discourse on Mid-Sized Cities 01 (01):24-30.
Invited Contributions
Johnson, Jason S. 2013. "Fabricating Fashion." ii- International Journal of Interior Architecture and Design December (2): 36–41.
http://www.iijournal.org/
Johnson, Jason S. 2013. "Baseball, Politics and the Rise of the Architecture Atheists." ii- International Journal of Interior Architecture and Design February (1): 172–174.
Taron, Joshua M, Johnson, Jason S. 2011. "An Introductory Conversation." CMD Journal July (2): 42–69.
http://cmdjournal.com/issue_archive.html
Work Featured in Various Media
5 print media features
5 television/radio/podcast interviews
25 online features of work

Contd. Below

RESEARCH, SCHOLARSHIP, CREATIVE ACTIVITY

Committees

Merit (2015), Admissions (2009,2013-2016), Student Appeals (2010-2012), Workshop Committee Chair (2016), Graduate Awards (2012-2015), Faculty of Law Council Rep (2014)

TUCFA Representative (2014-2016), AAA Representative (2016), ACSA Representative (2014-2016)

Peer Reviewer for ACSA, ACADIA, International Journal for Interior Architecture and Spatial Design

Co-Chair ACADIA 2011 Conference

Associate Editor and Contributor, International Journal for Interior Architecture and Spatial Design

Master of Architecture Program
Faculty of Environmental Design
University of Calgary
2016

Resumes

Faculty

Branko Kolarevic
Professor

COURSES TAUGHT
Fall- EVDA 682.02: Intermediate Studio
Winter- EVDA 543 Graphics Workshop II, EVDS 683: Integrated Design

EDUCATION
Doctor of Design, Harvard University, USA, 1993
Master of Design Studies, Harvard University, USA, 1989
Diploma Engineer in Architecture, University of Belgrade, Yugoslavia, 1986

REGISTRATION STATUS & PROFESSIONAL MEMBERSHIPS
Association for Computer Aided Design in Architecture (ACADIA)
Education in Computer Aided Architectural Design in Europe (eCAADe)
Sociedad Iberoamericana de Grafica Digital (SIGraDi)

HONOURS & AWARDS
ACADIA Society Award of Excellence, 2015

PUBLICATIONS
Book: Building Dynamics: Exploring Architecture of Change, Routledge (Taylor & Francis), London, UK, 2015 (with Vera Parlac)
Book: Integration through Computation, Proceedings of the ACADIA 2011 Conference, Univ. of Calgary, ACADIA, 2011 (with Jason S. Johnson, Vera Parlac and Joshua M. Taron)
Book chapter: "Architecture of Change: Adaptive Building Skins" (with V. Parlac) in Mitra Kanaani and Dak Kopec (eds.), Handbook for Architecture Design and Practice: Established and Emerging Trends, London: Routledge (Taylor & Francis), 2016
Book chapter: "An Experiment in Design Collaboration" (reprint, w/G. Schmitt and others) in Mark Burry (ed.), Critical Concepts in Architecture: Digital Architecture, London: Routledge, 2016 (forthcoming)
Book chapter: "From Mass-Customization to Design Democratization" in Tom Verebes (ed.), Mass Customized Cities (Architectural Design), London: Wiley Academy Press, 2015
Book chapter: "Actualizing (Overlooked) Material Capacities" in Achim Menges (ed.), Material Synthesis: Fusing the Physical and the Computational (Architectural Design), London: Wiley Academy Press, 2015
Book chapter: "Foreword (Digital)" in James Stevens & Ralph Nelson (eds.), Digital Vernacular: Architectural Principles, Tools, and Processes, London, UK: Routledge, 2015
Book chapter: "Towards Architecture of Change" in B. Kolarevic & V. Parlac (eds.), Building Dynamics: Exploring Architecture of Change, London, UK: Routledge, 2015
Book chapter: "Adaptive, Responsive Building Skins" (with V. Parlac) in B. Kolarevic & V. Parlac (eds.), Building Dynamics: Exploring Architecture of Change, London, UK: Routledge, 2015
Book chapter: "Adaptive Architecture: Low-Tech, Hi-Tech, or Both?" in Manuel Kretzer and Lutger Hovestadt (eds.), Alive: Advancements in Adaptivity and Architecture, Basel, Switzerland: Birkhauser, 2014
Book chapter: "Why We Need Architecture of Tolerance" in Bob Sheil (ed.), High Definition: Zero Tolerance in Design and Production (Architectural Design) London: Wiley Academy Press, 2014
Book chapter: "Computing the Performative" in Rivka Oxman and Richard Oxman (eds.), Theories of the Digital in Architecture, London: Routledge, 2014
Book chapter: "Parametric Evolution" in Brady Peters and Terri Peters (eds.), Inside SmartGeometry, London: Wiley, 2013
Book chapter: "Building Dynamics: Towards Architecture of Change" in Rachel Armstrong and Simone Ferracina (eds.), Unconventional Computing: Design Methods for Adaptive Architecture, Cambridge: Riverside Architectural Press, 2013
Invited Paper: "Towards Integrative Design" in Lonn Combs and Chris Perry (eds.), Computational Ecologies: Design in the Anthroposcene, Proceedings of the ACADIA 2015 Conference, Univ. of Cincinnati, USA, 2015
Invited Paper: "Building Dynamics: Exploring Architecture of Change" in Bhzad Sidawi and Zaki Mallasi (eds.), Digital Crafting: Virtualizing Architecture, Proceedings of the ASCAAD 2014 Conference, Effat University, Jeddah, KSA, 2014
Invited Paper: "Mass-customization + Non-standard Modes of (Re)Production" in Ila Berman & Ed Mitchell (eds.), New Constellations /New Ecologies, Proceedings of the ACSA 2013 Annual Meeting, San Francisco, 2013
Invited Paper: "Architecture of Change: Building Dynamics and Kinetic Matter" in Philippe Leveneau & Phillipe Marin (eds.), Materiality in Its Contemporary Forms, Proceedings of the MC 2012 Symposium, Lyon/Grenoble, France, 2012
Paper: "Heuristic Optimization in Design" (w Yassin Ashour) in Lonn Combs and Chris Perry (eds.), Computational Ecologies: Design in the Anthroposcene, Proceedings of the ACADIA 2015 Conference, University of Cincinnati, 2015
Paper: "Optimizing Creatively in Multi-Objective Optimization" (w Yassin Ashour) in Holly Samuelson, Shajay Bhooshan, and Rhys Goldstein (eds.), Proceedings of the Symposium on Simulation for Architecture and Urban Design (SimAUD), Alexandria, 2015
Paper: "Cultural Cognition and Smart Space Design Culture" (w Alfredo Andia) in Xavier Costa and Martha Thorne (eds.), Change: Architecture, Education, Practice, Proceedings of the ACSA 2012 International Conference, Barcelona, Spain, 2012

Contd. Below

Journal Article: “Development of a Framework for Dimensional Customization System” (w S. Khalili) in Journal of Building Engineering (5), Elsevier Science Publishers, 2016

RESEARCH, SCHOLARSHIP, CREATIVE ACTIVITY

Research project: Living Architecture Systems, funded, 2016 – present
Research project: Mass Customization and Design Democracy, unfunded, 2015 – present
Research project: Building Dynamics: Exploring Architecture of Change, funded, 2012 – 2015
Research project: Integrative Design, funded, 2008 – 2014
Keynote: “Building Dynamics”, 2015 SIGraDi Conference, Florianopolis, Brazil
Keynote: “Design Democratization”, 2015 Reworking the City Conference, Belgrade, Serbia
Keynote: “Architecture of Change”, 2014 Facing the Future Conference, Belgrade, Serbia
Keynote: “Design Democracy”, 2015 Design Driven Manufacturing Symposium, Univ. of Virginia
Keynote: “Exploring Architecture of Change”, 2014 ASCAAD Conference, Jeddah, Saudi Arabia
Keynote: “Integrability in Design Education”, 2013 ADU2020 Conference, Rio de Janeiro, Brazil
Keynote: “Design Democracy”, 2013 SIM Conference, Lisbon, Portugal
Keynote: “Architecture of Change”, 2012 MC Symposium, Lyon/Grenoble, France
Public lecture: “Exploring Architecture of Change”, 3/2016, Clemson University, USA
Public lecture: “Building Dynamics: Exploring Architecture of Change”, 3/2016, GA Tech, USA
Public lecture: “Exploring Architecture of Change”, 3/2016, Kennesaw State U., Marietta, USA
Public lecture: “Design Democracy”, 3/2015, Warsaw University of Technology, Poland
Public lecture: “Architecture of Change”, 3/2015, Warsaw University of Technology, Poland
Public lecture: “Exploring Architecture of Change”, 5/2014, Technical Univ. of Delft, Netherlands
Public lecture: “Design Democracy”, 5/2014, University of Porto, Portugal

ACADEMIC, PROFESSIONAL, & PUBLIC SERVICE

Association of Collegiate School of Arch. (ACSA), 2nd Vice-President, Board of Directors, 2016-
Canadian Arch. Certification Board (CACB), President, Board of Directors, 2013-2014
Vice President, 2012-2013, Director (elected representative of CCUSA), 2010-2014
Canadian Council of Univ. Sch. of Arch. (CCUSA), Secretary, 2011-2013, Member, 2010-2013
Associate Dean (Academic-Architecture), EVDS, Univ. of Calgary, 2010-2013

Master of Architecture Program
Faculty of Environmental Design
University of Calgary
2016

Resumes

Faculty

Tang Lee
Professor

COURSES TAUGHT
Winter- EVDA 511: Building Science & Technology I, EVDA 611: Architectural Professional Practice I, EVDS 621: Health in the Build Environment

EDUCATION
1975 M.Arch. The Ohio State University, Columbus, Ohio
1973 B.Arch. Case Western Reserve University, Cleveland, Ohio
1970 Dipl.Arch. Ryerson University, Toronto, Ontario

REGISTRATION STATUS & PROFESSIONAL MEMBERSHIPS
Registered professional architect, Alberta Association of Architects
Member: Standing Committee on Part 5 Environmental Separation, National Research Council of Canada (2015 and re-appointed to the 2020 National Building Code of Canada)
Chair: Task Group on Solar Collectors, Cdn Codes Centre, NRC (2012-2015)
Chair: Task Group on Airborne Sound Transmission, Cdn Codes Centre, NRC (2010-2015)
Member: Joint Task Group on Sheet Steel Products, Cdn Codes Centre, NRC (2015-2017)
Member: Barrier Free Sub-Council, Alberta Safety Codes Council (2012-2014)
Life Member: Arctic Institute of North America (1990-present) http://www.arctic.ucalgary.ca/

HONOURS & AWARDS
Supervisory Excellence Award, Graduate Student's Association, 2014
Nominated for the Teaching Excellence Award
Nominated for the Graduate Teaching Excellence Award

PUBLICATIONS
Lee, T.G. (2016) Converting volatile organic compounds to carbon dioxide and water. 2016 International Conference on Chemistry and Biochemical Engineering (CHEMBIO2016), Hangzhou, China, May 25-26. American Journal of Chemical Engineering (in press), http://www.chembioeng.net/2016/keynotespeakers2
Lee, T.G. (2016) Opportunities for Food Security for Canada: Keeping out the Cold: Cold climate technologies for Northern greenhousing. Northern Farm Training Institute, Aurora Research Institute, Aurora College, Hay River, NWT March 11-12.
Lee, T.G. (2014). Addressing Building Envelope Issues in Multi-Residential Buildings. Host and presenter, Edmonton, Buildex-Edmonton, Informa Canada, March 17.
*Lee, T.G. (2014) Year 2050: Retrofitting suburbs to become eco-villages. International Conference on Advances in Social Science, Humanities, and Management (ASSHM 2014), Guangzhou, China, December 26-27. http://www.asshm.org/2014/index.html
Lee, T.G. (2013) Rehabilitation of the Building Envelop and Opportunities for Solar. Project Management Conference, Department of Public Works and Services, Government of the NWT, Explorer Hotel, Yellowknife, Northwest Territories, December 3-5.
*Lee, T.G. (2013). Canals for a Healthy Community, Paper presentation, Urban Ecologies 2013, hosted by Ontario College of Art and Design (OCAD University), Toronto, June 19-21.
*Lee, T.G. (2012). Architects, Article: 00477, International Encyclopedia of Housing and Home, Elsevier Ltd., London, UK.
Lee, T.G. Marihuana Grow Op's and their effect on Indoor Air Quality, Presentation hosted by Alberta Specialized Law Enforcement Training (ASLET), Calgary Police Service and City of Calgary - Building Regulations, Banff Center, Banff, Alberta, March 26-28, 2012.

RESEARCH, SCHOLARSHIP, CREATIVE ACTIVITY
Expert Witness in construction litigations: 13 cases since 2011.
Air leakage examination: Unit 1402, 801 – 2nd Avenue SW, Calgary, AB. Expert witness report: prepared for McLeod Law, LLP, Calgary, December 21, 2015, 9 pages.
Lisa Collier et al v SNC-Lavalin O&M Inc et al; File 6992821. Report prepared for Borden Ladner Gervais LLP, Barristers & Solicitors, Edmonton. October 14, 2015, 9 pages.
Kochetov-Iwasyk Residence. Report prepared for Schuster Bruce LLP, Barristers & Solicitors, Calgary. September 18, 2015, 53 pages.
Kleiner v. Desmarais Enterprises Ltd. et al – Action No.: P1490101358. Report prepared for Ho MacNeil Barristers & Solicitors, Calgary. May 14, 2015, 8 pages.
Examination of Parkade Leaks in Elements of River's Edge. Report prepared for Sunreal Property Management Ltd. Red Deer, Elements at Rivers Edge Condominium v. Sherri Turpin Architect, et al. Bryan & Company LLP, Edmonton, Alberta, November 30, 2015, 23 pages.
Scott Pennock Design Inc. v. Patel and Patel, Action No. 1201-11086. Expert Witness report prepared for Demiantschuk Lequier Burke & Hoffinger LLP, Calgary, November 23, 9 pages (Questioning May 19, 2015)

Contd. Below

ACADEMIC, PROFESSIONAL, & PUBLIC SERVICE

Design Jury Chair: 2015 Masonry Design Awards. Alberta Masonry Council, Canada
Board Member: Environmental Health Research Foundation, USA. (founding member 2003)
Advisory Board: Healthy House Institute, http://www.healthyhouseinstitute.com/
Advisory Board: Nova Scotia Allergy and Environmental Health Association
Board of Director: Caylan Boyse Foundation for Spinal Cord Injury www.caylanboysefoundation.ca/
Advisory Board: Stardale Women's Group Inc., Calgary http://www.nald.ca/stardale/
Editorial Board: Journal of Performance of Constructed Facilities, American Society of Civil Engineers (ASCE), forensic engineering. ISSN: 0887-3828
Editorial Board: J. of Architecture, Civil and Environmental Engineering. ISBN: 1674-4764,
Member: Infrastructure and Property Resiliency - River Flood Mitigation Program Expert Panel City of Calgary. www.calgary.ca/floodprep
Member: Expert Panel #5: Infrastructure and Property Resiliency, River Flood Mitigation
Council Member: Alberta Association of Architects, EVDS representative (2009-2013)

Master of Architecture Program
Faculty of Environmental Design
University of Calgary
2016

Resumes

Administration

Richard Levy
Professor

EDUCATION
PhD, Architectural History, 1980, School of Architecture, University of California, Berkeley
M.Arch. Design, 1975, School of Architecture, University of California, Berkeley
BSCE Structural Engineering, 1972, College of Engineering Tufts University, Medford Massachusetts, (Tau Beta Pi)

REGISTRATION STATUS & PROFESSIONAL MEMBERSHIPS
Alberta Association Canadian Institute of Planners
American Institute of Architects
Canadian Institute of Planners
Computer Applications and Quantitative Methods in Archaeology
Serious Games Association, Canada

HONOURS & AWARDS
Home, Hearth, and Household in the Circumpolar North, BOREAS, SHRRC, E634,000, 2006-9 Canadian Council on Learning, A Study of Classroom Use of Games and Simulations, Project Team, Kathy Sanford Associate Professor Faculty of Education. Richard M. Levy, Faculty of Environmental Design, $75,000. 2007-8
Canadian Council on Learning, A Study of Classroom Use of Educational Games and Simulations for Literacy Skills Development, Project Team, Ron Owston, Jenifer Johnson, Herb Wideman, Markgot Kaszap, Richard Levy, Michael Magee, $75,000. 2006-8
Asian Pacific Fund, Design as Gateway: Enabling Innovation in Canada's Asia-Pacific Gateway & Corridor, David Covo, Richard Levy, Douglas Macleod and Larissa Muller, $15,000. 2006
NCE, National Centre of Excellence, Canadian Design Research Network Partners: University of British Columbia, University of Calgary, McGill University, Nova Scotia College of Art and Design, Ontario College of Art and Design, Ryerson University, Simon Fraser University, University of Alberta, Universite Laval, University of Manitoba, University of Toronto and the University of Waterloo. 2006
Alberta Real Estate Foundation, Grant to support the creation of a Certificate Program in real estate development and finance, $30,000. 2005

PUBLICATIONS
Dawson, P. Levy, R. Oetelaar, G, Arnold, A Lacroix D 2009 Documenting mackenzie Inuit architecture using 3D laser scanning Alaska Journal of Anthropology 7 (2) 31-44.
Levy, R., and P. Dawson, Using finite element methods to analyze ancient architecture: an example from the North American Arctic, Journal of Archaeological Science, 36 (2009) 2298-2307.
Levy, R., G. O'Brien and A. Orich, "Predicting The Behavior of Game Players, Space Syntax and Urban Planning Theory as a Predictive tool in Game Design, VSMM Conference Proceedings, IEEE, 2009, pp 203-208.
Levy, R. and Dawson, P , Exploring Thule Culture—Constructing Virtual Worlds for 3D Theaters, Computer Applications and Quantitative Methods in Archaeology, Williamsburg, VA, 2009.
O'Brien, Mary Grantham, Richard M. Levy, and Annika Orich. "Virtual Immersion: The role of CAVE and PC technology." CALICO Journal 26:2, January 2009.
O'Brien, Mary Grantham, and R. Levy. "Exploration through virtual reality: Encounters with the target culture." Canadian Modern Language Review. June, 2008.
Levy, R. and Dawson, P. Structural Analysis, A Tool for Testing 3D Computer Reconstructions of Thule Whalebone Houses, Computer Applications and Quantitative Methods in Archaeology, Proceedings 2007, 2008, pp. 134-39.
Levy, R., and L. Katz, Virtual Reality Simulation: Bobsled and Luge, Symposium Proceedings, 6tn International Association of Computer Science in Sport, 2007, pp. 241-251.
Levy, R., H. Widemann, R. Owston, and Annika Orich . Knight Elimar's Last Joust: A Virtual Environment Game for Promoting Literacy Across the Curriculum Ed Media, Proceedings, 2007.
Levy, R., and M. G. O'Brien, A Virtual World for Teaching German, Canadian Game Studies Association Journal,1:1, 2007.

Master of Architecture Program
Faculty of Environmental Design
University of Calgary
2016

Resumes

Faculty

Graham Livesey
Professor, Associate Dean (Academic – Architecture)

COURSES TAUGHT
Fall- EVDA 782.xx: Senior Studio I (Portland)
Winter- EVDA 523.02 History of Architecture II

EDUCATION
Doctorate (January 2013), Faculty of Architecture, TUDelft, Delft, The Netherlands
Master of Architecture (October 1991) in History and Theory, School of Architecture, McGill University, Montréal, Québec
Bachelor of Architecture (June 1984), School of Architecture, McGill University, Montréal, Québec
BSc Architecture (June 1982), School of Architecture, McGill University, Montréal, Québec

REGISTRATION STATUS & PROFESSIONAL MEMBERSHIPS
Member, Royal Architectural Institute of Canada, 1996-05, 2012-Present
Associate Member, Alberta Association of Architects, 2005-11
Member, Architectural Humanities Research Association, 2005-Present

PUBLICATIONS
Books (Edited)
Livesey, G., ed. Deleuze and Guattari on Architecture: Critical Assessments in Architecture. 3 Vols. Abingdon: Routledge, 2015. Chapters in Books
Livesey, G. "Towards an Ecology of the Palladian Villa," in M. Neveu and N. Djavaherian, eds. Architecture's Appeal. Abingdon: Routledge, 2015, pp. 228-239.
Livesey, G. "Shifting Boundaries in Environments and Organizations," in D. Masny, ed. Cartographies of Becoming: A Deleuze-Guattari Perspective. Rotterdam, Sense, 2013, pp. 181-192.
Livesey, G. "Themes in the work of Rem Koolhaas," in A. Bal-Sanders, G. Bruyns and J. Schapp, eds., Liber Gratulatoria: Arie Graafland. Delft: DSD, 2012, pp. 86-89.
Livesey, G. "Patchworks, Ecologies, and the Contemporary City," in Parr, A. and M. Zaretsky, eds. New Directions in Sustainable Design. Abingdon: Routledge, 2011, pp. 84-94.
Refereed Journal Articles
Livesey, G. "Assemblage Theory, Gardens, and the Legacy of the Early Garden City Movement." arq: Architectural Research Quarterly. Vol. 15, No. 3, 2011.
Non-refereed Articles in Journals
Livesey, G. "Five Edmonton Pavilions." Canadian Architect. February 2016.
Livesey, G. "Urbanity in a Suburban Land: Clareview Community Recreation Centre Review." Canadian Architect. July 2015.
Livesey, G. "Defensive Measures: Calgary Bow River Projects." Canadian Architect. February 2014.
Livesey, G. "Big D Design in the Big E." Canadian Architect. January 2013.
Livesey, G. "Productive Infrastructure: Ralph Klein Legacy Park." Canadian Architect. October 2011.
Livesey, G. "The Architect as Developer." Canadian Architect. July 2011.

RESEARCH, SCHOLARSHIP, CREATIVE ACTIVITY
Books Co-edited (Forthcoming)
Lam, E. and Livesey, G., eds., Northern Building: Canadian Architecture 1967-2017. New York: Princeton Architectural Press, 2018.
Livesey, G. and A. Moulis, eds., Le Corbusier: Critical Assessments in Architecture. 4 Vols. Abingdon: Routledge, 2017.
Refereed Journal Articles (Forthcoming)
Livesey, G. "Innovation, the Agricultural Belt, and the Early Garden City." Berkeley Planning Journal, Forthcoming.
Refereed Conference Papers
Livesey, G. and A. Moulis. "From Impact to Legacy: Interpreting Critical Writing and Research on Le Corbusier form the 1920s to the Present." Le Corbusier: 50 Years Later International Congress, Universitat Politècnica de València, Spain, November 18-20, 2015.
Livesey, G. "Turbulence and the Creation of Home." Paper presented at the Atmosphere 2014 (Action) Symposium, Faculty of Architecture, University of Manitoba, February 6-8, 2014.Grants
Publication Grant, Co-applicant (with Elsa Lam), received $48,200 from the Canada Council towards the research, writing and production of Northern Building: Canadian Architecture, 1967-2017 to be published by Princeton Architectural Press (2018). 2016

Contd. Below

ACADEMIC, PROFESSIONAL, & PUBLIC SERVICE

Juror, 2015 Northwest Territories Association of Architects Architectural Awards, Yellowknife, NWT, January 2016
Chair, Council of Canadian University Schools of Architecture (CCUSA), 2015-Present
Associate Dean (Academic – Architecture), Sept. 1, 2015-Present
Member, Graduate Program Review Committee, Department of Architecture, University of Manitoba, March 24-26, 2015
Regional Correspondent, Canadian Architect, 2014-Present
Member, Council, Calgary Institute for the Humanities, 2014-Present
Panel Moderator, "Celebrating the Architecture of Raymond Moriyama" Panel Discussion, University of Calgary, June 10, 2013
Chair, CACB Visiting Accreditation Team, John H. Daniels Faculty of Architecture, Landscape, and Design, University of Toronto, February 9-13, 2013
Co-Chair, Facilities and Information Technologies Committee (GFC), 2012-13
Interim Executive Editor, Journal of Architectural Education, 2012-13
Member, Dept. of English CRC in Creative Writing Selection Committee, 2012
Co-Coordinator, EVDS Design Matters Lecture Series, 2011-12
Member, Editorial Board, Journal of Architectural Education, 2009-13
Editorial Advisor, Architecture + Ideas, 2005-2013

Master of Architecture Program
Faculty of Environmental Design
University of Calgary
2016

Resumes

Faculty / Administration

David Monteyne

Associate Professor, Graduate Program Director

COURSES TAUGHT
Fall- EVDA 523.01 History of Architecture I
Winter- EVDL 629: History of Landscape Architecture

EDUCATION
Ph.D., Department of American Studies, University of Minnesota, 2005.
Master of Advanced Studies in Architecture, University of British Columbia, 1995.
Bachelor of Arts in English, First Class, University of British Columbia, 1992.

REGISTRATION STATUS & PROFESSIONAL MEMBERSHIPS
Society of Architectural Historians (SAH)
Vernacular Architecture Forum (VAF)
Society for the Study of Architecture in Canada (SSAC)
Society of American City and Regional Planning History (SACRPH)

HONOURS & AWARDS
Visiting Fellow, The Centre for Research in the Arts, Social Sciences and Humanities (CRASSH), University of Cambridge (UK), January 2013
Visiting Fellow, Clare Hall, University of Cambridge (UK), January 2013
University of Calgary SSHRC Enhancement Grant, 2013
University of Calgary Seed Grant, 2012

PUBLICATIONS
Fallout Shelter: Designing for Civil Defense in the Cold War. Minneapolis: University of Minnesota Press, 2011. (Second printing in 2013.)
"Pier 21 and the Production of Canadian Immigration" in Carolyn Loeb and Andres Luescher, eds., The Design of Frontier Spaces: Control and Ambiguity (Farnham, UK: Ashgate, 2015), 109-128.
"Certain Uncertainties: Architecture and Building Security in the 21st Century," in Benjamin Flowers, ed., Architecture in an Age of Uncertainty (Farnham, UK: Ashgate, 2014), 87-100. "The Legacy of Hiroshima in Civil Defense and Architecture," in Erin Barnett and Philomena Mariani, eds., Hiroshima: Ground Zero 1945 (New York and Göttingen: ICP/Steidl, 2011), 172-85.
"Boston City Hall and a History of Reception," Journal of Architectural Education 65:1 (October 2011), p. 45-62.
Guest editor, with Matthew Farish, Special Issue of Urban History 42:4 (November 2015), on "Cold War Cities."

RESEARCH, SCHOLARSHIP, CREATIVE ACTIVITY
Eight invited lectures and six peer reviewed conference presentations since 2011.
Barbara Dupuis, David Monteyne, and Brian R. Sinclair, "Environmental Design: Creating Healthy Spaces and Making Successful Places," in Diana Mansell, ed., "Bedside to Community: Contributions to Health from the U of C over the Past 50 Years" (under review with University of Calgary Press, projected publication 2017)

ACADEMIC, PROFESSIONAL, & PUBLIC SERVICE
Thesis student supervision, and supervisory committee membership.
Peer review for academic presses, journals and funding bodies.
University-wide service:
Faculty of Arts, Archaeology of Urbanism Hiring Committee, 2016
University of Calgary 50th Anniversary Planning Committee, 2015-16
Provost's Decanal Review Committee for EVDS Dean, 2014
Faculty of Arts, Global Urban Studies, CRC Tier II, Hiring Committee, 2014
EVDS Representative to Vice-Provost's Curriculum Assessment Committee, 2012
University School Week (taught two Grade 5 classes), 2012
Faculty of Arts, Academic Appointment Review Committee for Tenure Case, 2012
Faculty of Arts, Urban Studies Hiring Committee, 2012
Faculty of Arts, Department of Anthroplogy/Centre for Military and Strategic Studies Hiring Committee, 2011-12
Professional Service:
Board Member, Alberta Association of Architects (AAA) Council, 2014-2016
Secretary, Canadian Council of University Schools of Architecture (CCUSA), 2014-15
Member, Southern Alberta Institute of Technology (SAIT), Architectural Technologies Advisory Committee, 2014
University of Calgary Faculty Councilor to the Association of Collegiate Schools of Architecture, 2005-2012.

Master of Architecture Program
Faculty of Environmental Design
University of Calgary
2016

Resumes

Faculty

Vera Parlac
Assistant Professor

COURSES TAUGHT
Fall- EVDA 682.02 Intermediate Studio, EVDA 621: Introduction to Design Theories, EVDB 697.xx: Somerville Charrette
Winter- EVDA 782.xx: Senior Studio II, EVDB 697.xx: Somerville Charrette, EVDS 697: Responsive Architecture

EDUCATION
Master of Architecture, UCLA University of California Los Angeles, USA, 1993
Diploma Engineer in Architecture, University of Belgrade, Yugoslavia, 1988

REGISTRATION STATUS & PROFESSIONAL MEMBERSHIPS
Registered Architect in Pennsylvania, USA
Association for Computer Aided Design in Architecture (ACADIA)

PUBLICATIONS
Book: Building Dynamics: Exploring Architecture of Change, Routledge (Taylor & Francis), London, UK, 2015 (with Branko Kolarevic)
Book: Integration through Computation, Proceedings of the ACADIA 2011 Conference, Univ. of Calgary, ACADIA, 2011 (with Jason S. Johnson, Branko Kolarevic and Joshua M. Taron)
Book: Integration Through Computation, Project Catalog of the ACADIA 2011 Conference, Unic. Of Calgary, ACADIA, 2011 (with Jason S Johnson, Branko Kolarevic and Joshua M Taron)
Book chapter: "Architecture of Change: Adaptive Building Skins" (with B. Kolarevic) in Mitra Kanaani and Dak Kopec (eds.), Handbook for Architecture Design and Practice: Established and Emerging Trends, London: Routledge (Taylor & Francis), 2016
Book chapter: "Adaptive, Responsive Building Skins" (with B. Kolarevic) in B. Kolarevic & V. Parlac (eds.), Building Dynamics: Exploring Architecture of Change, London, UK: Routledge, 2015
Book chapter: "Exploring Responsiveness in Architecture" in B. Kolarevic & V. Parlac (eds.), Building Dynamics: Exploring Architecture of Change, London, UK: Routledge, 2015
Book chapter: "Material as Mechanism in Agile Spaces" in B. Kolarevic & V. Parlac (eds.), Building Dynamics: Exploring Architecture of Change, London, UK: Routledge, 2015
Paper: "Imagining Responsiveness in the Built Environment" in Facing the Future: Proceedings of the Second International Conference and Exhibition On Architecture, Belagrade, Serbia, 2014
Paper: "Surface Dynamics: From Dynamic Surface to Agile Spaces" in Bhzad Sidawi and Zaki Mallasi (eds.), DIGITAL CRAFTING Virtualizing Architecture and Delivering Real Built Environment, Proceedings of the 2013 ASCAAD Conference, Jeddah, Saudi Arabia, 2014
Paper: "Surface Change: Information, Matter and Environment – Surface Change Project" in Rudi Stouffs, Patrick Janssen, Stanislav Roudavski, Bige Tuncer (Eds.), Open Systems: Proceedings of the 18th International Conference on Computer-Aided Architectural Design Research in Asia, Singapore, 2013
Paper: "Surface Change" in Xavier Costa and Martha Thorne (eds.), Change: Architecture, Education, Practice, Proceedings of the ACSA 2012 International Conference, Barcelona, Spain, 2012
Introductory Paper: "Integrating Physical and Digital: Interactive Technologies and Design of Matter" in Integration through Computation: Proceedings of ACADIA 2011, Banff, Canada, 2011 (with Jason S Johnson, Branko Kolarevic and Joshua M Taron)
Project: "Changing Fields", in Facing the Future, Exhibition Book, 2nd International Scientific Conference and Exhibition, Belgrade, Serbia, 2014
Project: "Agile Spaces" in Philip Beesley, Omar Kahn and Michael Stacy (Eds.), Adaptive Architecture: Proceedings of the ACADIA 2013 Conference, University of Waterloo, Cambridge, Canada, 2013
Project: "Soft Kinetic Network (SKiN)" in Mark Goulthorpe and Amy Murphy (Eds.) Digital Aptitudes: Proceedings of the ACSA 2012 Annual Meeting, Massachusetts Institute of Technology, Boston, Massachusetts, USA, 2012

RESEARCH, SCHOLARSHIP, CREATIVE ACTIVITY
Research project: Living Architecture Systems, funded, 2016 – present
Research project: Pursuing Innovative Design in an Interdisciplinary Research Studio, funded, 2015-17
Research project: Building Dynamics: Exploring Architecture of Change, funded, 2012 – 2015
Research project: Differentiated Topographies, unfunded 2014 – present
Research project: Responsive Architecture: Mechatronics in Building Spaces, funded 2011-13
Conference Organization: Co-Chair, ACSA – Association of Collegiate Schools of Architecture 2016 International Conference, University of Calgary, Florida International University, Carnegie Mellon University, Pontificia Universidad Católica, Santiago de Chile, Chile, 2016
Conference Organization: Co-Chair, Symposium "Building Dynamics Exploring Architecture of Change" University of Calgary/Banff Centre, Canada, 2013

Contd. Below

Conference Organization: Co-Chair, ACADIA – Association for Computer Aided Design in Architecture Annual 2011 Conference, University of Calgary/Banff Centre, Canada, 2011
Creative Activity: Repetitive Topography, Part I, Differentiated Topographies research, full scale surface installed at Westmount Charter School as classroom partition, 2014
Exhibition: Curator, Building Dynamics: Exploring Architecture of Change, Banff Centre, Banff, Canada, 2013

ACADEMIC, PROFESSIONAL, & PUBLIC SERVICE

Peer Review Committee: ACADIA, Association for Computer Aided Design in Architecture, since 2010
Peer Review Committee: eCAADe, Education in Computer Aided Architectural Design in Europe, since 2013
Peer Review Committee: SIGRaDI, Sociedad Iberoamericana de Grafica Digital since 2015
Journal Peer Review: International Journal of Architectural Computing (IJAC), since 2013
Scientific Committee: First International Conference on the Digital Age, Going digital: Innovations in the Innovations in the Contemporary Life, Belgrade, Serbia, 2015
Scientific Committee: Third International Conference and Exhibition On Architecture, Reworking The City Through New Architecture, Belgrade, Serbia, 2015
Book Review: For Routledge since 2013

Master of Architecture Program
Faculty of Environmental Design
University of Calgary
2016

Resumes

Administration

Nancy Pollock-Ellwand
Dean, Professor

EDUCATION
Ph.D. (Planning) Waterloo, Canada
Master of Architecture Manitoba, Canada
Bachelor of Landscape Architecture Guelph, Canada

REGISTRATION STATUS & PROFESSIONAL MEMBERSHIPS
Fellow – Canadian Society of Landscape Architects (CSLA)
Full Member – Alberta Association of Landscape Architects (AALA)
Ontario Association of Landscape Architects (Leave of Absence)
VP North America for the International Scientific Committee on Cultural Landscapes and Expert Advisor International Council on Monuments and Sites (ICOMOS)/International Federation of Landscape Architects (IFLA)
World Heritage (WH) Panel Reviewer; and, WH Field Mission Cultural Landscape Specialist UNESCO (ICOMOS)

HONOURS & AWARDS
2016 Fellow Status granted by the Canadian Society of Landscape Architects (for Professional University Instruction and Service to the Community or Public) http://www.csla-aapc.ca/people/college-of-fellows
2015 "Notable Graduate", University of Guelph's Landscape Architecture Program, 50th Anniversary Legacy Site **https://www.uoguelph.ca/sedrd/landscape-architecture** NOTABLE GRADUATE
2014 Faculty representative for the award, Heroes of The Flood, granted by the Province of Alberta, which recognized the work of the Faculty (with the City of Calgary and O'Brien Institute of Public Health) mounting an international symposium and block week studio centering on making Calgary more resilient- After the Flood (of 2013). FACULTY REPRESENTATIVE NOMINEE
2009 American Society of Landscape Architects. Honor Award in Communications; Boston Society of Landscape Architects' Award of Excellence and J.B. Jackson Book Prize, Foundation for Landscape Studies. (CONTRIBUTOR on CANADIAN PROJECTS) THE MASTER LIST OF DESIGN PROJECTS OF THE OLMSTED FIRM, 1857-1979
2007 Canada's Walk of Fame Foundation, Toronto, Canada. NORTHERN LIGHTS TEAM FIRST PLACE- WINNER, DESIGN COMPETITION
2005 Canadian Society of Landscape Architects, National Citation Award. LANDSCAPE LEGACIES (UofT Press) POLLOCK-ELLWAND & PRESTON (2006)
2004 Richardson Foundation LANDSCAPE LEGACIES (UofT Press) POLLOCK-ELLWAND & PRESTON (2006)
2003 – 2006 Social Science and Humanities Research Council (SSHRC): Standard Grant. PRINCIPAL INVESTIGATOR OLMSTED FIRM IN CANADA
1999 International Countryside Exchange, Isle of Wight, England. PLANNING TEAM MEMBER
1999 Canadian Institute of Planners Award for Planning Excellence - Honorable Mention. Creating Curricula and Software Tools for High School-Based Community Heritage and Economic On-line Resource Centres with Mapconnections Consortium. COMMUNITY-BASED INFORMATION SYSTEMS
1998 Mapconnections Consortium. Cambridge, ON. RESEARCH GRANT
1995 – 1997 Social Science and Humanities Research Council (SSHRC) Doctoral Fellowship. DOCTORAL FELLOW
1988 – 1989 Shimizu Corporation – University of Manitoba Architect Exchange Fellowship. Tokyo, JAPAN. ARCHITECTURAL FELLOW
1987 American Institute of Architects Scholastic Award – The AIA School Medal and the Certificate of Merit from the Henry Adams Fund, University of Manitoba. "The American Institute of Architects awards an engraved medal and certificate of merit to the top-ranking graduating student in each architecture program…" **http://www.aia.org/education/AIAB087873** MEDAL & CERTIFICATE WINNER

PUBLICATIONS
Books
2004/6 Pollock-Ellwand, N. and Preston, S. Landscape Legacies. Toronto, ON: U of T Press. 563 pages
Chapters/Essays in Books/ Editing
2014 Landscape/Paysage Special Issue on Resilience- Landscape Adaptations to Climate Change. Guest Editor. Winter/Hiver 2014. Vol. 16 (4). "To Begin With" (pp. 11-12), "The Last Word" (p.54).
2008 and 2012 (revised) Pollock-Ellwand, N. "The Canadian Olmsted Projects" In, The Master List of Design Projects of the Olmsted Firm 1857 to 1979 (second edition). L. Lawliss, Caroline Loughlin and L. Meier (eds.). Tranquility, NJ: National Association of Olmsted Parks. pp.14-18 (and correction of Canadian job listings throughout document). 348 pages.
2006 Pollock-Ellwand, N. "The Critical Divide: Landscape Policy and Its Implementation". In, John Weins and Michael Moss (eds.). Issues in Landscape Ecology. Second Edition. Cambridge, England: Cambridge University Press. pp. 281-295.
1995 Pollock-Ellwand, N. "A Homestead Restored". In, Edwinna von Baeyer, and Pleasance Crawford (eds.). Garden Voices: Two Centuries of Canadian Garden Writing. Toronto: Random House Canada. pp. 122-126.

Contd. Below

Major Refereed Journal Articles

2016 (Submitted) Planning Perspectives: An International Journal of History, Planning and the Environment. Article called, "The Onscured Legacy of Canada's First Landscape Architect- Frederick G. Todd". This article represents the fourth and final refereed piece (see 2006, 2010, 2012) on the Olmsted's Canadian work. A book is now planned based on this foundational research, to be called Out of America- The Olmsted Firm in Canada.2012 Pollock-Ellwand, N. "Gordon Culham: Living a 'Useful Life' through the Professionalization of Canadian Landscape Architecture and Town Planning". Planning Perspectives: An International Journal of History, Planning and the Environment. Vol. 27 (4): 587-609. October.

2011 Pollock-Ellwand, N. "Common Ground and Shared Frontiers in Heritage Conservation and Sustainable Development: Partnerships, Policies and Perspectives". Special Issue: Multidisciplinary Perspectives on Sustainable Development. International Journal of Sustainable Development & World Ecology. Vol. 18 (3): 236-242.

2010 Pollock-Ellwand, N. "Rickson Outhet: Bringing the Olmsted Legacy to Canada. A Romantic View of Nature in the Metropolis and the Hinterland". Journal of Canadian Studies. 44 (1): 137-183.

2009 Pollock-Ellwand, N., Yokohari, M., Miyamoto, M. and Kano, Y. "Commerce and Conservation: An Asian Approach to an Enduring Landscape, Ohmi-Hachiman, Japan". International Journal of Heritage Studies. 15(1): 3-23.

2006 Pollock-Ellwand, N. "The Olmsted Firm in Canada: A Correction of the Record". Planning Perspectives: And International Journal of History, Planning and the Environment. 21 (3): 277-310. July.

2006 Pollock-Ellwand, N. "Travelling the Route from Designation to Local Action: The Case of the Underground Railroad Settlement in Buxton, Ontario, Canada" International Journal of Heritage Studies. 12 (4): 372-388.

2001 Pollock-Ellwand, N. "Gréber's Plan and the 'Washington of the North': Finding A Canadian Capital in The Face of Republican Dreams". Landscape Journal. 20(1): 48-61.

2001 Pollock-Ellwand, N. "Landscape Policy and Planning Practice: The Gap In Understanding, Ontario, Canada". Landscape Research. 26(2): 99-118.

1996 Pollock-Ellwand, N. "The Need for Holism: A Landscape and Pluralist Perspective". in, Gordon Nelson and John Marsh (eds.). Environments: A Journal of Interdisciplinary Studies. 24(1): 94-96.

1995 Pollock-Ellwand, N. "Cultural Landscapes and Environmental Ethics: The Case of Puslinch Township's Historic Roadside Trees". Journal of Agricultural and Environmental Ethics. 7(2): 189-203.

1992 Pollock-Ellwand, N. "Heritage Advocacy in the Cultural Landscape'. APT Journal. XXIV (3-4): 71-77.

Manuals and Professional Reports

2016 Pollock-Ellwand, Nancy and Michel Cotte. Mid-Stream Report on the Transboundary Erzgebirge Mining Cultural Landscape. Czech Republic and Germany. Submitted to the World Heritage Evaluation Unit, ICOMOS, Paris.

2016 Juliet Ramsay Lead Author with Contributors. Editing by Nancy Pollock-Ellwand, Aedeen Cremin, Jane Lennon and Brian Egloff. The Aesthetic Value of Landscapes: Background and Assessment Guide. Technical Paper Number 2. ICOMOS-IFLA International Scientific Committee on Cultural Landscapes (ISCCL). Website.

2016 Juliet Ramsay Lead Author with Contributors. Editing by Nancy Pollock-Ellwand, and Brian Egloff. Contemporary Issues in the Aesthetic Value of Landscapes, A Discussion. Technical Paper Number 3. ICOMOS IFLA International Scientific Committee on Cultural Landscapes (ISCCL). Website.

2001 to 2006 Pollock-Ellwand, N. and Cassidy, J. History of Cultural Form Course Manual: LARC*1950DE (Reader and Website as well for this Distance Course), Office of Open Learning, University of Guelph. 196 pages.

2006 Aarluk Consulting. Cultural Landscape Report for Clyde River. ("Global Survey of Cultural Landscape Assessment Approaches.") Nunavut. (Part of Planning Team)

2004 Nikittuittuq Ltd. Heritage Resource Advisor. Uvajuq (Mt. Pelly) Territorial Park Plan. Iqaluit, Nunavut: Nunavut Parks Department. 35 pages. (Part of Planning Team)

2002 Nikittuittuq Ltd. Heritage Resource Advisor. "Design for the Reconstruction and Interpretation of a Whaling Building in Kekerten Park". Iqaluit, Nunavut: Nunavut Parks Department. 41 pages. (Part of Planning Team)

2001 Pollock-Ellwand, N. Community-Based Landscape Inventory. Parks Canada, Ontario Region, Cornwall, ON. March 20th. 28 pages.

2000 Pollock-Ellwand, N. Buxton National Historic Cultural Landscape Inventory: Phase One- Data Assembly. Parks Canada, Ontario Region, Cornwall, ON. March 30th. 61 pages.

1999 Pollock-Ellwand, N. et al. Isle of Wight Countryside Exchange Report. Cold Spring, NY: Countryside Exchange. 25 pages. (Part of International team that authored report to cross-sectoral Island organization on Countryside Sustainability).

1998 Pollock-Ellwand, N. June 1998. Blair Cultural Landscape Inventory Project. Ontario Ministry of Culture, Toronto, Ontario. 45 pages.

Professional Publications, Blogs and Book Reviews

2015 "Dean of EVDS shares insights on being in Paris one week after attacks". UToday Feature. December.
http://www.ucalgary.ca/utoday/issue/2015-12-16/dean-evds-shares-insights-being-paris-one-week-after-attacks

2015 "Launch of the Master of Landscape Architecture Degree, University of Calgary". Up Front on Education. Ground Magazine. November.

2014 makeCalgary Talk. "Special Feature: The Role of Design Schools in Great Cities". **http://makecalgary.com/?p=12535**

2013 makeCalgary Talk. "A Question of Authorship, Authority, and Authenticity". **http://makecalgary.com/?p=11308**

2013 "The Big Idea 2013. Design, Education and Health Care". A discussion with Avenue Magazine.
http://www.avenuecalgary.com/articles/introducing-the-big-idea-2013

2013 A discussion with the Alberta Professional Planning Institute (APPI) Journal. "New Planning Programs in Alberta: Nurturing Our Future". Winter (10): 22-26.

2012 Avenue Magazine. The Big Idea 2012. Community Engagement. Launch.
https://twitter.com/AvenueMagazine/status/251471241473556480

Contd. Below

2007 Pollock-Ellwand, N. and Grosset, C. Winter/Hiver. “Coming to Terms with Cultural Landscapes/L’Acceptation des Paysages Culturels”. Landscape/Paysage. 9(1): 36-39.
2005 Pollock-Ellwand, N. “New York City: Concrete and Clay, A Book Review”. Landscape Research. July Issue.
2004 Pollock-Ellwand, N. Exhibit Text. “Olmsted and the British Properties”. West Vancouver Museum.
2003 Pollock-Ellwand, N. 2004. “Le Parc Historique de Kekerten: Kekerten Historic Park”. Landscape/Paysages. Vol. 5, No. 2, page 34.
2003 Pollock-Ellwand, N. 2003. “Les Chefs-d’oeuvre de nos laureats d’un océan à l’autre/ Award-Winning Work from Coast to Coast". Landscape/Paysages, Vol. 5, No. 1, pp. 8-13.
2001 Pollock-Ellwand, N. “The Hunter’s Game: Poachers and Conservationists in Twentieth Century America.” Book Review, Landscape Research. 25(3): 215-217.
2001 Pollock-Ellwand, N. Fall 2001. “International Committee on Monuments and Sites”. CSLA Bulletin. 16(3):14.
2000 Pollock-Ellwand, N. “Student Reaction to 9/11”. Letter to the Editor. Landscape Architecture.1 (January): 7.
1998 Pollock-Ellwand, N. “The Boulevard That Ate Ottawa”. Globe and Mail, Op Ed, June 12th.
1994 Publications listed in the “Cultural Landscape section of Edwinna von Baeyer’s A Selected Bibliography for Garden History in Canada. (Revised Edition) Ottawa: Parks Canada, Canadian Heritage. p.14.

Edited Proceedings/Monographs

2002 Pollock-Ellwand, N. (editor). Borderlands: 1999 Conference Proceedings of the Alliance for Historic Landscape Preservation. US National Park Service and the Alliance for Historic Landscape Preservation. Waterloo: Heritage Resources Centre, University of Waterloo. 150 pages. (withdrew as editor before completion).
1999 Pollock-Ellwand, N. (guest editor). 1999. Proceedings, Parks Research Forum of Ontario: Challenges to Parks and Protected Areas in Ontario. Waterloo, ON: Heritage Resources Centre, University of Waterloo. 450 pages.
1998 Pollock-Ellwand, N., Van Osch, K, and Nelson, J.G. (eds.) with Beechey, T., Stephenson, W. and Marsh, J. Parks and Protected Areas in Ontario. Proceedings of the Parks Research Forum of Ontario (PFRO), Annual General Meeting, February 5th and 6th, Peterborough, ON. Waterloo, ON: Heritage Resources Centre. 410 pages.
1994 Pollock-Ellwand, N., Nelson, J.G., and Stroud T. (eds.) Landscape Planning: Implications of the Proposed New Ontario Heritage Act. Occasional Paper #25. University of Waterloo: Heritage Resources Centre. 44 pages.

ACADEMIC, PROFESSIONAL, & PUBLIC SERVICE

2015 – 2017 Vice President, North America Region. UNESCO’s International Council on Monuments (ICOMOS) International Scientific Committee on Cultural Landscapes
2016 Midstream and Upstream Mission Specialist for World Heritage nominations for State Parties in Czech Republic-Germany, and Saudi Arabia
2016 International Panelist participating in Workshop on the development of new Heritage Bill for Bhutan. June, 2016, Paro, BHUTAN
2015 & 2016 World Heritage Sites Review Panel Member, UNESCO’s International Council on Monuments and Sites. World Heritage Evaluation Unit November, 2015 and March, 2016. Paris, France.
2000 – Present ICOMOS/IFLA (Joint- International Council on Monuments and Sites/ International Federation of Landscape Architects) International Scientific Committee on Cultural Landscapes: Voting Member for Canada (2000 to 2006); Expert Advisor to Executive Council (2007 to present); Vice President, North American Region (2015 to Present); World Heritage Nomination Desk Reviewer since 2007- for sites in Japan, China, USA and Viking Age Sites in Northern Europe (Iceland/ Denmark/ Germany/ Latvia/ Norway); World Heritage Nomination International Advisory Team for Mt. Fuji, Japan (2009); Chairing- Working Group on Heritage Landscapes at Risk. ICOMOS-IFLA (2015 to present)
1989 – Present
Fellow. Canadian Society of Landscape Architects (investiture 2016); Full Member – Alberta Association of Landscape Architects.
2013 – Present Advocacy Task Force, Canadian Society of Landscape Architects (CSLA), Canada
2015 ICOMOS/IFLA- International Scientific Committee on Cultural Landscapes 2015, Moderator, October, Jeju Island, Republic of Korea
2015 Manuscript Reviewer. International Journal of Sustainable Development and World Ecology
2014 Grant Reviewer for the Austrian Science Fund- FWF Der Wissenschaftsfonds, Austria
2013 External Doctoral Examiner. Royal Melbourne Institute of Technology University (RMIT), Practice-Based PhD Practica Examinations and Exhibitions. (3 candidates), Barcelona, Spain
2013 – 2015 National Executive Forum on Public Property. Academic Advisor, Canada
2012 – Present Panel Member for Alberta Association of Landscape Architects. Urban Design Review Panel, City of Calgary. Canada.
2012 Urban Design Jury Member. Ciudades Humanas Ciudades Incluyentes International Committee, , Mexico
2012 Juror. City of Calgary, Lion’s Award (for heritage conservation efforts). 2011 and 2012. 20th and 21st Annual Emerald Awards Juror. Environmental award competition for Province of Alberta, Canada.
2011 Province of Alberta appointee to Oversight Panel judging the final selection of the new Royal Alberta Museum Design-Build contractor, Canada
2011 Juror. City of Calgary Mayor’s Urban Design Award (MUDA) Competition, Canada
2009 – 2010 Organizing Committee Member for 2nd Xiamen Forum on Urban Environment (XIFUE), December 11-13, 2010. Organized with the Institute of Urban Environment, Chinese Academy of Sciences, Xiamen, China.
2009 – Present Editorial Board Member. International Journal of Urban Sustainability and World Ecology (Taylor and Francis).
2009 Vice Chancellor team investigating the feasibility of setting up a SE Asian Centre in design education in Singapore, for the University of Adelaide, Australia.
2008 Conference Co-organizer. “How do you make a city hungry for design?” National Wine Centre. Adelaide, Australia
2008 – 2009 Port Adelaide Heritage Conservation Campaign, Australia

Contd. Below

2007 – 2008 University of Adelaide lead on Green Cathedral Project. Water conservation landscape planning along the Torrens River, Adelaide. St. Peter's Cathedral and Energy Architects, Australia.
2007 & 2009 South Australia Design Awards Juror. Australian Institute of Architects and Australian Institute of Landscape Architects as well as Planning Institute of Australia, Australia.
2007 – 2009 Australian Institute of Landscape Architects (Full Member), Australia
Australian Institute of Architects (Corporate), Australia
Planning Institute of Australia (Academic), Australia
2003 Examiner. Council of Landscape Architectural Registration Board (CLARB), USA
2002 & 2003 National Awards Juror (2002) and Chair (2003), Canadian Society of Landscape Architects Awards of Excellence, Canada.
2001 – 2005 Ontario Association of Landscape Architects (OALA) Executive Council, Educator from the University of Guelph, Canada
2000 – 2010 American Society of Landscape Architects, International Member, USA
2000 – 2002 Vice President. Alliance for the Preservation of Historic Landscapes. US-Canadian organization of academics, government agencies and practitioners.
1999Conference Organizer. Borderlands: The Shared Canadian and U.S. Experience of Landscape. Alliance for Historic Landscape Preservation Annual Meeting, June 2- 5, 1999, Niagara-on-the-Lake, ON, Canada
1997 – 2001 Parks Research Forum of Ontario (PRFO) Board Member, Canada.
Invited Lectures/Presentations/Interviews (External)
2016 Session Chair. "Integrating the Public into Interventions on Heritage Landscapes". Symposium sur la Conservation des Paysages. October. University of Montreal (Invited).
2016 Presenter and Commentator. "International Standards of Cultural Landscape Management". Workshop on Cultural Landscape and Sustaining its Significance (CLASS)- Bhutan, 2016. July, Paro, Bhutan. (Invited)
2016 Evolution of the Landscape Idea. ICOMOS Canada. National Conversation on Cultural Landscapes (on-line). Inaugural Guest Presenter. October. (Invited)
2015 International Perspectives on Cultural Landscape Conservation. National Trust Conference. Energizing Heritage. Session 5C- ICOMOS Canada Session – Evolving Perspectives on Cultural Landscapes Stream: Energy Distribution – Heritage as Fuel for the Future. October, Calgary, AB (Invited)
2015 Issues Affecting Mid-Sized Cities. 2015 Urban Policy Program Symposium. Session Chair- "Conflict in the Rural-Urban Fringe". June 3rd, 2015. (Invited)
2015 The Olmsted Legacy & Calgary's Urban Communities: The Father of Landscape Architecture, Frederick Law Olmsted. Thursday May 21st, 2015, Scarboro Community Association, Calgary. (Invited)
2015 Nickles Museum. University of Calgary. Protecting World Heritage- Land and People, for Nickle at Noon on April 9th. (Invited)
2015 National Executive Forum on Public Property. 2015 National Symposium- Partnerships: The New Frontier. Moderator- Real Property Development Partnerships with Educational Facilities and Not-for-Profits, May 22nd, 2015, Calgary, AB (Invited)
2014 CBC Interview. December 23rd, 2014. Homestretch. "UofC Dean elected VP North America for a UNESCO advisory body"; UToday, University of Calgary. December 19th, 2014. "EVDS Dean elected vice-president of UNESCO advisory body." (Invited)
2014 Moderator. This City in Seven Years: Calgary Spur Festival. (Daniel Brook, Author of A History of Future Cities in discussion with Rollin Stanley, General Manager of Planning, City of Calgary). Glenbow Museum – Conoco-Phillips Theatre. April 26th. (Invited)
2014 makeCalgary 2014: Healthy- Shaping our Cities; Shaping Ourselves. International symposium with Urban Alliance, Institute of Public Health, Alberta Health Services and Alberta Innovates. April 11th. Co-Emcee with City of Calgary's David Down. (Invited)
2013 makeCalgary 2013: Resilient. Moderator at International Symposium (also Faculty Block Week Studio) called After the Flood- Resilient City Design. October 12th. (Invited)
2012 Presentation to the Urban Development Institute. Calgary, Alberta. November 27th. (Invited)
2012 The Nexus of Planning and Design: What Does It Mean from A Practice and Educational Perspective? Can U (Canadian Urbanists). Downtown Campus, University of Calgary. October 14th. (Invited)
2012 makeCalgary 2012: Culture Space. Moderator at Metropolitan Centre public presentation and debate on proposed design interventions. October 12th. (Invited)
2012 Panelist at Chancellor's Club event discussing Cities as Economic Engines with Mayors of Calgary and Edmonton (Mayors Nenshi and Mandel). (Invited)
2012 Presentation to the Parliamentary Delegation Inquiry State of Victoria, Australia (Outer Suburban/Interface Services and Development Committee). Calgary, Fairmont Palliser, May 9th. (Invited)
2012 Sustainable Cities in a Global World. Keynote Speaker. University of Calgary. March 14th. (Invited)
2011 City of Calgary Library, Calgary Heritage Authority, and City of Calgary Land Use Planning and Policy. "Old Stone, New Concrete", March 11, 2011. (Invited)
2010 Calgary Heritage Authority. "Heritage Trends and Calgary". July 23, 2010. Calgary City Hall. (Invited)
2009 Mt. Fuji World Heritage Nomination Advisory Group (five members from around the world consulting on the nomination package). "An Asian Approach to Cultural Landscape Management- Ohmi-Hachiman, Japan". International Experts Conference on the Inscription of Mt. Fuji to World Heritage Status. Shizuoka Prefecture Conference Hall, September 7, 2009. Japan. (Invited)
2008 "From Sodom and Gomorrah to Kath and Kim". Research Tuesday Talk (public lecture series featuring top researchers at the University and broadcast on Radio Adelaide, June 20, 2008). University of Adelaide, Bonython Hall, May 13th. Australia. (Invited)
2008 "Cultural Landscape Work in Australia". Cultural Landscape Scientific Committee Meeting. International Council on Monuments and Sites. September 28th to 30th. Charlotte, Vermont, US. (Non-refereed Presentation)
2007 Coordination of Community Workshop on Cultural Landscapes in Collaboration with University of Tokyo in Ohmi-Hachiman, Japan, October 2nd to 5th, 2007, Japan. (Invited)

Contd. Below

2006 “Cultural Landscape Conservation in Canada”. Tokyo, Japan. Japan Institute of Rural Landscape Planning. June, 2006 (translation: Makoto Yokohari), Japan. (Invited)
2006 “Buxton, Canada and Omi-Hachiman, Japan: A Comparison of Cultural Landscapes”. Omi-Hachiman City Council, Japan. May, 2006. (translation: Makoto Yokohari), Japan. (Invited)
2006 “Sustainability and Cultural Landscapes”. Sustainability Cities Conference: Stuttgart, Naples and Kyoto. University of Kyoto, Kyoto, Japan. May, 2006, Japan. (Invited)
2005 “Cultural Landscape Conservation in Canada”. ICOMOS/IFLA 2005 Meeting. February 12th- 14th, Brussels, Belgium. (Non-refereed Presentation)
2004 “Canadian Trends in Cultural Landscape Conservation”. ICOMOS/IFLA 2004 Meeting. October 3rd. Berlin, Germany. (Non-refereed Presentation)
2004 “The Landscape Idea and the Case of Buxton, Ontario”. Heritage Landscape Guidelines Workshop, June 25th, 2004, Ridgetown, ON. (Invited)
2004 "Cultural Landscape Conservation". Heritage Workshop, September, 2004. University of Waterloo, Heritage Resources Centre Waterloo, ON. (Invited)
2003 “LA Title Acts and LARE: Do They Have to Go Together?”. CSLA 2003 Awards Symposium, March 1st. Winnipeg, University of Manitoba, MN. (Invited)
2003 “Buxton N.H.S.: A Landscape Perspective on the Underground Railway”. Black History Month Workshop, February 21st. Toronto, York University, ON (Invited)
2003 Heritage Day Celebrations Wrap-Up Address, February 14th, Guelph Youth Music Centre, Guelph, ON. (Invited)
2003 D. Douglas and N. Pollock-Ellwand. September 17th-20th “The Intersection of Planning and Landscape Architecture”. OPPUI-OALA Joint Conference. Deerhurst Resort, Muskoka, ON
2002 “Capital Design: Searching for The 21st Century Landscape of Ottawa”. CSLA 2002 Awards Symposium. February 23rd. CSLA Annual Awards and Symposium. Winnipeg, University of Manitoba, MN. (Invited)
2002 "Conserving Cultural Landscapes at a Local Level". June. Legacy Cambridge, Cambridge, ON. (Invited)
2002 “Women in the Design Professions”. Women at Work. May. University of Guelph, Guelph, ON. (Invited)
2001 "Canadian Cultural Landscape Report". Annual Meeting 2001, Historic Gardens and Cultural Landscapes- ICOMOS-IFLA, May. Budapest, Hungary. (Non- refereed Presentation)
1998 “Borderlands: The US/Canadian Shared Experience of Landscape”. Alliance of Historic Landscape Preservation, Grey Towers (Gifford Pinchot Estate) Pennsylvania, US. (Invited)
1998 “Gréber and the ‘Washington of the North’”. CSLA Conference, Université de Montréal. Montreal, PQ. (Non-refereed Presentation)
1998 Opening Address, Women in the Profession… a ten-year retrospective on the profession of Landscape Architecture. January. University of Guelph, Guelph, ON. (Invited)
1997 “Building Community through Cultural Landscape Identification”. CELA Conference, University of North Carolina. September 10th –13th, Chapel Hill, North Carolina, US. (Non-refereed Presentation)
1997 “Community-based Data Collection”. Community Heritage Ontario Conference: ‘Continuity with Change’. September 26th –28th, Penetanguishene, ON. (Invited)
1996 “Blair Cultural Landscape CD-ROM and Community Heritage Data Collection”. Alliance of Historic Landscape Preservation Annual Conference. Burlington, Vermont, US (Non-refereed presentations)

Master of Architecture Program
Faculty of Environmental Design
University of Calgary
2016

Resumes

Administration

Bev Sandalack

Professor, Associate Dean (Academic)
Landscape + Planning

COURSES TAUGHT
Fall- EVDS 675: Urban Systems / Urban Design Theory (Calgary)

EDUCATION
PhD (Urban Design), Oxford Brookes University, UK 1998
MLandArch, University of Manitoba, 1991
BPE, University of Calgary, 1980
Dip Hort, Olds College, Alberta, 1976

REGISTRATION STATUS & PROFESSIONAL MEMBERSHIPS
Fellow, Canadian Society of Landscape Architects (FCSLA) elected 2006, Member from 1993
Alberta Association of Landscape Architects (AALA), Registered Member
Canadian Institute of Planners (MCIP), Registered Member from 1997
Alberta Professional Planners Institute (APPI), Registered Professional Planner (RPP)
Council for Canadian Urbanism (CanU), Member from 2012
Institute of Public Health, Faculty of Medicine, University of Calgary, Member from 2013

HONOURS & AWARDS
President's Award of Recognition, International Federation of Landscape Architects, 2011

PUBLICATIONS
Sandalack, BA (2016) 'Community & Urban Design Plan: Benalto, Alberta' in Planning Canada: A Case Study Approach. RThomas (ed.) Toronto: Oxford Univ Press Canada, 290-304
Sandalack, BA (2014) 'The EVDS Urban Lab: an on-going experiment in teaching, research & outreach' Architecture Live Projects Pedagogy H Harriss, L Widder (eds) Routledge, 99-108
Sandalack, BA & A Alaniz Uribe (2014) 'Whose Water Is It? climate change and politics in southern Alberta', in Landscapes/Paysages. Invited. 16:4, 38-41
Sandalack, BA, F Alaniz Uribe, G McCormack (2013) 'Walkshed Size and Neighbourhood Type' in Journal of Urbanism Vol. 6, Issue 3, 236-255
Sandalack, BA (2013) 'Prairie Towns: Process and Form', chapter in Place and Replace. A Perry, EW Jones, L Morton (eds) University of Manitoba Press, 271-297
Sandalack, BA & A Nicolai (2012) 'Time, Place & Structure: Typo-Morphological Analysis of 3 Calgary N'hoods', in Lndscp/Ideology of Nature KCadieux/LTaylor (eds) Routledge, 185-217

RESEARCH, SCHOLARSHIP, CREATIVE ACTIVITY
HealthyHoods Initiative: better life in cities. Co-PI with F Alaniz Uribe, PK Doyle-Baker. $75,000 University of Calgary VP Research Grants, 2016 -
LAPLACE Late Life Location of Care. Co-PI with F Lagare, A Jones, C Depres, et al. $25,000 Canadian Institute for Health Research, CIHR, 2015
SSHRC Enhancement Grant University of Calgary. PI, $5,000 (2014 SSHRC proposal (project on density, public engagement + virtual reality) received 4A status, 2015
Crescent Heights Planning and Design Study Co-PI with F Alaniz Uribe $25,000 – resulted in research report, accepted by Crescent Heights Community Association, 2015-16
Centre City Public Realm Audit Co-PI with F Alaniz Uribe $34,644 The Urban Alliance - resulted in research report, accepted by City of Calgary, 2014-15
Pathways to Health: relationships between neighbourhood form & body weight G McCormack (PI), B Sandalack, et al $ 341,024 – CIHR, 2013-17
Grouard Heritage and Cultural Resources Project $20,000 from Northern Lakes College through ARDN – resulted in research report, accepted by Hamlet of Grouard, 2012
Campus Site Planning Project, St. Mary's University $55 000, phase 2 $48,000 – resulted in research report, accepted by St. Mary's Board of Governors, 2011-13
Transitioning Calgary's Middle Ring: sustainability concepts pilot project $14,892 The Urban Alliance – resulted in research report, accepted by City of Calgary, 2011
Sandalack, BA (2016) 10x20x20 Landscape Edition (invited) Wpg Art Gallery, CSLA Congress
Sandalack, BA (2016) 14-minute talk, TedX Calgary Evolution/Revolution 8 May 2016
Sandalack, BA (2014) 'Morphology is Destiny: n'hood design, public health & social connectivity', invited, Alberta Assoc of Architects Professional Development Day, Calgary

Contd. Below

Sandalack, BA (2014) makeCalgary: Healthy Symposium, panelist, Calgary
Sandalack, BA (2014) SHIFT: Resilience Conference. Keynote, Dalhousie School of Planning
Sandalack, BA (2013) 'A Landscape Approach to Urbanism' Invited Closing Address, Revitalizing Downtowns Summit, Edmonton, Alberta
Sandalack, BA (2012) 'The Urban Forest and Urban Planning' International Society of Arboriculture, Prairie Chapter. Keynote, Canmore, Alberta
Sandalack, BA (2012) 'Too Conventional for our Context? Urban Design & City-Making', City of Calgary Professional Engineers Professional Development Day. Invited
Sandalack, BA (2011) 'Calgary: urban form/urban life' Boise State U Distinguished Lec. Series
Alaniz Uribe, F & BA Sandalack (2015) 'Diseño Urbano Basado en la Investigación: forma urbana sustentable como objetivo', Urban Thinkers Campus Mexico, UN, online, Refereed
Sandalack, BA and F Alaniz Uribe (2015) 'Walking into the future: are kids getting the best deal with neighbourhood design?' Walk21, Vienna, Oct. Refereed
Alaniz Uribe, F and BA Sandalack (2015) 'How to measure public space quality? Urban form and walkability in Calgary, Canada' Walk21, Vienna, Oct. Refereed
Sandalack, BA (2015) 'Landscape Architecture: a profession for the 21st century', Int'l Fed of Landscape Architects History of the Future, St. Petersburg, Russia, May. Refereed.
Sandalack, BA & F Alaniz Uribe (2015) 'Townscape Analysis: Open Space Planning for a Better Public Realm' Cdn Soc of Landscape Arch Congress, held in Mexico City. Refereed
Sandalack, BA & F Alaniz Uribe (2014) 'Hospitality in the City,' World Town Planning Day virtual conference. Refereed
Sandalack, BA & F Alaniz Uribe (2011) 'Calgary's Middle Ring Neighbourhoods: transitioning post-WW2 urban form to greater sustainability', Int'l Seminar Urban Form, Mtl. Refereed
F Alaniz Uribe & Sandalack, BA (2011) 'N'hood Design, Vehicle Travel & Energy Consumption', International Seminar on Urban Form, Montreal. Refereed
Sandalack, BA (2011) 'IFLA Student Landscape Arch Design Competition - Retrospection & Reflection on the Meaning for our Profession' IFLA World Congress, Zurich, Switzerland

ACADEMIC, PROFESSIONAL, & PUBLIC SERVICE

Faculty of Graduate Studies, University of Calgary, Appeals Committee 2015-
EVDS and Haskayne School of Business search committee for new Professorship 2015
EVDS search committee, Landscape Architecture (Chair) 2013, 2015, 2016
EVDS Admissions Committees, MLA Program (Chair) 2015,16; MPlan Program (Chair) EVDS 2013,14,15 (Member) 2012; MEDes Program (Chair) 2013,14; PhD Program (Chair) 2013,14
EVDS Graduate Certificate in Sustainable Urban Design Co-Lead with F Alaniz Uribe 2014-16
EVDS Master of Landscape Architecture Working Group, develop MLA program, Chair, 2013-15
University of Calgary Mexico Regional Advisory Council - appointed by the Provost 2013-
Director (Interim) PhD and MEDes Programs, EVDS 2012-14
Project Manager, EVDS Website Working Group 2011-13
National Executive Forum on Public Property, Academic Advisor, appointed 2013-16
City of Calgary Flood Mitigation Committee, appointed member 2013-14
Regional Municipality of Wood Buffalo (City of Fort McMurray) Design Review Panel, appointed member and Co-Chair 2012-14

Master of Architecture Program
Faculty of Environmental Design
University of Calgary
2016

Resumes

Faculty

Brian Sinclair
Professor

COURSES TAUGHT
Fall- EVDA 782.xx: Senior Studio I (Tokyo/Melbourne)
Winter- EVDA 682.04: Comprehensive Studio

EDUCATION
PhD | Doctor of Philosophy, Department of Architectural Studies, University of Missouri, USA
MEDes (Arch) | Master of Environmental Design (Architecture), University of Calgary, Canada
MSc (Psyc) | Master of Science (Psychology), University of Calgary, Canada
BSc (Psyc) | Bachelor of Science (Psychology) (With Distinction), University of Calgary, Canada

REGISTRATION STATUS & PROFESSIONAL MEMBERSHIPS
Fellow - Royal Architectural Institute of Canada International Member - American Institute of Architects
Member - Union of Mongolian Architects
Member - Society of Nepalese Architects
Member - Council on Tall Buildings and Urban Habitat

HONOURS & AWARDS
2015 Exemplary Leadership in Education Award, International Institute for Advanced Studies in Systems Research and Cybernetics, Baden-Württemberg, Germany.
2015 Great Supervisor Award, University of Calgary, Faculty of Graduate Studies, Calgary,
2015 Supervisory Excellence Nomination, 2014-2015 GSA, University of Calgary, Canada
2014 Golden Award of Achievement, International Institute for Advanced Studies in Systems.Research and Cybernetics, Baden-Württemberg, Germany.
2014 Kihl Distinguished Service Award, Architectural Research Centers Consortium, USA.
2013 Rev. Dr. Chief John Snow Sr. Award for Excellence in Teaching & Research, Canada
2013 Elected | Inducted into Membership of the International Academy of Arts, Sciences and Engineering, IIAS, Germany.
2013 Elected | Inducted into Lambda Alpha International Honor Society for the Advancement of Land Economics, USA.
2013 Invitation to and Inclusion in "Great Teachers" Website, University of Calgary, Canada.
2012 Honorary Doctorate (DrHC | Doctor Honoris Causa), International Institute for Advanced Studies in Systems Research and Cybernetics, Baden-Württemberg, Germany.
2012 Teaching Excellence Award, 2011-2012 (single award campus-wide) GSA, University of Calgary, Alberta, Canada.
2011 Fellowship (FIIAS), International Institute for Advanced Studies in Systems Research and Cybernetics, Germany.
2011 U-Make-A-Difference Recognition Award - Faculty, University of Calgary, Canada.

PUBLICATIONS
"Japanese Spirituality, Flexibility and Design: Influences and Impacts on Agile Architecture + Open Building". Architectural Research Addressing Societal Challenges. International Research Conference: Architectural Research Centers (ARCC) | European Association of Architectural Educators (EAAE), University of Lisbon, Portugal, 2016
"Real Estate, Residency, Design & Sustainability: Reconsidering Innovation & Efficacy in Development". Co-Authored with Saad Rajan. Architectural Research Addressing Societal Challenges. International Research Conference: Architectural Research Centers (ARCC) | European Association of Architectural Educators (EAAE), University of Lisbon, Portugal, 2016
"Culture, Context + Environmental Design: Considering Vernacular in Modern Islamic Urbanism". Co-Authored with Sabeen bin Zayyad. Architectural Research Addressing Societal Challenges. International Research Conference: Architectural Research Centers (ARCC) | European Association of Architectural Educators (EAAE), University of Lisbon, 2016
"Tall Buildings, High Expectations, Towering Responsibilities: Critically Considering Skyscrapers, Urbanism and Sustainability". Co-Authored with Fahad Alotaibi. Architectural Research Addressing Societal Challenges. International Research Conference: Architectural Research Centers (ARCC) | European Association of Architectural Educators (EAAE),
University of Lisbon, Portugal, 2016
"Devising Design: Agility, Aptness, Equilibrium, Imperfection". Pg41-58. In: Building Dynamics: Exploring Architecture of Change (Ed: B. Kolarevic + V. Parlac). Routledge: London, 2015. "Integration | Innovation | Inclusion: Values, Variables and the Design of Human Environments".
Cybernetics and Systems: An International Journal, 46:6-7, pp 554-579, 2015.
"From the Age of the Machine to the Age of Life: Explorations of Education in an Ethos of Imbalance". Keynote Address, 27th International Conference on Systems Research, Informatics and Cybernetics, Germany, 2015.
"Energy, Empathy, Equilibrium, Education: Learning from the Sweat Lodge". 12th Symposium on Personal and Spiritual Development in the World of Cultural Diversity, Germany, 2015.

Contd. Below

"Building Better Bridges | Forging Stronger Links: Devising + Designing School-Profession Relationships". 8th International Symposium on Architecture of the 21st Century: In Search of New Paradigms, Germany, 2015.
"Metamorphosis + Meaning in Ulaanbaatar – A Capital City in Dramatic Transition". Co- Authored with Cornelia Turney, 8th International Symposium on Architecture of the 21st Century: In Search of New Paradigms, Germany, 2015.
"Intersection | Connection | Alliance | Transcendence: Studio Pedagogy Informed + Inspired via Indigenous Culture". Design for Learning: Fostering Deep Learning, Engagement and Critical Thinking: University Calgary Conference Postsecondary Learning + Teaching; 2015.
"Building Tall in the Arabian Gulf: Perception, Performance, Place-Making". Co-Authored with Fahad Alotaibi; The Future of Architectural Research: Annual Research Conference, Architectural Research Centers Consortium (ARCC) with Perkins + Will; Chicago, USA 2015.
"Holistic Approach to Urban + Architectural Design with Housing Sustainability Paramount". Co- Authored with Sara Alinaghi Pour; The Future of Architectural Research: Annual Research Conference, Architectural Research Centers Consortium (ARCC) with Perkins + Will Architecture; Chicago, USA 2015.
"Evaluative Place-Making of the Arts & Crafts Movement: A Sustainability Framework". Co- Authored with Jeanette Burman; The Future of Architectural Research: Annual Research Conference, Architectural Research Centers Consortium (ARCC) with Perkins + Will Architecture; Chicago, USA 2015.
"Aboriginal Culture: Fostering Understanding, Consideration and Seeing through the Eyes of the Other". Co-Authored with Sutter, Sandra and Calliou, George. MakeCalgaryTalk.
Calgary, Canada, 2014. http://makecalgary.com/?p=12320

RESEARCH, SCHOLARSHIP, CREATIVE ACTIVITY
Agile Architecture + Open Building
Informal Settlements – Analysis, Reform, Design + Planning Urban Design + Cities
Homelessness Aboriginal Issues
Holistic Design + Planning Framework

ACADEMIC, PROFESSIONAL, & PUBLIC SERVICE
Member – Academic Sustainability Committee, University of Calgary
Member – Aboriginal Standing Policy Committee, University of Calgary
Chair – Search Committee, Structures Position, EVDS, University of Calgary
Member – Awards Committee, EVDS, University of Calgary
Board Member – Architectural Research Centers Consortium (ARCC), USA
Founder and Administrator – ARCC King Medal for Excellence in Student Research, USA
Steering Committee Member – 2015 Festival of Architecture, RAIC

Master of Architecture Program
Faculty of Environmental Design
University of Calgary
2016

Resumes

Faculty

Mauricio Soto Rubio
Assistant Professor

COURSES TAUGHT
Fall- EVDA 613: Structures for Architects I, EVDA 697: Tensile Membrane Structures
Winter- EVDA 682.04: Comprehensive Studio, EVDA 619: Structures for Architects II

EDUCATION
Master in Architecture, University of Michigan, Ann Arbor, MI. USA 2003
Professional degree in Architecture, Universidad de Los Andes, Venezuela. Cum laude. 1999

REGISTRATION STATUS & PROFESSIONAL MEMBERSHIPS
Licensed Architect in Germany. Architektenkammer Baden-Württemberg. # 90375 since 2007
Licensed Architect in Venezuela. Colegio de Arquitectos de Venezuela since1999

HONOURS & AWARDS
Nominated by students as Best Professor of the Year. EVDS. University of Calgary 2016
Distinguished Visiting Fellow. University of California at Berkeley, CA 2015
Faculty Development Grant, $4.000. California College of the Arts, San Francisco, CA 2013
Alfred Taubman Scholarship, University of Michigan, $33.000 2001, 2002
University of Michigan Alumni Society Award. University of Michigan, Ann Arbor, MI 2001
Graduated with honors -Cum laude, Universidad de Los Andes, Mérida, Vzla. 1999

PUBLICATIONS
Soto-Rubio M. Michalski A. Tensile Membrane Structures and the Education of the Architect. Proceedings of the International Association for Shell and Spatial Structures. 2016 Sep 30.
Soto-Rubio M. Turney C. Understanding the Critical Role of Materiality in Academia through Design-Build Projects. Proceedings of the International Association for Shell and Spatial Structures. 2016 Sep 30.

RESEARCH, SCHOLARSHIP, CREATIVE ACTIVITY
Exhibitions of Design Work:
AIASF - LiA Alter Space Gallery. San Francisco. Sep 2015
Invited to participate in AIASF Perspectivas. Alter Space Gallery. San Francisco. Sep 2014
Invited to participate in exhibition Working Title. CCA. San Francisco. Sep 2013
Curated Exhibitions:
Formworks End of Year Exhibition. California College of the Arts. San Francisco. May 2014
Assemblage Exhibition. California College of the Arts. San Francisco. Dec 2013
Forecasting. End of Year Exhibition. California College of the Arts. San Francisco. May 2013
Exhibition Studiolo. Zeppelin University at Friedrichshafen, Germany. Sep. 2009
Technical Advisor:
KNIPPERS, J.; CREMERS, J.; GABLER, M; LIENHARD, J.: Atlas Kunststoffe + Membranen: Werkstoffe und Halbzeuge, Formfindung und Konstruction. Hrsg. Institüt für inter nationale Architektur-Dokumentation. München: Edition Detail, 2010
BART Bicycle Advisory Task Force. SF April 2013
SF OPEN CITY. Yerba Buena Center for the Arts. San Francisco. Oct. 2014
Architectural Professional Projects
Principal, Studio for Lightweight Design, Stuttgart, Germany since 2009 Projects Include: Entrance Courtyard Canopy, CCA, San Francisco Norway Pavillion Expo 2010, Shanghai Poruklu & Pendik Marinas, Turkey
Architect, Project Leader, Nüssli, Hüttwilen, Switzerland 2012-2013 Projects include: “The Bubble”, Hirshhorn Museum, Diller Scoffidio + Renfro

ACADEMIC, PROFESSIONAL, & PUBLIC SERVICE
Invited Lectures:
Lightweight Structures. Interdisciplinary Symposium Energizing by Design. Calgary. May. 2016
University of Tennesee, Knoxville Mar. 2015
Lightweight Strategies in Modular Construction. Modular Construction Summit. SF Sep. 2014
Montana State University, Bozeman. School of Architecture. Feb. 2014
TU Wien. School of Architecture Feb 2014
CCA Lecture Series. California College of the Arts. San Francisco March 2014
University of Wisconsin, Milwaukee. School of Architecture. Feb. 2013
Designing Membrane Structures. TU Wien. Austria May 2012
Manufacturing and Installation of Membrane Structures. TU Wien. May 2012
Invited Critic:

Contd. Below

University of Michigan, Ann Arbor Final Studio Review. Dec 2016
University of Tennessee at Knoxville Final Thesis Review. March 2015
University of California at Davis Final Review. Introduction to 3D design. Jun 2014
NEA Community Learning Center Final Review. Architectural Geometry. May 2014
University of California at Berkeley. Final Studio Review - May 2015
Final Thesis Reviews - May 2014
Final Studio Review - May 2014
Final Studio Review - May 2014
Final Studio Review - Dec 2013
Final Studio Review - Nov 2013
Final Thesis Reviews - May 2013
Thesis Mid-Term Reviews - April 2013
Academy of Art University, San Francisco Final Thesis Reviews. Dec 2013
Panels:
Q&A Panel Moderator. Modular Construction Summit. Sep. 2014 Modular Building Institute. San Francisco, CA
Panel Moderator in the Session Transformation and Adaptation May. 2016 Interdisciplinary Symposium Energizing by Design. Calgary
Service at the University of Calgary
Design Matters Lecture Series Coordinator Jan - Aug 2016
CAT - Committee on Admissions and Transferability Feb 2016
Cornelia Turner's PhD Supervisory Committee Jan 2016
Workshop Coordinator Search Committee. Dec 2015
Workshop Committee. since Dec 2015
Peer Reviewer for the 2016 ACSA Conference and Proceedings: Cross-Americas: Proving Disglobal Networks Dec 2015
Portfolio Review Committee. Oct 2015

Master of Architecture Program
Faculty of Environmental Design
University of Calgary
2016

Resumes

Faculty

Joshua Taron
Associate Professor

COURSES TAUGHT
Fall- EVDA 682.02: Intermediate Studio, EVDA 621: Introduction to Design Theories, EVDB 697.xx: Gillmor Theory Seminar
Winter- EVDB 697.xx: Gillmor Theory Seminar, EVDA 582: Studio II in Architecture, EVDS 683: Architecture & Anonymity

EDUCATION
2005 Southern California Institute of Architecture, Los Angeles, CA, Master of Architecture [M.Arch 2]
2000 University of California, Berkeley, CA, Bachelor of Arts in Architecture [A.B.Arch]

REGISTRATION STATUS & PROFESSIONAL MEMBERSHIPS
2008- Member, ACADIA (Association for Computer Aided Design in Architecture)
2008- Member, ACSA (Association of Collegiate Schools of Architecture)
2010-13 Member, eCAADe (Education and research in Computer Aided Architectural Design in Europe)
2011-12 Member, ASCAAD (Arab Society for Computer Aided Architectural Design)
2008-9 Board Member, CAUSA (Calgary Architecture and Urban Studies Alliance)

HONOURS & AWARDS
2014 EVDS Award for Teaching Excellence, Calgary AB, Canada.
2012 First Honorable Mention, Think Space Past-Forward 2012, Blur Competition.
2011 Regional Winner, Migrating Landscapes, Calgary AB, Canada. People's Choice Award, Migrating Landscapes, Calgary AB, Canada.

PUBLICATIONS
Peer Reviewed
Taron, J. "From Autonomy toward Anonymity in Architecture." 2015 ACSA Fall Conference: Between the Autonomous & Contingent Object. Syracuse, 2015.
Taron, J. "Anonymity and the Making of a Non-Relational Architecture." In The Expanding Periphery and the Migrating Center: Papers from the 2015 ACSA Annual Meeting. Toronto, 2015.
Taron, J., Parker, M. "Bounded Agency: Integrating Informed Multi-Agent Systems with Architectural Subtractions." In ACADIA 2014 Design Agency: Proceedings of the 34th Annual Conference. Los Angeles, 2014.
Taron, J., Parker, M. "Augmented Agency: Trompe L'oeil in the Age of Google Earth." In ACADIA 2014 Design Agency: Proceedings of the 34th Annual Conference. Los Angeles, 2014.
Taron, J. "Toward Anonymity in Architecture: An augmentation of the historical project of autonomy." Atmosphere 2014: Action. Winnipeg, 2014.
Taron, J. "Speculative Structures." 30th eCAADe conference: Digital Physicality / Physical Digitality. Prague, 2012.
Taron, J. "Structurally Intelligent Swarms: Exploiting Interoperability Toward Generative Design." 6th ASCAAD Conference: CAAD / Innovation / Practice. Manama, 2012.
Invited Contributions
Taron, J. "Distributed Sensations." in Digital Design Exercises for Architecture Students. Johnson, J., Vermillion, J. (eds). Routledge.
Bratton, B.H., Taron, J. "Stack Pedagogy." in Digital Design Exercises for Architecture Students. Johnson, J., Vermillion, J. (eds). Routledge.
Taron, J. "Portfolio: Josh Taron." Journal of Computational Media Design. Issue 4, Summer 2012.
Taron, J. "On the Integrative Program." Integration through Computation: Proceedings of the 31st Annual Conference of the Association for Computer Aided Design in Architecture, ACADIA Press, 2011.

RESEARCH, SCHOLARSHIP, CREATIVE ACTIVITY
2016 Beth Tzedec Congregation Sukkah, Subject to Change, Calgary, AB, Canada.
2015 RAIC Future Voices Pavillion, fXat Screen TV, Calgary, AB, Canada.
Tensile-informed Grid Shell Structures, Smithers, BC, Canada.
2014 Warming Huts Art & Architecture Competition, Worming Hut, Winnipeg, MB, Canada.
2013 Beakerhead Pop-up Pavilion, Composite Thatch, Calgary, AB, Canada
2012 Think Space Blur Competition Entry, Chaahk, New York, NY, USA.

ACADEMIC, PROFESSIONAL, & PUBLIC SERVICE
2016Co-chair, Interdisciplinary Symposium: Energizing by Design, Calgary, AB, Canada.
2015- EVDS Gallery Coordinator.
2011 Co-chair, Acadia 2011 Annual Conference: Integration through Computation, Banff, AB, Canada.

Master of Architecture Program
Faculty of Environmental Design
University of Calgary
2016

Resumes

Faculty

Barry Wylant
Associate Professor

COURSES TAUGHT
Fall- EVDA 580: Studio I in Architecture – Design Thinking
Winter- EVDB 697: Design Drawing, EVDA 782.xx: Senior Studio II

EDUCATION
1991 Master of Environmental Design in Industrial Design (MEDes, ID), University of Calgary, Masters Degree Project (MDP): Events at the Buffalo Jump: a Theoretical Exercise in Industrial Design
1983 Bachelor of Environmental Studies (BES, Architecture), University of Manitoba

REGISTRATION STATUS & PROFESSIONAL MEMBERSHIPS
2001-2009 Member of the Industrial Designers Society of America (Alberta Chapter)
Fellow of THECIS (the Centre for Innovation Studies, Alberta)

HONOURS & AWARDS
Client Robin Winsor, founder of Imaging Dynamics Company, was a recipient of the Manning Award for Innovation. Mr Winsor kindly acknowledges the role of my industrial design efforts in significantly aiding IDC in the development and commercialization of its innovative technology 2005
"Best New Security Product" for the TelAlert TA2000 security phone at the 1997 Consumer Electronics Show in Las Vegas, Nevada 1997
"Design Distinction Award) for the Madentec Tracker, hands free computer mouse for people with disabilities, awarded by International Design Magazine, NYNY 1996

PUBLICATIONS
Wylant, Barry. "Significance Beyond Functional Singularity" in Enabling Solutions for Sustainable Living: A Workshop with Ezio Manzini. Manzini, Walker, Wylant eds. The University of Calgary Press, Calgary. 2008.
Walker, Stuart and Wylant, Barry. "Workshop Theme Envisioning a Culture of Sustainability" in Enabling Solutions for Sustainable Living: A Workshop with Ezio Manzini. Manzini, Walker, Wylant eds. the University of Calgary Press, Calgary. 2008.
Journal Articles
Wylant, Barry Wylant. "Design Thinking and the Question of Modernity" in Design Journal, London: Berg Publishers, (2010).
Wylant, Barry. "Design Thinking and the Experience of Innovation" in Design Issues. Cambridge, Massachusetts: MIT Press, (Volume 24, Number 2, Spring 2008).
International Conference Proceedings
Wylant, Barry, 2009. "Design Thinking and the Question of Modernity," Design Connexity: Eighth International Conference of the European Academy of Design Proceedings. Malins, ed. Aberdeen, Scotland: Gray's School of Art, The Robert Gordon University. (Note this paper was 'top rated' and is to be included in an upcoming issue of the Design Journal).
Wylant, Barry, 2006. "Crash: And the Enduring Legacy of Futurism" accepted for publication in the proceedings for the Hawaii International Conference on Arts and Humanities, Jan. 2007.
Wylant, Barry, 2006. "Harmonic Contexts and the Gestalt of Design Thinking" accepted for publication in the proceedings for the Hawaii International Conference on Arts and Humanities, Jan. 2007.
Wylant, Barry, 2005. "Exploring Dimensions of Design Thinking" in Crossing Design Boundaries: Proceedings of the 3rd Engineering and Product Design Education International Conference. Rogers, Brodhurst and Hepburn, eds. London: Taylor and Francis.
Wylant, Gellion, & Badke, 2005. "Futurism & Dada: Theoretical Adventures in Design Context" in Crossing Design Boundaries: Proceedings of the 3rd Engineering and Product Design Education International Conference. Rogers, Brodhurst and Hepburn, eds. London: Taylor and Francis.
Wylant, & Badke, 2005. "Placements: Contextualizing Design Thinking" in Eastman IDSA National Education Conference 2005 Proceedings. Dulles, VA: IDSA.

ACADEMIC, PROFESSIONAL, & PUBLIC SERVICE
Selected Professional Industrial Design Projects
(via Q Industrial Design Corporation, my design firm):
2010-2014 Litebook Edge: Industrial design project work with Tangent Design Engineering for the Litebook Company, to develop and launch their light therapy product (IRAP supported).
2010-2011 Orthopaedic Surgical Devices for Total Hip and Knee Replacement Surgery: Developed industrial design concepts within an interdisciplinary team headed by the U of C's Dr. Carolyn Anglin (Dept. of Biomedical Engineering) and engineers from Tangent Design Engineering to develop devices to improve surgeon accuracy in total hip and knee replacement orthopaedic procedures (Patents pending on both devices).

Contd. Below

2010-2011 Outback Max GPS: Completed the industrial design for new GPS agricultural navigation device for Hemisphere GPS, commercially launched in 2011.
2009-2011 Spider 2 Patient Positioning System: Completed the industrial design for Tenet Medical Engineering's Spider 2, patient positioning device for orthopaedic surgery. The Spider 2 launched in 2011 (IRAP supported).
2001-Present Various EVDS/University committees, including faculty council, workshop committee, faculty promotions committee, Dean Search Committee, etc.
2014-15 Evaluator for the Manning Innovation Awards.
2012-13 U of C Portal Steering Committee, advising on development of business systems software.
2011 EVDS iS2 representative, facilitating communications for implementation for new U of C business system.
2007-8 Treasurer, Industrial Designers Society of America, Alberta Chapter.

David Down
Adjunct Professor

EDUCATION
1988 Master of Architecture (EVDS), University of Calgary, Calgary, Alberta
1982 Mandarin Language Immersion, Diploma, East China University, Shanghai.
1982 Architectural Technology, Diploma, Camosun College, Victoria, British Columbia
1978 Bachelor of Arts (Urban Geography), University of Victoria,

REGISTRATION STATUS & PROFESSIONAL MEMBERSHIPS
2005-present Fellow, Royal Architectural Institute of Canada
2005-present Member, Canadian Council for Urbanism (CanU)
1999-present Board Member, Architectural Foundation of Alberta
1995-present Registered Member, Alberta Association of Architects
1995-present Member, Royal Architectural Institute of Canada

HONOURS & AWARDS
Calgary Mayor's Urban Design Awards:
2015 Large Commercial Urban Design Guidelines
2011 Downtown Underpass Urban Design Guidelines
2011 Bird Friendly Urban Design Guidelines
2011 Downtown Illumination Design Guidelines
Star of Excellence:
2012 City of Calgary Wayfinding Program

RESEARCH, SCHOLARSHIP, CREATIVE ACTIVITY
2016 A Fine Balance: Community Engagement in Design & Public Policy, ULI, Panelist
2015 Planning for the City of Calgary; Ryerson University Webcast
2015 Creating a Better City: The Role of Urban Design; RICS Prairies Chapter
2015 Misunderstood Modern; National Trust Roundtable on Heritage Education
2014 Understanding the New Urban Design Guidelines, Calgary Real Estate Forum
2014 Calgary: The Role of Urban Design in Place Making; AAA
2014 Shaping Our Cities, Shaping Ourselves; MakeCalgary Healthy, MC and Panelist
2014 Calgary's Evolving Real Estate Market, NAIOP Calgary, Panelist
2013 Building Iconomy: New Uses for Brutalist Buildings, DTalks, Glenbow Museum
2013 New Development Guidelines: Real Estate Leasing Conference, Calgary
2013 Downtown Pedestrian Systems, American Planning Association, Chicago
2012 Walking the Urban Design Talk – Policy into Action; CanU 4, Calgary
2012 Infill Opportunities in Station Planning and Design, Railvolution, Los Angeles
2011 makeCalgary: Keynote Architectural Forum, Moderator
2011 Creating More Certainty in the Planning Process: Calgary Real Estate Forum

ACADEMIC, PROFESSIONAL, & PUBLIC SERVICE
2015 Chair, Tours & Exhibitions Committee, RAIC Festival Steering Committee
2014 Member, Steering Committee, Faculty Positioning Project, EVDS,
2013 Juror, New Central Library, International Architectural Competition, Calgary
2012 Juror, New City Design Awards, Surrey BC.
2012 Juror, Gateway Public Art competition, Calgary
2005-present Chair, Mayors Urban Design Awards, Organizing Committee
2010-present Member, Steering Committee, makeCalgary, Annual Urban Symposium, EVDS 2012 Member, Steering Committee, Council for Canadian Urbanism, Symposium

Master of Architecture Program
Faculty of Environmental Design
University of Calgary
2016

Resumes

Adjunct Professors

David Edmunds
Adjunct Professor

EDUCATION
Master of Environmental Design (Architecture), University of Calgary (1976)
Bachelor of Environmental Studies, University of Manitoba (1980)

REGISTRATION STATUS & PROFESSIONAL MEMBERSHIPS
Fellow, Royal Architectural Institute of Canada
Member, Alberta Association of Architects
Member, Architectural Institute of British Columbia
Member, Saskatchewan Association of Architects
Accredited Professional, Leadership in Energy and Environmental Design (LEED)
Past Regional Governor, Western Region, Council of Educational Facility Planners International
Council of Educational Facility Planners International Executive Committee, Alberta Chapter (Research)
Past Member President's Circle, Alberta College of Art & Design
Adjunct Professor, University of Calgary

HONOURS & AWARDS
2012- PSMJ Resources, Inc. Circle of Excellence Firms -GEC Recognized Firm
2011- Downtown Vitality Awards: Enhancing the Downtown through Urban Development, Bow Valley College North Campus, Calgary, AB
2011- Alberta Wood WORKS! Municipal/Recreational: Banff Community Recreational Centre - Banff, AB
2011- Alberta Masonry Design Awards. Educational/Institutional Award of Excellence. Pine Creek WWTP
2009- Winner of Excellence in Environmental Engineering (E3) Competition - Pine Creek WWTP
2009- Civil Runner-Up, 2009 Top Projects (Alberta Construction Magazine) Pine Creek Water Management Centre, Calgary, AB
2009- LEED Gold Certification for the Pine Creek OM&A Building
2009- Consulting Engineers of Alberta Award of Excellence for Sustainable Design Pine Creek WWTP
2009- Consulting Engineers of Alberta Award of Excellence for Project Management Pine Creek WWTP
2009- APEGGA Project Achievement Summit Award Pine Creek WWTP
2007- Mayor's Urban Design Awards - Urban Architecture Award Winner 7th Avenue LRT Refurbishment, Calgary
2007- Mayor's Urban Design Awards -Urban Fragments Award Winner 7th Avenue LRT Refurbishment, Calgary, AB
2007- Alberta Wood WORKS! - Canadian Wood Council Commercial / Industrial Ronald McDonald House, Calgary
2007- Vancouver Regional Construction Association Silver Medal Nanaimo Ice Centre, Nanaimo, BC
2006- Alberta Wood WORKS! -Canadian Wood Council Engineering (RJC, Structural Engineer) Somerset-Bridlewood LRT Station, Calgary,AB
2006- Alberta Wood WORKS! - Canadian Wood Council Multi Unit Residential Villa D'Este Condos, Tuscany, Calgary
2005- BOMA Go Green Award - First building in Calgary and the province of Albert to be certified "BOMA Go Green" in recognition of responsible environmental practices in building operations. Calgary TELUS Convention Centre
2005- Council of Education Facility Planners International Outstanding Design for Educational Environment Modernization Banff Community High School
2003- Alberta Association of Architects/Chronicle of Significant Alberta Architecture-Olympic Oval, Calgary, AB
2002- Building Owners and Managers Association Calgary Award-Building of the Year-Government/Institutional Facility 2002 TELUS Convention Centre Expansion, Calgary, AB
2002- Building Owners and Managers Association Calgary Award - Building of the Year - Government/Institutional facility 2002 TELUS Convention Centre, Calgary, AB
2002- The International Parking Institute - 2002 International Parking Awards Competition, Honorable Mention TELUS Convention Centre Parkade, Calgary, AB
2001- Canadian Institute of Steel Construction Alberta Steel Design Award Architectural Steel Category - Most Effective and Innovative Use of Steel Honorable Mention TELUS Convention Centre, Calgary
2001- SchoolNet Innovative School - "The Network of Innovative School Project" Industry Canada's SchoolNet and the Canadian Association of School Administrators Canmore Collegiate High School
2000- Royal Architectural Institute of Canada, Millennium Celebration of Canadian Architecture Alberta Research Council Headquarters and Complex, Edmonton, AB
2000- Premier's Award of Excellence - Bronze Recipient Alberta Research Council Facility, Calgary, AB
1995- Interior Designers of Alberta - Silver Award Prince's Island Estates, Calgary, AB
1990- American Association of School Administrators and The American Institute of Architects Lester B.Pearson High School, Calgary, AB
1988- American Concrete Institute - Award of Excellence (Alberta Chapter) Olympic Speed Skating Oval, Calgary, AB
1987- Post Tensioning Institute -Award of Excellence Olympic Speed Skating Oval, Calgary, AB
1987- Prestressed Concrete Institute -Award of Excellence 0lympic Speed Skating Oval, Calgary, AB
1986- Royal Architectural Institute of Canada - Governor General's Medal for Architecture, Alberta Research Council Headquarters and Complex, Edmonton, AB

Contd. Below

PUBLICATIONS

2012 - IAKS Congress Presentation -" the Athletic & Ice Complex at Canada Olympic Park"
2011 - Wood Products Council - Live Webinar Presentation - "Wood Use in Non-Combustible Buildings"
2011 - Woodworks Wood Solutions Fair, San Francisco - "Wood Use in Non-Combustible Buildings"
2010 - Canadian Wood Council - Prairie Wood Solutions Fair, Calgary - "Designing Non-Combustible Buildings with Wood"
2010 - Presentation to CSC on Athletic & Ice Complex, Canada Olympic Park
2008 - Alberta Woodworks - Sustainable Wood Design Presentation - Ronald McDonald House
2007 - SPOSA Presentation - "Sustainability"
2001- AAA Presentation to Banff Sessions on Banff Community High School LEED CEFPI Presentation on PNR CEFPI Academy
Daylighting Performance Analysis
A Preliminary Assessment of Daylighting in Calgary's Olympic Oval - October 1991
Evaluation of PWC Daylighting Manual - April 4, 1991
Daylighting System Design Evaluation of Professional Faculty Building, Calgary, Alberta, Canada - July 1991
Daylighting System Design Evaluation of North East High School, Calgary, Alberta, Canada - March 1989

Master of Architecture Program
Faculty of Environmental Design
University of Calgary
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Resumes

Adjunct Professors

Jane Ferabee
Adjunct Professor

EDUCATION

Bachelor of Architecture, University of Toronto 1985
Queen's University, Undergraduate Studies 1979-80
Neuchatel Junior College, Switzerland 1978-1979
London University A-Level Studies in Nairobi, Kenya 1977-1978
Lisgar Collegiate Institute, Ottawa 1974-1977

REGISTRATION STATUS & PROFESSIONAL MEMBERSHIPS

Licensed in 1990 with Ontario Association of Architects Licensed in 1991 with Alberta Association of Architects
Chair of the Alberta Association of Architects Practice Review Board 2000-2003
Alberta Association of Architects Council 2001-2006
Member of the Joint Board of Practice (APEGGA + AAA) 2005-2007
President of the Alberta Association of Architects 2004-2005
Fellow of the Royal Architectural Institute of Canada since 2005
LEED Accredited Professional 2003
Initial chair of the Committee for the Exam for Architects in Canada -ExAC 2005-2013
Member of CACB Program Certification Team reviewing U of C EVDS 2011
Member of the Association of University Architects

Rafael Gomez-Moriana
Adjunct Professor

COURSES TAUGHT
Fall- EVDA 782.xx Senior Studio I (Barcelona)

EDUCATION
1993-95 Master of Architecture (post-professional degree), Berlage Institute, Amsterdam. Thesis design project: "Menu: A Master Plan for Holland's Green Heart." Written thesis: "Architectural Tourism."
1987-89 Bachelor of Architecture (professional degree), University of Waterloo, Ontario. Co-op workstudy program. Thesis project: "Sacred & Profane Mixed-Use Building, Montreal."
1983-87 Bachelor of Environmental Studies (pre-professional degree), University of Waterloo. Co-op work-study program.
1981-83 Diplôme d'Études Collégiales, Pure & Applied Science, CEGEP John Abbott College, Montreal.

REGISTRATION STATUS & PROFESSIONAL MEMBERSHIPS
2014- Member, CICA (Comité International des Critiques d'Architecture / International Committee of Architectural Critics)
1997-99 Member of the Board of Directors, Plug-in Contemporary Art, Winnipeg
Member, Royal Architectural Institute of Canada
1996-97 Member of the Board of Directors, Vancouver League for Studies in Architecture (Alcan Lectures)
1992-93 Member of the Board of Directors, Edmonton Society for Urban and Architectural Studies

HONOURS & AWARDS
Canada Council Inter-Arts grant (with Sheila Nadimi).
Netherlands Foundation for Art, Design and Architecture (with Sheila Nadimi)
Graham Foundation for Advanced Studies in the Fine Arts grant (with Sheila Nadimi).
Canada Council for the Arts Architecture Mid-Career grant.
Canadian Wood Council Honour Award (to Helliwell Smith / Blue Sky Architecture and Urban Design) for Harvey Residence
B.C. Lieutenant Governor's Merit Award, to Helliwell Smith / Blue Sky Architecture and Urban Design for Harvey Residence
Canada Council Project Assistance for Initiatives in Contemporary Visual Art and Architecture grant (with Collaborations in Art and Architecture)
Manitoba Arts Council grant (with Collaborations in Art and Architecture)
Canadian Society of Landscape Architects Regional Honour Award to Carlyle + Associates Landscape Architecture and Urban Design for Lloydminster border park
'Incentive prize', Inside Randstad Holland International Competition, Eo Wijers Foundation, The Netherlands (with Jan Peter Wingender)
Honourable mention, Ontwerpprijs Beton charette, Unité d'Habitation de Briey-en-Fôret (with Jan Kroes)

PUBLICATIONS
PUBLISHED BOOKS
1996 Reflexivity: Studio '94-'95. Marijke Beek, Rafael Gómez-Moriana, Herman Hertzberger, editors. Rotterdam: 010 Publishers (Berlage Cahiers vol.4).
1995 The New Private Realm: Studio '93–'94. Marijke Beek, Rafael Gómez-Moriana editors. Rotterdam: 010 Publishers (Berlage Cahiers vol.3).
PUBLISHED PAPERS, ARTICLES AND ESSAYS
2016 "Avoid the Void: MX_SI sheds light on Federico García Lorca" (forthcoming article), Mark Magazine #60
2015 "La crítica arquitectónica y la imagen del arquitecto" (peer-reviewed paper), Palimpsesto #13
"Dis-Fru-Tar" (article), Azure, Nov./Dec. 2015
"Ricardo Devesa" (interview) Mark Magazine #58
"Size Isn't Everything: a House Inside a House by Josep Ferrando" (criticism), Mark Magazine #57
"Art Studio-Museum" (criticism), Oris Magazine for Architecture and Culture #92
"Brutal Underground" (criticism), Mark Magazine #54
"Observations on Attitude" (criticism), Log Journal #32, Fall 2014
"Criticism 2.0, or Nobody likes a Critic when Everybody's a Critic" (book chapter) in Louise Noelle and Sara Topelson de Grinberg, eds. Critical Juncture: Joseph Rykwert's Royal Gold Medal and CICA Symposium
"Carme Pinós Honours the Pillar" (criticism), Mark Magazine #52
"Groupies" (review of Venice Architecture Biennale), Mark Magazine #51
"Reality Check: Spain" (essay), Mark Magazine #50
"Thinking Big: The City of Culture of Galicia as Regional Development Strategy" (catalog essay) in Patrick Merz, ed. Beyond the Building: Museums of the 21st Century, Basel Art Centre (forthcoming)
"Product Placement" (op-ed), Arquitectura Viva #153
"MBM Learns from Las Vegas" (criticism), Mark Magazine #45
"Man on the Move" Azure 9/13

Contd. Below

"Going Slowly: Cadaval and Solà-Morales Arquitectos" (profile) Mark Magazine #39
"Parainfrastructures: A Gut Reaction" (criticism) Quaderns d'arquitectura i urbanisme #262, online edition
http://quaderns.coac.net/en/2011/09/reaccions-262-gomezmoriana/
"Quietly Brilliant: Nieto Sobejano Arquitectos" (profile) Mark Magazine #34
"Exposé: Cristóbal Balenciaga Museoa" (essay), Disegno #1
"Strike a Pose" (criticism of assisted living facility in Alcácer do Sal, Portugal, by Aires Mateus) Mark Magazine #32
"RCR gives us low-key green" (criticism) Mark Magazine #31
"Power to the People: Andrés Jaque Architect" (profile) Mark Magazine #29
"Dear Joao" (catalogue essay) in Joao O: The Mythologist. Beijing: AFA Gallery.
"Peter Eisenman" (interview) KLAT Magazine #4
"City as Landscape: The City of Culture of Galicia by Eisenman Architects" (criticism) Mark Magazine #27
"Top-Down Tower: Social Housing by R+B Arquitectos" (criticism) Mark Magazine #27
"Triumph of the Shell: Llotja de Lleida by Mecanoo" (criticism) Mark Magazine #26
"Pillow Talk: Media-TIC building by Enric Ruiz Geli" (criticism) Mark Magazine #25.
"Jurisprudence: City of Justice by David Chipperfield and b720" (criticism) Art 4D Magazine.
"Optimization Takes Command: Angelo Roventa's Elastic Living Unit" (catalogue essay) ST/ A/R #23 special issue for exhibition "Game of the Mighty: Heidulf Gerngross archistrates Franz West's Nageltower". Vienna: Museum für Angewandte Kunst (MAK).
"Monument Ahead: Caja Granada Cultural Centre by Alberto Campo Baeza" (criticism) Mark Magazine #22.
"Team Play: Caja Mágica Tennis Stadium, Madrid, by Dominique Perrault" (criticism) Mark Magazine #21.
"Dominique Perrault's tower in Barcelona defies gravity" (criticism) Mark Magazine #18.
"Two Optimistic Architecture Yearbooks: A Comparative Analysis" (book chapter) 2008 Optimistic Architecture Yearbook. Paris: les éditions de la French Touch.
"Water Duel (I): Water Tower, Zaragoza, by Enrique de Teresa" (criticism) Mark Magazine #16
"Water Duel (II): Bridge Pavilion, Zaragoza, by Zaha Hadid" (criticism) Mark Magazine #16
"Exquisite Corpse: CaixaForum Madrid by Herzog & de Meuron" (criticism) Mark Magazine #14
"Punch and Play: Palmeritas Health Centre, Seville, by CHS Arquitectos" (criticism) Mark Magazine #14
Phaidon Architecture Atlas, second edition: contributor of 15 encyclopedic text entries on Spain.
"Everyday Camouflage in the City" (theoretical research), Lotus International #126.
"The Pursuit of the Pleasure by the Most Efficient Available Means: The Urbanism of Benidorm, Spain" (criticism), Onsite #14.
"Less and More" (criticism), Jornal Arquitectos #214.
"Less and More" (criticism), HUNCH #6/7.
"Out of Sight: Architecture as Camouflage in Everyday Life" (research), Onsite #9 (with Sheila Nadimi).
"The Virtue of Reality: Puntos de Luz, (Web)-Site Specificity and the Butterfly Effect" at www.puntosdeluz.net Barcelona: Fundació la Caixa.
"From White Cube to Big Box: Three Exurban Themes in the Work of Kim Adams" (catalogue essay) in Ewen McDonald, editor, The World May Be Fantastic. Sydney: 2002 Biennale of Sydney.
"Speaking Architecture / Arquitectura que habla" (foreword) in Northon Flores Troche, editor, Mirando al futuro. Bussum: Thoth Publishers.
"Kit Bashing, Street Remakes and Bisexual Architecture: Urbanist Rafael Gómez-Moriana in conversation with Sculptor Kim Adams", C Magazine #70.
"The Valparaiso School and the Construct(ion) of Regional Identity" (book chapter) in Mercedes Durán-Cogan and Antonio Gómez-Moriana, editors, Hispanic Issues vol.23: National Identities and Sociopolitical Changes in Latin America. New York and London: Routledge Publishers.
"Winnipeg: One Great Situation-Normal" (catalogue essay) in Shirley Madill, editor, Sit(e)ings: Trajectories for a Future. Winnipeg: Winnipeg Art Gallery.
"11,000 Eichler Home-Buyers Can't be Wrong" (research) in Herbert Enns, ed. The Eichler Homes: Building the California Dream. Winnipeg: TAP.
"Do Not Try This at Home: Architectural Tourisms of the Modern Age" (research) in Marijke Beek et al, editors, Reflexivity. Rotterdam: 010 Publishers (Berlage Cahier 4).
"Public Address System" (introduction) in Marijke Beek et al, editors, Reflexivity. Rotterdam: 010 Publishers (Berlage Cahier 4).
Book review of S,M,L,XL, in Parachute #85.
"Straightforward" (book chapter) in VMX Architects. Amsterdam: Architectura & Natura.
"Housing Discourse in the New Private Realm" in Marijke Beek et al, editors, The New Private Realm, Rotterdam: 010 Publishers (Berlage Cahier #3).
"Back to Basics: An Interview with Kenneth Frampton" (in collaboration with Zeno Vogel) Tefchos Review # 14/15.
"Montreal: A Concrete Guide" (article) in Marie-Paule Macdonald editor, The Splinter #6/7.
TRANSLATIONS (SPANISH TO ENGLISH)
Jacobo Vidal Franquet: "A Catalan Tapestry in New York" (paper), Universitat de Barcelona / Metropolitan Museum of New York

Cont. Below

Ana-María Alvarez, ed. Bogotá Urban Interactions, Audi Urban Future Initiative (book, forthcoming).
Jacobo Vidal Franquet, "'Its wood is used to craft the alfarje ceilings of royal palaces': Tortosa as a centre for the production and distribution of timber", Universitat de Barcelona.
Paolo Sustersic, Domestic Spaces in the Information Era: Architectural Design, Images and life in a Technological Age (doctoral thesis)
Sara Sender, "Passing through the Spider's Web" in Chema Alvargonzález: Palabras Corpóreas exhibition catalogue, Centro de Arte Contemporáneo de Málaga, 2003, pp.81-83.
Juan Antonio Ramírez, "The Living Skin" in Serena Keshavjee, editor, Aganetha Dyck. Winnipeg: Gallery 111.
Bruno Barla-Hidalgo "The Voyage as an Integral Part of Study and Conceptualization at the School of Architecture of the Catholic University of Valparaiso, Chile" in Mercedes Durán- Cogan and Antonio Gómez-Moriana, editors, Hispanic Issues vol.23: National Identities and Sociopolitical Changes in Latin America. New York and London: Routledge Publishers.

Master of Architecture Program
Faculty of Environmental Design
University of Calgary
2016

Resumes

Adjunct Professors

Martin Jones
Adjunct Professor

EDUCATION
Master of Environmental Design (Architecture), University of Calgary, 1992
Bachelor of Science (Geography), University of Calgary, 1986

REGISTRATION STATUS & PROFESSIONAL MEMBERSHIPS
Member, Alberta Association of Architects
Member, Royal Architectural Institute of Canada
LEED Accredited Professional, US Green Building Council

Master of Architecture Program
Faculty of Environmental Design
University of Calgary
2016

Resumes

Adjunct Professors

Anthony Leong
Adjunct Professor

EDUCATION
M.Arch, Faculty of Environmental Design, University of Calgary
B.A., Faculty of General Studies, University of Calgary

HONOURS & AWARDS
All awarded while working for the Marc Boutin Architectural Collaborative:
2016 Prairie Design Awards, Award of Excellence for The Landscape of Memory: Pathway Upgrades. Calgary, Alberta
2014 Canadian Architect Award of Merit for the Edmonton Valley Zoo Children's Precinct, Edmonton, Alberta
2014 Canadian Society of Landscape Architects Awards of Excellence: National Honour for the Memorial Drive Landscape of Memory: Poppy Plaza, Calgary, Alberta
2014 National Mayor's Urban Design Awards Certificate of Merit for the Memorial Drive Landscape of Memory: Poppy Plaza, Calgary, Alberta
2014 Calgary Heritage Authority Lion Award for the Memorial Drive Landscape of Memory: Poppy Plaza, Calgary, Alberta
2013 Mayor's Urban Design Award for the Memorial Drive Landscape of Memory: Pathway Upgrades, Calgary, Alberta
2011 Mayor's Urban Design Award for the Memorial Drive Landscape of Memory Pathway Upgrades, Calgary, Alberta

PUBLICATIONS
Awards of Excellence. Edmonton Valley Zoo Children's Precinct. Canadian Architect v.59, n.12 Dec. 2014: 32-33

Master of Architecture Program
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Resumes

Adjunct Professors

Jeremy Sturgess
Adjunct Professor

EDUCATION
Member, Royal Canadian Academy of Arts (RCA)
Fellow, Royal Architectural Institute of Canada (FRAIC)
Member, Alberta Association of Architects (AAA)
Member, Architecture Institute of British Columbia

REGISTRATION STATUS & PROFESSIONAL MEMBERSHIPS
Member, Royal Canadian Academy of Arts (RCA)
Fellow, Royal Architectural Institute of Canada (FRAIC)
Member, Alberta Association of Architects (AAA)
Member, Architecture Institute of British Columbia

HONOURS & AWARDS
2016
Governor General's Medal in Architecture, Glacier Skywalk
2015
Alberta Steel Edge Award, Canadian Institute of Steel Construction, Glacier Skywalk
Award of Excellence, Special Applications, Post-Tensioning Institute Awards, Glacier Skywalk
Award for Outside Quebec Projects, Canadian Institute of Steel Construction, Quebec Region, Glacier Skywalk
Architecture + Engineering A+Award, Jury Winner, Architizer , Glacier Skywalk
Architecture + Engineering A+Award, Popular Choice Winner, Architizer, Glacier Skywalk
Steel Edge Award, Canadian Institute of Steel Construction, Alberta Region, Glacier Skywalk
Calgary Mayor's Urban Design Award Honourable Mention, Urban Architecture, South Bow Plaza
2014
Consulting Engineers of Alberta, Award of Excellence, Glacier Skywalk
Award of Excellence, Canadian Design-Build Institute, Glacier Skywalk
2013
Alberta Construction Magazine, Top Commercial Project Award, Glacier Skywalk
Alberta Construction Magazine, The Design Commercial Award, Glacier Skywalk
Alberta Construction Magazine, People's Choice Award, Glacier Skywalk
2012
Queen's Jubilee Medal; Awarded to Jeremy Sturgess
Calgary Awards – Signature Award: Awarded to Jeremy Sturgess for bringing International Recognition to the City of Calgary
Word Architecture Festival – Transport Category: Shortlisted Project, 7th Avenue LRT Transit Corridor Renewal
2011
World Architecture Festival - Future Projects (Competition) Award, Glacier Skywalk
Alberta Masonry Design Award, Award of Excellence, The Water Centre

PUBLICATIONS
Glacier Skywalk, in press

RESEARCH, SCHOLARSHIP, CREATIVE ACTIVITY
Principal, Sturgess Architecture

ACADEMIC, PROFESSIONAL, & PUBLIC SERVICE
University of Calgary Dean's Circle
Calgary Planning Commission (until 2014)
Juror, Western Living Designer of the Year

Master of Architecture Program
Faculty of Environmental Design
University of Calgary
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Resumes

Adjunct Professors

Kate Thompson
Adjunct Professor

EDUCATION
1999-2002 University of Calgary, Master of Architecture Degree
Winter 2001 C.E.P.T. School of Architecture, Ahmedabad India
Fall 2000 Universitat International de Catalunya, Barcelona Spain
Spring 1998 Instituto Universitario di Architectura di Venezia, Bassano del Grappa Italy
1995-1999 University of Manitoba, Bachelor of Environmental Design

REGISTRATION STATUS & PROFESSIONAL MEMBERSHIPS
2007 Registered Architect - Completed NCARB exams and was registered by the Alberta Association of Architects

HONOURS & AWARDS
2002 American Institute of Architects (Certificate of Merit 2002: for thesis project)
University Research Scholarship
Faculty Murray Waterman Scholarship
2002 Advanced Standing Entry Scholarship (Honours Academic Scholarship)
1999 Program Medal in the Faculty of Architecture Highest academic standing in Environmental Design Program
Outstanding Student Award University wide award given to one student in each faculty at the University of Manitoba

Master of Architecture Program
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Resumes

Adjunct Professors

Lynn Webster
Adjunct Professor

EDUCATION
Master of Architecture, University of Calgary, 1979
Bachelor of Arts (Anthropology), University of British Columbia, 1973

REGISTRATION STATUS & PROFESSIONAL MEMBERSHIPS
Member, Architectural Institute of British Columbia, 2008
Member, Alberta Association of Architects, 1983
Member, Ontario Association of Architects, 2008
Fellow, Royal Architectural Institute of Canada, 2002
Member, Royal Architectural Institute of Canada, 1985
LEED® Accredited Professional, 2004
Evidence-Based Design Accreditation and Certification (EDAC) from the Center for Health Design, 2014
Adjunct Assistant Professor of Architecture, University of Calgary, 2002 to 2018
Professional Affiliate, The Centre for Health Design, 2013-2015
Chair, Committee of Canadian Architectural Councils, 2002 to 2003
CCAC/NPP Alberta Representative, 2001 to 2002
Past President, Alberta Association of Architects, 2001 to 2002
President, Alberta Association of Architects, 2000 to 2001
Famous Five Foundation Board Member, 1997 to 2001
1st Vice President, Alberta Association of Architects, 1998 to 1999
Council Member, Alberta Association of Architects, 1997 to 1998
YWCA Women of Distinction Nominee, Business, Professions and Labour, 1993

HONOURS & AWARDS
Award of Excellence in Policy Planning - Planning Institute of British Columbia, Pearson Dogwood Redevelopment, Vancouver, BC 2015
Best in BIM, CanBIM, Grande Prairie Regional Hospital, 2015
BOMA Edmonton - Outstanding Building of the Year (TOBY) Award, (500,000 - 1,000,000 sq ft Category), Edmonton Clinic Health Academy, Edmonton, AB, 2014
Edmonton Urban Design Awards - Award of Merit, Site Development, Edmonton Clinic, Edmonton, AB, 2013
Mayor's Award for Innovative Support by a Business for the Arts, Edmonton Clinic, Edmonton, AB, 2013
ICU Design Citation, Co–sponsored by the Society of Critical Care Medicine, the American Association of Critical Care Nurses and the American Institute of Architects Academy on Architecture for Health, Foothills Medical Centre McCaig Tower Intensive Care Unit, Calgary, AB, 2011
Award of Merit – Educational/Institutional, Masonry Design Awards (Alberta Region), Robbins Pavilion, Royal Alexandra Hospital, Edmonton, AB, 2011
Silver, Interior Designers of Alberta, Robbins Pavilion, Royal Alexandra Hospital, Edmonton, AB, 2011
Mayor's Award for Universal Design in Architecture, City of Edmonton, Royal Alexandra Hospital - Robbins Pavilion, Edmonton, AB, 2011
Heritage Award, The City of Calgary, SAIT Polytechnic Heart Project, Calgary, AB, 2003
Award for Accessibility, The City of Calgary, Alberta Cancer Board Ambulatory Oncology Clinic and Colonoscopy Clinic, Holy Cross Hospital Site, Calgary, AB, 2006
Heritage Award, The City of Calgary, SAIT Polytechnic Heart Project, Calgary, AB, 2003
Mayor's Award for Accessible Architecture, City of Edmonton, Stollery Children's Hospital, Edmonton, AB, 2002

PUBLICATIONS
Evaluating Building Performance in Healthcare Facilities: An Organizational Perspective, HERD: Health Environments Research and Design Journal, Winter 2010
Designing Environments for Children's Health, Chapter 12 in The Hospital Care of Children, Robinson and Clarke eds., Oxford University Press, New York, Oxford, 1980

Master of Architecture Program
Faculty of Environmental Design
University of Calgary
2016

Resumes

Adjunct Professors / Sessional Instructors

Alan Collyer
Adjunct Professor / Sessional Instructor

COURSES TAUGHT
Winter- EVDA 682.04: Comprehensive Studio

EDUCATION
Master of Architecture, University of Manitoba, 1984
Bachelor of Environmental Studies, University of Manitoba, 1980

REGISTRATION STATUS & PROFESSIONAL MEMBERSHIPS
Royal Canadian Academy of Arts, 2016
Associate Adjunct Professor - University of Calgary, EVDS, 2015 - Present
Member, The City of Calgary Urban Design Review Panel, 2007-2012
Fellow, Royal Architectural Institute of Canada, 2010
Member, RAIC Gold Medal Jury, 2011
Chair, Cultural Spaces Investment Program Jury, Calgary Arts Development, 2011
LEED® Accredited Professional, 2003
Calgary Exhibition and Stampede, Committee Member, 1994-2001
Calgary 2005, Sponsorship Committee, 1995
Past Board Member, The Banff Centre, 1988-1992
Jury Member, International Illumination Design Awards, 1992
Alberta Ballet, Vice President, Facilities, 1991
Alberta Ballet, Director, 1990
Member, Alberta Association of Architects, 1989 - Reg. #1133
Royal Architectural Institute of Canada, 1989
Edmonton Society for Urban & Architectural Studies, Executive Committee, 1988

HONOURS & AWARDS
TELUS SPARK - Principal-in-Charge, Architect
Great City, Great Design, Honorable Mention, Calgary Mayor's Urban Design Awards, 2015
Alberta Construction Magazine Top Award, Institutional Category, 2011

Master of Architecture Program
Faculty of Environmental Design
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2016

Resumes

Adjunct Professors / Sessional Instructors

Chris Roberts
Adjunct Professor / Sessional Instructor

COURSES TAUGHT
Winter- EVDA 611: Building Science & Technology II

EDUCATION
Dip. Arch Tech., Southern Alberta Institute of Technology, 1972
M.E. Des.(Arch), University of Calgary, 1979

REGISTRATION STATUS & PROFESSIONAL MEMBERSHIPS
Registered Architect, Alberta Association of Architects
LEED AP

HONOURS & AWARDS
2011 SAB Green Building Award, Environmental Education Centre, Ralph Klein Park
2011 Mayor's Urban Design Award, City of Calgary, Environmental Education Centre, Ralph Klein Park
2011 Alberta Chapter, American Concrete Institute, Award of Excellence, Environmental Education Centre, Ralph Klein Park
2015 Consulting Engineers of Alberta, Award of Excellence, Elbow River Traverse
2015 Faculty of Environmental Design, University of Calgary, Distinguished Contribution Award

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Resumes

Adjunct Professors / Sessional Instructors

Keir Stuhlmiller

Adjunct Professor / Sessional Instructor

COURSES TAUGHT
Winter- EVDA 682.04:Comprehensive Studio

EDUCATION
Masters of Architecture (M.Arch), University of Calgary, Calgary AB
Bachelor of Arts, Honors Art History (BA.Hons), University of Alberta, Edmonton AB

REGISTRATION STATUS & PROFESSIONAL MEMBERSHIPS
Registered Architect – Alberta Association of Architects (Architect, AAA)
Royal Architecture Institute of Canada (RAIC)
LEED Accredited Professional (USGBC/CAGBC)
Group2 Architecture Interior Design Ltd. (Calgary AB) Associate (2010 to present)
Project Architect: design, design mentorship, quality control, overseeing innovation in design
Project Manager: fiscal responsibility, project management through project completion, team management
Personnel Management: project plans, fiscal organization of projects, personnel planning, advising senior principles on studio requirements
Business Development: preparation of proposals, manages client relationships, contributes to G2 business development practices

HONOURS & AWARDS
Royal Architecture Institute of Canada
MARMOMACC Scholarship Recipient
Attendance of MARMOCMACC Conference
Verona Italy – Sept / Oct 2015

RESEARCH, SCHOLARSHIP, CREATIVE ACTIVITY
Curator Experience, Exhibit: “No Object: Recent work by Trudi Smith”, Kasian Gallery, University of Calgary, November 19 – December 19, 2012
Lecture Experience, Design Thinking: Monument and Program, AHMS 3255 Visual Commercial Culture; Instructor: David Coman, Bow Valley College, 2015-11-17
Design Thinking: Methods of Implementation, AHMS 3255 Visual Commercial Culture; Instructor: David Coman, Bow Valley College, 2014-11-25
Cross Laminated Timber: CLT Fundamentals, Architecture Design Senior Studio; Instructor: Jason S. Johnson, University of Calgary, 2013-03-12
HIGH TECH /LOW TECH: Current BIM Initiatives in Calgary / G2 Projects, ARST 201 – Introduction to Architecture and Design, 2012-10-31

ACADEMIC, PROFESSIONAL, & PUBLIC SERVICE
University of Idaho – Faculty of Architecture, Final Architectural Presentation Guest Reviewer, Masters and Undergraduate Courses, 2016-05-02 thru 2016-05-05
2015 Spotlight on Italian Innovation & Sustainability – Business-2-Business Design Series, Coinciding with the inaugural Chicago Architecture Biennial, Italian Trade Agency Sponsor, Chicago IL, 2015-10-25/28
OAEC (Owners, Architects, Engineers and Contractors), Calgary Construction Association (CCA), 3rd Annual OAEC Workshop Attendee, Committee Member – Committee for Document Development, “Good Leader Best Practices” – document development and publication
RAIC Festival 2015 – Tours & Exhibitions Sub-Committee, Co-Chair; Organization of Tours and Exhibitions, June 3-6, 2015
Urban Design Review Panel – Committee Member, City of Calgary, 2013-2015 Term
Title, Scope, and Allied Professions Task Force, Task Force Member, The Alberta Association of Architects
Architecture for Humanity, Calgary Chapter, Board Member
AAA Mentor, Alberta Association of Architects, Currently Mentor to 11 Architecture Interns
AAA Intern Support Volunteer, Alberta Association of Architects, Volunteer for Final Intern Architect Interviews

Master of Architecture Program
Faculty of Environmental Design
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Resumes

Adjunct Professors / Sessional Instructors

Sinisa (Sonny) Tomic

Adjunct Professor / Sessional Instructor

EDUCATION
B.Arch. / Urban Design Specialization – School of Architecture and Urbanism, University of Sarajevo

REGISTRATION STATUS & PROFESSIONAL MEMBERSHIPS
CANU (Canadian Urbanism) Co-founder
ISOCARP (International Association of Community and Rural Planners) Hague, Netherland

HONOURS & AWARDS
2013 International Downtown Association, Merit Award, Calgary Centre City Wayfinding System
2011 ISOCARP (International Society of Community and Rural Planners), Abu Dhabi Public Realm Design Manual First Prize Award, Excellence in Planning and Urban Design
2011 Canadian Institute of Planners (CIP) Honourable Mention, Urban Design, Abu Dhabi Public Realm Design Manual

PUBLICATIONS
2013 "Architecture and Globalisation in the Persian Gulf Region", University College London, UK (Edited by Murray Fraser and Nasser Golzari)

RESEARCH, SCHOLARSHIP, CREATIVE ACTIVITY
Research applied to my daily work as a Senior Urban Design Associate at B&A Planning Group (Age-friendly Planning and Design, Place-making, large scale Mixed use and Commercial Developments)

ACADEMIC, PROFESSIONAL, & PUBLIC SERVICE
Academic
2011/14 University of Calgary, Faculty of Environmental Design (EVDS), Adjunct professor/Design Critic, Urban Design
2009-11 Sorbonne University Paris, Abu Dhabi Campus, UAE Guest lecturer and design critic, Masters Program
2010-11 American University of Sharjah / School of Architecture, UAE: Guest lecturer and design critic, Masters Program
2011 New York University, Abu Dhabi Campus, UAE, Guest lecturer
2011 Zayed University, Abu Dhabi, UAE
Public Service
2011-2014 City of Calgary, Manager, Centre City Planning and Implementation
Professional Service
World Future Council / Future of Cities Forum (Hamburg 2013 and Munich 2014);
Presentations at Planning Conferences (APPI, SPPI, Community Planning Association of Alberta), Pro-bono Design Charrettes, and vast range of professional projects at B&A Planning Group

Master of Architecture Program
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Resumes

Sessional Instructors

Jessie Andjelic
Sessional Instructor

COURSES TAUGHT
Winter- EVDA 782.xx: Senior Studio II in Architecture

EDUCATION
2009 Master of Architecture (Honors) – Faculty of Environmental Design, University of Calgary, Canada
2006 Bachelor of General Studies, Minor in Architectural Studies, With Distinction, Dean's List – Faculty of Communication and Culture, University of Calgary, Canada

REGISTRATION STATUS & PROFESSIONAL MEMBERSHIPS
2010 Intern Architect, Alberta Association of Architects (AAA)
2009 LEED Accredited Professional, CAGBC

HONOURS & AWARDS
2016 Alberta Business Awards - Young Entrepreneur Award of Distinction - Nomination
2015 Border Lands - Honorable Mention - Selection for exhibition at Expo Milano
2015 Delugional Calgary - UofC EVDS - Sessional Instructor Travel Grant
2014 West Kelowna Civic Centre - First Place Competition Prize - under Sturgess Architecture
2014 Coulee Mixed Use Building - Shortlist - Invitation to second stage of design competition
2014 Brutal Intentions, D.talks Iconomy - Calgary Heritage Authority Lion's Award - with others
2014 Instructor Excellence Award Nomination - Southern Alberta Institute of Technology
2014 Delugional Calgary - selection for Urban Emergencies: Emergent Urbanism, Cambridge
2013 U of A Leadership College - First Place Competition Prize - under GEC Architecture
2013 Thinking Hat Exhibition - Medicine Hat Cultural Grant
2013 Thinking Hat Exhibition - Medicine Hat Downtown Development Incentive Grant
2012 Amsterdam Technical School - First Place Competition Prize - under Powerhouse Company
2012 Wowse Plantage - First Place Competition Prize - under Powerhouse Company
2012 Endless Platform - Anonymous.d Shortlist - in collaboration with Adam Scales
2011 Small Box - Strip Appeal Competition Shortlist

PUBLICATIONS
2015 Immaculate Reception - Archtriumph Pavilion 2015 Book Series
2014 Delugional Calgary (Future Possible) - Avenue Magazine - with projects by others
2013 Activity Cave - Mark Magazine - in collaboration with David Vera
2012 Small Box - Strip Appeal: Reinventing the Strip Mall

RESEARCH, SCHOLARSHIP, CREATIVE ACTIVITY
Exhibitions
2015 Giant Footprint - Epicenter of Tallinn Exhibition - 2015 Tallinn Architecture Bienalle
2015 Delugional Calgary and Border Lands - Future Voice - 2015 RAIC / AAA Festival - Sassy Pants Calgary
2015 _EST Film Installation and Calgary Skyline Hats - 2015 RAIC / AAA Festival Open House – SPECTACLE Studio
2015 Border Lands - D.talks Lost Spaces Found - Triangle Gallery Calgary
2015 Immaculate Reception - Archtriumph Pavilion 2015 Opening - London UK
2015 Delugional Calgary - Urban Emergencies: Emergent Urbanism (UE:EU) Conference and Exhibition - U of Cambridge UK
2014 Rio de Inverso - Worlds of Cityvision - WUHO Gallery Los Angeles - in collaboration with Buro AD
2013 Brutal Intentions - Building Curiosity - UofC EVDS Gallery - with James McMenamin, MODA, Nyhoff and others
2013 Various Projects - Thinking Hat - Beveridge Block Medicine Hat and Medicine Hat Central Library
2013 Activity Cave - Collider Activity Center Competition - Union of Architects Sofia Bulgaria - with David Vera
2012 Meta Vancouverism and Vancouver Islands - Re:think Reveal - Vancouver Roundhouse Center - with Buro AD
Lectures
2015 70 Degrees of Separation - Cities Creativity Extremes - Hosted by EEDC and the Government of Alberta in Dubai, UAE
2015 Delugional Calgary - Urban Emergencies: Emergent Urbanism (UE:EU) Conference and Exhibition - U of Cambridge UK
2014 Thinking Hat - Pecha Kucha Volume 3 - The Legion Medicine Hat

ACADEMIC, PROFESSIONAL, & PUBLIC SERVICE
Volunteering
2016 Urban Development Committee, Calgary Downtown Association
2015 Contemporary Calgary LOOK 2015
2014 Beltline Parks and Public Places Committee
2014 Habitat for Humanity
2013 Skyscraper Workshop Eagle Butte High School Design Class
2011 Guest Critic at University of Calgary EVDS Master of Architecture Program
All work with SPECTACLE Bureau for Architecture and Urbanism, unless noted otherwise.

Master of Architecture Program
Faculty of Environmental Design
University of Calgary
2016

Resumes

Sessional Instructors

Dustin Couzens
Sessional Instructor

COURSES TAUGHT
Winter- EVDA 582: Studio II in Architecture

EDUCATION
2000 to 2004, Masters of Architecture, University of Calgary, Calgary AB
1995 to 1999, Bachelor of Commerce, University of Calgary, Calgary AB

REGISTRATION STATUS & PROFESSIONAL MEMBERSHIPS
Registered Architect, AAA
MRAIC

HONOURS & AWARDS
2016 Canadian Architect recognition for Emerging Architectural Practice
2016 Canadian Architect Awards Honorable Mention (Tinbox)
2015 Prairie Wood Design Award (Junction 09 Yoga + Pilates Studio)
2015 Mayor Urban Design Award (Junction 09 Yoga + Pilates Studio)
2014 MOCCA 'To Be Destroyed' winning entry – Art is for Everyone
2013 City of Calgary Lion Award (Calgary Museum of Contemporary Art)

PUBLICATIONS
2015 Calgary Herald – "MoDA Makes Quick Impact in Inglewood"
2014 Western Living – Naramata Residence
2013 Calgary Herald – "Architectural Duo Building Renown"
2013 Calgary Herald – "The State of Calgary's Architectural Icons"
2012 Domus Magazine – Shaw Residence
2012 Western Living – Shaw Residence
2012 Avenue Magazine - Interview with Dustin Couzens

RESEARCH, SCHOLARSHIP, CREATIVE ACTIVITY
2014 CJSW 90.9 – 'Space and Place' Interview
2013 Kasian Gallery, U of C – 'Building Curiosity'

ACADEMIC, PROFESSIONAL, & PUBLIC SERVICE
Volunteer, Design Talks Institute

Master of Architecture Program
Faculty of Environmental Design
University of Calgary
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Resumes

Sessional Instructors

Jodi James
Sessional Instructor

COURSES TAUGHT
Fall- EVDA 580: Studio I in Architecture - Design Thinking

EDUCATION
2012 | Master of Architecture (M.Arch), University of Calgary
2005 | Bachelor of Science with Business Minor (B.Sc), University of Alberta

REGISTRATION STATUS & PROFESSIONAL MEMBERSHIPS
Intern Architect, Alberta Association of Architects (since December 2013)

HONOURS & AWARDS
2016 | Prairie Design Award (Edmonton Military Commemorative Monument, Project Coordinator with the marc boutin architectural collaborative inc.)
2015 | Co-recipient of the EVDS Award for Teaching Excellence (with Matthew Knapik)
2013 | Mayor's Urban Design Award Honorable Mention (1st Street SW Underpass Enhancement, Project Coordinator with the marc boutin architectural collaborative inc.)
2012 | Canadian Architect Award of Excellence (1st Street SW Underpass Enhancement, Project Coordinator with the marc boutin architectural collaborative inc.)
2012 | Henry Adams Certificate of Merit, American Institute of Architects
2011 | Nominee for Alberta Views Magazine 'Next Up and Coming' Graduate
2011 | Murray W. Waterman Study Abroad Award
2011 | D.S. Stevens Memorial Scholarship

PUBLICATIONS
2016 | Johnson, J., Vermillion, J. Digital Design Exercises for Architecture Students. New York, NY: Routledge.
2012 | Award of Excellence. First Street Underpass Enhancement Project. Canadian Architect V.57, N.12 Dec 2012: pp.28-29 (with the marc boutin architectural collaborative inc.)
2011 | 'Integrating Difference'. Johnson, Jason. Integration through Computation: Proceedings of the 31st Annual Conference of the Association for Computer Aided Design. Projects Cited: Structurally Intelligent Swarms [Taron, Joshua], RE: Connect Devington [Johnson, Jason; Taron, Joshua], Cloud Wall [Johnson, Jason]
2011 | 'The Digital Tectonics of Dynamic Particle Based Generated Geometry'. Correa, David. Peer Reviewed Project. Integration through Computation: Projects of the 31st Annual Conference of the Association for Computer Aided Design. Projects Cited: Host [Correa, David; James, Jodi; Parker, Matthew]

RESEARCH, SCHOLARSHIP, CREATIVE ACTIVITY
2011 | Research Assistant to Professor Joshua Taron, Faculty of Environmental Design, University of Calgary
2011 | Senior Student Designer for the Acadia 2011 Conference, Laboratory for Integrative Design, Faculty of Environmental Design, University of Calgary

ACADEMIC, PROFESSIONAL, & PUBLIC SERVICE
Professional
2012 to Current | Project Coordinator, the marc boutin architectural collaborative inc.
Juries
University of Calgary, Faculty of Environmental Design | M. Boutin, C. Hamel, M. Knapik, T. Leong, J. Johnson, J. Taron
Academic
2016 | Sessional Instructor, EVDA 543/ARST 453 Graphics Workshop II, Faculty of Environmental Design, University of Calgary
2015 | Sessional Instructor, EVDA 543/ARST 453 Graphics Workshop II, Faculty of Environmental Design, University of Calgary
2014 | Sessional Instructor, EVDA 543/ARST 453 Graphics Workshop II, Faculty of Environmental Design, University of Calgary
2013 | Sessional Instructor, EVDA 543/ARST 453 Graphics Workshop II, Faculty of Environmental Design, University of Calgary
2012 | Teaching Assistant, EVDA 543/ARST 453 Graphics Workshop II, Faculty of Environmental Design, University of Calgary
Service
2016 | Design Matters Lecture Series (EVDS): Event Host
2015 | Design Matters Lecture Series (EVDS): Event Host
2014 | Design Matters Lecture Series (EVDS): Event Host
2013 | Design Matters Lecture Series (EVDS): Event Host
2012 | M.Arch Admissions Committee Student Representative, Faculty of Environmental Design, University of Calgary
2012 | Design Matters Lecture Series (EVDS): Event Host
2011 | Design Matters Lecture Series (EVDS): Event Volunteer

Master of Architecture Program
Faculty of Environmental Design
University of Calgary
2016

Resumes

Sessional Instructors

Matt Knapik
Sessional Instructor

COURSES TAUGHT
Winter- EVDA 543: Graphics Workshop II

EDUCATION
MArch, 2013; University of Calgary.
MEDes (Urban Design), 2012; University of Calgary.
BA Urban Studies, 2007; University of Calgary.
University Teaching Certificate (2014)
Instructional Skills Workshop (2011)

HONOURS & AWARDS
EVDS Teaching Award (University of Calgary) – 2015
RBC Emerging Artist Award (Banff Centre) – 2014
Kenneth MacLean Glazier Graduate Award – 2011

PUBLICATIONS
home|room – Design competition submission (co-author) (Calgary 2015)
Piece in the Shape of a Piece in the Shape of a Square – Installation (lead designer) (Banff 2015; Fringe Festival of the Sydney Bienalle, 2016)
Random Seeds – Installation and book (co-author) (Banff 2015)
Infrastructure and Public Life in the Extensive City – Thesis publication (author) (2013)
Searching for Ecological Connectivity in Calgary's Suburbs – Thesis publication (author) (2012)
iConic – Installation & poster presentation (concept & lead designer) (ACADIA 2011)
JFS Park Pavillion – Poster presentation (contributing designer) (ACADIA 2011)
Weaving Ecological Interface into Calgary's Suburbs – Conference presentation (author) (Montreal World EcoCity Summit, 2011)

RESEARCH, SCHOLARSHIP, CREATIVE ACTIVITY
Kilometre Design – Founding Principal
kilometre is an interdisciplinary design practice that spans the realms of urban design, architectural design & research, installation, graphic design, branding, interface design, and facilitation. kilometre has completed projects in Canada, Europe, and Africa, with clients in the enterprise, non-profit, and government sectors. The practice is developing a thematic focus on landscape connectivity, neighbourhood renovation, public facilitation, and education.
Designer in Residence, Calgary Reads (2013 – Present)
Visual Arts Resident, The Banff Centre (2015)
Design Consultant, Marshall Tittemore Architects (2011 – 2012)
Special Projects Advisor, University of Calgary (2011 – 2012)

ACADEMIC, PROFESSIONAL, & PUBLIC SERVICE
Charmer's Almanac Radio Show (2012 – Present)
Since 2012, I have co-hosted a radio show on CJSW (Calgary's campus and community radio station) called Charmer's Almanac. The show has aired every other Thursday from 7 - 10 AM, which means we are approaching our 100th episode (and 300th hour on-air) in July of 2016. Over the years, we have welcomed over 105 guests on the show to discuss issues, ideas, and conversations affecting Calgary and the world that Calgary lives within.
EVDS Teaching Award Selection Committee (2016)
makeCalgary Steering Committee (2015)
Patch (2015) Co-founder and member of a group of active citizens who are exploring grassroots approaches to improving public space.
Whitenoise Talks Host & Moderator (2014 – Present), Host of recurring Wordfest event that brings together authors and artists from across genres to discuss topical questions, especially relating to the concerns of the millennial generation.
Wordfest Moderator (2014 – Present), Various additional moderating roles with Wordfest.
SPUR Festival Moderator (2014)
Jane's Walks Leader (2011 – 2015), Hosted a range of Jane's walk tours through Calgary, in Ogden, Tuscany, and on bikes through the western transect of the city.

Master of Architecture Program
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University of Calgary
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Resumes

Sessional Instructors

Norbert Lemermeyer
Sessional Instructor

COURSES TAUGHT
Fall- EVDS 697.86: Leadership and Architecture

EDUCATION
Master of Environmental Design (Architecture) 1976 University of Calgary, Calgary, Alberta

REGISTRATION STATUS & PROFESSIONAL MEMBERSHIPS
Member of Alberta Association of Architects – Lifetime member

PUBLICATIONS
2012 The E-Myth Architect - Why Most Architectural Firms Don't Work and What to Do About It

RESEARCH, SCHOLARSHIP, CREATIVE ACTIVITY
Since 2014 Architecture+Business – mentoring/coaching small business architects on line in Canada and USA
Since 2012 Architecture+Business – mentoring/coaching small businesses in person in Alberta

ACADEMIC, PROFESSIONAL, & PUBLIC SERVICE
1978-2012 Lemermeyer Architect Inc – architectural practice based in Edmonton, Alberta
2006-2012 ACM Construction Management – partner, based in Edmonton, Alberta

Master of Architecture Program
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Resumes

Sessional Instructors

Matthew Parker
Sessional Instructor

COURSES TAUGHT
Fall- EVDA 541: Graphics Workshop I

EDUCATION
2016 | Master of Environmental Design (MEDes), University of Calgary
2012 | Master of Architecture (M.Arch), University of Calgary
2004 | Bachelor of Science in Archaeology (B.Sc), University of Calgary

HONOURS & AWARDS
2015 | EVDS Scholarship, University of Calgary
2014 | Alberta Graduate Student Scholarships, University of Calgary
2014 | Queen Elizabeth II (Master's) Scholarship, University of Calgary
2014 | University of Calgary Graduate Travel Scholarship, University of Calgary
2014 | EVDS Scholarship, University of Calgary
2013 | EVDS Scholarship, University of Calgary
2012 | RAIC graduation Honor Roll
2012 | AIA Gold Medal Recipient
2012 | Queen Elizabeth II (Master's) Scholarship, University of Calgary
2012 | Canadian Architect Graduating Project Honorable Mention
2011 | Alberta Graduate Student Scholarships, University of Calgary
2011 | SSEF Excellence Award in Steel Design, University of Calgary
2011 | Murray W. Waterman Study Abroad Awards, University of Calgary
2011 | EVDS Scholarship, University of Calgary

PUBLICATIONS
2016 | Johnson, J., Vermillion, J. Digital Design Exercises for Architecture Students. New York, NY: Routledge.
2016 | Johnson, J., Parker, M. Architectural Heat Maps: A Workflow for Synthesizing Outliers, Historical and Speculative Data. In Proceedings of the 36th Annual Conference of the Association for Computer Aided Design in Architecture, Ann Arbor, Michigan.
2016 | Johnson, J., Parker, M. Ubiquitous Simultaneity: A Design Workflow for an Information Rich Environment. In CROSS-AMERICAS: Probing Disglobal Networks. The 2016 ACSA International Conference, Santiago de Chile.
2016 | Taron, J., Parker, M. Form-Making in SIFT Imaged Environments. In Proceedings of the 36th Annual Conference of the Association for Computer Aided Design in Architecture, 389 - 398. Ann Arbor, Michigan.
2015 | Parker, M. Excess Environments: The Production of Anomaly and Architecture's Role in Virtual Space. [trans-] Loci, Vol. 1. University of Arizona Press, Phoenix Arizona.
2014 | Johnson, J., Parker, M. This Is Not a Glitch: Algorithms and Anomalies in Google Architecture. In Proceedings of the 34th Annual Conference of the Association for Computer Aided Design in Architecture, 389 - 398. Los Angeles, California.
2014 | Taron, J., Parker, M. Augmented Agency: Reorienting Trompe L'oeil in the Age of Google Earth. In Proceedings of the 34th Annual Conference of the Association for Computer Aided Design in Architecture, 389 - 398. Los Angeles, California.
2014 | Taron, J., Parker, M. Bounded Agency: Integrating informed multi-agent systems within architectural surfaces. In Proceedings of the 34th Annual Conference of the Association for Computer Aided Design in Architecture, 389 - 398. Los Angeles, California.
2014 | Parker, M. SIFT Materiality: Indeterminacy and Communication between the Physical and the Virtual. In Proceedings of What's the Matter? Materiality and Materialism at the Age of Computation. Barcelona, Spain.
2011 | Correa, D., James, J., Parker, M., The Digital Tectonics of Dynamic Particle Based Generated Geometry. ACADIA 2011, Calgary/Banff, AB.

RESEARCH, SCHOLARSHIP, CREATIVE ACTIVITY
2016 | FXAT Screen TV, Cross-Americas: Probing Disglobal Networks, Santiago, Chile
2016 | The Ministers, Cross-Americas: Probing Disglobal Networks, Santiago, Chile
2015 | Beakernight: The Ministers, Calgary, AB, Canada
2015 | RAIC Festival of Architecture Future Voices Pavilion, Calgary, AB
2013 | Building Dynamics: Exploring Architecture of Change, Banff, AB, Canada.
2013 | InformedForm: Articulated Tensions, Calgary, AB, Canada
2012 | Alt N Research, GameSpace Workshop, Calgary, AB, Canada
2012 | Subtractive Structures, Chancellors Club Event, Calgary AB, Canada.
2012 | SCAR[s], D3 Natural Systems Competition, Calgary, AB, Canada
2012 | Current[ly] EVDS, Calgary, AB, Canada
2012 | Helsinki Central Library Competition Exhibit, Jatkasaari Bunker, Helsinki, Finland
2012 | [de]Stressed Genes, Tex-Fab 3.0 Applied Competition
2011 | Structurally Intelligent Swarms, in AX2011 Project Exhibition, Banff/Calgary AB, Canada

Contd. Below

ACADEMIC, PROFESSIONAL, & PUBLIC SERVICE

Academic: Teaching Assistant

2014 | EVDA 782 Senior Research Architecture Studio (J. Taron)
2014 | EVDA 621 Introduction to Architectural Design Theory (V. Parlac and J. Taron)
2013 | EVDA 782 Senior Research Architecture Studio (J. Johnson)
2013 | ARST 201 Introduction to Architecture and Design (B. Wylant, M. Boutin)
2012 | EVDA 782 Senior Research Architecture Studio (J. Taron)
2011 | EVDA 543 / ARST 453 Graphics Workshop II (J. Johnson, J. Taron)

Juries

University of Calgary, Faculty of Environmental Design | J. James, J. Johnson, M. Knapik, B. Kolarevic, V. Parlac, J. Taron, *Service*
2016 | Beakerhead Community-Based Digital Design: Lampshop
2016 | Design Matters Lecture Series (EVDS): Event Host
2015 | RAIC Festival of Architecture Future Voices Pavilion development team
2015 | SSHRC Insight Grant; Digital Futures, Community Based Digital Fabrication – community workshop coordinator and representative
2015 | Design Matters Lecture Series (EVDS): Event Host
2014 | Panel Chair, What's the Matter? Materiality and Materialism at the Age of Computation, Barcelona, Spain
2014 | Design Matters Lecture Series (EVDS): Event Host
2013 | Design Matters Lecture Series (EVDS): Event Host
2012 | M.Arch Admissions Committee Student Representative, Faculty of Environmental Design, University of Calgary
2012 | Design Matters Lecture Series (EVDS): Event Host
2011 | Design Matters Lecture Series (EVDS): Event Volunteer

Master of Architecture Program
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Resumes

Sessional Instructors

Suzanne Strum
Sessional Instructor

COURSES TAUGHT
Fall- EVDS 675: Urban Systems / Urban Design Theory (Barcelona)

EDUCATION
2010 Ph. D. Theory and History of Architecture, Escola Tènica Superior d´Arquitectura de Barcelona, Universitat Politècnica de Catalunya.
1999 Master of Architecture and Urban Culture, Metropolis Master and Graduate, Program. Universitat Politècnica de Catalunya and Centre of Contemporary Culture of Barcelona.
1984 Master of Architecture Columbia University Graduate School of Architecture, Planning and Preservation, NY.
1979 Bachelor of Arts, Rutgers University.

REGISTRATION STATUS & PROFESSIONAL MEMBERSHIPS
Since 2010 Member European Network of Architectural Historians

PUBLICATIONS
Books
2015 The Ideal of Total Environmental Controls. Knud Lönberg-Holm, Buckminster Fuller and the SSA (Currently in review)
Peer Reviewed and Indexed Journals
2012 "The International Architectures of the SSA: Informational Designer Knud Lönberg-Holm." In Architecture, Systems Research and Computational Science. Nexus Network Journal. Volume 14, Number 1 (Winter 2012): 35-53.
Congress Proceedings
2012 "Design Abroad: Program Design and Cultural Immersion" ACSA (Associated Collegiate Schools of Architecture) International Conference, Barcelona. Change: Architecture, Education, Practices.
2011 "Monuments and Instruments: a historical case study of design scenarios and emergency" Design History Foundation Conference, Barcelona.
Web based publications
2015 "El Born" Grand Tour City Guides. A digital magazine on architecture and travel.
2013"Palau Güell Revisted: Gaudi´s Sonorous Architecture." Grand Tour Magazine. A digital magazine on architecture and travel. First issue.
2012 "In Context" Mas Context online architecture Zine. (Winter 2012).

RESEARCH, SCHOLARSHIP, CREATIVE ACTIVITY
2010 Book and Exhibition Project: Cobquecura. Alma de Piedra, Altair 2012.
2011-2012 "Live Sites: Urban Reactivation of Spaces in Disuse." Foment de les Arts i Disseny. Fostering Arts and Design Organization, FAD. Urban Curatorial Project commissioned by the Public Program initiative.

ACADEMIC, PROFESSIONAL, & PUBLIC SERVICE
Academic: External Thesis Reviewer
Since 2014 KU Leuven, Faculty of Architecture, Saint-Lucas. Ghent, Belgium. Master of Architecture Design and Theory , Evaluation of the thesis work of 12 students.
2015 Dept. Architectural Projects. Escuela Técnica Superior de Arquitectura de Madrid. Universitat Politécnica de Madrid. Doctoral Dissertation Jury for Beatrice Goller. Arquitectura Sonora
2011 Dept. Architectural Projects. Escuela Técnica Superior de Arquitectura de Barcelona, Universidad Politécnica de Catalunya
Doctoral Dissertation Jury for Claudio Sebastián Navarrete. Slab Housing as a Methodology for Urban Space Reorganization:
The Work of the Housing Corporation of Santiago de Chile (1953-197)
Professional and Public
2013 Jury Member. Barcelona City to City Prize, FAD. Fostering Arts and Design Organization and Barcelona City Hall.
Since 2008 Antennae /Consultant for Barcelona City to City Prize, FAD.

Master of Architecture Program
Faculty of Environmental Design
University of Calgary
2016

Resumes

Sessional Instructors

Phillip Vandermey
Sessional Instructor

COURSES TAUGHT
Fall- EVDS 682.02 Senior Research Studio in Architecture

EDUCATION
2006 Master of Architecture, Architecture and the Contemporary City, Honors - Faculty of Environmental Design, University of Calgary, Canada
2003 Bachelor of Comm. Culture, Minor in Architectural Studies, With Distinction, Dean's List - University of Calgary, Canada

REGISTRATION STATUS & PROFESSIONAL MEMBERSHIPS
2016 Architect, Stichting Bureau Architectenregister (SBA)
2013 MRAIC, Member of the Royal Architectural Institute of Canada
2011 Architect, Alberta Association of Architects (AAA)
2009 LEED Accredited Professional, CAGBC

HONOURS & AWARDS
2016 Alberta Business Awards - Young Entrepreneur Award of Distinction - Nomination
2015 Border Lands - Honorable Mention - Selection for exhibition at Expo Milano
2015 Delugional Calgary - UofC EVDS - Sessional Instructor Travel Grant
2014 Coulee Mixed Use Building - Shortlist - Invitation to second stage of design competition
2014 Brutal Intentions, D.talks Iconomy - Calgary Heritage Authority Lion's Award - with others
2014 Instructor Excellence Award Nomination - Southern Alberta Institute of Technology
2014 Delugional Calgary - selection for Urban Emergencies: Emergent Urbanism, Cambridge
2013 Thinking Hat Exhibition - Medicine Hat Cultural Grant
2013 Thinking Hat Exhibition - Medicine Hat Downtown Development Incentive Grant
2012 Endless Platform - Anonymous. Shortlist - in collaboration with Adam Scales
2011 Small Box - Strip Appeal Competition Shortlist

PUBLICATIONS
2015 Immaculate Reception - Archtriumph Pavilion 2015 Book Series
2014 Delugional Calgary (Future Possible) - Avenue Magazine - with projects by others
2013 Activity Cave - Mark Magazine - in collaboration with David Vera
2012 National and University Library of Slovenia - Mark Magazine - under Barcode Architects
2012 Taiwan Tower, Beijing Stepping Stones and Tilburg Spoorzone - Dutch Design in China Yearbook - under Barcode Architects
2012 Small Box - Strip Appeal: Reinventing the Strip Mall
2011 MONU Magazine Issue #14 - Assistant Editor
2011 In the Name of the Past : Countering the Preservation Crusades - MONU Magazine Issue #14 - Co-author with Beatriz Ramo

RESEARCH, SCHOLARSHIP, CREATIVE ACTIVITY
Exhibitions
2015 Giant Footprint - Epicenter of Tallinn Exhibition - 2015 Tallinn Architecture Biennale
2015 Delugional Calgary, Border Lands - Future Voice - 2015 RAIC Festival - FXAT Pavilion
2015 _EST Film Installation and Calgary Skyline Hats - 2015 RAIC Festival Open
2015 Border Lands - D.talks Lost Spaces Found - Triangle Gallery Calgary
2015 Immaculate Reception - Archtriumph Pavilion 2015 Opening - London UK
2015 Delugional Calgary - Urban Emergencies: Emergent Urbanism (UE:EU) Cambridge UK
2014 Rio de Inverso - Worlds of Cityvision - WUHO Gallery Los Angeles - with Buro AD
2013 Brutal Intentions - Building Curiosity - UofC EVDS Gallery - with others
2013 Thinking Hat - Beveridge Block Medicine Hat and Medicine Hat Central Library
2013 Activity Cave - Collider Activity Center Competition - Union of Architects Sofia Bulgaria - with David Vera
2012 National and University Library - Tobačna Complex Ljubljana - under Barcode Architects
2012 Beijing Stepping Stones - Beijing Design Week - Beijing CAFA Central Academy of Fine Arts - at Barcode Architects
2012 Sloterdijk Park Station - IABR 2012 - Netherlands Architecture Institute Rotterdam - at Barcode Architects
2012 Meta Vancouverism and Vancouver Islands - Re:think Reveal - Vancouver Roundhouse Center - with Buro AD
Lectures / Panel Discussions
2016 On Shifts and New Trajectories – Professional Practice Course – University of Calgary
2015 70 Degrees of Separation - Cities Creativity Extremes - Hosted by EEDC and the Government of Alberta in Dubai, UAE
2015 Delugional Calgary and Border Lands - Future Voice : Situating Architecture - Hosted by MBAC in Calgary, Canada
2015 Delugional Calgary - Urban Emergencies: Emergent Urbanism (UE:EU) Conference and Exhibition - U of Cambridge UK
2014 Brutal Intentions - D.talks Iconomy - with MODA, Nyhoff, David Down, Fuck Yeah Brutalism, CLOG and others

Contd. Below

ACADEMIC, PROFESSIONAL, & PUBLIC SERVICE
Volunteering
2016 City of Calgary Urban Design Review Panel
2015 Committee Member, RAIC 2015 Festival Tours and Exhibition Sub-Committee
2015 Vice-Chair, Beltline Planning Group
2015 Contemporary Calgary LOOK 2015
2014 Committee Member, Calgary Heritage Initiative
2014 Beltline Parks and Public Places Committee
2014 Habitat for Humanity
2013 Skyscraper Workshop Eagle Butte High School Design Class
2011 Guest Critic at University of Calgary EVDS Master of Architecture Program
All work with SPECTACLE Bureau for Architecture and Urbanism, unless noted otherwise.

Master of Architecture Program
Faculty of Environmental Design
University of Calgary
2016

Resumes

Sessional Instructors

Katherine Wagner
Sessional Instructor

COURSES TAUGHT
Winter- EVDS 661: Architectural Professional Practice I

EDUCATION
1993 Master of Environmental Design, Architecture, University of Calgary, Calgary, AB 1987 Bachelor of Applied Arts, Interior Design, Ryerson Polytechnic Institute, Toronto, ON
1980 Interior Design Technology Diploma with Honours, Northern Alberta Institute of Technology, Edmonton, AB

REGISTRATION STATUS & PROFESSIONAL MEMBERSHIPS
1998 Registered Architect, Alberta Association of Architects 2013 Fellow, Royal Architectural Institute of Canada
2003 LEED Accredited Professional

RESEARCH, SCHOLARSHIP, CREATIVE ACTIVITY
2004 – present, Associate, DIALOG Architecture Engineering Interior Design Planning Landscape Architecture
2003 – present, Architect AAA, DIALOG Architecture Engineering Interior Design Planning Landscape Architecture

ACADEMIC, PROFESSIONAL, & PUBLIC SERVICE
2015, 2016 Participant, Cultural Forum | Cultural Plan for Calgary
2015 Member, Tours + Exhibitions Committee, RAIC Festival of Architecture
2014, 2015 Guest Critic, Architecture Programme, Faculty of Environmental Design, University of Calgary
2014 - present, Member, Calgary Public Art Board
2013 - present, Member, Calgary Arts Development Board 2013 – present, d.talks Advisory Committee
2012, 2013 Chair, Calgary Arts Development, Cultural Spaces Investment Process Assessment Committee
2013 Member, Advisory Committee, Canada Council for the Arts
2013 Assessor, Canadian Architectural Certification Board Accreditation Team 2012, 2013 Adjudicator, Doors Open YYC Photography Contest
2011 Regional Juror, Canada Council for the Arts, Migrating Landscapes, Venice Biennale, Architecture
2011 – present, AAA, Intern Architect Mentor, Alberta Association of Architects

James Love
Emeritus Professors

EDUCATION

1988-90 Doctor of Architecture, Building Technology, the University of Michigan, Ann Arbor
1975-78 Master of Environmental Design (Architecture), University of Calgary
1971-74 B. A. Sc. (Electrical Engineering), Queen's University

REGISTRATION STATUS & PROFESSIONAL MEMBERSHIPS

Member, Association of Professional Engineers and Geoscientists of Alberta
Member, Illuminating Eng. Society of North America; Chair, Daylighting Com. 1993-1995
Member, Royal Architectural Institute of Canada
Member, American Society of Heating Refrigerating and Air-conditioning Engineers
Certified Lighting Practitioner, US National Council on Qualifications for the Lighting Professions
Accredited Professional, Building Design and Construction, Homes, Leadership in Energy and Environmental Design (LEED), Green Building Certification Institute

HONOURS & AWARDS

2011 SAB Magazine Award for the Ralph Klein Park Environmental Education Centre (J Love, environmental coordinator and energy engineer).
2008 Summit Award for Environment and Sustainability, Energy Systems Engineering Team, Association of Professional Engineers and Geoscientists of Alberta for University of Calgary Child Development Centre.
2008 Sustainability Innovator Award (to University of Calgary), J. Love was co-chair, Curriculum and Research, Sustainability Stewardship Working Group – prepared business plan for that area, etc.
2007 Photovoltaic Project of the Year award, Canadian Solar Industries Association for University of Calgary Child Development Centre.
2006 Best Paper with Student as Lead Author, Simbuild 2006 (US national building systems simulation conference), Massachusetts Institute of Technology – Z. Tian (Student) and J. Love (supervisor). See conference papers below - Tian and Love 2006a, b
2005 Award of Merit, Illuminating Engineering Society of North America International Illumination Design
Award, Lighting Upgrades, Calgary International Air Terminal, with D. Prusky and A. Styler of Beaubien Glover Maskell Engineering. Daylighting by J. Love.
2005 Best Modernization Award, Council of Educational Facility Planners International Alberta Chapter, Banff Community High School. GEC Architects. First LEED-certified (US Green Building Council - Leadership in Energy and Environmental Design) School in Canada). J. Love – LEED Coordination and Energy Consultant.
2000 Electric Power Research Institute Award for Energy-Efficient Lighting Design, Central Auto Parts warehouse, Calgary, Illuminating Engineering Society of North America, Chinook Section Award
1988 Best Paper of the Year, Solar Energy Society of Canada
Scholarships
1989 University Fellowship, Watts Architecture Award, University of Michigan
1988 C.W. Seabury Research Fellowship, University of Michigan
1977 Canada Mortgage and Housing Corporation Architectural Scholarship
1976-78 Canada Mortgage and Housing Corporation Graduate Fellowship

PUBLICATIONS

Publications: Articles in Refereed Journals
Zibin N, Zmeureanu R and Love JA 2015. Automatic assisted calibration tool for coupling building automation system trend data with commissioning. Automation in Construction, 61(1)124-133
Gestwick MJ, Kandil A and Love JA 2014. Heating plant input-output efficiency in two cold climate institutional buildings with condensing hot water boilers, Building Services Engineering Research and Technology, 35 (6) 634-652.
Gestwick MJ and Love JA 2014. Trial application of ASHRAE 1051-RP: calibration method for building energy simulation, J Building Performance Simulation 7(5) 346-359.
Kandil A and Love JA 2014. Signature analysis calibration of a school energy model using hourly data, J Building Performance Simulation 7(5) 326-345.
Bos MA and Love JA 2013. A field study of thermal comfort with underfloor air distribution, Building and Environment. 69, 233–240
Tan L and Love JA 2013. A literature review on heating of ventilation air with large diameter earth tubes in cold climates. Energies, 6, 3734- 3743.

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Cubi Montanya E and Love JA 2011. Pollutant removal effectiveness with underfloor air distribution: field study of a ducted variable-flow system. ASHRAE Transactions 117 (2) 759-770.
Cubi Montanya E, Love JA and Keith D 2009. Integrated design and UFAD. ASHRAE Journal, American Society of Heating, Refrigerating and Airconditioning Engineers, July, 30-40.
Tian Z, Love JA and Tian W 2009. Applying Quality Control in Building Energy Modeling: Comparative Simulation of a High Performance Building. Journal of Building Performance Simulation. 2(3) 163-168.
Tian Z and Love JA 2009. Energy performance optimization of radiant slab cooling using building simulation and field measurements. Energy and Buildings 41 (3) 320-330.
Tian Z and Love JA 2008. A field study of occupant thermal comfort and thermal environments with radiant slab cooling. Building and Environment 43 (10) 1658-1670.
Love JA 1998. "Manual switching patterns in private offices." International Journal of Lighting Research and Technology, 30 (1) 45-50.
Navvab M, Siminovitch M and Love JA 1997. "The variability of daylight in luminous environments." Journal of the Illuminating Engineering Society, 26 (2) 101-114.
Navvab M, Prayoonhong C and Love JA 1995. "Application of the new standards for the evaluation of daylight and solar availability measurements." JIES 24 (2) 113-130.
Love JA and Navvab M 1994. "The vertical-to-horizontal illuminance ratio: a new indicator of daylighting performance." JIES 23 (2) 50-61.
Love JA 1993 "Daylighting estimation under real skies: further comparative studies of full-scale and model photometry." JIES 22 (2) 61-68.
Love JA 1993. "Determination of the daylight factor under real overcast skies." JIES 22 (2) 176-182.
Love JA and Navvab M 1991. "Daylighting estimation under real skies: a comparison of full-scale photometry, model photometry and computer simulation as techniques for daylighting prediction under real sky conditions." JIES 20 (1): 140-156.
Love JA and Passmore RS 1987. "Airtightness testing methods for row housing", ASHRAE Transactions, Atlanta: American Society of Heating Refrigerating and Air-conditioning Engineers, Part I (Winter): 1359-1370.
Publications: Articles in Conference Proceedings
R=refereed; RA=Refereed abstract; I= invited
R) Lachapelle A-C and Love JA 2014. Measured and EE4-DOE2 simulated economizer performance of demand-controlled ventilation in an institutional building. Proc eSim 2014, Ottawa, May 5-6.
R) Zibin NF, Zmeureanu RG and Love JA 2014. Bottom-up simulation calibration of zone and system level models using building automation system (BAS) trend data. Proc eSim 2014, Ottawa, May 5-6.
R) Zibin NF, Zmeureanu RG and Love JA 2013. Use of building automation system trend data for inputs identification in bottom-up simulation calibration. Proc ICEBO 2013, Montreal, Oct. 8-11.
R) Baker T and Love JA 2013. Field assessment of CO2 removal effectiveness with underfloor air distribution. Proc CISBAT 2013, Lausanne, Switzerland, Sept 4-5.
R) Lachapelle A-C and Love JA 2012. Simulink® model of single co2-sensor location impact on CO2-levels in recirculating multiple-zone systems. Proc eSim 2012, Halifax, May 2-3.
R) Lachapell A-C and J.A. Love 2012. DOE2 dry-bulb temperature precision level impact proc. Esim 2012, Halifax, May 2-3.
R) Love JA, Tian W and Z Tian Z 2008. Window-to-wall ratios and commercial building environmental control in cold climates. Proc Solar Buildings Research Network Conf., Frederiction, Aug. 20-24. 8 p.
R) Tian Z and J Love JA 2008. "Comparative simulation of a high performance building with EE4-DOE2.1e and Energyplus." Proc 2008 Simbuild 2008. Berkeley CA. 8 p. (CD) Jul. 30-Aug. 1.
R) Tian Z and Love JA 2006a. "A case study of radiant slab cooling: energy performance." Proc Simbuild 2006. Cambridge MA. Aug. 2-4. 8 p. (CD)
R) Tian Z and Love JA 2006b. "Radiant slab cooling: a field study of occupant thermal comfort." Proc Simbuild 2006. Cambridge MA. Aug. 2-4.
R) Athienitis AK, Kesik T, Beausoleil-Morrison I, Noguchi M, Tzempelikos A, Charron R, Karava P, Love JA, Harrison S, and Poissant Y 2006. “Development of requirements for a solar building conceptual design tool”, Proc joint 31st Solar Energy Society of Canada & 1st Solar Buildings Research Network Conference, Montreal, August 2006.
R) Tian, Z. and J. Love 2005. " Design of energy-efficient buildings with radiant cooling systems." Proc. 2005 World Sustainable Building Conference. Tokyo. Sep. 27-29 p. 340-347.
R) Tian Z and Love JA 2005. "An integrated study of radiant slab cooling systems through experiment and building simulation." Proc. 2005 International Building Simulation Association Conference. Montreal. Aug. 15-18. P. 1229-1236 (CD).
R) Kassab M and Love JA 2005. " The potential of daylighting design on improving the energy efficiency of commercial buildings." Proc. 2005 International Building Simulation Association Conference. Montreal. Aug. 15-18. p. 501-508 (CD).
I) Love JA 2003. Daylighting Challenges and Opportunities in 2003. Keynote address. Solar Energy Society of Canada Annual Conference, Kingston, Canada.
RA) Mohamad A and Love JA 2003. Analysis of earth temperature for space conditioning. Proc. Solar Energy Society of Canada Annual Conference, CD.
R) Cowan DJ, Andrus DL and Love JA 2003. Knowledge transfer and adoption of innovation. Proc. 24th McMaster World Congress on the Management of Intellectual Capital and Innovation, Jan. 15-17, Hamilton, Canada.
R) Andrus DL, Rangel Ruiz R and Love JA 2002. Diffusion of energy efficient innovations: an inter-organizational perspective. Proc. 31st European Marketing Academy. Portugal.

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R) Rangel Ruiz R and Love JA 1999. Daylighting and thermal comfort in a hot climate classroom, Proc. 1999 Conf. of the Australia and New Zealand Solar Energy Soc., Geelong, Australia: Deakin University. Dec. 1-4. 10 pages (CD).
R) Shakya B and Love JA 1999. Performance of a building-integrated active solar heating system in Calgary, Canada, Proc. 1999 Conference of the Australia and New Zealand Solar Energy Soc., Geelong, Australia: Deakin University. Dec. 1-4. 10 pages (CD).
R) Love JA and Bajracharya S 1999. Simulation of thermal stratification in two atriums: comparison with measured data, Proc. 1999 Conf. of the Australia and New Zealand Solar Energy Soc., Geelong, Australia: Deakin University. Dec. 1-4. 10 pages (CD).
R) Love JA 1998. "Daylighting control systems: directions for the future based on lessons from the past" Proc. 1998 international daylighting conference Ottawa: Natural Resources Canada. May. 299-306.
R) Love JA 1998. "Daylighting case studies: installations in the Calgary area" Proc. 1998 international daylighting conference Ottawa: Natural Resources Canada. May. 147-154.
Navvab M, Vanatta T and Love JA 1995. "Evaluation of daylight and solar availability data." Proc. 23rd Session of the Commission Internationale de l'Eclairage. Vienna: CIE. 212-215.
R) Galasiu AM, Love JA and Navvab M 1995. "Design and performance of a daylighted high school." Proc. 1995 Illuminating Engineering Society of North America annual conference. New York: IESNA. 617-634.
R) Nemeskeri R L, Love JA, Navvab M, and Wardell RW 1995. User assessment of lighting in offices with and without windows. Proc. 1995 Illuminating Engineering Society of North America annual conf. New York: IESNA. 703-725.
R) Love JA 1995. "Field Performance of Daylighting Systems with Photoelectric Controls," Proc. 3rd European conf. on energy efficient lighting - vol. 1 - presented papers. Newcastle upon Tyne, UK: Northern Electric. 75-82.
R) Love JA 1995. "Regulation of residential daylighting in response to new window technology," Proc. 3rd European conf. on energy efficient lighting - vol. 1 - presented papers. Newcastle upon Tyne, UK: Northern Electric. 329-335.
I) Love JA 1993. "Field performance of compact fluorescent systems," 1993 conference record of the industry applications section of the Institute of Electronics and Electrical Engineers, October. 2254-2259.
I) Love JA 1992. "The evolution of performance indicators for the evaluation of daylighting systems," Conference record of the 1993 annual meeting of the Industry Applications Society of the Institute of Electric and Electronic Engineers, Piscataway, N.J.: IEEE, October, 1992. 1830-1836.
Navvab M, Love JA and E Ne'eman 1989. "Daylight and solar availability data for Ann Arbor, Michigan, USA" in Kaase, H. and Geutler, E. (eds.) Proc. 1989 meeting of the Commission Internationale de l'Éclairage-World Meteorological Organization on the Measurement of Solar Radiation, Berlin, Oct. 9-13. Vienna: Commission Internationale de l'Éclairage, 1990.
R) Love JA and Navvab M 1989. "A comparison of photometric modelling and computer simulation as techniques for daylighting prediction under real sky conditions" in Thermal performance of the exterior envelopes of buildings IV, Atlanta: American Society of Heating Refrigerating and Air-conditioning Engineers. 97-107.
*Love JA, Edmunds D and Navvab M 1988. "A preliminary evaluation of daylighting at Calgary's Olympic Oval", Energy solutions for today, Ottawa: Solar Energy Society of Canada. 42-47. *awarded best paper of the year, Solar Energy Society of Canada
Love JA 1986. "Improving the airtightness of the existing housing stock", Proc. renewable energy conference '86, Ottawa: Solar Energy Society of Canada. 76-81.
Publications: Book Chapters and Monographs
Love JA (with contributions from members of IESNA's Daylighting Committee) 1999. Recommended Practice of Daylighting. New York: Illuminating Engineering Society of North America. 40 pages.
Atif MR, Love JA and P Littlefair P 1997. Daylighting monitoring protocols and procedures for buildings. International Energy Agency document T21/D2/1/97-01. Ottawa: National Research Council of Canada (Publications Office, Institute for Research in Construction).
Love JA 1995. Lamp replacement guide. Ottawa: Natural Resources Canada, 15 pages.
Love JA, McLean J and Grant R 1993. Housing for the disabled - a generic model, Edmonton: Alberta Municipal Affairs, 67 pages.
Love JA 1993. "Daylighting," Chapter 8, IES lighting handbook (8th Edition), New York: Illuminating Engineering Society of North America: 359-381.
Love JA and TG Lee (eds.), 1991. New directions in architectural research, Proc. 1990 Canadian symposium on architectural research, Edmonton: Alberta Municipal Affairs, 140 pp.
Love JA 1990. The vertical-to-horizontal illuminance ratio: a new indicator of daylighting performance, dissertation, Ann Arbor: The University of Michigan.
Love JA 1989. "Airtightness survey of row houses in Calgary, Alberta", in Sherman, M. H. (ed.), Air change rate and air tightness in buildings, STP 1067, Philadelphia: American Society for Testing and Materials, pp. 194-210.
Love JA and Passmore RS 1986. Air leakage in existing town houses, Edmonton: Alberta Municipal Affairs, 61 pp.
Love JA (ed.) 1986. Proc. of a symposium on indoor air quality, Edmonton: Alberta Municipal Affairs, 170 pp.
Love JA 1986. Airtightness testing methods for multi-unit housing, Ottawa: Canada Mortgage and Housing Corporation, 22 pp.
Legislation
Love JA, Whelan V and Volkeroth A 1999. Energy Efficiency Act: Energy Efficiency Regulations, amendment. Canada Gazette Part II Vol. 129, No. 24 (November 29): 3073-3081.
Patent
Love JA and Ermoli V 2001 Invention – window blind. US patent 6 318 441 B1; the patent is for a blind with improved capability for filtering sunlight.
Publications: Technical Reports
Love JA 2006. "SAIT residence – radiant wall heating assessment final report ", prepared for Southern Alberta Institute of Technology, Calgary. May 22. 14 pages.

Contd. Below

Love JA 2004. “Displacement ventilation analysis for Victoria High School: report on mock-up testing “, prepared for Alberta Infrastructure and Transportation, Edmonton. Sept. 13. 10 pages.
Love JA 2004. “Displacement ventilation analysis for Calmar School “, prepared for Alberta Infrastructure and Transportation, Edmonton. May 2. 15 pages.
Love JA 2002. “Comparison of CAN/CSA-C860-01 Performance of Internally Lighted Exit Signs with Energy Star Program Requirements for Compact Fluorescent Lamps,” Jan. 10, prepared for Natural Resources Canada, Ottawa, 15 pages.
Love JA 2001. “Comparison of CAN/CSA-C861-95 Performance of Compact Fluorescent Lamps and Ballasted Adapters with Energy Star Program Requirements for Compact Fluorescent Lamps,” Nov. 16, prepared for Natural Resources Canada, Ottawa, 14 pages.
Love JA 1999. “Proposed Changes to Energy Efficiency Regulations Pertaining to Lamps,” Mar. 17, 1999 prepared for Natural Resources Canada, Ottawa, 7 pages.
Love JA 1998. Reflector Lamp Market Trends and Implications for Regulation of Energy Efficiency, prepared for Natural Resources Canada, March 31, 25 pages.
Love JA 1995. Photometric comparison of mirror light pipes. Prepared for CF Management, Calgary, 33 pages.
Love JA 1995. Field assessment of daylighting systems. Prepared for Public Works Canada (Architectural and Engineering Services) and Natural Resources Canada (Energy Efficiency Group - Canadian Centre for Mineral and Energy Technology), Ottawa, Canada, 52 pages.
Perez R., Beyer HG, Bittar A, Czeplak G, Dahlgren L, Delaunay J-J, Dumortier D, Fontoynont M, Ineichen P, Love JA, McArthur B, Olseth JA, Rommel M and Skartveit A 1994. Broad-band visible radiation data acquisition and analysis. Report No. IEA-SHCP-17E-1. Albany, NY: Atmospheric Sciences Research Centre, State University of New York at Albany for the International Energy Agency.
Love JA 1995. Spectral transmittance of glazing used in Canadian housing. Prepared for Research Division, Canada Mortgage and Housing Corporation, Ottawa, Canada, 22 pages.
Love JA, 1994. Literature review: regulations and standards for daylighting of housing in northern countries, prepared for Canada Mortgage and Housing Corporation, Ottawa, Canada, 21 pp.
Love JA, McLean J and Grant R 1993. Housing for the disabled: a generic model, Edmonton: Alberta Municipal Affairs, 67 pp.
Love JA 1987. Demonstration of minifluorescent lighting: phase II report, prepared for Alberta Energy, Edmonton, Canada, 66 pp.
Love JA 1986. Demonstration of minifluorescent lighting: phase I report, prepared for Alberta Energy, Edmonton, Canada, 61 pp.
Love JA 1985. Townhouse retrofit demonstration project 1983-85: final report, prepared for Alberta Energy, Edmonton, Canada, 61 pages.
Love JA 1985. Clearview Lighting Ltd.: light source evaluation, prepared for Clearview Lighting Ltd. and the National Research Council of Canada (Industrial Research Assistance Program), 28 pp.
DHC Consultants and Love JA 1983. Energy consumption survey: municipal building sector, prepared for Energy Mines and Resources Canada, 46 pp.
Holtz S, Love JA and Procos D 1981. Municipal energy management in Nova Scotia, prepared for the Nova Scotia Department of Mines and Energy, Halifax, Canada, 216 pp.
Love JA, Ross GA and Ross WA 1979. An energy management programme for Grande Prairie Public School District, prepared for Alberta Education, Edmonton, Canada, 114 pp.
Love JA, Ross GA and Ross WA 1978. A study of energy efficiency of commercial buildings in Canada, prepared for Energy Mines and Resources Canada, 109 pp.

2011 Visiting Team Report

Master of Architecture Program University of Calgary

The Canadian Architectural Certification Board
1 Nicholas Street, Suite 710
Ottawa (Ontario)
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Table of Contents

I. Introduction • CACB Accreditation

The CACB is a national independent non-profit corporation, whose Directors represent the Canadian Architectural Licensing Authorities (CALA), the Canadian Council of University Schools of Architecture (CCUSA) and the Canadian Architectural Students Association (CASA). The CACB is both a decision-making and policy-generating body. It is the sole organization recognized by the architectural profession in Canada to assess the educational qualifications of architecture graduates (*Certification program*) and to accredit professional degree programs in architecture offered by Canadian Universities (*Accreditation program*).

By agreement of the Registration Authorities and Councils of nine Provincial Institutes and Associations, the CACB was established in 1976 to assess and certify the academic qualifications of individuals holding a professional degree or diploma in architecture who intend to apply for registration. The Ordre des Architectes du Québec joined the CACB in 1991. In 1991, the CACB mandate to certify degree credentials was reaffirmed and its membership was revised to reflect its additional responsibility for accrediting professional degree programs in Canadian University Schools of Architecture.

The CACB awards accreditation only to professional degree programs in architecture. These are normally:

- Master of Architecture degree with a related pre-professional bachelor's degree; requirement, typically amounting to five or six years of study;
- Master of Architecture degree without a pre-professional requirement, consisting of an undergraduate degree plus a minimum of three years of professional studies;
- Bachelor of Architecture degree requiring a minimum of five years of study, except in Quebec, where four years of professional studies follows two years of CEGEP studies.

The process of accreditation begins at the school with the preparation of the Architecture Program Report (*APR*). The *APR* identifies and defines the program and its various contexts, responding to the *CACB Conditions and Procedures for Accreditation*. The *APR* is expected to be useful to the planning process of the school, as well as documentation for the purposes of accreditation.

Upon acceptance of the *APR* by the CACB Board, an accreditation visit is scheduled. The CACB's decision on accreditation is based upon the capability of the program to satisfy the Conditions and Procedures for Accreditation, including the ability of its graduating students to meet the requirements for learning as defined in the Student Performance Criteria. During the visit, the team reviews student work and evaluates it against these requirements. The team also assesses the effectiveness and degree of support available to the architectural program through meetings with the institution's administrators at various levels, architecture and other faculty, students, alumni, and local practitioners.

At the conclusion of the visit, the Visiting Team makes observations and expresses compliments and concerns about the program and its components. It also offers suggestions for program enrichment and makes recommendations, which, in the judgment of the team, are necessary for the program's improvement and continuing re-accreditation. Following the visit, the team writes the following VTR, which is forwarded with a confidential recommendation to the CACB. The CACB then makes a final decision regarding the term of accreditation.

II. Summary of Team Findings

1. Team's General Comments

The CACB Visiting Team reviewed the Master of Architecture program at The University of Calgary School of Architecture, 26 February – 02 March, 2011. The circumstances of the Visit included a thorough process of preparation and scheduling, with all travel arrangements and appointments made in good time. Minor adjustments to the schedule were made on site. The Students, Faculty, Staff and Administrators were accommodating and helpful. All conditions for Visit Preparation for the Team Chair, Team Members and Observers were reviewed as stipulated in the CACB Conditions and Procedures and as stipulated in Appendix A-7.

The Visiting Team wishes to thank the hosts of the Visit, including the Students, Faculty and Staff of the Master of Architecture Program; its Director, Dr. Branko Kolarevic; the Faculty of Environmental Design and its Dean, Dr. Nancy Pollock-Ellwand; the Faculty of Graduate Studies and its Dean, Dr. Fred Hall; and the Chief Administrators of the University of Calgary, President Dr. Elizabeth Cannon, and Provost Dr. Alan Harrison.

The Site Visit was carried out according to the recommended CACB Procedures, and amended at the request of the Team Chair in consultation with the Director. The final Visit Agenda is included in Appendix C for reference.

All appointments were attended as scheduled. The venue for meetings with the Dean of EVDS, the Dean of the Faculty of Graduate Studies, the President and the Provost was the Team Room, in order to introduce the University's chief administrative officers to the work of the program, and to encourage discussions about the program in the context of evidence of the Students' work.

Seventy-five (75) students attended the Program Wide Meeting. The students were engaged, direct and transparent in their questions and concerns.

The Team Room was clearly laid out, and all information was easily accessed and well coordinated.

A request for eleven (11) items of additional information was submitted to the Director by email on Sunday afternoon at 6:00 pm, and responded to in full by 4:00 pm on Monday, 28 February. This information included the following:

- Admission Process Description and Evaluation methods for program applications, including international transcript and portfolio assessments;

- Description of how students coming directly into the master's Program are assessed in consideration of the CACB requirements;

- With reference to the student performance criteria, how are students working in groups assessed individually;

- Procedures for student progress reports and studio review sheets as they move through the program;

- Further evidence and documentation of program preparation;

- Copy of budget plan for the next 4 years, including rationale statements and references to the University Mission and Strategic Plan;

- Index of external partners related to service and research support;

- Financial implications of program change over the last three years;

- Organizational chart describing the relationship between Architecture Program, the Faculty of Environmental Design, and the Faculty of Graduate Studies;

- New committee, representational, and governance opportunities for participation in University administrative affairs related to the reorganization;

- A summary of research funding over the last 5 years;

Requests for clarification and additional information were responded to promptly, and the Director is fully aware of all aspects of program management.

2. Conditions for Accreditation "met" and "not met": a summary

	Met	Not Met
1. Program Response to the CACB Perspectives		
A. Architecture Education and the Academic Context	[**X**]	[ ]
B. Architecture Education and the Students	[**X**]	[ ]
C. Architecture Education and Registration	[**X**]	[ ]
D. Architecture Education and the Profession	[**X**]	[ ]
E. Architecture Education and Society	[**X**]	[ ]
2. Program Self-Assessment	[**X**]	[ ]
3. Public Information	[**X**]	[ ]
4. Social Equity	[ ]	[**X**]
5. Human Resources	[**X**]	[ ]
6. Human Resource Development	[**X**]	[ ]
7. Physical Resources	[**X**]	[ ]
8. Information Resources and Information Technology	[**X**]	[ ]
9. Financial Resources	[**X**]	[ ]
10. Administrative Structure	[**X**]	[ ]
11. Professional Degrees and Curriculum	[**X**]	[ ]
12. Student Performance Criteria (SPC)		
A1. Critical Thinking Skills	[**X**]	[ ]
A2. Research Skills	[**X**]	[ ]
A3. Graphic Skills	[**X**]	[ ]

A4.	*Verbal and Writing Skills*	[**X**]	[ ]
A5.	*Collaborative Skills*	[**X**]	[ ]
A6.	*Human Behavior*	[ ]	[**X**]
A7.	*Cultural Diversity*	[ ]	[**X**]
A8.	*History and Theory*	[**X**]	[ ]
A9.	*Precedents*	[**X**]	[ ]
B1.	*Design Skills*	[**X**]	[ ]
B2.	*Program Preparation*	[ ]	[**X**]
B3.	*Site Design*	[ ]	[**X**]
B4.	*Sustainable Design*	[ ]	[**X**]
B5.	*Accessibility*	[ ]	[**X**]
B6.	*Life Safety Systems, Building Codes and Standards*	[**X**]	[ ]
B7.	*Structural Systems*	[**X**]	[ ]
B8.	*Environmental Systems*	[**X**]	[ ]
B9.	*Building Envelopes*	[**X**]	[ ]
B10.	*Building Service Systems*	[**X**]	[ ]
B11.	*Building Materials and Assemblies*	[**X**]	[ ]
B12.	*Building Economics and Cost Control*	[**X**]	[ ]
C1.	*Detailed Design Development*	[**X**]	[ ]
C2.	*Building Systems Integration*	[**X**]	[ ]
C3.	*Technical Documentation*	[**X**]	[ ]
C4.	*Comprehensive Design*	[ ]	[**X**]
D1.	*Leadership and Advocacy*	[**X**]	[ ]
D2.	*Ethics and Professional Judgment*	[**X**]	[ ]
D3.	*Legal Responsibilities*	[**X**]	[ ]
D4.	*Project Delivery*	[**X**]	[ ]
D5.	*Practice Organization*	[**X**]	[ ]
D6.	*Professional Internship*	[**X**]	[ ]

3. Program's Progress since the previous site visit (from previous VTR)

Conditions not met – 3.4 Social Equity
Some progress has been made on gender equality in the faculty: women represent 23% of the total FTE in 2010 (from 20% in 2005): 1.5 new full time positions were added since 2004. The previous visiting team report also exhorted the program to hire more women as lecturers, sessional instructors, adjuncts, and visiting professors: this has been done, but without mentioning the number of women. This program should continue working towards this goal since it has been a concern in 1995, 2000, and 2005

SPC not met – 12. National and regional traditions
This SPC does not exist anymore: it has been merged into SPC*A8 History and Theory*

Causes of concern
1. Lack of gender diversity among faculty members: see above – 3.4 condition not met Social Equity: The Staff and Students are confident that all best efforts to balance this ratio have been made in the recent faculty search and recruitment procedures.

2. The 2005 VTR strongly suggested increasing the number of international and out-of-province students. The 2010 APR does mention some increase and that it is a priority of the program. Active efforts are being made to augment both the number of applications to the program and improve recruiting strategies.

3. External research funding … to be augmented by the current planned hiring of a research-centered faculty member (in order to enrich the existing complement of faculty members in innovative practice): the inventory of Research submitted to the Visiting Team shows grants totaling $ 8,400,520 between 2006 and 2011.

4. The expansion of the program is stressing the capacity of the present facilities. The program has made an application to the Central Administration for funding to renovate the studios and adjacent spaces to address this requirement. The 2010 APR mentions that the facility has been carefully managed to assure access to studios, classrooms, labs, and that funding from the ACCESS program provided for new furniture and renovations to the building. The Visiting Team urges the Administration to consider the Capital Plan of the Comprehensive Plan 2011-2014. (Self-Assessment 2.)

5. Regarding the significance of the Canadian Architectural Archives (CAA) and its use by students and faculty: the relocation of the CAA in the new library building will enhance its visibility and accessibility.

4. Program Strengths

- The current teaching cohort of academics is of a high caliber, and well respected by the students;

- A notable array of more than $270,000 in annual Scholarships, Grants and Awards, and numerous teaching and research assistantships approaching $80,000 per year are available to students;

- The faculty members have received $8,400, 520 in research grants between 2006 and 2011;

- The Program's recently defined Mission described as the "Four (4) Ecologies" aligns the Program with the Tenets of the Faculty of Environmental Design and the strategic mission of the University;

- Administrative team is effective and dedicated;

- Evidence of the desire to build further linkages to the Program's primary external stakeholders, including Alumni, the Professional Community, and the Civic Authorities;

- Recent Faculty appointments have strengthened the school's capacity in the area of History and Digital Media;

- An adaptive, responsive and expanding materials fabrication lab is embracing new technologies, including Laser Cutting and 3D Printing;

- The annual Gillmor Visiting Lectureship in Architectural Theory, the William Lyon Somerville Visiting Lectureship, and the Taylor Visiting Lectureship are innovative, consistent and high quality core visiting lectureship programs that deserve commendation;

- A mature, well-established and highly subscribed Barcelona Program Abroad is in high demand and attracts students to the program;

5. Causes of Concern and Team's Recommendations

The Comprehensive Design project appears early in the Master's Program, and while exhibiting evidence of *understanding*, the work does not indicate *ability*. The projects represent the first substantive and complex building program that a student encounters, and while being explorative in nature, there is concern for the lack of a full comprehension of the complex integration of all technical factors with design.

While teamwork accelerates production, individual advance as prescribed by the CACB is difficult to assess. The proliferation of group projects presented in the Team Room – Comprehensive Studio EVDA 682.04, Intermediate Studio EVDA 682.02, Research Studios EVDA 782.01, Research Studio (Barcelona) EVDA 782.17, and Structures 1 EVDA 613, for example – suggest that an entire advanced program of studies at the Masters level is devoted to collaborative practice. We recommend that the Program seek a more balanced strategy inclusive of both collaborative and individual work.

Integration of ecological and environmental systems with design - as defined in the Statement of Philosophy - requires strengthening;

A full review of the role and capacity of Studio spaces and the Computer Lab in the new Master of Architecture program is recommended in order to maintain relevance in relation to teaching and research;

An air quality assessment and upgrade of the air handling capacity in the Material and Fabrication Labs is urgently recommended;

Efforts should be made to enhance the Program's profile within the University.

III. Compliance with the Conditions for Accreditation

1. Program Response to the CACB Perspectives

Programs must respond to the relevant interests of the constituencies that make up the CACB: educators (CCUSA) and regulators (CALA), as well as members of the practicing profession, students and interns, and the general public.

A. Architecture Education and the Academic Context

The program must demonstrate that it both benefits from and contributes to its institutional context.

Met	Not Met
[**X**]	[ ]

Team comments:

The program is able to demonstrate how it both benefits from and contributes to its institutional context. Although much of the interdisciplinary engagement of the program involves its position and interaction with other programs in the Faculty of Environmental Design, most notably the Architecture Program and the Faculty of Environmental Design have been involved in the design of a sustainable house for the 2011 Solar Decathlon. This effort has been supported by the University of Calgary and includes and several other Faculties (Engineering and Business, for example) in the design, engineering and construction of the house. Other research groups have been collaborating on projects with faculty members in other disciplines and the relationship with Computer Science is an example. Although not required for their curriculum in the M.Arch, students do have the ability to enroll in classes outside the faculty. Over the recent years, students have installed (designed and built) small engagement environments in several strategic places in University buildings. Faculty members serve on Faculty and University committees including as representatives to other faculty councils and university committees such as the Library and Cultural Resources committee and the University Senate. Dean Nancy Pollock-Ellwand represents the faculty on numerous university committees. Associate Dean Branko Kolarevic is a member of the Faculty of Graduate Studies Council. Faculty in the M.Arch have been engaged in the University of Calgary's master planning initiatives since 2005. The Minor in Architectural Studies provides exposure of the program to students in faculties across the campus. Faculty members from Arts, Education, Business, Nursing, Science and Social Work, for example, serve on the Faculty of Environmental Design Council. The presence of the architecture program in the Faculty of Graduate Studies provides more potential for integration with the university. The Dean and President indicated that they would encourage an increased profile and prominence of the faculty, and the Masters of Architecture Program across the campus and in the local community of Calgary.

B. Architecture Education and the Students

The program must demonstrate that it provides support and encouragement for students to achieve their full potential during their school years and later in the profession, and that it provides an interpersonal milieu that embraces cultural differences.

Met	Not Met
[**X**]	[ ]

Team comments:

Over the last years the program has been actively recruiting and accepting a wide range of students. As a result, the student body is quite diverse pertaining to gender, ethnicity, and their geographical origination. The Faculty has a Student Association (SA) that is made up of students in the programs in the Faculty of Environmental Design. This organization is entirely led by students. They are active with social events, organize networking opportunities and facilitate the fall orientation. They are supported by their own fundraising and from the Dean for special events. Notably, they organize a "Brown Bag" event that invites speakers from diverse areas of the university or community. This association initiates elections for student representatives on Environmental Design committees, and a representative serves on the Faculty Council. The University also supports a Graduate Student Association that provides opportunities for students from the Faculty of Environmental Design to interact with other graduate students across campus. Students are encouraged to establish their own individual path of study with electives and Senior Research studios in their final year. Students in the program benefit from numerous enrichment programs, such as international studios, and integrated learning with students in the Faculty. Access to the profession is evident with events and Professional Practice courses. The students express general satisfaction with the program.

C. Architecture Education and Registration

The program must demonstrate that it provides students with a sound preparation for the transition to professional life, including internship and licensure.

Met	Not Met
[**X**]	[ ]

Team comments:

There are strong connections among the faculty with the Alberta Association of Architects and other professional bodies as well as linkages with alumni and practicing professionals across Canada. The Innovative Practice Group is unique and provides strong practical information and preparation for students and their entrance into the profession and licensure.

D. Architecture Education and the Profession

The program must demonstrate how it prepares students to practice and assume new roles within a context of increasing cultural diversity, changing client and regulatory demands, and an expanding knowledge base.

Met	Not Met
[**X**]	[ ]

Team comments:

The professional practice courses EVDA 661 and EVDB 663 are comprehensive and give a good grounding for students to apply the information into their design studios and technical programs. The courses cover detailed code analysis, ethics, cost control and the legal and legislative underpinnings of the profession. Of special interest is the implementation of professional branding, marketing and business development. Local professionals are invited to give specialized lectures on contracts and project management.

E. Architecture Education and Society

The program must demonstrate that it equips students with an informed understanding of social and environmental problems and that it also develops their capacity to help address these problems with sound architecture and urban design decisions.

Met	Not Met
[**X**]	[ ]

Team comments:

The Program's commitment to address social and environmental issues at a deep philosophical and practical level is revealed in a number of ways: in the strong focus on history and theory; in the work of specific studios that address environmental issues and impacts on climate of buildings; and in the references in the Mission statement and the Comprehensive Plan 2011-2014.

There is some contact with the City of Calgary, evidenced at the level of the Professional Practice courses. However, there is limited engagement between the program itself and the City. Calgary has a long history of culture and civic engagement. As many of the students are local, the students have access to many dimensions of civic engagement on their own.

The ethical implications of design work are explored in a number of areas within studio projects, and exemplified in the Research Studios. Other international work being done in the Barcelona studio further demonstrates a sensitivity to the ethical and environmental issues.

We are also pleased to see good examples of student engagement in the community including the SOLAR DECATHLON.

The programs' Lecture Series DESIGN MATTERS provides a public and sustainable venue at the Calgary downtown location for a meaningful dialogue between the program, profession and the community.

2. Program Self-assessment

The program must provide an assessment of the degree to which it is fulfilling its mission and achieving its action plan.

Met	Not Met
[**X**]	[ ]

Team comments:

a.) The program must provide an assessment:
The CACB encourages candor in conducting and reporting the self-assessment. The architecture program has a well-established system of self-assessment. The Dean regularly meets with the Executive Management Group of administrators and Associate Deans. The program maintains monthly program meetings and engages in occasional retreats to discuss curricular and other subjects pertaining to the administration of the program. The program has oversight from the Faculty of Graduate Studies in addition to the Faculty of Environmental Design. The Faculty and Program have developed a Program Strategic Plan, a Faculty Strategic Plan, and a Business Plan.

Students regularly assess teaching through University administered course evaluations, and students are tracked through progress reports by the architecture faculty. The program is experimenting with a unique method of course evaluation by students named "Stop, Start, Continue."

The APR describes the program strengths of Ecologies of Design Curriculum, Sustainable Design, Architecture and the Contemporary City, Critical Practice, Digital Design and Fabrication, Architectural History and the enrichment opportunities that they offer. Although the program does not clearly indicate areas that are currently in process or are yet to be reached in the strategic plan as areas of weakness, in other parts of the APR they address progress since the previous visit toward their goals and objectives.

b.) Progress re Mission Statement and Strategic Plan:
The reorganization of the Faculty of Environmental Design during 2007-2009 had an impact on the Master of Architecture program with a reduction of the length of the M.Arch degree program and some changes to the curriculum. The result was a more effective administration of the EVDS and the Master of Architecture program and the development of a new website. The awarding of ACCESS funds also allowed the expansion of the Architecture Program by 51 new student positions to a total of 130 students as well as capital upgrades creating more effective studio and teaching space and digital workstations for additional students. Key priorities have generally been met with respect to the ongoing strategic plan based on the established Mission Statement.

One initiative includes the establishment of a Development Plan with fundraising targets to generate funds for scholarships, fund Research Chairs and special block courses, contribute to capital projects and support to student programs and services. The fundraising target of $5.625 Million is ambitious and will require careful and focused strategic planning to achieve this goal.

Other initiatives include a broader offering including the offering of a new course-based Planning degree, a new Minor in Planning, several undergraduate survey courses, augmented enrollments in the Minor of Architectural Studies and post professional certificates at the Downtown Campus. This will enhance the exposure of the EVDS Faculty and Architecture Program. The Research Plan in the fields of Sustainable Design and Emergent Practices will be enhanced by the ReDESIGN Centre and sponsored research funding.

There will be an increase of 88% in HCEs offered through the Faculty through these proposed initiatives (1755 HCEs to 2760 HCEs) resulting in 16 FLEs across the faculty programs. In 2014-2015 the FLEs will grow to 25 extra places, a rise of 10% from current enrollments.

An investment of $624,000 in capital projects, renovations and associated equipment has been calculated as required to achieve the objectives of the plan over the period of 2011-2014. Immediate funding of $449,000 has been identified in the capital plan for 2011-2012 as as a cornerstone of the Capital Plan. This funding is for workshop upgrades, IT upgrades and new equipment and facility upgrades. Facility upgrades incorporate the conversion of the Urban Lab rooms into a larger studio space. A second computer lab is needed to accommodate the Faculty's doubling capacity around IT delivery. The source of funding will come from funds already requested within the University as well as planned fundraising. The faculty also plans to increase its workforce by 1.5 support staff to 46 FTE by 2013-2014. Two senior faculty retirements are also anticipated with replacement at junior levels over the planning period of 2011-2014.

The immediate funding requirement of $449,000 for 2011-2012 is critical in order to increase the capacity that will bring the Faculty to a sustained budget.

> Note: The School did not provide a faculty, student, and alumni assessment of the program's overall curriculum and learning, as outlined in the CACB Perspectives.

3. Public Information

The program must provide clear, complete, and accurate information to the public by including in its academic calendar and promotional literature the exact language found in the CACB 2010 Conditions (Appendix A-1), which explains the parameters of an accredited professional degree program.

Met	Not Met
[**X**]	[]

Team comments:

The exact language of the Appendix 1 (CACB 2010 Conditions) is in the web calendar, but it should be put in quotations marks and referenced to the CACB document.

4. Social Equity

The accredited degree program must provide a summary of provincial and institutional policies that augment and clarify the provisions of the Charter of Rights and Freedoms as they apply to social equity.

Met	Not Met
[ ]	[**X**]

Team comments:

Gender inequality in faculty has been noticed in VTRs 1995, 2000 and 2005. The School is encouraged to continue its efforts in achieving equity in their hiring processes of sessional and tenure-track appointments.

5. Human Resources

The program must demonstrate that it provides adequate human resources for a professional degree program in architecture, including a sufficient faculty complement, an administrative head devoting not less than fifty percent of his/her time to program administration, administrative and technical support staff, and faculty support staff.

Met	Not Met
[**X**]	[ ]

Team comments:

In this relatively small faculty the ratio of students to faculty for required lecture courses averages 24:1 to 36:1. For elective lectures and seminar courses the ratio is an average of 12:1. The maximum student to faculty ratio in studio is presently 14:1.

For the 130 to 158 students there are 13 full time faculty members, 3 emeritus faculty members, 9 part-time sessional instructors, 3 contributing faculty from the MEDes Program, and 19 adjunct professors. Amongst the full time faculty members there are 3

registered architects. Amongst the sessional and adjunct professors there are at least another 21 registered architects.

Dean Dr. Nancy Pollock-Ellwand holds a 100% administrative appointment. She has a background in architecture and planning, and professional qualifications in landscape architecture.

Associate Dean (Academic – Architecture) Dr. Branko Kolarevic has a 50% administrative assignment which the APR says includes 50% teaching release, an administrative honorarium and administrative leave at the end of serving in the position.

Associate Dean (Research – International) John Brown also has a 50% administrative release.

There are 6 full time administrative staff covering task including faculty administration, assistance to the Dean, financial analysis, graduate program administration, admissions and PhD program administration, development and communications, finances and HR and reception.

There are 3 technical support staff including 2 workshop technicians and 1 computer technician.

6. Human Resource Development

Programs must have a clear policy outlining both individual and collective opportunities for faculty and student growth within and outside the program.

Met	Not Met
[**X**]	[ ]

Team comments:

FACULTY

The faculty members are officially responsible to the Dean so that they can move across disciplines if desired. The APR states that there is an expectation that faculty devote 40% of their time to teaching, 40% to research/ creative activity and 20% to service. At the University level the APT Manual (Procedures Pertaining to Appointment, Promotion and Tenure of Academic Staff) and GPC Manual (Manual of Policies and Procedures for the Annual Assessment of Academic Staff) govern career development of faculty members. The Environmental Design Faculty uses three University level guideline documents for the selection, appointment, assessment, promotion and appointment review as well as renewal of academic staff. Ultimately the Dean must make a recommendation to the Provost for approval.

It is unclear how the individual areas of expertise are linked to the faculty's statement of philosophy.

It is also not clear if there is a formal policy that encourages faculty members to develop the areas of expertise identified as Program Strengths through research, travel, conference attendance and general outreach and fasten them firmly to faculty members. The APR states that there is simply a restricted level of funding (APR p.49, paragraph 3). The $ 1,500 Annual Professional Expense Reimbursement account as described at < https://pr1web.ucalgary.ca/per/Documents/Regulations.pdf> is available to faculty.

There is mention in the APR of a sabbatical leave policy that can be applied for. Incentives like start-up funding for faculty beginning their work tied to the Program Strengths is not apparent.

STUDENTS

The attractions of this program identified by the students were “enrichment opportunities” such as the study abroad programs, the block week programs and the ecologies philosophy.

The study abroad program in Barcelona has been running for 15 years and is very popular. The Adelaide study abroad program is somewhat untested but appears to have 9 students participating at the time of this Committee’s visit. Three block week programs are offered through the year and participation in two of them is required at some point during a student’s time in the Program. In October block week a prominent critic or theoretician is invited to the Faculty to give a one-week advanced seminar. This is named the Gillmor Visiting Lectureship. An internationally renowned architect is invited during January block week to give a one-week design charette that is named the William Lyon Somerville Visiting Lectureship. Finally, in February an emerging architect directs a workshop under the heading Taylor Visiting Lectureship. These are well received by the students.

There are scholarships and bursaries available for students who wish to take advantage of these opportunities while in the program and at least one that supports travel beyond the program.

Universal access to the Barcelona experience for all students was noted as a concern since most recently there were more students than the studio could handle so a lottery system was deployed. Some students who wished to go were not able to. Students who did not take part in the study abroad programs appeared to be happy with the studio learning here in Calgary. A student noted this at the Student Meeting.

The ecologies philosophy was noted as something that does not appear as a program of study quite to the extent the students anticipated. The student meeting brought this concern forward and the Committee noted little or no mention of ecology in the work posted in the Team Room.

SUPPORT STAFF

Technical staff members include two workshop technicians, one computer IT technician and one administrative assistant. These staff members belong to the Alberta Union of Public Employees but report to the Dean and the Associate Deans. Their development offerings are outlined by the Union. The remaining staff positions include non-teaching support for the Dean and Associate Deans. These include Faculty Administration Officer/Executive Assistant to the Dean, Senior Financial Analyst, Administration Assistant to Associate Deans and Awards, Graduate Program Administrator, Admissions and PhD Program Administrator, Administration Assistant, Finances and HR and Reception. The Dean noted they have been successful in obtaining money for 4 new positions recently:

1. Full Development and Communications Staff person (from half)

2. Full Programs Assistant

3. Dedicated IT Tech Person from Central (1/3 appointment)

4. Second Full time Workshop Technician (from half appointment)

7. Physical Resources

The program must provide physical resources that are appropriate for a professional degree program in architecture, including design studio space for the exclusive use of each full-time student; lecture and seminar spaces that accommodate both didactic and interactive learning; office space for the exclusive use of each full-time faculty member; and related instructional support space.

Met	Not Met
[**X**]	[ ]

Team comments:

The faculty is housed in a purpose-built structure, which is contiguous with other areas of study, referred to as the Professional Faculties Building. The structure for students and staff is comprised of dedicated classrooms, studio spaces, review spaces, a work shop and faculty and administrative offices.

While classroom and seminar spaces appear adequate, staff noted that with current enrollment, scheduling into some classrooms is challenging at times. As well, classrooms are not all adequately equipped for presentations (digital projectors, screens, pin up surfaces). Studio spaces generally are modest for the number of students, with the area reserved for use per student reduced to the point where more students are choosing not to work within the studio environments. Studios are noted to have good exposure to natural light.

The workshop is very well equipped with state of the art tools for model and object fabrication, some of which are computer aided. The shop is clean and well organized with ample space for safe operation of much of the equipment. However, ventilation of various machines is inadequate, and should be carefully reviewed due to safety concerns of dust generation by various media.

8. Information Resources and information technology

The architecture librarian and, if appropriate, the staff member in charge of visual resource or other non-book collections must prepare a self-assessment demonstrating the adequacy of the architecture library. For Information Technology Resources, the program must also provide the information technology infrastructure and corresponding staff support in order to effectively contribute to the delivery of the curriculum, as well as supporting activities of staff and faculty.

Met	Not Met
[**X**]	[ ]

Team comments:

A new central library is presently nearing completion with expected occupancy in September 2011. The new library will house the collections found in the LCR (Library and Cultural Resources – formerly Information Resources) of the Architecture Program as well as the Canadian Architectural Archives and will be part of a new department of Arts and Culture. The new space in the library for the architectural collections, periodicals and the Canadian Architectural Archives provides dedicated space for research, lectures and

teaching programs as well as lounge space, reading rooms and storage facilities. The extent of the architectural collection space is approximately 15,785 volumes. This has increased from 13,200 volumes in 2005. Approximately $40,000 is spent per year on new book collections with a projected increased book budget to a $50,000 level. Serials and architecture journals have a budget of approximately $24,417 anticipated for 2011. Many of the core journals remain in print format although the digital access of journals is becoming more prevalent. A new High Density Library is being developed off campus.

The image collection is comprised of approximately 250,000 slides and 80,000 high resolution digital images with access through ARTstor, a high-resolution digital image database. There is an extensive video collection database that is heavily developed by faculty to support teaching.

Staffing includes a Head of Fine Arts and Visual Resources and Liaison Librarian for Art, Architecture and Design, Music, and Audio/Visual/Image Resources. There are 6.8 FTE paraprofessional positions with additional student assistants. Assistance for Architecture is estimated at 0.8 FTE.

The Canadian Architectural Archives is a unique collection of architectural drawings and photographs that was founded in 1974. The CCA is a unique resource for the architectural program. The CAA is staffed by 1.8 FTE professionals which is comprised of 1.0 FTE Archivist and Chief Curator, 0.4 FTE Associate Archivist, 0.2 FTE Archives Specialist and 0.2 FTE Conservation Officer.

The architecture collection remains highly relevant to the architecture program as well as undergraduate architecture minor program and the History of Art and Architecture courses offered in the Department of Art. The collection focusing on sustainability, as a core component of the EVDS program as related to the architecture, urban design, buildings and landscape provides the resources for specialized research. A subscription to the Material Connexion Collection<http://www.materialconnexion.com/> is planned for the new library.

The Team was very impressed and excited by the opportunities presented in the new library.

9. Financial Resources

Programs must have access to sufficient institutional support and financial resources.

Met	Not Met
[**X**]	[ ]

Team comments:

The Faculty of Environmental Design is currently operating with a significant debt load. At the request of the Administration, the Dean has embarked on a 3-year plan to reconcile this shortfall. The Multi-year Financial Projection of Annual Expenses offers a range of strategies: proposed incremental funding thorough increased enrollment; proposed incremental funding from fundraising based on a more carefully organized effort to engage stakeholders; and recent additional central administration support for a development officer, an additional half-time budget line for the material and fabrication lab; and funding for a program officer. The budget shortfall is largely related to the shift to a new funding model for the thesis-based MEDes program and lowering enrollments to that thesis degree. It is anticipated that a course-based Planning degree that is to be better funded will add additional students to the Faculty and increase its revenue stream.

Independent of the Faculty, the Architecture Program has sufficient funding to maintain its present Mission, though shortfalls in support for faculty travel to conferences was noted. This is of particular concern to the new Tenure track appointments. The Architecture Program also has aspirations to host two major conferences per year, and is seeking the means to develop this intense external program on a consistent basis.

10. Administrative Structure (Academic Unit & Institution)

The program must be part of, or be, an institution accredited by a recognized accrediting agency for higher education. The program must have a degree of autonomy that is both comparable to that afforded to the other relevant professional programs in the institution and sufficient to assure conformance with all the conditions for accreditation.

Met	Not Met
[**X**]	[ ]

Team comments:

The condition is met.

11. Professional Degrees and Curriculum

The CACB awards accreditation only to first-professional degree programs in architecture. These include:

- *Master of Architecture degree with a related pre-professional bachelor's degree; requirement, typically amounting to five or six years of study;*
- *Master of Architecture degree without a pre-professional requirement, consisting of an undergraduate degree plus a minimum of three years of professional studies.*
- *Bachelor of Architecture degree requiring a minimum of five years of study, except in Quebec, where four years of professional studies follows two years of CEGEP studies;*

The curricular requirements for awarding these degrees must include three components: general studies, professional studies, and electives that respond to the needs of the institution, the architecture profession, and the students respectively.

Met	Not Met
[**X**]	[ ]

Team comments:

Reference to Comments:

- *Pre-Professional Studies* – **Minor in Architectural Studies (ARST)** *This program is offered through the Faculty of Communication and Culture in cooperation with the Faculty of Environmental Design and consists of the courses taken by students in the foundation year of the professional Architecture Program. Students enrolled in the Minor take these cross-listed courses alongside students in the MArch program and can apply for the Year I of the MArch program upon completion of the undergraduate program requirements, reducing the time required for the MArch to two years. The Minor in Architectural Studies may be taken as part of a number of undergraduate degree programs and may be used as preparation for the professional program. Some popular choices include Urban Studies, Canadian Studies, Fine Art, and Art History, but almost any degree program that allows room*

for a minor (5 full-course equivalents) is acceptable. The ARST minor may also be taken with the non-major BA in Communication and Culture (multidisciplinary). (http://www.ucalgary.ca/evds/march/arst, accessed 01 March, 2011)

- The Master of Architecture Program offers a three-year graduate curriculum, based on a one-year Foundation program and the two-year Master's program, leading to the degree Master of Architecture. The degree is accredited by the Canadian Architectural Certification Board and enjoys a cooperative relationship with the Alberta Association of Architects.(http://www.ucalgary.ca/evds/march, *accessed 01 March, 2011)*

As the "new" M.Arch program is now three years long rather than four, its status - with or without the foundation year - needs clarification with regard to the first-professional degree programs in architecture that the CACB accredits. The foundation year of the M.Archis the same as the Minor in Architectural Studies- presented on the web site as Pre-Professional Studies at the undergraduate level.

The team advises that the Program clarify the ambiguity its professional degree proposal with CACB:

a.) In treating a "minor in architecture program" equivalent to the design-based pre-professional program in order to access a 2-year professional master degree program,

or

b.) in considering a foundation year that appears to be the equivalent of a part of an undergraduate degree, as a real constituent of a three-year professional degree at the Master's level.

12. Student Performance Criteria (SPC)

Each architecture program must ensure that all its graduates possess the skills and knowledge defined by the performance criteria set out below, which constitute the minimum requirements for meeting the demands of an internship leading to registration for practice. (See CACB 2010 Conditions for further detail regarding the SPC categories and criteria).

General Team comments:(See Below)

A1. Critical Thinking Skills

Ability to raise clear and precise questions, use abstract ideas to interpret information, consider diverse points of view, reach well reasoned conclusions, and test them against relevant criteria and standards.

Met	Not Met
[**X**]	[ ]

Team comments:

These criteria are met in EVDA 501 Interdisciplinary Seminar, EVDA 523.01 History of Architecture I, EVDA 523.02 History of Architecture II, and EVDA 621 Formal Strategies in Architecture, where students raise questions, interpret information and reach conclusions concerning environmental, historical and architectural theory.

A2. Research Skills

Ability to employ basic methods of data collection and analysis to inform all aspects of the programming and design process.

Met	Not Met
[**X**]	[ ]

Team comments:

This criteria is met primarily in EVDA 621: Formal Strategies, where students write papers analyzing and referencing historical and theoretical texts. EVDA 682.02 Intermediate Studio has been indicated in the matrix for supporting documentation, there is evidence in the binders that students employ basic methods of data collection and analyze information to inform their design process through site analysis and code restrictions.

A3. Graphic Skills

Ability to employ appropriate representational media to convey essential formal elements at each stage of the programming and design process.

Met	Not Met
[**X**]	[ ]

Team comments:

There is evidence that this criteria is met in the outcomes of EVDA 503 Studio I, EVDA 582 Studio II, EVDA 541 Graphics I, and EVDA 543 Graphics II that students employ appropriate representational media to convey essential formal elements in their programming and design process. Students are able to effectively represent information through two and three dimensional diagrams.

A4. Verbal and Writing Skills

Ability to speak and write effectively on subject matter contained in the professional curriculum.

Met	Not Met
[**X**]	[ ]

Team comments:

Evidence of student writing in EVDA 501 Interdisciplinary Seminar, EVDA 523.01 History of Architecture I, EVDA 523.02 History of Architecture II, and EVDA 621 Formal Strategies show that students are able to write effectively on subject matter contained in the professional curriculum. The History sequence shows numerous papers of various lengths, and EVDS 501 shows examples of papers by students investigating a particular topic in theory.

A5. Collaborative Skills

Ability to identify and assume divergent roles that maximize individual talents, and to cooperate with others when working as members of a design team and in other settings.

Met	Not Met
[**X**]	[ ]

Team comments:

Due to the degree of group work, there is an implication that skills relative to collaboration are well honed. The maximization of specific individual abilities, however, are not as clearly articulated, as various projects in various courses do not differentiate the responsibilities of the project team members.

A6. Human Behavior

Understanding of the relationship between human behaviour, the natural environment and the design of the built environment.

Met	Not Met
[ ]	[**X**]

Team comments:

Evidence of understanding the relationship between human behavior, the natural environment and the design of the built environment is not sufficiently found, as indicated on the matrix, in EVDS 501 Formal Strategies or EDVA 621 Formal Strategies in Architecture. The course EVDS 523 Sustainability in the Built Environment has potential to meet these performance criteria, as one student chose to write on this topic for the final assignment.

A7. Cultural Diversity

Understanding of the diverse needs, values, behavioral norms, and social/spatial patterns that characterize different cultures and individuals, as well as the implications of this diversity on the societal roles and responsibilities of architects.

Met	Not Met
[ ]	[**X**]

Team comments:

Although several of the course outlines (four sections) of EVDA 582 Studio II in Architecture indicate in the course objectives “inter-relationships between social

ecology and design, including notions of human behavior and human diversity," the projects are a house design and a mixed-use, multi-level, multi family housing project, both sited in Calgary. Also the matrix indicates EVDS 501 Interdisciplinary Seminar. This course outline discusses the importance of human activities and human settlements but the outcomes of the course include assignments of energy and environmental design in Southern Alberta. This SPC is marginally satisfied in EVDA 523.01 History of Architecture I and EVDA 523.02 History of Architecture II where cultural diversity is part of the lectures and students write a short essay analyzing a building with relationship to cultures they studied.

A8. History and Theory

Understanding of diverse global and local traditions in architecture, landscape, and urban design, as well as the factors that have shaped them.

Met	Not Met
[**X**]	[ ]

Team comments:

Student Performance Criterion for National and Regional Traditions was not met during the previous team visit in 2005. That criterion was subsequently replaced by more encompassing History and Theory criterion. The school has revised its history and theory curriculum.

A9. Precedents

Ability to make a comprehensive analysis and evaluation of a building, building complex, or urban space.

Met	Not Met
[**X**]	[ ]

Team comments:

Precedents are used to investigate strategies used by architects in generation of built form in EVDA 621 - Formal Strategies in Architecture. In one of the assignments students are studying a significant post 1900 building or project using diagrams as main tool of exploration and analysis. In EVDA 523.02 - History of Architecture II a writing assignment is on a building or a space placing it in urban and historical context. Study of precedents is reinforced in EVDA 682.02 – Intermediate Studio (Seattle field trip) and EVDA 682 - Comprehensive Studios.

B1. Design Skills

Ability to apply organizational, spatial, structural, and constructional principles to the conception and development of spaces, building elements, and tectonic components.

Met	Not Met
[**X**]	[ ]

Team comments:

Development of architectural design skills are evident in most course and project work, as should be expected as a core competence in any architectural program. The issue of some concern is related to the amount of group work in the various design studios and to what extent students will be evaluated independently.

B2. Program Preparation

Ability to prepare a comprehensive program for an architectural project that accounts for client and user needs, appropriate precedents, space and equipment requirements, the relevant laws and standards, and site selection and design assessment criteria.

Met	Not Met
[ ]	[**X**]

Team comments:

Ability to create a program or alter a program supplied as initial requirement is not evident in EVDA 682 - Intermediate and EVDA 682 - Comprehensive Studios

B3. Site Design

Ability to analyze and respond to context and site conditions in the development of a program and in the design of a project.

Met	Not Met
[ ]	[**X**]

Team comments:

Covered as a concept in EVDS 523 - Sustainability in the Built Environment including a separate assignment on Site Design. Addressed in Design Studios I and II but the ability of students to respond to site conditions in the development of program and in the design of project is not clearly evident.

B4. Sustainable Design

Ability to apply the principles of sustainable design to produce projects that conserve natural and built resources, provide healthy environments for occupants/users, and reduce the impacts of building construction and operations on future generations.

Met	Not Met
[ ]	[**X**]

Team comments:

These principles are taught in EVDS 523 Sustainability in Built Environment and EVDS 501 Interdisciplinary Seminar. The notional elements of Sustainability are presented and evidenced, however the integration and relation to Sustainable Design in the built environment is lacking. This shortfall is magnified by the position of sustainability as a core philosophy of the pedagogical mission. Little if any evidence is found in the studio work presented, in the context of architectural design solutions. Further strengthening of this initiative in the context of the mission statement is an imperative.

B5. Accessibility

Ability to design both site and building to accommodate individuals with varying physical and cognitive abilities.

Met	Not Met

[ ] [**X**]

Team comments:

611 Building Science & Technology II covers lecture on building codes overview, but accessibility not specifically mentioned. Very little evidence of *ability* to address this criterion was found in the work presented under 682 - Comprehensive Studio. 661 - Arch. Prof. Practice I has code analysis exercise that includes accessibility elements but it does not provide confirmation of student ability.

B6. Life Safety Systems, Building Codes and Standards

Understanding the principles that inform the design and selection of life-safety systems in buildings and their subsystems; the codes, regulations, and standards applicable to a given site and building design project, including occupancy classifications, allowable building heights and areas, allowable construction types, separation requirements, occupancy requirements, means of egress, fire protection, and structure.

Met	Not Met
[**X**]	[]

Team comments:

While some project work in EVDA 611 Building Science and Technology II clearly illustrate an understanding for an approach to the basics of building codes as related to separation requirements and fire protection, projects over various design assignments do not demonstrate a thorough understanding of the approach to building organization relative to occupancy requirements and means of egress.

While the exercises within Professional Practice EVDA 561are noted as addressing the requirement, it is questioned whether this subject matter should be more thoroughly integrated into design studio exercises.

Code issues not covered under 615 Environmental Control Systems. Mentioned in introductory lecture in EVDA 511 – Building Science & Technology I but it is not part of the tests or assignments. Students are generally aware of the principles involved, but the work does not reveal consistently acceptable levels of understanding. EVDA 661 Prof. Practice I has code analysis exercise with assignments that show students understanding of concepts.

B7. Structural Systems

Understanding of the principles of structural behavior in withstanding gravity and lateral forces, and the evolution, range and appropriate applications of structural systems.

Met	Not Met
[**X**]	[ ]

Team comments:

Structural systems are thoroughly investigated within various courses EVDA 619 Structures I and EVDA 619 Structures II, as well as various design projects presented. However the integration of how structural systems interface with building envelope, cladding systems and roof assemblies is less developed and is cause for concern for an integrated approach to building systems relative to structure.

B8. Environmental Systems

Understanding of the basic principles that inform the design of environmental systems, including acoustics, illumination and climate modification systems, building envelopes, and energy use with awareness of the appropriate performance assessment tools.

Met	Not Met
[**X**]	[ ]

Team comments:

Environmental systems, notably climatic, illumination and energy use systems are well examined in EDVA 615 Environmental Control Systems and EVDA 617 Architectural Lighting Design, evidenced thorough tests, independent projects, as well as integration into the Comprehensive Design Studio project EVDA 682.04. The courses illustrate students how are expected to achieve a thorough understanding of the implication of systems integration to architecture, as well as the understanding of how systems are conventionally expressed.

B9. Building Envelopes

Understanding of the basic principles involved in the appropriate application of building envelope systems and associated assemblies relative to fundamental performance, aesthetics, moisture transfer, durability, and energy and material resources.

Met	Not Met
[**X**]	[ ]

Team comments:

Building Envelope methodologies and design are investigated in various courses, notably EVDA 511 Building Science and Technology I and EVDA 611 Building Science and Technology II. Exercises are developed to identify solutions to plausible conditions. Integration of these principles into various design studios are not as evident and various details illustrated within the presentations show a less thorough approach to the design intent of this integration into the projects.

B10. Building Service Systems

Understanding of the basic principles that inform the design of building service systems, including plumbing, electrical, vertical transportation, communication, security, and fire protection systems.

Met	Not Met
[**X**]	[ ]

Team comments:

While lighting and HVAC system design and explanations are well described in courses EVDA 615 Environmental Control Systems and EVDA 617 Architectural Lighting Design, there is no demonstrable exploration or exposure to the other areas of study listed. The consideration for the integration of these systems in the projects is not evident.

B11. Building Materials and Assemblies

Understanding of the basic principles utilized in the appropriate selection of construction materials, products, components, and assemblies, based on their inherent characteristics and performance.

Met	Not Met

[**X**] [ ]

Team comments:

Understanding of the basic principles for the selection and use of building materials is effectively documented, specifically in EVDA 511 Building Science and Technology I and EVDA 611 Building Science and Technology II.

B12. Building Economics and Cost Control

Understanding of the fundamentals of development financing, building economics, construction cost control, and life-cycle cost accounting.

Met Not Met
[**X**] [ ]

Team comments:

Cost control covered in EVDA 661 - Arch. Prof. Practice I with lectures and one assignment. EVDA 615 – Environmental Control Systems do not seem to address this criterion.

C1. Detailed Design Development

Ability to assess and detail as an integral part of the design, appropriate combinations of building materials, components, and assemblies.

Met Not Met
[**X**] [ ]

Team comments:

This criteria is evidenced under EVDA 682.02 Intermediate Studio, EVDA 682.04 Comprehensive Studio, EVDA 611 Building Science and Technology II, and EVDA 619 Structures for Architects II. Although the documentation presented does contain evidence of these criteria, the courses EVDA 682.02 and EVDA 619 do not contribute to this outcome. It is suggested that EVDA 682.02 should develop the project beyond the conceptual to provide more tangible examples of building construction elements. EVDA 619 is little more than a statics course and does not contain any relevance topics to building construction elements, which is covered more extensively in EVDA 613 Structures for Architects I.

C2. Building Systems Integration

Ability to assess, select, and integrate structural systems, environmental systems, life safety systems, building envelopes, and building service systems into building design.

Met Not Met
[**X**] [ ]

Team comments:

These criteria are evidenced under EVDA 682.04 Comprehensive Studio, EVDA 611 Building Science and Technology II, EVDA 619 Structures for Architects II, EVDA 615 Environmental Control Systems, and EVDA 617 Architectural Lighting Design. The documentation from the selected courses all present evidence of the criteria, except for EVDA 619. As noted above, this course should provide a more rigorous review of various structural systems, including steel and concrete, in design, utility, and implementation.

C3. Technical Documentation

Ability to make technically precise descriptions and documentation of a proposed design for purposes of review and construction.

Met	Not Met
[**X**]	[ ]

Team comments:

These criteria are evidenced under EVDA 682.04 Comprehensive Studio and EVDA 611 Building Science and Technology II. The documentation produced presents technical drawings that are of sufficient detail to describe the building design and construction.

C4. Comprehensive Design

Ability to project a comprehensive design based on an architectural idea, a building program and a site. The design or designs should integrate structural and environmental systems, building envelopes, building assemblies, life-safety provisions, and environmental stewardship.

Met	Not Met
[ ]	[**X**]

Team comments:

These criteria are evidenced under EVDA 682.04 Comprehensive Studio, with additional courses providing secondary evidence. It is felt that EVDA 611 Building Science and Technology II must be included as primary evidence in order to support these criteria. Further, there is little or no evidence for the building program development and allocation, and insufficient evidence of site analysis among the various studios. Although the theme of the project is energy, and references environmental issues, there is no reflection of environmental consciousness in the projects presented.

D1. Leadership and Advocacy

Understanding of the techniques and skills for architects to work collaboratively with allied disciplines, clients, consultants, builders, and the public in the building design and construction process, and to advocate on environmental, social, and aesthetic issues in their communities.

Met	Not Met
[**X**]	[ ]

Team comments:

These criteria are evidenced under EVDA 661 Architectural Professional Practice I and EVDA 663 Architectural Professional Practice II. EVDA 661 relies on the delivery of course material by multiple practitioners and thus provides an arena for hands-on collaborative interaction. EVDA 663 presents an entrepreneurial approach to an architecturally related business model that encompasses community environmental and social agendas. The delivery of the material through these two courses presents a highly effective and inventive approach to student understanding of the collaborative and advocacy nature and role of Architects.

D2. Ethics and Professional Judgment

Understanding of the ethical issues involved in the formation of professional judgment regarding social, political and cultural issues in architectural design and practice.

Met	Not Met
[**X**]	[ ]

Team comments:

These criteria are evidenced under EVDA 661 Architectural Professional Practice I and EVDA 663 Architectural Professional Practice II. EVDA 661 and EVDA 663, together, immerse the student, via exposure to presentations from a wide variety of practitioners plus individual research, in ethics related to professional judgment.

D3. Legal Responsibilities

Understanding of the architect's responsibility to the client and the public under the laws, codes, regulations and contracts common to the practice of architecture in a given jurisdiction.

Met	Not Met
[**X**]	[ ]

Team comments:

This component is covered under EVDA 661Professional Practice I. The course is taught by practicing professionals, which includes case studies and assignments. The relationship with the AAA is quite strong through this inclusion of licensed professionals in teaching this course. The AAA is taking an increased interest in the professional practice programs offered at the faculty.

D4. Project Delivery

Understanding of the different methods of project delivery, the corresponding forms of service contracts, and the types of documentation required to render competent and responsible professional service.

Met	Not Met
[**X**]	[ ]

Team comments:

These criteria are evidenced under EVDA 661 Architectural Professional Practice I and EVDA 663 Architectural Professional Practice II. EVDA 661 covers the prescribed methods, contracts, and documentation necessary to the practice of Architecture; while EVDA 663 presents a more holistic entrepreneurial approach to an architecturally related business model. The delivery of the material through these two courses presents a highly effective and inventive approach to student understanding of professional practice issues.

D5. Practice Organization

Understanding of the basic principles of practice organization, including financial management, business planning, marketing, negotiation, project management, risk mitigation and as well as an understanding of trends that affect practice.

Met	Not Met
[**X**]	[ ]

Team comments:

These criteria are evidenced under EVDA 661 Architectural Professional Practice I and EVDA 663 Architectural Professional Practice II. EVDA 663 presents a holistic entrepreneurial approach to an architecturally related business model. This delivery approach allows for an understanding of architectural practice organization through the creative investigation of a business plan for a consumer/profit driven company, with sustainable undertones.

D6. Professional Internship

Understanding of the role of internship in professional development, and the reciprocal rights and responsibilities of interns and employers.

Met	Not Met
[**X**]	[ ]

Team comments:

This component is covered under Professional Practice I (EVDA 661). Practicing professionals are quite well represented in this course and the AAA has an active position of representation of the interest of the Association. The CACB Team was very excited by the student's interest in professional development and intent to enter into the licensure process.

IV. Appendices

Appendix A: Program Information

The following is condensed from the Program's Architecture Program Report

1. Brief History of the University of Calgary

The institution, that became the University of Calgary, was initially established in 1945 as an extension of the University of Alberta in Edmonton, based on the Calgary Normal School (est. 1906). In 1966 the city, and the southern Alberta region, finally achieved its long sought-after goal as the University of Calgary was given its new name and its autonomous status. This developed coincidentally with Calgary's emergence as an international business centre for energy, agriculture, communications, transportation and tourism. Calgary is rich in cultural and artistic activity, and an exceptionally high level of education leads its people to take a lively interest in their University. This history leads the University to combine the best of long-established university traditions with the freshness, originality and independence of Calgary's entrepreneurial environment.

Although it has occupied its present 213-hectare north-west Calgary campus since 1960, the years from 1965 to 1976 defined the major period of growth for the University, seeing the establishment of programs in Engineering (1965), Social Welfare (1966), Business and Fine Arts (1967), Nursing (1969), Medicine (1970), Environmental Design (1971), Law (1975), Science (1976), Social Science (1976), Humanities (1976), General Studies (1981), and Veterinary Medicine (2008). Today it is a comprehensive large research (ranked top seven in Canada) and teaching University with a broad range of Faculties, academic departments and major program areas, and research institutes and centres.

In September 2008, the inaugural class of the Faculty of Veterinary Medicine began their studies in the Clinical Skills Building at Spy Hill. With the Faculty's focus on transmission of diseases from animals to humans, population health, its ties to the medical school, its innovative curriculum and its use of community teaching resources, this new Vet School has already received a reputation for innovation. In August 2007, the U of C opened a campus in Doha, Qatar, offering internationally accredited nursing degrees to students in the Middle East. During the 2008/2009 academic year, there were 65 students registered at University of Calgary—Qatar (UCQ). An additional 75 students are expected to arrive in fall 2009, and another 50 the following winter (2010).

2. Institutional Mission

The Master of Architecture Program at the University of Calgary offers a three-year graduate curriculum leading to a professional degree in architecture. It prepares individuals to be productive and thoughtful contributors in the evolving world of architectural practice. In 2009 the Program adopted a new vision that focuses on design as engaging a complex range of ecological factors. Beyond delivering an accredited professional program, as a community of educators, practitioners and students, the Master of Architecture Program is committed to the following areas of concentration as reflected in teaching, research and practice: sustainable design, architecture and the contemporary city, critical practice, digital design and fabrication, and architectural history and theory.

3. Program History

The Faculty of Environmental Design was established in 1971 in response to a campaign by the Alberta Association of Architects for a school of architecture in the province. Its non-departmental structure housed academic programs in Architecture, Environmental Science and Urbanism. The intention of both the University and the Association, in establishing such an academic unit, was to meet the increasing demands being placed on the profession and on the environment through the education and training of professionals for a greater variety of design roles in an academic environment that not only encouraged but required interdisciplinary group approaches to teaching and research.

Prof. William T. Perks, from Ottawa's National Capital Commission, was founding Dean of the Faculty (1971-1981) and Professor R. Douglas Gillmor, FRAIC, from the University of Manitoba, the founding Director of the Architecture Program. The early challenges facing the Program were the professional liaison and curriculum development necessary to implement the professional programs of study while at the same time developing the interdisciplinary links within the Faculty. Among the accomplishments of this period was the development of the theoretical and pedagogical foundations of the program and the recruitment of students and faculty committed to the idea of interdisciplinary studies. In addition to Doug Gillmor, the Directorship was held in this period by James McKellar, FRAIC and Dr. Michael McMordie.

Dr. Don Detomasi moved from the Planning Program in EVDS to serve as Dean from 1981 to 1989. During his tenure, the Directorship of the Architecture Program was held successively by Dale Taylor FRAIC, Doug Gillmor, and Robert Kirby. In response to the evolving needs of the profession, the Architecture Program began to shift towards incorporating national standards and procedures expressed through certification into a curriculum to be followed by a student body who were increasingly focused and less inclined to explore the periphery. This was also a period of declining resources and expanding national and international initiatives. A range of revenue generating research projects in Bangkok and Peru enabled the Faculty to manage the gradual decline in government support over this period. Dean Detomasi initiated a proposal for a new building to house this Faculty and three other professional faculties before his departure in 1989 to become Associate Vice President (Planning) for the University. Prof. Doug Gillmor, of the Architecture Program, served as Acting Dean from 1989 to 1990 as the Faculty began to develop a strategic plan for the coming decade.

Dr. Robert Page from Trent University served as Dean from 1990-1996, and directed the Faculty through the difficult task of managing significant budget cuts while maintaining the integrity of the professional programs. John Brown, MRAIC, and Dale Taylor, FRAIC, served as Directors of the Architecture Program during this period and prepared the Program for the process of accreditation by the CACB. Despite significant budgetary constraints and the loss of one faculty position, the Program instituted a number of enrichment opportunities including exchange programs in India and the study abroad program in Barcelona, Spain. The currrent building became the Faculty’s new home in January 1994.

Following the retirement of Dale Taylor, the Directorship of the Program was shared by John Brown, MRAIC, and James Love, MRAIC. This was done to recognize the significant administrative duties of the Director while still allowing these key faculty members to continue their teaching and research activities. In 1997, under Acting Dean Dr. Ron Wardell, the Faculty underwent a reorganization of its administrative structure.

The appointment of Dr. Mary Ellen Tyler as Dean in September 1998 heralded a new period in the Faculty. Issues of administrative restructuring were addressed and the Architecture Program

enjoyed a renewed commitment from the Faculty. Key initiatives included the establishment of a Minor in Architectural Studies (ARST) within the Faculty of Communication and Culture (formerly the Faculty of General Studies) in 1999, the consolidation of the study abroad term in Barcelona (Spain), and the inauguration of an annual architecture student publication *In Situ*.

Prof. Graham Livesey, AAA, MRAIC assumed the Program Directorship on July 1, 2000 and continued in the role until June 30, 2006. He focused on promotion, redefining the vision, curriculum changes, and growing the program. In September 2003 an Access proposal was developed for the Alberta government that outlined the Architecture Program's growth objectives. This proposal was accepted in 2005, and funds came to the program that allowed for the hiring of new faculty and augmenting the facilities to accommodate the growth of the overall program.

On September 1, 2003 Prof. Brian R. Sinclair assumed the Dean's position in the Faculty. An alumnus of the Architecture Program he has focused on strengthening the Faculty, fundraising, promotion, and significant outreach initiatives including the University of Calgary's urban campus project. He continued in the role until June 30, 2007. Under Dean Sinclair, Prof. Loraine Fowlow served as Associate Dean Academic, overseeing the academic administration of both the Architecture and Environmental Design programs.

Prof. Loraine Fowlow was Interim Dean from July 1, 2007 until December 31, 2009. During her tenure the faculty underwent a significant re-structuring that led to the faculty being comprised of two programs, each coordinated by an Associate Dean: the professional Master of Architecture Program and the non-professional Master of Environmental Design Program. These two programs are augmented by a Doctoral program. Prof. Marc Boutin directed the Architecture Program from 2006-2009, and became the first Associate Dean (Academic – Architecture). During this period the Faculty of Environmental Design came under the administration of the Faculty of Graduate Studies, which led to a number of changes. Among these, was the decision to reduce the professional Master of Architecture Program to three years. During this recent period the Program also secured its first two research chairs: Dr. Branko Kolarevic (Chair in Integrated Design) and Dr. James Love (Chair in Sustainable Building Technologies).

As of July 1, 2009 Graham Livesey assumed the position of Associate Dean (Academic - Architecture) for a one-year term. During 2009-10 the Program revised its vision statement, consolidated the three-year curriculum, developed a Strategic Plan (2010-2015), and concentrated on promotion. On January 1, 2010 Dr. Nancy Pollock-Ellwand was appointed to the position of Dean of the Faculty of Environmental Design for a five-year term. On July 1, 2010 Dr. Branko Kolarevic assumed duties as the new Associate Dean (Academic – Architecture).

Driven by an energetic and dedicated group of faculty members and supplemented by a very generous enrichment programs for its students, the Master of Architecture Program is currently in an exciting period of transformation and is well poised to assume an ever more significant role in the coming decade. During the last several years faculty, students, and alumni have received widespread recognition for their achievements in local, regional and national media and awards programs.

4. Program Mission

Vision Statement

> *The Master of Architecture Program at the University of Calgary will achieve wide recognition for being within the top tier of accredited schools in North America by 2015.*

Mission Statement

To realize our vision of top-tier ranking, we will continue to innovate and grow in the areas of learning and research/practice/scholarship by enhancing our reputation, broadening the student experience, and developing resources.

Statement of Philosophy

There is a pressing need for human designed environments to be comprehensively integrated and to have significantly less impact on the resources of the planet and its ecologies. Ecologies are defined by the complex inter-relationships between organisms and environments. Designed ecologies are constellations of organisms, territorialities, energies, technologies, languages, and the like, that can be productive and effective, and achieve a dynamic balance. An ecological approach to architecture seeks a full integration of all the forces that impact on the design, construction, and inhabitation of buildings and related environments.

5. Program Action Plan

As a non-departmentalized faculty, the strategic planning for the Master of Architecture Program is harmonized with the Faculty of Environmental Design's business and strategic plans. The Master of Architecture Program's strategic initiatives are discussed at Program meetings, and, as required, specific tasks are assigned to faculty members in the Program. The Associate Dean (Academic – Architecture) has the overall responsibility to implement strategies and monitor measures of success and time lines associated with the development of the Program. Through various strategic planning initiatives the Master of Architecture Program has affirmed its commitment to delivering a high quality accredited professional graduate program leading to the Master of Architecture degree. It also confirmed the importance of pursuing this goal within the interdisciplinary context of Environmental Design. The Faculty of Environmental Design is developing a strategic plan that will reinforce the Master of Architecture Program's direction, among a range of initiatives, and will be adopted in the Fall 2010. The Master of Architecture Program developed and adopted a strategic plan, in April 2010, for the period 2010-2015.

Appendix B: The Visiting Team *(names & contact information)*

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Appendix C: The Visit Agenda

University of Calgary
Faculty of Environmental Design / Architecture Program
2011 Accreditation Visit Schedule

Saturday, February 26, 2011

PM	Team Arrival	Hotel Alma (403.220.3203), 169 University Gate NW, U of C
17:30	Team Introductions	Hotel – Bistro Alma
18:30	Team-only dinner	Teatro, 200-8th Ave SE (403.290.1012)
20:30	Team meeting/review of schedule	Hotel, Parkdale Boardroom (5 fl)

Sunday, February 27, 2011

07:30	Team breakfast with Dr. Branko Kolarevic Associate Dean (Academic-Architecture)	Hotel – Bistro Alma (Varsity Room)
09:00	Facilities tour	EVDS – Branko Kolarevic
10:30	Team Orientation, review of APR and issues	Team Room (PF 2160)
11:00	Preliminary review of exhibits	Team Room (PF 2160)
12:00	Lunch	PF 2110
13:00	Presentation of program by academic staff	Team Room (PF 2160)
15:00	Review of exhibits	Team Room (PF 2160)
19:00	Team-only dinner	Redwater Grille, 1935 Uxbridge Dr. NW (403.220.0222)
21:00	Review of exhibits	Team Room (PF 2160)

Monday, February 28, 2011

07:00	Team breakfast with BrankoKolarevic, AD	Hotel – Bistro Alma (Varsity Room)
08:30	**Entry meeting with EVDS Dean Dr. Nancy Pollock-Ellwand**	Team Room (PF 2160) **(45 minutes)**
09:30	Tour of Library and Canadian Architectural Archives with library staff	Ms. Marilyn Nasserden and Ms. Linda Fraser (meet at TFDL Info Desk)
10:30	**Entry meeting with Dr. Fred Hall, Dean of the Faculty of Graduate Studies**	Team Room (PF 2160) **(45 minutes)**
11:30	Lunch with Teaching Faculty	Bistro Alma

13:30	**Entry meeting with President Dr. Elizabeth Cannon and Provost Dr. Alan Harrison**	Team Room (PF 2160) **(30 minutes)**
14:30	School wide meeting with students	PF 3160
16:00	Visits and Review of student work	Team Room (PF 2160)
17:00	Reception for faculty, alumni, practitioners	Kasian Gallery (PF 2145)
19:00	Team-only dinner	Aida's, 2202 4th St SW (403.541.1189)
20:30	Draft report	Hotel, Parkdale Boardroom (5th floor)

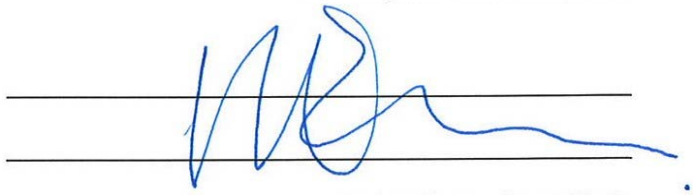
Tuesday, March 1, 2011

07:30	Team breakfast with BrankoKolarevic, AD	Hotel – Bistro Alma (Varsity)
09:00	Continuing review of exhibits and records Draft report	Team Room (PF 2160)
11:00	Meeting with Student Representatives	PF 3197
12:00	Team-only lunch	PF 2107
13:00	Meeting with Faculty Members	PF 2165
14:00	Meeting with Support Staff	PF 3197
14:30	Meeting with Technical Staff	PF 3197
15:00	Continue review of exhibits/draft report	Team Room (PF 2160)
18:30	Team only dinner	Niko's Bistro, 1241 Kensington Rd NW (403.270.0082)
20:00	Draft report/list concerns and comments/ Strategy session/recommendation	Hotel, Parkdale Boardroom (5 fl)

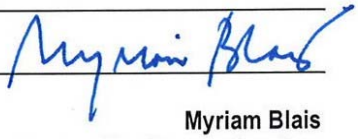
Wednesday, March 2, 2011

07:30 Room)	Team breakfast with BrankoKolarevic, AD	Hotel – Alma Bistro (Varsity
09:00	**Exit meeting with Dean Dr. Nancy Pollock-Ellwand and Dr. BrankoKolarevic, Associate Dean (Academic-Architecture)**	**PF 2107 (45 minutes)**
10:00	**Exit meeting with President Dr. Elizabeth Cannon**	**A 129 (30 minutes)**
11:00	School-wide exit meeting with faculty and students	PF 3160
12:00	Team Departs	
13:30	Transfer to airport	
15:00+	Departure	

V. Report Signatures



Herbert Enns • *Team Chair*
representing the ... educators

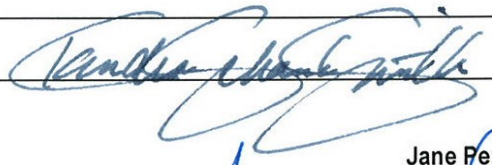


Myriam Blais
representing the ... educators

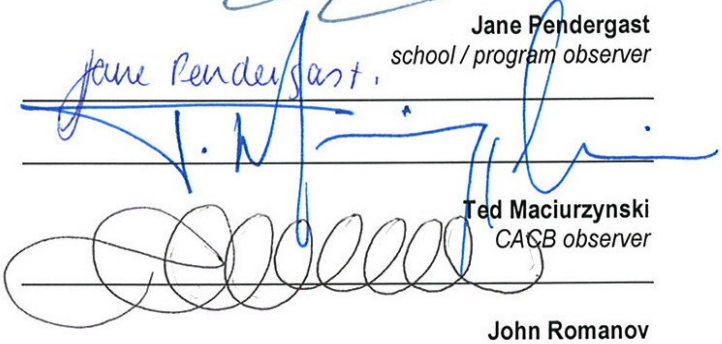
Ivan Martinovic
representing the ... practitioners

Brian Gregersen
representing the ... practitioners

Kendra Schank Smith
representing the ... educators



Jane Pendergast
school / program observer



Ted Maciurzynski
CACB observer

John Romanov
CACB observer

4.6 Annual Reports 2011-2016

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June 22, 2011

Dr. Branko Kolarevic
Associate Dean (Academic-Architecture)
Professor and Chair in Integrated Design
Faculty of Environmental Design
University of Calgary
2500 University Drive NW
Calgary, AB. T2N-1N4

Dear Professor Kolarevic,

CACB CCCA

At its spring meeting of June 3-4, 2011, the Canadian Architectural Certification Board (CACB-CCCA, reviewed the *Visiting Team Report* for University of Calgary's Master of Architecture in the Faculty of Environmental Design.

As a result, we are pleased to confirm that the professional architecture program: **Master of Architecture** was formally granted the following term: a **Six-year term with a Focused Evaluation at the end of Three years**, on Condition 4: Social Equity.

The continuing accreditation term is effective January 1, 2011 and will end on December 31, 2016. The next accreditation visit is scheduled to take place in 2017, and the focused evaluation will be carried out in 2013.

In preparation for the Focused Evaluation, the Program will need to prepare a Focused Evaluation Report, to be submitted to the CACB by April 30, 2013. The Focused Evaluation Report must identify the changes made or planned by the Program to remove each deficient condition/criterion. Please note that the Focused Evaluation requires a site visit only in cases where the documentation provided by the Program fails to address the concerns identified in a satisfactory way. The CACB will send out a follow-up letter referring to the Procedures for the Focused Evaluation Report in the year 2012.

The CACB-CCCA encourages dissemination to the University community, the profession and the public of the information about the Program contained in both the *Architectural Program Report* (APR) and the *Visiting Team Report (VTR)*. Upon this notice of accreditation, the Faculty must make a copy of these reports available in the library, together with the CACB-CCCA Conditions for Accreditation and the CACB-

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CCCA Procedures for Accreditation. These materials must be supplemented with copies of the Program's *Annual Reports*.

The CACB-CCCA wishes to express their appreciation for the gracious hospitality extended by the Program and the Faculty to the Team throughout the visit.

Very truly yours,

Terrance Galvin, Ph.D., MRAIC
CACB-CCCA President

encl.: University of Calgary, 2011 CACB-CCCA Visiting Team Report

cc: Dr. M. Elizabeth Cannon, President and Vice-Chancellor
Dr. Alan Harrison, Vice-President (Academic) and Provost
Dr. Nancy Pollock-Ellwand, Dean, Faculty of Environmental Design
Herbert Enns, Chair, Visiting Team

CACB CCCA

A-4• Human Resources Statistics Report • 2011 – 2012

School or Program : University of Calgary

Professional Degree Accredited	Total nb of credits / degree	Total nb of terms / degree	Nb of credits / term	Nb of hours / credit	Total nb of hours / degree
• **Master of Architecture degree**	9.75	4	2.5	6	58.5
with a related pre-professional bachelor's degree					
• **Master of Architecture degree**	**14.25**	**6**	**2.5**	**6**	**85.5**
without a pre-professional requirement, and consisting of an undergraduate degree plus a minimum of three years of professional studies					
• **Bachelor of Architecture degree**					
minimum of five years of study, except in Quebec, where four years of professional studies follow two years of CEGEP studies					

Faculty Data	Faculty Credentials (highest degree only) Full-time (FT) + Part-Time (PT)													
	Ph.D or D.Arch		Post-Prof Ms		Prof. M.Arch		B.Arch		Other		Licensed architects		Studio teaching	
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT
Regular Faculty	4		6		3						4		9	
Men	4		4		2						3		7	
Women			2		1						1		2	
Total FT Equivalent (FTE) Regular Faculty: Number of FT Regular Faculty + a figure equating PT Regular Faculty	13													
Typical FT teaching load / year	(a) 2 studios + 1 course or (b) 4 courses													
Other Faculty			3		10		2					13		
• Visiting														
• Adjunct • Sessional • Lecturer			2		10		2							8
• Ph.D Candidate			1											
Men			3		6		2					9		5
Women					4							4		3
Total FT Equivalent (FTE) Other Faculty: a figure equating other faculty on the basis of a typical FT teaching load	4													
Total FTE Regular + Other Faculty														
Total Regular and Other Faculty who are licensed architects											17			
Total Regular and Other Faculty teaching in studio													17	
Nb of pre-professional studios taught by all Faculty for the year													0	
Nb of Masters studios taught by all Faculty for the year													6	

Student Data	Pre-professional degree				Master of Architecture degree or Bachelor of Architecture degree			
	Fall	Winter	Summer	Mean/yr	Fall	Winter	Summer	Mean/yr
Full-Time Students					126	124	n/a	125
Men (optional)					53	52		52.5
Women (optional)					73	72		72.5
Part-Time Students								
Men (optional)								
Women (optional)								
Total Full-Time Equivalent (FTE) Students [1]					126	124	n/a	125
FTE Foreign Students [2] *(optional)*								
Students in Design Studio					126	119		122.5
Studio Ratio (Students in Design Studios / Nb studios taught for a year)					1:12.5			
	Fall	**Winter**	**Summer**	**Total/yr**	**Fall**	**Winter**	**Summer**	**Total/yr**
Number of applicants for a given term and total for a year					199			199
Number of entering students for a given term and total for a year					44	0	0	44
With advanced standing (optional)					15	0	0	15
Total Degrees Awarded-Expected for a given term and total for a year					0	55	0	55
Men (optional)					0	22	0	22
Women (optional)					0	33	0	33
Graduation Rate (%) [3]								82%

1 Full-Time Equivalent Students (FTE): Number of full-time students reported above + number of full-time equivalent for part-time students calculated on the basis of a full course load required to complete the program in the normal number of terms.

2 FTE Foreign Students : Students included in Total FTE Students who are not Canadian citizens or landed immigrants.

3 No of degrees awarded or expected / No of entering students at the beginning of the degree.

The Canadian Architectural Certification Board
Conseil canadien de certification en architecture

RESPONSE TO VISITING TEAM REPORT RECOMMENDATIONS ANNUAL REPORT, YEAR 2012-2013

School: University of Calgary
Compiled by: Branko Kolarevic, Associate Dean (Academic-Architecture)

ACSA Region: Canada

Following a Continuing Accreditation Visit conducted in February 2011, the Canadian Architectural Certification Board formally granted the Master of Architecture Program at the University of Calgary a Six-year accreditation term with a Focused Evaluation after three years on Condition 4: Social Equity. The 2013 Focused Evaluation report, submitted in April 2013, identified the actions taken by the Program to address that deficient condition. This is a first substantive report submitted after the Continuing Accreditation Visit in February 2011, so it summarizes the developments and the news over a two-year period, i.e. from January 2011 to July 1, 2013.

Architecture Program had two successful years with faculty members and students receiving international and national awards and broad exposure, new sessional hires, and improvements to the Faculty's facilities. Prof. Marc Boutin and his firm, Marc Boutin Architecture Collaborative (MBAC) has received a Canadian Architect Award (his seventh). The "S House" design project by Yiming Su, MArch student, was the winner of the West Region in the 2011-2012 The Sustainable Home, A Habitat for Humanity Student Design Competition. The project was completed in the Winter 2012 term in a senior research design studio taught by Graham Livesey.

Architecture students took part in the Solar Decathlon 2011 competition, working alongside their counterparts from the Schulich School of Engineering and Haskeyne School of Business, as the only student team from Canada (among 20 selected internationally). The solar house project, titled TRTL, placed 10th overall. This past year, University of Calgary students partnered with students from Southern Alberta Institute of Technology (SAIT) and Mount Royal University (MRU); their house design titled Borealis was selected for yet another international Solar Decathlon competition, with construction slated for the fall 2013 (on site in California). This is a third time in a row that architecture students are participating in the Solar Decathlon competition. Our continuous involvement in the Solar Decathlon is providing important opportunities for our students to acquire design-build experience and practical knowledge pertaining to the environmentally friendly design and building solutions. This is

also a reflection of the faculty's expertise in and commitment to environmentally responsible building design and construction.

The Faculty of Environmental Design (EVDS) has requested a transfer of administrative oversight for the Minor Program in Architectural Studies (ARST) from the Faculty of Arts. That request was recently approved by the University administration and the minor program is now formally housed within the Faculty. The Minor in Architectural Studies (ARST) was approved in 1999, receiving strong support throughout the University and was fast tracked into existence because of its alignment with the overall strategic directions of the University to increase access to professional programs, decrease time to degree, and improve the effectiveness of existing programs through inter-faculty cooperation. The Minor consists of the same courses taken by students in the Foundation Year of the professional Master of Architecture (MArch) Program. Students enrolled in the Minor take the cross-listed courses alongside students in the Foundation year of the MArch program and can apply for admission into the first year (M1) in the MArch program upon completion of undergraduate program requirements. The Minor can be taken as part of a number of four-year undergraduate degree programs at the University of Calgary and is intended as preparation for the professional program. About 6 to 8 of 15 to 17 students who complete the minor annually apply for admission to the MArch program.

Another important initiative that received approval is the laddering of MArch and MEDes (Thesis) degrees so that interested MArch students could receive a second, post-professional degree (MEDes) within a minimum of one year upon completion of the MArch program. It is expected that 2 to 4 MArch students may take advantage of this opportunity annually.

In an effort to raise design awareness and appreciation of architecture and design among undergraduate students, an introductory survey course, "Introduction to Architecture and Design", was offered for the first time in the Fall 2011, attracting 120 students. Several new elective course were also developed to further enrich educational opportunities for architecture students in their last year of study in the program: "Energy Systems Simulation" and "Net-zero Energy Buildings" taught by James Love, "Solar Heating in High-Performance Buildings" by Tang Lee, "Responsive Architecture" by Vera Parlac and "Performative Surface Fabrications" by Jason Johnson, highlighting program's expertise in building science and technology. In addition new elective offerings this past academic year included "Current Themes in Architectural History" by David Monteyne, "Architecture and Public Realm" by Marc Boutin and "Agile Architecture" by Brian Sinclair, highlighting program's broad expertise from history and theory to building science and technology. This expansion in the elective offerings should further strengthen Architecture Program's commitment to "Four Ecologies" in its pedagogy and the Faculty's emphasis on the sustainability agendas in both research and teaching.

The final year of the MArch program is given an overarching theme of “Synthetic Ecologies: Smart Buildings and Cities”, complementing the “Four Ecologies” of the first two years of study. In an effort to create a record of design research in architecture, students enrolled in senior research studios (EVDA 782), both in Calgary and abroad in Barcelona and Melbourne, are completing summary research reports at the end of each term, which are then collected in a database for future referencing.

Jason Johnson, Branko Kolarevic, Vera Parlac and Joshua Taron organized and co-chaired the 2011 Conference of the Association for Computer Aided Design in Architecture (ACADIA), which was held from October 11 to 16, 2011 at EVDS in Calgary and the Banff Centre (www.acadia.org/acadia2011). The conference theme was “Integration through Computation”. More than 150 participants explored integrative trajectories and areas of overlap that have emerged through computation between design, its allied disciplines of engineering and construction, and other fields, such as computer science, material science, mathematics and biology. The conference highlighted state-of-the-art experimental projects in which methods, processes, and techniques are discovered, appropriated, adapted, and altered from elsewhere, and digitally pursued. In April 2013 Branko Kolarevic and Vera Parlac organized and co-chaired an international symposium titled “Building Dynamics: Exploring Architecture of Change”, which featured 15 invited speakers, including Sir Peter Cook from London, Enric Ruiz Geli from Barcelona, Chuck Hoberman from New York and other prominent designers, researchers and thinkers. Over 120 attendees, including 30 EVDS students, followed the symposium proceedings over two days at the Banff Centre.

The Program continues to attract leading thinkers and designers as instructors in its intensive week-long “block” courses, which are offered in mid-October (Gillmor Theory Seminar and makeCalgary Charrette, added in 2012), the first week of January (Somerville Charrette), and in the third week of February (Taylor Workshop). The 2011 Gillmor Lecturer was Jane Rendell from the Bartlett School of Architecture; an architectural designer and historian, art critic and writer, her work over the past ten years has explored various interdisciplinary intersections: feminist theory and architectural history, fine art and architectural design, autobiographical writing and criticism. The 2012 Somerville Lecturer was Michael Weinstock from the Architectural Association (AA) School of Architecture in London, who is the Director of Research and Development at the AA and who also directs its graduate program in Emergent Technologies and Design. The 2012 makeCalgary Charrette leaders were Craig Dykers and Vanessa Kassabian from Snohetta and Patricia and John Patkau from Vancouver; the theme was “Culture Space”. The 2012 Gillmor Lecturer was Shelley Hornstein, Professor of Architectural History & Urban Culture at York University; her work looks at the intersection of memory and place in

architectural and urban sites. The 2013 Somerville Lecturer was Toronto architect Brigitte Shim of Shim and Sutcliffe.

Dr. Branko Kolarevic ends his three year term as Associate Dean (Academic – Architecture), i.e. Program Director, on June 30, 2013. Dr. David Monteyne succeeds him in that role, beginning on July 1, 2013 for a three year term. Historically, the position has rotated among the program faculty; this system has worked very well over the last several decades.

CONDITIONS NOT MET

4. Social Equity.

The 2011 VTR noted the gender inequality in faculty and encouraged the Program to continue its efforts in achieving equity in hiring of sessional instructors and in tenure-track appointments. The Program reported on this condition in its 2013 Focused Evaluation Report, which is summarized below.

Women currently occupy three positions among full-time faculty, out of a total of thirteen, i.e. women represent 23% of all full-time faculty in the Program. In the fall of 2012 a position was advertised for an Assistant Professor to teach building science and technology, with a starting date of July 1, 2013. The advertisement attracted a strong pool of applicants; three were interviewed, including one woman, who was a top-ranked applicant and who was offered a position, which she declined. That search was not successful and should be repeated this fall. With two retirements expected over the next two to three years, new opportunities should open up to hire more women as full-time faculty members.

As recommended by the accreditation team, the Program has made every effort to hire women as sessional (i.e. part-time) faculty and also as adjuncts and visiting lecturers. In 2010-2011, at the time of the last accreditation visit, there was one women teaching in the program as a sessional faculty. In 2011-2012, four women were hired to teach design studios and other courses. In 2012-2013, seven women were hired to teach in the Program as sessionals.

Our Program has several high-profile visiting lecturer positions to teach intensive week-long courses at various times during academic year. As reported already, Jane Rendell from

Bartlett was the Gillmor Lecturer in 2011 and Shelley Hornstein of York University in 2012; Vittoria Di Palma from Columbia University will join us this coming fall. Brigitte Shim from Toronto was the 2012 Somerville Lecturer. We will continue to actively recruit women to these visiting lectureship positions which are highly visible in our local community.

12. Student Performance Criteria

A6. Human Behavior.

According to the 2011 VTR, evidence of understanding the relationship between human behavior, the natural environment and the design of the built environment was not sufficiently found in EVDS 501 Interdisciplinary Seminar or EDVA 621 Formal Strategies in Architecture, as indicated on the SPC matrix submitted by the Program. The report noted that course EVDS 523 Sustainability in the Built Environment had the potential to meet these performance criteria. After the curricular retreat following the visit, the course EVDA 621 was renamed to Design Theories in Architecture, with a clearer emphasis on this SPC; likewise, the themes referenced by this SPC were further strengthened in EVDS 501 and also in EVDA 621.

A7. Cultural Diversity.

The 2011 VTR noted that this SPC was marginally satisfied in EVDA 523.01 History of Architecture I and EVDA 523.02 History of Architecture II, “where cultural diversity is part of the lectures and students write a short essay analyzing a building with relationship to cultures they studied,” as stated in the report. According to the SPC matrix we submitted with the 2010 APR, this SPC was also addressed in EVDA 582 Studio II in Architecture and EVDS 501 Interdisciplinary Seminar, but the Visiting Team didn’t deem the evidence sufficient. In addition to EVDA 523.01, EVDA 523.02 and EVDS 501, mentioned above, the program continues to emphasize in the course objectives for EVDA 582 Studio II the inter-relationships between social ecology and design, including notions of human behavior and human diversity.

B2. Program Preparation.

This SPC is addressed primarily in two design studios, EVDA 682.02 Intermediate Studio and EVDA 682.04 Comprehensive Design Studio. In these two studios students develop a

program for the buildings they design by analyzing the precedents pertinent to the building type and/or modify the template program depending on the selected building site. The Visiting Team found the evidence of program preparation in the exhibits in the team room insufficient; we will insure that sufficient evidence is clearly presented at the time of the next Continuing Accreditation Visit.

B3. Site Design.

The VTR noted that this SPC is covered as a concept in EVDS 523 Sustainability in the Built Environment, including a separate assignment on Site Design. It also acknowledged that this SPC was addressed in Design Studios I and II but noted that the ability of students to respond to site conditions in the development of program and in the design of project was not clearly evident. As with the previous SPC, we will insure that sufficient evidence is clearly presented at the time of the next Continuing Accreditation Visit.

B4. Sustainable Design.

The principles of sustainable design are taught in the first semester of the Foundation Year, in EVDS 523 Sustainability in Built Environment and EVDS 501 Interdisciplinary Seminar, as noted in the VTR. According to the Visiting Team, the notional elements of Sustainability were presented and evidenced; however, the integration and relation to Sustainable Design in the built environment was lacking, with little if any evidence found in the studio work presented, in the context of architectural design solutions. The Program considers principles of sustainable design as the foundational knowledge, covered in two first-term courses mentioned previously. Furthermore, sustainability is at the core of the program's philosophy and pedagogical mission, as correctly noted in the VTR. The fact that the Visiting Team didn't find sufficient evidence of the ability with respect to this SPC was subject of considerable discussion at the program meetings that followed the visit and at the curricular retreat later in the spring of 2011. The sustainability agenda would be further strengthened in the studio offerings in the program, with sufficient evidence to be clearly presented at the time of the next Continuing Accreditation Visit.

B5. Accessibility.

The Visiting Team noted that while EVDA 611 Building Science & Technology II provided the building codes overview, the accessibility was not specifically mentioned, according to the course outline. This omission has been corrected. The Team noted that little evidence

of ability to address this criterion was found in the work presented under 682 Comprehensive Design Studio. It also noted that EVDA 661 Architectural Professional Practice I had code analysis exercise that included accessibility elements but it did not provide confirmation of student ability. The program will ensure that sufficient evidence of ability re this SPC will be provided at the next Visit.

C4. Comprehensive Design.

The Program addresses comprehensive design criteria through EVDA 682.04 Comprehensive Design Studio in which students integrate structural and environmental systems, building envelopes, building assemblies, life-safety provisions, and environmental stewardship. That studio is closely coupled with EVDA 619 Structures II, EVDA 615 Environmental Systems Design, and EVDA 611 Building Science and Technology II. The Visiting Team was of the opinion that EVDA 611 Building Science and Technology II must be included as primary evidence to support the criteria associated with SPC, which will be done for the next Continuing Accreditation Visit. The Team found little or no evidence for the building program development and allocation in exhibited studio projects, and insufficient evidence of site analysis among the various studio sections. The Program will exhibit such evidence clearly at the next Visit.

CAUSES OF CONCERN

1. *The Comprehensive Design project appears early in the Master's Program, and while exhibiting evidence of understanding, the work does not indicate ability. The projects represent the first substantive and complex building program that a student encounters, and while being explorative in nature, there is concern for the lack of a full comprehension of the complex integration of all technical factors with design.*

Since the Visit, we have implemented several changes to EVDA 682.02 Intermediate Studio and EVDA 682.04 Comprehensive Design Studio. In EVDA 682.02 students develop a program for a large building (or complex of buildings) that serve a public purpose, i.e. that engage the public realm. In EVDA 682.04, students work on a building with a smaller program, circa 2,000 m2 (which was 5,000 m2), which should enable earlier and greater degree of integration of all technical factors in design.

2. *While teamwork accelerates production, individual advance as prescribed by the CACB is difficult to assess. The proliferation of group projects presented in the Team Room –*

Comprehensive Studio EVDA 682.04, Intermediate Studio EVDA 682.02, Research Studios EVDA 782.01, Research Studio (Barcelona) EVDA 782.17, and Structures 1 EVDA 613, for example – suggest that an entire advanced program of studies at the Masters level is devoted to collaborative practice. We recommend that the Program seek a more balanced strategy inclusive of both collaborative and individual work.

The issue of teamwork as assessed by the Visiting Team was discussed at length by the Program at its curricular retreat following the Visit. It was agreed that in general the team assignments would be limited to early, analytical phases of design studios and that the design projects in studio will be developed by each student individually. Another strategy adopted by the program was to limit the size of teams to two members so that the contributions (and learning outcomes) of each member could be assessed effectively.

3. *Integration of ecological and environmental systems with design - as defined in the Statement of Philosophy - requires strengthening.*

The Program's philosophy of "Four Ecologies" was articulated at the program retreat in the spring of 2010. The Program is fully committed to it and is assessing annually the extent to which its basic tenets are embedded in the curricular offerings by the program. Ecological approaches to design are essential to pedagogic approaches in all studio offerings within the program, from Foundation level studios to Senior Research Studios offered in the last term of the three-year curriculum.

4. *A full review of the role and capacity of Studio spaces and the Computer Lab in the new Master of Architecture program is recommended in order to maintain relevance in relation to teaching and research.*

The Faculty has received funds in 2012 from the central facilities allocation to reconfigure and upgrade the existing Computer Lab as an essential teaching facility. The two smaller labs and adjacent auxiliary spaces were joined into a large computer classroom equipped with two overhead projectors and state-of-the-art computer workstations. We have also submitted a proposal to upgrade the architecture studio spaces on the 4th floor but we didn't receive the funding. That is an ongoing initiative.

5. *An air quality assessment and upgrade of the air handling capacity in the Material and Fabrication Labs is urgently recommended.*

Substantial upgrades were made in 2012 to the Fabrication Labs with funding from the Facilities and the Provost's Office. Each of two CNC machines is housed in a separate room, with separate safety equipment and dedicated air handling units. As a consequence, air quality in the shop improved substantially, as was the overall safety in the facility.

6. *Efforts should be made to enhance the Program's profile within the University.*

As was mentioned earlier, the Program has launched a 200-level introductory undergraduate course in architecture and design that was immediately filled to its maximum capacity of 120 enrollees. The Program is cognizant of the strong interest in design instruction among undergraduates but is limited in what it could offer by the currently available resources, both in terms of space and instructional capacity. The existing Minor in Architectural Studies (ARST) continues to attract applicants with high overall GPAs. The Program is looking into the ways to further strengthen its undergraduate offerings.

The Canadian Architectural Certification Board
Conseil canadien de certification en architecture

RESPONSE TO VISITING TEAM REPORT RECOMMENDATIONS
2013 FOCUSED EVALUATION REPORT

School: University of Calgary
Compiled by: Dr. Branko Kolarevic, Associate Dean (Academic—Architecture)

Following a Continuing Accreditation Visit conducted in February 2011, the Canadian Architectural Certification Board formally granted the Master of Architecture Program at the University of Calgary a Six-year accreditation term with a Focused Evaluation after three years on **Condition 4: Social Equity**. This report identifies the changes made by the Program to address this deficient condition.

CONDITIONS NOT MET: 4. Social Equity.

The 2011 VTR identified lack of gender diversity among faculty members as one of main causes of concern and encouraged the Program to continue its efforts in achieving gender equity in the hiring processes of sessional and tenure-track appointments. The 2011 VTR acknowledged that some progress has been made on gender equality in the faculty: women represented 23% of the total FTE in 2010, a minor increase from 20% in 2005: 1.5 new full time positions were added between 2004 and 2010. As was the case with the 2005 Visiting Team, the 2011 Visiting Team also exhorted the Program to hire more women as lecturers, sessional instructors, adjuncts, and visiting professors, which is what we have done over the past two years.

STUDENTS
It should be noted that the majority of our architecture students are female, giving our program an approximate 50/50 split in the female/male ratio; the percentage of women in the Program has been consistently in the 48-52% range for the past three years. The Program has no quotas for women or minorities applying to enter the Program at this time.

FULL-TIME FACULTY
In the Program women currently occupy three positions among full-time faculty, out of a total of thirteen, i.e. women represent 23% of all full-time faculty. In the fall of 2012 a position was advertised for an Assistant Professor to teach building science and technology, with a starting date of July 1, 2013. The advertisement attracted a strong pool of applicants; three will be interviewed, including one woman, who is a top-ranked applicant. If she is offered a position and if she accepts, her joining the faculty would make women almost a third of all full-time faculty. With two retirements expected over the next two to three years, new opportunities should open up to hire more women as full-time faculty members.

SESSIONAL (PART-TIME) FACULTY

As recommended by the accreditation team, the Program has made every effort to hire women as sessional (i.e. part-time) faculty and also as adjuncts and visiting lecturers. In 2010-2011, at the time of the last accreditation visit, there was one women (Keir Stuhlmiller) teaching in the program as a sessional faculty. In 2011-2012, four women (Heather Cameron, Alison MacLachlan, Keir Stuhlmiller, Kate Thompson) were hired to teach design studios and other courses. In 2012-2013, seven women (Jodi James, Judith MacDougal, Alison MacLachlan, Kimberly Mercier, Keir Stuhlmiller, Kate Thompson, Katherine Wagner) were hired to teach in the Program. Given that we have limited opportunities to increase the number of women among full-time faculty, an obvious short-term remedy is to have more women as sessionals, which was successfully accomplished over the past two years.

VISITING LECTURERS

Our Program has several high-profile visiting lecturer positions to teach intensive week-long courses (Gillmor Theory Seminar, Somerville Charrette, Gillmor Workshop) at various times during academic year. Jane Rendell from Bartlett was the Gillmor Lecturer in 2011; Shelley Hornstein of York University in 2012; Vittoria Di Palma from Columbia University will join us this coming fall. Brigitte Shim from Toronto was the 2012 Somerville Lecturer. We will continue to actively recruit women to these visiting lectureship positions which are highly visible in our local community.

OUT-OF-TOWN REVIEWERS

At the end of each term we invite two out-of-town reviewers to join us for the final reviews of design studios. In 2010-2011 we had two women, Nataly Gategno from San Francisco and AnnaLisa Meyboom from UBC, as out-of-town reviewers. In 2011-2012, we had four: Ila Berman from CCA in San Francisco, Maria Denegri and Meg Graham from Toronto, and Sarah Iwata from Lethbridge. Thus far in 2012-2013 we had only Leslie Van Duzer from UBC (several women were invited but declined due to a variety of reasons).

The Master of Architecture Program is very cognizant of gender equity issues as they pertain to both education and the profession. We believe that the specific situation at the University of Calgary is similar to those experienced at other institutions and in the profession. The Program and Faculty will continue to explore ways of recruiting female faculty members, adjuncts, guests, and students.

A-4• Human Resources Statistics Report • 2012 – 2013

School or Program : University of Calgary

Professional Degree Accredited	Total nb of credits / degree	Total nb of terms / degree	Nb of credits / term	Nb of hours / credit	Total nb of hours / degree
• **Master of Architecture degree**	10.25	4	2.56	6	61.5
with a related pre-professional bachelor's degree					
• **Master of Architecture degree**	**15.75**	**6**	**2.62**	**6**	**94.5**
without a pre-professional requirement, and consisting of an undergraduate degree plus a minimum of three years of professional studies					
• **Bachelor of Architecture degree**					
minimum of five years of study, except in Quebec, where four years of professional studies follow two years of CEGEP studies					

Faculty Data	Faculty Credentials (highest degree only) Full-time (FT) + Part-Time (PT)													
	Ph.D or D.Arch		Post-Prof Ms		Prof. M.Arch		B.Arch		Other		Licensed architects		Studio teaching	
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT
Regular Faculty	5		5		3						4		9	
Men	5		3		2						3		7	
Women			2		1						1		2	
Total FT Equivalent (FTE) Regular Faculty: Number of FT Regular Faculty + a figure equating PT Regular Faculty	13													
Typical FT teaching load / year	(a) 2 studios + 1 course or (b) 4 courses													
Other Faculty	1				14				2			10		9
• Visiting	1													
• Adjunct • Sessional • Lecturer					14				2			10		9
• Ph.D Candidate														
Men					7				1			5		6
Women	1				7				1			5		3
Total FT Equivalent (FTE) Other Faculty: a figure equating other faculty on the basis of a typical FT teaching load	5.5													
Total FTE Regular + Other Faculty	18.5													
Total Regular and Other Faculty who are licensed architects											14			
Total Regular and Other Faculty teaching in studio													18	
Nb of pre-professional studios taught by all Faculty for the year													0	
Nb of Masters studios taught by all Faculty for the year													6	

Student Data	Pre-professional degree				Master of Architecture degree or Bachelor of Architecture degree			
	Fall	Winter	Summer	Mean/yr	Fall	Winter	Summer	Mean/yr
Full-Time Students					127	124	n/a	125.5
Men (optional)					61	58		59.5
Women (optional)					66	66		66
Part-Time Students								
Men (optional)								
Women (optional)								
Total Full-Time Equivalent (FTE) Students [1]					127	124	n/a	125.5
FTE Foreign Students [2] *(optional)*								
Students in Design Studio					119	118		118.5
Studio Ratio (Students in Design Studios / Nb studios taught for a year)					1:12			
	Fall	Winter	Summer	Total/yr	Fall	Winter	Summer	Total/yr
Number of applicants for a given term and total for a year					217			217
Number of entering students for a given term and total for a year					50	0	0	50
With advanced standing (optional)					17	0	0	17
Total Degrees Awarded-Expected for a given term and total for a year					0	45	0	45
Men (optional)					0	24	0	24
Women (optional)					0	21	0	21
Graduation Rate (%) [3]								87.5%

1 Full-Time Equivalent Students (FTE): Number of full-time students reported above + number of full-time equivalent for part-time students calculated on the basis of a full course load required to complete the program in the normal number of terms.

2 FTE Foreign Students : Students included in Total FTE Students who are not Canadian citizens or landed immigrants.

3 No of degrees awarded or expected / No of entering students at the beginning of the degree.

The Canadian Architectural Certification Board
Conseil canadien de certification en architecture

RESPONSE TO VISITING TEAM REPORT RECOMMENDATIONS
2013 FOCUSED EVALUATION REPORT

School: University of Calgary
Compiled by: Dr. Branko Kolarevic, Associate Dean (Academic—Architecture)

Following a Continuing Accreditation Visit conducted in February 2011, the Canadian Architectural Certification Board formally granted the Master of Architecture Program at the University of Calgary a Six-year accreditation term with a Focused Evaluation after three years on **Condition 4: Social Equity**. This report identifies the changes made by the Program to address this deficient condition.

CONDITIONS NOT MET: 4. Social Equity.

The 2011 VTR identified lack of gender diversity among faculty members as one of main causes of concern and encouraged the Program to continue its efforts in achieving gender equity in the hiring processes of sessional and tenure-track appointments. The 2011 VTR acknowledged that some progress has been made on gender equality in the faculty: women represented 23% of the total FTE in 2010, a minor increase from 20% in 2005: 1.5 new full time positions were added between 2004 and 2010. As was the case with the 2005 Visiting Team, the 2011 Visiting Team also exhorted the Program to hire more women as lecturers, sessional instructors, adjuncts, and visiting professors, which is what we have done over the past two years.

STUDENTS
It should be noted that the majority of our architecture students are female, giving our program an approximate 50/50 split in the female/male ratio; the percentage of women in the Program has been consistently in the 48-52% range for the past three years. The Program has no quotas for women or minorities applying to enter the Program at this time.

FULL-TIME FACULTY
In the Program women currently occupy three positions among full-time faculty, out of a total of thirteen, i.e. women represent 23% of all full-time faculty. In the fall of 2012 a position was advertised for an Assistant Professor to teach building science and technology, with a starting date of July 1, 2013. The advertisement attracted a strong pool of applicants; three will be interviewed, including one woman, who is a top-ranked applicant. If she is offered a position and if she accepts, her joining the faculty would make women almost a third of all full-time faculty. With two retirements expected over the next two to three years, new opportunities should open up to hire more women as full-time faculty members.

SESSIONAL (PART-TIME) FACULTY

As recommended by the accreditation team, the Program has made every effort to hire women as sessional (i.e. part-time) faculty and also as adjuncts and visiting lecturers. In 2010-2011, at the time of the last accreditation visit, there was one women (Keir Stuhlmiller) teaching in the program as a sessional faculty. In 2011-2012, four women (Heather Cameron, Alison MacLachlan, Keir Stuhlmiller, Kate Thompson) were hired to teach design studios and other courses. In 2012-2013, seven women (Jodi James, Judith MacDougal, Alison MacLachlan, Kimberly Mercier, Keir Stuhlmiller, Kate Thompson, Katherine Wagner) were hired to teach in the Program. Given that we have limited opportunities to increase the number of women among full-time faculty, an obvious short-term remedy is to have more women as sessionals, which was successfully accomplished over the past two years.

VISITING LECTURERS

Our Program has several high-profile visiting lecturer positions to teach intensive week-long courses (Gillmor Theory Seminar, Somerville Charrette, Gillmor Workshop) at various times during academic year. Jane Rendell from Bartlett was the Gillmor Lecturer in 2011; Shelley Hornstein of York University in 2012; Vittoria Di Palma from Columbia University will join us this coming fall. Brigitte Shim from Toronto was the 2012 Somerville Lecturer. We will continue to actively recruit women to these visiting lectureship positions which are highly visible in our local community.

OUT-OF-TOWN REVIEWERS

At the end of each term we invite two out-of-town reviewers to join us for the final reviews of design studios. In 2010-2011 we had two women, Nataly Gategno from San Francisco and AnnaLisa Meyboom from UBC, as out-of-town reviewers. In 2011-2012, we had four: Ila Berman from CCA in San Francisco, Maria Denegri and Meg Graham from Toronto, and Sarah Iwata from Lethbridge. Thus far in 2012-2013 we had only Leslie Van Duzer from UBC (several women were invited but declined due to a variety of reasons).

The Master of Architecture Program is very cognizant of gender equity issues as they pertain to both education and the profession. We believe that the specific situation at the University of Calgary is similar to those experienced at other institutions and in the profession. The Program and Faculty will continue to explore ways of recruiting female faculty members, adjuncts, guests, and students.

2013 Focused Evaluation Team Report

Master of Architecture Program
University of Calgary

The Canadian Architectural Certification Board
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Table of Contents

I. Summary of Team Findings

1. Team Comments

The Focused Evaluation Team reviewed all material related to the Focused Evaluation (FE), starting with the 2005 Visiting Team Report, 2011 Visiting Team Report, the 2013 Focused Evaluation Report, University of Calgary Master of Architecture Program Teaching Template 2012-13, University of Calgary 2010 Architecture Program Report and the University of Calgary School of Architecture website.

At the end of the FE review, the FE Team appreciate the recent efforts made with respect to bringing a more balanced gender equity for Visiting Lecturers, Out-of-Town Reviewers and Sessional Faculty Members. The FE Team, however, has not been provided with any evidence to support the notion that these efforts contribute to a long term approach to address gender equity.

II. Compliance with the Conditions for Accreditation

1. Team General Comments

It is noted by the FE Team that the issue of gender inequity has been identified as a repeated on-going issue for 18 years. From the Team Comments of 2011 VTR:

> *"Gender inequality in faculty has been noticed in VTRs 1995, 2000 and 2005."*

In light of this, the FE Team was surprised that insufficient back up material was provided by the School of Architecture. This frustrated the review of the changes being made or planned. For instance, it is appreciated to have the names of each female faculty listed; however it would have been helpful to be given more information so the FE Team can better understand the School's commitment to resolve this condition.

2. Program Response to Focused Criteria Identified from Previous Visit

Conditions:
Condition 4: Social Equity
The accredited degree program must provide a summary of provincial and institutional policies that augment and clarify the provisions of the Charter of Rights and Freedoms as they apply to social equity.

Met	Not Met
[ ]	[X]

Team comments:

Team Comments are broken down to respective categories as follows:

Students
Typical of the majority of Architecture programs in Canada, the University of Calgary is achieving roughly 50% female enrollment. The FE Team has no further comment.

Full-Time Faculty

Although the FE Team recognizes the modest increase in Full-Time Faculty from 20% in 2005 to 23% in 2011, it has been noted that this increase actually occurred prior to the 2011 VTR. The FE Team does not know if the full-time position currently being finalized will address this gender inequity or not.

Looking forward, the FE Team is hopeful that the status of the existing three full-time female faculty members, are strengthened and not diminished.

The School needs to continue to report on this status to the CACB.

Sessional (Part-time) Faculty

The FE Team appreciates the addition of seven female part-time hires in the 2012-13 year; some of which as returning faculty. The FE Team would have appreciated receiving further information about the sessional faculty. For instance, what are their qualifications (CV) and course load?

The FE Team encourages the School of Architecture to establish a long term hiring strategy with regard to female sessional faculty and not look at it as an "obvious short-term remedy". This is an opportunity to strategically invest in the program, recognizing it forms part of the overall success of the School. The School needs to continue to report on this status to the CACB.

Visiting Lecturers

It is noted that the University of Calgary has made good use of the endowed visiting lecturer positions to highlight female practitioners and academics.

It would have been helpful for the FE Team to have been provided with the syllabus of the Gillmor Theory Seminar, Somerville Charrette and Gilmour Workshops.

Out-of-Town Reviewers

The FE Team acknowledges that the School of Architecture has been successful inviting many female external examiners with a wide breadth of experience and encourages the continuation of this practice.

III. Appendices

Appendix A: The Focused Evaluation Team

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Appendix B: The Visit Agenda

No visit was necessary.

IV. Report Signatures

Sean Rodrigues • *Team Chair*
representing the practitioners

Myriam Blais
representing the educators

Kendra Schank Smith
representing the educators

Canadian Architectural Certification Board | Conseil canadien de certification en architecture

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June 17, 2013

Branko Kolarevic
Associate Dean (Academic-Architecture)
Professor and Chair in Integrated Design
Faculty of Environmental Design
University of Calgary
2500 University Drive NW
Calgary, AB. T2N-1N4

Dear Professor Kolarevic:

At its spring meeting of June 3-4, 2013, the Canadian Architectural Certification Board (CACB-CCCA) reviewed the Focused Evaluation Team Report for the Master of Architecture (M. Arch) Program of University of Calgary's Faculty of Environmental Design.

CACB CCCA

The Board concluded that no Focused Visit was required and made the decision that the schedule for the next accreditation visit in 2017 remains unchanged.

The Board requires the program to continue to report on the items mentioned in Focused Evaluation Team Report Part II (Compliance with the Conditions for Accreditation) in subsequent Annual Reports.

The Board wishes to express their appreciation for the material forwarded along with the Focused Evaluation Report.

Very truly yours,

Carole Caron AANB
President

encl.: University of Calgary 2013 CACB-CCCA Focused Evaluation Team Report

A-4• Human Resources Statistics Report • 2013– 2014

School or Program : University of Calgary

Professional Degree Accredited	Total nb of credits / degree	Total nb of terms / degree	Nb of credits / term	Nb of hours / credit	Total nb of hours / degree
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with a related pre-professional bachelor's degree					
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without a pre-professional requirement, and consisting of an undergraduate degree plus a minimum of three years of professional studies					
• **Bachelor of Architecture degree**					
minimum of five years of study, except in Quebec, where four years of professional studies follow two years of CEGEP studies					

Faculty Data	Faculty Credentials (highest degree only) Full-time (FT) + Part-Time (PT)													
	Ph.D or D.Arch		Post-Prof Ms		Prof. M.Arch		B.Arch		Other		Licensed architects		Studio teaching	
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT
Regular Faculty	5		5		3						4		9	
Men	5		3		2						3		7	
Women			2		1						1		2	
Total FT Equivalent (FTE) Regular Faculty: Number of FT Regular Faculty + a figure equating PT Regular Faculty	13													
Typical FT teaching load / year	(a) 2 studios + 1 course or (b) 4 courses													
Other Faculty														
• Visiting		1		1		1						2		1
• Adjunct • Sessional • Lecturer		2				16				2		7		11
• Ph.D Candidate														
Men		2		1		11				2		5		8
Women		1				6						4		4
Total FT Equivalent (FTE) Other Faculty: a figure equating other faculty on the basis of a typical FT teaching load	5.5													
Total FTE Regular + Other Faculty	18.5													
Total Regular and Other Faculty who are licensed architects											13			
Total Regular and Other Faculty teaching in studio													21	
Nb of pre-professional studios taught by all Faculty for the year													0	
Nb of Masters studios taught by all Faculty for the year													6	

Student Data	Pre-professional degree				Master of Architecture degree or Bachelor of Architecture degree			
	Fall	Winter	Summer	Mean/yr	Fall	Winter	Summer	Mean/yr
Full-Time Students					119	118	n/a	119
Men (optional)					55	54		55
Women (optional)					64	64		64
Part-Time Students					0	0		
Men (optional)					0	0		
Women (optional)					0	0		
Total Full-Time Equivalent (FTE) Students [1]					119	118		119
FTE Foreign Students [2] *(optional)*					0	0		
Students in Design Studio					119	118		119
Studio Ratio (Students in Design Studios / Nb studios taught for a year)					Approx. 1:12			
	Fall	**Winter**	**Summer**	**Total/yr**	**Fall**	**Winter**	**Summer**	**Total/yr**
Number of applicants for a given term and total for a year					190			190
Number of entering students for a given term and total for a year					50			50
With advanced standing (optional)					15			15
Total Degrees Awarded-Expected for a given term and total for a year					0	41	0	41
Men (optional)					0	16	0	16
Women (optional)					0	25	0	25
Graduation Rate (%) [3]								85%

1 Full-Time Equivalent Students (FTE): Number of full-time students reported above + number of full-time equivalent for part-time students calculated on the basis of a full course load required to complete the program in the normal number of terms.

2 FTE Foreign Students : Students included in Total FTE Students who are not Canadian citizens or landed immigrants.

3 No of degrees awarded or expected / No of entering students at the beginning of the degree.

University of Calgary
Faculty of Environmental Design
Master of Architecture

Annual Report to the Canadian Architectural Certification Board
2013-2014
June 27, 2014

Signed:

David Monteyne, Associate Dean, Architecture

The Master of Architecture (MArch) Program in the Faculty of Environmental Design (EVDS) at the University of Calgary has experienced a successful year in 2013-14, with strong studio projects, the development of faculty research, and the broad exposure of faculty and student work. Guest critics this year were unanimous in their praise for the quality and depth of the student design projects. Faculty research progressed with two new book contracts, applications to several large national and regional research grants, and local community engagement exercises. Among other accolades received by our faculty and students, Associate Professor Marc Boutin garnered a National Urban Design Award and a Prairie Design Award, for Poppy Plaza in Calgary. Professors Brian Sinclair and Tang Lee continue to consult internationally in the areas of design, planning, and building science. Former Associate Dean of Architecture, Professor Branko Kolarevic was elected as President of the CACB for 2013-14. Student success included the publication of Mahdiar Ghaffarian's senior studio project in the book *EVOLO SKYSCRAPERS 2* this spring. As well, Yves Poitras, a first-year architecture student was awarded the 2014 DIALOG Scholarship in Honour of Michael Evamy, a prestigious national award.

University of Calgary students in the MArch and other programs partnered with students from Southern Alberta Institute of Technology (SAIT) and Mount Royal University (MRU) under the rubric of Campus Alberta to compete in Solar Decathlon 2013, the contest sponsored by the United States Department of Energy. Their house design, Borealis, was erected on the U of C campus, then disassembled and reassembled on site in California for the competition. Team Alberta placed ninth overall in the competition (out of twenty). The project leader was MArch Associate Prof. Loraine Fowlow. This was the third time in a row that our architecture students participated in the Solar Decathlon competition. Our involvement in the Solar Decathlon has provided opportunities for our students to acquire design-build experience and practical knowledge pertaining to environmentally friendly design and building solutions.

As annual enrichment opportunities, the Program hosts leading thinkers and designers in its week-long Block Courses, during which regularly scheduled courses are suspended. These Block Weeks are offered in mid-October (Gillmor Theory Seminar and makeCalgary Charrette), the first week of January (Somerville Charrette), and in the third week of February (Taylor Workshop). The 2013 Gillmor Lecturer was Vittoria di Palma, an art historian from the

University of Southern California who led the students in a seminar about perceptions of unproductive or wasteful landscapes in historical and contemporary contexts. The 2013 makeCalgary Resilient charrette leaders were Stephen Cassell and Kim Yao of Architecture Research Office, a New York-based firm that led one of five design teams that proposed solutions to the effects of rising sea levels and storm surges on New York's waterfront after Hurricane Sandy. With our students they explored responses to the June 2013 floods in Calgary. The 2014 Somerville Lecturer and charrette leader was Scott Marble, who teaches design studio at Columbia University, and is partner in the New York firm Marble Fairbanks. Finally, the 2014 Taylor Workshop saw the students making small responsive designs (and one larger team project) for an exhibition in our Kasian Gallery, under the guidance of Joshua Vermillion of the University of Nevada.

For final reviews in December and April, we hosted guest critics from gh3, MJMA, and Moriyama & Teshima in Toronto, Bing Thom Architects in Vancouver, along with many Alberta practitioners from Calgary, Edmonton, and Lethbridge. On the last day of reviews in April we held a well-attended opening for our graduating show. The three senior studios in Calgary last semester each occupied a storefront in a downtown art space. Our senior studios included a tall buildings project; explorations in materials waste management, and of current scientific insights as generative of design; and research into architecture and the public realm. During the Barcelona semester, student groups tackled an urban design problem sited on a major plaza and traffic interchange in that city. In Melbourne, students took on a smaller urban design project, before moving to the outback for a one month design-build exercise. In an effort to create a record of design research in architecture, students enrolled in senior research studios (EVDA 782), both in Calgary and abroad in Barcelona and Melbourne, are completing summary research reports at the end of each term, which are then collected in a database for future referencing.

Several new elective courses were developed in the past year to further enrich educational opportunities for architecture students in their last year of study: Digital Diagrams, taught by Jason Johnson; Modern Canadian Architecture and Urbanism, by David Monteyne; Building Information Modeling (BIM), by Branko Kolarevic and David Burch (a sessional with expertise in the area); and Building Performance Simulation by Branko Kolarevic. Along with several

electives that were continued from the previous year, these courses highlight the Program's broad expertise from history and theory to building science and technology. MArch students also participated in Planning and Environmental Design electives. A popular EVDS elective was MakeCalgaryTalk, a seminar combining public engagement with social media and other modes of communication to develop a discourse around design and urban issues in Calgary; this course was taught by Lance Robinson, a former media celebrity and EVDS alumnus.

There have been a number of bureaucratic and curricular changes to the Faculty and the Program during the past year. Branko Kolarevic ended his three year term as Associate Dean (Architecture), i.e. Program Director, on June 30, 2013. David Monteyne succeeded him in that role, beginning on July 1, 2013 for a three year term. Historically, the position has rotated among the program faculty, a system that has worked well. In 2013-14, both Branko Kolarevic and Jim Love were on half-year sabbaticals. Jim Love's sabbatical preceded his retirement from the University this summer, after many years of service teaching and researching in the area of building science. We are pleased to report that Love's courses will be taken up by a replacement hire, Caroline Hachem, who begins this summer as a tenure-track assistant professor. With graduate degrees in architecture and engineering, Hachem is currently finishing a postdoctoral fellowship at Concordia University. We have also received University approval to post another tenure-track position in Structures this coming year.

At the Faculty level, the restructured Master of Planning (MPlan) degree in EVDS received the full accreditation term after the team's visit in January 2014. Unlike many Planning programs, the MPlan is studio-based and we are exploring possibilities for interdisciplinary interaction between the two degrees, in both studio and theory courses. In addition, an EVDS proposal for a new Master of Landscape Architecture degree has proceeded through University committees and will be forwarded to the Province for approval. It may be many months before we hear from the Province, but the MArch Program sees this new degree as another splendid opportunity to exploit the commonalities of curriculum, while at the same time fostering students to represent their discipline (or profession) in interdisciplinary contexts.

EVDS also has approval for changes to the Master of Environmental Design (MEDes), the Faculty's research-based thesis degree. The changes have streamlined the course requirements

for this degree so that interested MArch students could follow their professional degree by delving into research and a thesis, receiving a second, post-professional degree (MEDes) within one year. It is hoped that several MArch (and MPlan) students may take advantage of this opportunity annually.

In the Fall, EVDS received the transfer of administrative oversight for the Minor Program in Architectural Studies from the Faculty of Arts. The Minor in Architectural Studies can be taken as part of a number of four-year undergraduate degree programs at the University of Calgary, and is intended as preparation for the professional program. It consists of the same courses taken by students in our Foundation Year, the qualifying year which precedes the two-year curriculum of the professional MArch. Housing the Minor in EVDS allows us greater ability to advise, track, and to graduate students from the Minor program, and stream them toward our MArch. As a first step, we have been approved by the University to change the admission requirements to the Minor to require a small portfolio in addition to a high GPA. Formerly, the only requirement was a GPA, which excluded some students with excellent design skills or other diverse qualifications. This change will strengthen the admissions pool for the Minor, and the overall quality of the Foundation/Minor year cohort.

The transfer of the Minor to EVDS also prompted a number of curricular changes both to the Minor and to the MArch. At the time of transfer, it was brought to our attention that we required the undergraduate students to take one half-course too many, according to University standards for a Minor. In Fall 2013, we initiated the University processes to remove one half-course from the Minor requirements, specifically, the Interdisciplinary Seminar. The Interdisciplinary Seminar is required of all EVDS students. Removing it from the Minor created a situation where the Minor students, upon successful application to the MArch, will enter the two-year MArch without a course that the Foundation Year students in their cohort have taken, even though the two groups otherwise take all the same courses. In addition, we admit other students directly into the two-year MArch, if they have a design education from other universities. Therefore, we solved these multiple issues by moving the Interdisciplinary Seminar from the Foundation/Minor year to the two-year MArch curriculum, as a required course. In this way, all students will take it at the same time in their curriculum. To accommodate that course moving into the first year of the two-year MArch, we moved Professional Practice I into

the second year, Winter semester. We felt that this is a better place for the Pro Prac course, as students will take it during the final semester when they move toward graduating and entering the profession.

Moving the Interdisciplinary Seminar into the two-year MArch required the elimination of one course in order to maintain the total number of credits at the same level. We decided to eliminate the Professional Practice II course. After offering two Professional Practice courses for the past several years, we have determined that the second course did not cover any aspects of the subject that are specifically required under CACB Accreditation Terms. All the required topics are covered in Professional Practice I. Professional Practice II had been taught as an exploration into entrepreneurialism in architecture; it will continue to exist, but as an elective course (and required for a few legacy students who must complete the prior curriculum). Moreover, the Interdisciplinary Seminar supplements what is now our sole Professional Practice course, by introducing aspects of professional ethics and leadership in an interdisciplinary context. The University has approved these changes to take effect beginning in Fall 2014.

We are able to offer the Professional Practice course in the Winter semester of the second year, , because we also made the decision to move our Australia study abroad option into the Fall semester. Formerly, students had the option of Barcelona in the Fall or Australia in the Winter. By moving them to the same semester, to operate in parallel, we ensure that the full cohort of graduating students are back in Calgary for their final semester, which leads to a graduating show curated by them and the senior studio instructors.

The changes described above were prompted by local conditions and requirements in our institutional context, and by our determination to increase the efficiency and legibility of the MArch, Minor, and Foundation Year experience for the students. In the meantime, we have been addressing the causes of concern and conditions not met in our 2011 Visiting Team Report (VTR). Addressing these issues has been an ongoing pursuit for the MArch Program, as well as consuming a significant portion of our retreat discussion in June 2014, which marks the halfway point between accreditation visits to the University of Calgary.

CONDITIONS NOT MET

4. Social Equity.

The 2011 VTR noted the gender inequality among faculty members, and encouraged the Program to continue its efforts in achieving equity through the hiring of sessional instructors and in tenure-track appointments. The Program also reported on this condition in its 2013 Focused Evaluation Report.

In recent years, women have occupied three positions out of a total of thirteen full-time faculty; i.e., 23% of all full-time faculty in the Program. After an unsuccessful search for a building science person in 2012-13, we re-posted the job this year and garnered a strong pool of applicants. All three finalists invited for campus visits and interviews, were women. As noted above, we have hired a woman for this position, Caroline Hachem. With Jim Love's retirement, this raises the ratio of women to men among full-time faculty to four out of thirteen, or 31%, a significant improvement. We have also received the Provost's approval to advertize for another full-time, tenure-track position in the coming year, in the area of Structures. Hopefully, our pool of applicants will again include strong candidates who are women.

As recommended by the accreditation team, the Program has made every effort to hire women as sessional (i.e. part-time) faculty and as visiting lecturers. In 2013-14, four women were hired to teach in the Program as sessionals. Two of our outside visiting critics for final reviews were women (from Toronto and Lethbridge).

Our Program also has several high-profile visiting lecturers who teach the Block Week courses described above. Two of the visitors were women this year. We will continue to actively recruit women to these visiting lectureship positions which are highly visible in our local community.

12. Student Performance Criteria

A6. Human Behaviour.

According to the 2011 VTR, evidence of understanding the relationship between human behavior, the natural environment and the design of the built environment was not sufficiently found in the Interdisciplinary Seminar or in Formal Strategies in Architecture. The latter course has been changed from a precedents-driven course to a course focused on architectural theory, which includes significant material on human behaviour and social/political systems. Moreover, our course Sustainability in the Built Environment spends multiple weeks on aspects of social sustainability, while our History sequence continues to emphasize the social aspects of architectural development, from human needs for boundaries and monuments, to the interaction of people across urban and institutional built environments of the past. Studio courses include aspects of Human Behaviour as well: in particular, Studio II which focuses on multi-unit residential buildings; and Studio III which foregrounds the program preparation for a more complex, multi-use building that satisfies diverse human needs. Finally, we have recently re-thought the Fall semester of the second year in our MArch, which includes our study abroad options. Driven by the urban design focus of the Barcelona studios in recent years, and the complementary Urban Systems course that is taught there as well, we have decided to similarly align the Australia (now exclusively in Melbourne) and Calgary curricula around issues of urbanism in what we are calling "City Studios." A new urban theory course will be developed by local instructors in Melbourne for our MArch and MPlan students, while the students who remain in Calgary during that semester will receive an urbanistic studio, and will enroll in the Planning History and Theory course offered by our MPlan program. As a bonus, this facilitates more interdisciplinary touch points for EVDS professional degrees, with professional collaboration being one aspect of Human Behaviour.

A7. Cultural Diversity.

The 2011 VTR noted that this SPC was marginally satisfied in the two History courses. To complement and complete the coverage of this SPC, Cultural Diversity is a key aspect of the program for the multi-unit residential buildings in Studio II, and often is

a focus of Studio III and IV, and senior studios. For example, the building program for Studio IV (the Comprehensive Studio) in 2014 was a Centre for Dialogue of Civilizations, while in 2013 it was a Calgary Centre for Aboriginal Culture, which involved local First Nations as consultants and critics. While our students have always had the opportunity to be exposed to diverse cultures during our study abroad semesters, our new City Studios concept will reinforce a focus on urbanism and diverse urban cultures through theory courses and an optional travel opportunity embedded in the studio course for students who remain in Calgary.

B2. Program Preparation.

This SPC is addressed primarily in three design studios, the Intermediate Studio and Comprehensive Design Studio, and to some extend in Studio II (multi-use residential buildings). In these studios students develop a program for the buildings they design by analyzing the precedents pertinent to the building type or modifying the template program according to a project's site, function, or intention. Program development is most central to the Intermediate Studio. Given that the previous Visiting Team did not see evidence of this, we have decided during our recent MArch Program retreat that the Intermediate Studio will henceforth include a standalone assignment or deliverable that specifically demonstrates the students' process of preparing a program.

B3. Site Design.

This SPC is covered as a concept in our course Sustainability in the Built Environment, including a separate assignment on Site Design. Site is analyzed and responded to in all the first four studios, but the 2011 Visiting Team noted that the ability of students to respond to site conditions was not clearly evident. In recent years, Studio I clearly has been driven by site conditions, with all the students research and interventions grounded in the terrain and meanings of a local park along the Bow River. Likewise, in Intermediate Studio this year students were asked to respond innovatively to sites in Calgary's river floodplains, with an eye to designing resilient public buildings. Designs in the Comprehensive Studio clearly respond to site as well; this year's site was a corner

in the downtown grid, which resulted in students approaching the site in relation to neighboring buildings and uses. Finally, though they are elective studios, many of our senior studios take serious approaches to site, through urban design and studies of the public realm (e.g., our studios abroad). For next year, we have planned to make the senior studios of the Fall semester more consistent across Barcelona, Melbourne, and Calgary; all these studios will focus on urbanism, and the urban site context for designs.

B4. Sustainable Design.

The principles and theory of sustainability are taught in our required course on Sustainability in Built Environment and in the Interdisciplinary Seminar. According to the Visiting Team, however, the integration of Sustainable Design in the studio courses was lacking. It is true that we do not offer a specific studio in Sustainable Design. Our first four studios incorporate sustainable design tenets in different ways and to different extents. Studio I in its grounding within the specific landscape of a park considers broad ecological issues; Studio II is concerned with social sustainability in its program for multi-use residential buildings, often for groups at risk; Intermediate Studio projects of the last few years have tasked students with developing a strategy in relation to sustainability and resilience for their overall design approach; and the Comprehensive Studio asks students simply to diagram the sustainability solutions included in their design. As was decided at a recent retreat, it is our goal to make sustainable design more central to the Comprehensive Studio, partly by foregrounding sustainable solutions in the technical courses and technical desk crits that are integrated with this studio. Finally, a number of our elective senior studios take on approaches to sustainability through materials recycling, responsive environments, or urban design.

B5. Accessibility.

Accessibility is addressed in relation to codes in both Building Science & Technology II and in Architectural Professional Practice I. In the latter course, a major assignment worth 25% of the course grade evaluates the student's competence in this subject. This

building codes assignment is entirely focused on the barrier-free design section of the Alberta Building Code. Currently, there is no specific studio assignment that explicitly requires barrier-free design, and this will be a subject discussed by the Program in the coming year.

C4. Comprehensive Design.

Our MArch curriculum addresses comprehensive design criteria through the Comprehensive Studio, in which students integrate structural and environmental systems, building envelopes, building assemblies, life-safety provisions, and environmental stewardship. That studio is closely coupled with Structures II, Environmental Control Systems, and Building Science and Technology II, and includes desk crits by the instructors of these technical courses. The Visiting Team noted one problem was that students worked in pairs in this course, which impeded our ability to demonstrate that each individual student had developed the ability for comprehensive design. Beginning this year we have eliminated the partner projects and have students undertaking this studio solo. At the same time, we have decreased the size of the project to approximately 1800m2 to allow students to wholistically engage with their design and its technical details. In addition, see the first Cause of Concern, below.

CAUSES OF CONCERN

1. *The Comprehensive Design project appears early in the Master's Program, and while exhibiting evidence of understanding, the work does not indicate ability. The projects represent the first substantive and complex building program that a student encounters, and while being explorative in nature, there is concern for the lack of a full comprehension of the complex integration of all technical factors with design.*

A substantive building program in the form of a multi-use residential building is now incorporated into Studio II. As well, the programs developed in the Intermediate Studio are substantive and complex public buildings. These precede the Comprehensive Design Studio. In the Comprehensive Studio, the size and complexity of the program have actually been reduced in recent years, allowing the students ample

opportunity for developing the ability to integrate technical factors in their designs. New faculty members in building science and structures will be tasked with finding efficiencies and opportunities to more clearly integrate the technical courses with the design studio, and it is hoped that a clearer mandate of sustainability for this semester will bring a legibility to the comprehensive nature of the students' processes and results.

2. *While teamwork accelerates production, individual advance as prescribed by the CACB is difficult to assess. The proliferation of group projects presented in the Team Room – Comprehensive Studio EVDA 682.04, Intermediate Studio EVDA 682.02, Research Studios EVDA 782.01, Research Studio (Barcelona) EVDA 782.17, and Structures 1 EVDA 613, for example – suggest that an entire advanced program of studies at the Masters level is devoted to collaborative practice. We recommend that the Program seek a more balanced strategy inclusive of both collaborative and individual work.*

The Program has responded to the concern over teamwork expressed by the Visiting Team. In general, since the accreditation visit group assignments in studio have been limited to early, analytical phases of design studios, and the final projects have been developed by each student individually. Most recently, we have instituted this policy in the Comprehensive Studio as well, even though this requires significant teaching resources. The individual Comprehensive Studio projects of this year were well-resolved, and we will continue to search for efficiencies in the fostering of solo projects. Moreover, there are now fewer group projects in non-studio courses, as we have attempted to strike a balance between individual engagement and collaboration. While group projects remain central to the studios abroad in Barcelona and Melbourne, which seems entirely appropriate to the contexts and course objectives, teamwork has become significantly more scarce in the first four core studios.

3. *Integration of ecological and environmental systems with design - as defined in the Statement of Philosophy - requires strengthening.*

Ecological thinking frames the themes and pedagogies in all studio offerings of the degree, from Foundation to Senior Research Studios. That does not mean that every

studio advocates for green buildings or building systems. Rather, ecologies are considered broadly as systems for the integration of environments and life. This includes regional ecosystems, social relationships, site design, urban context, and life-support systems within a building, whether biological or psychological. Broad ecological thinking also informs non-studio courses like Sustainability in the Built Environment and the Interdisciplinary Seminar, two courses that are relatively unique to our MArch degree curriculum. In retrospect, though, our position statement and its relation to studio themes and pedagogies lacked clarity, and we will re-frame this in a new vision statement associated with our next strategic plan (2015-2020).

4. *A full review of the role and capacity of Studio spaces and the Computer Lab in the new Master of Architecture program is recommended in order to maintain relevance in relation to teaching and research.*

In 2012, EVDS received funds from the University's facilities allocation to reconfigure and upgrade the existing Computer Lab as a more efficient teaching facility. The two smaller labs and adjacent auxiliary spaces were joined into a large computer classroom equipped with two overhead projectors and state-of-the-art computer workstations, enabling courses to be taught there. In addition, we have rationalized our system and schedule for updating the hardware and software in the lab. Space planning exercises have demonstrated that there is ample capacity in the studio spaces to safely and comfortably accommodate all the MArch students. All the chairs in the studio spaces will be replaced this summer.

5. *An air quality assessment and upgrade of the air handling capacity in the Material and Fabrication Labs is urgently recommended.*

Substantial upgrades were made to the Workshop in 2012, with funding from the facilities allocation and the Provost's Office. Each of the two CNC machines, and the laser cutters, are housed in separate rooms with dedicated air handling units.

6. *Efforts should be made to enhance the Program's profile within the University.*

In 2011, the Program has launched an introductory undergraduate course in architecture and design that was immediately filled to its maximum capacity of 120 students, and continues to fill each year since. The existing Minor in Architectural Studies, now patriated to EVDS, continues to attract a large number of applicants with high GPAs. The Faculty and the Program are therefore cognizant of the strong interest in design instruction among undergraduates, though we are currently limited in our offerings by available resources, both in terms of space and instructional capacity. That being said, the exploration of a potential design studies undergraduate degree is part of the EVDS strategic plan, so we may be able to expand in this area in the future. Related to research, a significant increase in major grant applications by MArch faculty members has raised our profile at the University. Likewise, EVDS has convinced the University to award honourary doctorates to two designers in the past two years: Raymond Moriyama in 2013 and Cornelia Hahn Oberlander in 2014. Both of these prestigious presentations and addresses at University Convocation were accompanied by corresponding events held in the Faculty. Finally, a range of EVDS efforts in which MArch faculty have taken leading roles, have in tandem raised the profile of the MArch Program: recent lecture series, design charrettes, days of service, and other events have kept us continuously in the spotlight, both internally and externally.

Canadian Architectural Certification Board | Conseil canadien de certification en architecture

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December 16, 2014

Mr. David Monteyne
Associate Dean of Architecture,
Faculty of Environmental Design
University of Calgary
2500 University Drive NW
Calgary, Alberta T2N 1N4

Re: Annual Report-Master of Architecture Program

Dear Professor David Monteyne,

CACB CCCA

At its last fall meeting held on November 14-15, 2014, the Canadian Architectural Certification Board accepted the 2013-2014 Report (statistics and narrative) submitted by the Program. The Board would like to thank you for using the template forwarded to you by the CACB Office to that extent.

The Board requests the Program to report in its 2014-2015 Annual Report (statistics and narrative) on the conditions identified as not met as well as each cause of concern brought to light by the Visiting Team in 2011.

Attached is the 2011 Visiting Team Chair's review of the 2013-2014 Annual Report.

Sincerely,

Sean. F Rodrigues
President

A-4• Human Resources Statistics Report • 2014– 2015

School or Program : University of Calgary

Professional Degree Accredited	Total nb of credits / degree	Total nb of terms / degree	Nb of credits / term	Nb of hours / credit	Total nb of hours / degree
• Master of Architecture degree	10.25	4	2.56	6	61.5
with a related pre-professional bachelor's degree					
• Master of Architecture degree	15.75	6	2.62	6	94.5
without a pre-professional requirement, and consisting of an undergraduate degree plus a minimum of three years of professional studies					
• Bachelor of Architecture degree					
minimum of five years of study, except in Quebec, where four years of professional studies follow two years of CEGEP studies					

Faculty Data	Faculty Credentials (highest degree only) Full-time (FT) + Part-Time (PT)													
	Ph.D or D.Arch		Post-Prof Ms		Prof. M.Arch		B.Arch		Other		Licensed architects		Studio teaching	
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT
Regular Faculty	5		5		3						4		9	
Men	4		3		2						3		7	
Women	1		2		1						1		2	
Total FT Equivalent (FTE) Regular Faculty: Number of FT Regular Faculty + a figure equating PT Regular Faculty	13													
Typical FT teaching load / year	(a) 2 studios + 1 course or (b) 4 courses													
Other Faculty														
• Visiting		1		2		1						2		1
• Adjunct • Sessional • Lecturer		1		4		16						10		10
• Ph.D Candidate		2										1		
Men		2		3		13						6		8
Women		2		3		4						5		3
Total FT Equivalent (FTE) Other Faculty: a figure equating other faculty on the basis of a typical FT teaching load	9													
Total FTE Regular + Other Faculty	22													
Total Regular and Other Faculty who are licensed architects											17			
Total Regular and Other Faculty teaching in studio													20	
Nb of pre-professional studios taught by all Faculty for the year													0	
Nb of Masters studios taught by all Faculty for the year													6	

Student Data	Pre-professional degree				Master of Architecture degree or Bachelor of Architecture degree			
	Fall	Winter	Summer	Mean/yr	Fall	Winter	Summer	Mean/yr
Full-Time Students					122	119		120.5
Men (optional)					65	61		
Women (optional)					57	58		
Part-Time Students					0	0		
Men (optional)					0	0		
Women (optional)					0	0		
Total Full-Time Equivalent (FTE) Students [1]					122	119		120.5
FTE Foreign Students [2] (optional)					9	9		
Students in Design Studio					122	119		120.5
Studio Ratio (Students in Design Studios / Nb studios taught for a year)					1:12			
	Fall	Winter	Summer	Total/yr	Fall	Winter	Summer	Total/yr
Number of applicants for a given term and total for a year					203			203
Number of entering students for a given term and total for a year					52			52
With advanced standing (optional)					16			16
Total Degrees Awarded-Expected for a given term and total for a year							41	41
Men (optional)							22	22
Women (optional)							19	19
Graduation Rate (%) [3]								82%

1 Full-Time Equivalent Students (FTE): Number of full-time students reported above + number of full-time equivalent for part-time students calculated on the basis of a full course load required to complete the program in the normal number of terms.

2 FTE Foreign Students : Students included in Total FTE Students who are not Canadian citizens or landed immigrants.

3 No of degrees awarded or expected / No of entering students at the beginning of the degree.

University: Calgary

Faculty: Environmental Design

ANNUAL REPORT TO CACB-CCCA

Narrative Section

Program: MASTER OF ARCHITECTURE (M. Arch)

Academic Year: 2014-15

Head of the Program (Name): David Monteyne

Signature:

Date: June 25, 2015

1- INTRODUCTION

The Master of Architecture (MArch) Program in the Faculty of Environmental Design (EVDS) at the University of Calgary has experienced a successful year in 2014-15, with diverse studio projects, significant developments in faculty research funding, and the broad exposure of faculty and student work, including a number of awards.

Faculty research progressed with three books just released or in progress, success with large national research grants, and design awards. Books by our faculty members include a volume on responsive architecture co-edited by Professor Branko Kolarevic and Assistant Professor Vera Parlac; a collection of writings on Deleuze and architecture edited by Professor Graham Livesey; and Assistant Professor Jason Johnson is co-authoring a book on teaching students processes for digital design and fabrication. All three books will be published with Routledge; the first two listed are already out. Johnson also landed a large SSHRC Insight Grant to support community partnerships in digital design and fabrication. Our newest Assistant Professor, Caroline Hachem-Vermette, also won an NSERC Discovery Grant for her work on the energy modeling of communities.

Among other accolades received by our faculty and students, Associate Professor Marc Boutin's firm garnered a series of awards, and their Poppy Plaza project in Calgary was named to the Top Ten projects in the world by Landscape Architects Network. Parlac exhibited her work in responsive design in Belgrade last Winter. Kolarevic continues to lecture internationally about the cutting edge of digital design practice, and was visiting professor in Warsaw during his sabbatical this past Spring. Professor John Brown was recently appointed to the RAIC Board of Directors.

We recognized alumnus Chris Roberts with EVDS' first annual Distinguished Contribution Award. Roberts is an alumnus of the MArch Program from 1979, and recently retired as partner from Simpson Roberts Architecture where he was responsible for such commissions as the Environmental Education and Ethics Centre at Ralph Klein Park. Chris began teaching building science courses with EVDS as a sessional in the late 1990s. His commitment to the technical design reviews, which integrate his building science course into our Comprehensive Studio, has been highly valued by our students. The Award itself was designed by Associate Professor Barry Wylant, and fabricated in our workshop. The presentation was made before a good audience at one of EVDS' Design Matters public lectures.

Several of our faculty members and sessionals were involved in planning for the RAIC Festival, which brought architects from across Canada to Calgary the first week of June. There were exhibits of student and alumni work, as well as a pavilion designed and fabricated by our faculty and students.

Our students were successful on a number of fronts, most notably the pair of Amber Lafontaine and Sophia Yi who won a sizable first prize in the Humanitarian Category of an international competition sponsored by Sunbrella. Their design for flexible, expandable, and dignified, UN-standard refugee tents was developed in their graduating senior studio with Professor Livesey. Our students and alumni also showed well in the international Lost Spaces competition run by Calgary's dtalks. Although eight of the eleven prizes went to international designers, a pair of our students won honourable mention, a pair of our alumni were on a team winning in a "field prize," and an incoming MArch student also won a "field prize."

As our premier annual enrichment opportunities, the Program sends senior students on study abroad semesters and also hosts leading thinkers and designers in its week-long Block Courses. Our study abroad semesters include our long-established studio in Barcelona, and the more recently-developed offering in Melbourne. The Block Weeks, during which regularly scheduled courses are suspended, are offered in mid-October (Gillmor Theory Seminar), the first week of January (Somerville Charrette), and in the third week of February (Taylor Workshop and makeCalgary Seminar). The 2014 Gillmor Lecturer was Mary McLeod, an architectural historian from Columbia University, who led the students in a seminar discussing gender and modernism. The 2015 Somerville Lecturer and charrette leader was Rick Joy, who runs a celebrated design firm in Tucson, famed for its place-based architecture. The 2015 Taylor Workshop saw the students exploring digital fabrication for an exhibition in our Kasian Gallery, under the guidance of IK Studio (Mariana Ibañez and Simon Kim, Cambridge, MA).

Finally, the 2015 makeCalgary Equitable charrette leaders were MPlan Assistant Professor Greg Morrow and Los Angeles planner James Rojas, who led mostly architecture students in a series of community consultation events in an under-served and car-dominated neighbourhood in northeast Calgary. The trajectory of this course continues through the summer and into another Block Course next Fall. The makeCalgary series of events and courses, managed the past several years by a committee including MArch faculty and alumni partnering with others in the University and local communities, has become a *cause célèbre*, with University administration looking to it as a model of community engagement.

For final reviews in December and April, we hosted guest critics from atelier big city and Atelier Paul Laurendeau in Montréal, KPMB in Toronto, Manasc Isaac and DIALOG in Edmonton, and others from Vancouver, Fargo, and Toronto, along with many Alberta practitioners from Calgary and Edmonton. On the last day of reviews in April we held a well-attended opening for our graduating show, which was organized completely by the students. The wisdom of our decision to have all students back in Calgary for their final semester (formerly, the Australia study abroad was in our Winter semester) was confirmed in many ways, as it allowed a critical mass for the show and for convocation, and raised the energy level of their graduating studios. Our senior studios this year included a tall buildings project; a cemetery master plan and funerary architecture; laneway house design-build; and UN refugee housing design-build; and a competitions studio with prizes sponsored by an Edmonton non-profit. During the Barcelona semester, student groups tackled an urban design problem sited on a major plaza and traffic interchange in that city. In Australia, students undertook an urban design competition for a small city centre near Canberra, and won the people's choice award for their work.

A range of elective courses, several of them new, were offered in the past year to further enrich educational opportunities for architecture students in their last year of study: Current Themes in Architectural History, by David Monteyne; Building Information Modeling (BIM), by David Burch (a sessional with expertise in the area); Building Performance Simulation by PhD candidate Salman Khalili; Product Design by Barry Wylant; Housing and the Domestic by John Brown; Architecture and Anonymity by Josh Taron; and Solar Building Envelope Design by Caroline Hachem-Vermette. These courses highlight the Program's broad expertise from history and theory to building science and technology. MArch students also participated in Planning and Environmental Design electives. A popular EVDS-wide elective was makeCalgaryTalk, a seminar combining public engagement with social media to develop a discourse around design and urban issues in Calgary; this course was taught by Matt Knapik, an MArch alumnus.

2- STATEMENT OF CHANGES TO THE PROGRAM

There are few substantive changes to the Program to report on this year. After a year (2013-14) in which we initiated many changes to the curricular structure and organization of the Program, this past academic year has been devoted to operationalizing that structure and testing it in practice. The curricular changes described in great detail in last year's report to CACB will be fully effected by the end of the coming academic year. For instance, this Fall will see a full complement of MArch students return to the Interdisciplinary Seminar (now called Conceptual Bases in Environmental Design) after a gap year where we re-positioned this course in the curriculum; this coming Winter will be the first time Professional Practice is offered in the last semester of the students' senior year in the degree.

Last year we received approval from the University to require a portfolio from applicants to our undergraduate Architectural Studies Minor, and this past Spring's admissions cycle was the first for which this was in effect. The portfolio requirement reduced the number of applications, but seems to have ensured that we have access to a range of more experienced applicants with preexisting design skills. Once these admittees enter the studio, graphics, and other courses that constitute our Minor we will be able to confirm whether this change has improved student success and retention in the Minor.

One year ago, EVDS received permission from the Provost to hire in a new tenure-track position teaching the Structures courses in the MArch Program. Happily, we can report that we have hired a new Assistant Professor in this role who begins August 1. Mauricio Soto has his architecture degree from Venezuela and significant international practice experience designing lightweight structures; he comes to us from a teaching post at the California College of the Arts in San Francisco.

At the Faculty level, there have been a few significant developments. Above all, the EVDS proposal for a new Master of Landscape Architecture degree has been approved by the Province, and takes in its first cohort of about ten students this Fall. The MArch Program sees this new degree as another splendid opportunity to exploit the commonalities of curriculum, while at the same time fostering students to represent their discipline (or profession) in interdisciplinary contexts. The MLA and MArch Foundation Year students will share studio space this Fall. In addition, the Faculty has put forward a proposal for an international certificate in Sustainable Urban Design, based on two sets of paired nine-day courses taken in Spring/Summer, and a capstone project undertaken at a distance, and we hope to enroll students in this certificate as early as next Spring. MArch faculty members may teach in or contribute to this certificate. We are also exploring further post-professional certificate offerings.

3- RESPONSE TO TEAM FINDINGS

3.1- CAUSES OF CONCERN

1. *The Comprehensive Design project appears early in the Master's Program, and while exhibiting evidence of understanding, the work does not indicate ability. The projects represent the first substantive and complex building program that a student encounters, and while being explorative in nature, there is concern for the lack of a full comprehension of the complex integration of all technical factors with design.*

A substantive building program in the form of a multi-use residential building is now incorporated into Studio II. As well, the programs developed in the Intermediate Studio are substantive and complex public buildings. These precede the Comprehensive Design Studio. In the Comprehensive Studio, the size and complexity of the program have been reduced since the 2011 accreditation visit, allowing the students ample opportunity for developing the ability to integrate technical factors in their designs. New faculty members in building science and structures have been hired in the past two years, and they will be tasked with finding efficiencies and opportunities to more clearly integrate the technical courses with the design studio.

2. *While teamwork accelerates production, individual advance as prescribed by the CACB is difficult to assess. The proliferation of group projects presented in the Team Room – Comprehensive Studio EVDA 682.04, Intermediate Studio EVDA 682.02, Research Studios EVDA 782.01, Research Studio (Barcelona) EVDA 782.17, and Structures 1 EVDA 613, for example – suggest that an entire advanced program of studies at the Masters level is devoted to collaborative practice. We recommend that the Program seek a more balanced strategy inclusive of both collaborative and individual work.*

The Program has responded in several areas to the concern over teamwork expressed by the Visiting Team. In general, since the accreditation visit group assignments in studio have been largely limited to early, analytical phases of design studios, and the final projects have been developed by each student individually. While group projects remain central to the studios abroad in Barcelona and Melbourne, which seems entirely appropriate to the contexts and course objectives, teamwork has become significantly more scarce in the first four core studios. Moreover, there are now fewer group projects in non-studio courses, as we have attempted to strike a balance between individual engagement and collaboration. Last year, we had instituted a solo project in the Comprehensive Studio as well. Although the individual Comprehensive Studio projects of last year were well-resolved, the teaching team was adamant that the workload of this studio was such that students and instructors were better served with paired projects. In particular, it was very difficult for the instructors of the technical courses to meet with students and advise on double the number of studio projects (i.e., with solo projects). Pairing the students up makes these technical desk crits manageable, but raises the issue of individual assessment in the technical courses. This year, to ensure students were assessed individually on the technical aspects of Comprehensive Studio and its related technical courses, we instituted two assignments. First, students each kept a desk journal in which they recorded design development decisions around the integration of building systems, with their justifications and understanding of why they made certain decisions. Second, we introduced a technical review, separate from the design studio reviews, in which students present their building system design decisions to a panel of the technical course instructors who are able to question the individual students on their understanding and ability to integrate building technologies. After one semester using this assessment plan, we felt that it was successful in its goals, though subject to some fine-tuning in the coming year—e.g., better communicating to students the expectations for their presentations at the technical review.

3. *Integration of ecological and environmental systems with design - as defined in the Statement of Philosophy - requires strengthening.*

Ecological thinking frames the themes and pedagogies in all studio offerings of the degree, from

Foundation to Senior Research Studios. That does not mean that every studio advocates for green buildings or building systems. Rather, ecologies are considered broadly as systems for the integration of environments and life. This includes local ecosystems, social relationships, site design, urban context, and life-support systems within a building, whether biological or psychological. Broad ecological thinking also informs non-studio courses like Sustainability in the Built Environment and the Interdisciplinary Seminar (now Conceptual Bases in Environmental Design), two courses that are relatively unique to our MArch degree curriculum. In retrospect, though, our position statement and its relation to studio themes and pedagogies lacked clarity, and we will re-frame this in a new vision statement associated with our next strategic plan (2015-2020). This strategic plan was a main subject of discussion at our May 2015 Program retreat and will be completed in the coming months.

4. *A full review of the role and capacity of Studio spaces and the Computer Lab in the new Master of Architecture program is recommended in order to maintain relevance in relation to teaching and research.*

In 2012, EVDS received funds from the University's facilities allocation to reconfigure and upgrade the existing Computer Lab as a more efficient teaching facility. The two smaller labs and adjacent auxiliary spaces were joined into a large computer classroom equipped with two overhead projectors and state-of-the-art computer workstations, enabling courses to be taught there. In addition, we have rationalized our system and schedule for updating the hardware and software in the lab. Space planning exercises have demonstrated that there is ample capacity in the studio spaces to safely and comfortably accommodate all the MArch students. In fact, as mentioned above, we are also accommodating the incoming MLA students in our studios this Fall. All the chairs in the studio spaces were replaced last summer. Also last summer, in parts of the MArch studios less desirable for desks, three new pinup spaces were created to allow for more specifically communal areas.

5. *An air quality assessment and upgrade of the air handling capacity in the Material and Fabrication Labs is urgently recommended.*

Substantial upgrades were made to the Workshop in 2012, with funding from the facilities allocation and the Provost's Office. Each of the two CNC machines, and the laser cutters, are housed in separate rooms with dedicated air handling units.

6. *Efforts should be made to enhance the Program's profile within the University.*

In 2011, the Program launched an introductory undergraduate course in architecture and design that was immediately filled to its maximum capacity of 120 students, and continues to fill each year since. We just graduated our first student who began with this introductory course, then proceeded to the Minor and the MArch. There are also two new introductory undergraduate courses in environmental design offered by the Faculty. The existing Minor in Architectural Studies, now patriated to EVDS, continues to attract a large number of applicants with high GPAs. The Faculty and the Program are therefore cognizant of the strong interest in design instruction among undergraduates, though we are currently limited in our offerings by available resources, both in terms of space and instructional capacity. That being said, the exploration of a

potential design studies undergraduate degree is part of the EVDS strategic plan, so we may be able to expand in this area in the future.

Related to research, a significant increase in major grant applications —and recent success in these— by MArch faculty members has raised our profile at the University. Likewise, EVDS recently has convinced the University to award honourary doctorates to two designers: Raymond Moriyama in 2013 and Cornelia Hahn Oberlander in 2014. Both of these prestigious presentations and addresses at University Convocation were accompanied by corresponding events held in the Faculty. A range of EVDS efforts in which MArch faculty have taken leading roles, have in tandem raised the profile of the MArch Program: recent lecture series, design charrettes, days of service, and other events have kept us continuously in the spotlight, both internally and externally. Finally, EVDS' series of makeCalgary events, going back now to 2011, have created a well-recognized brand for the Faculty. makeCalgary is a themed series of symposia, charrettes, participatory planning exercises, and other events that has addressed issues such as culture in the city, resilience, health, and equity. The University looks to EVDS and makeCalgary as a model for other Faculties and Institutes in the areas of branding, community engagement, fundraising, and student experience.

3.2- CONDITIONS AND SPC ''NOT-MET''

4. Social Equity.

The 2011 VTR noted the gender inequality among faculty members, and encouraged the Program to continue its efforts in achieving equity through the hiring of sessional instructors and in tenure-track appointments. The Program also reported on this condition in its 2013 Focused Evaluation Report.

In previous years, women had occupied three positions out of a total of thirteen full-time faculty; i.e., 23% of all full-time faculty in the Program. After an unsuccessful search for a building science person in 2012-13, we re-posted the job the following year and hired a woman for this position, Caroline Hachem-Vermette. With Jim Love's retirement, this raised the ratio of women to men among full-time faculty to four out of thirteen, or 31%. This past year we hired for another full-time, tenure-track position in the area of Structures. Unfortunately, our pool of applicants did not include any strong women candidates. With this hire being male, our ratio in the upcoming year will be 4 women out of 14, or 29%.

As recommended by the accreditation team, the Program has made every effort to hire women as sessional (i.e. part-time) faculty and as visiting lecturers. Last summer, the Associate Dean-Architecture spent significant time and effort recruiting new women sessionals to teach studio. In each of the past two years, four women were hired to teach in the Program as sessionals, plus one more in each of our study abroad locations. Two of our outside visiting critics for final reviews were women.

Our Program also has several high-profile visiting lecturers who teach the Block Week courses described above. Two of the visitors were women in each of the last two years (though one did not make it on site due to a blizzard in the East). We will continue to actively recruit women to these visiting lectureship positions which are highly visible in

our local community. It should also be noted that the Dean of EVDS, and many of the highest-level administrative positions at the University (President, Provost, several Vice-Presidents and other Deans) are women.

12. Student Performance Criteria

A6. Human Behaviour.

According to the 2011 VTR, evidence of understanding the relationship between human behavior, the natural environment and the design of the built environment was not sufficiently found in the Interdisciplinary Seminar or in Formal Strategies in Architecture. The latter course has been changed from a precedents-driven course to a course focused on architectural theory, which includes significant material on human behaviour and social/political systems. Moreover, our course Sustainability in the Built Environment spends multiple weeks on aspects of social sustainability, while our History sequence continues to emphasize the social aspects of architectural development, from human needs for boundaries and monuments, to the interaction of people across urban and institutional built environments of the past. Studio courses include aspects of Human Behaviour as well: in particular, Studio II which focuses on multi-unit residential buildings; and Studio III which foregrounds the program preparation for a more complex, multi-use building that satisfies diverse human needs. Finally, we have recently re-thought the Fall semester of the second year in our MArch, which includes our study abroad options. Driven by the urban design focus of the Barcelona studios in recent years, and the complementary Urban Systems course that is taught there as well, we have decided to similarly align the Australia (now exclusively in Melbourne) and Calgary curricula around issues of urbanism in what we are calling "City Studios." A new urban theory course has been developed by local instructors in Melbourne for our MArch and MPlan students, while the students who remain in Calgary during that semester will receive an urbanistic studio, and will enroll in the Urban Design Theory course offered by our MPlan program. As a bonus, this facilitates more interdisciplinary touch points for EVDS professional degrees, with professional collaboration being an aspect of Human Behaviour.

A7. Cultural Diversity.

The 2011 VTR noted that this SPC was marginally satisfied in the two History courses. To complement and complete the coverage of this SPC, Cultural Diversity is a key aspect of the program for the multi-unit residential buildings in Studio II, and often is a focus of Studio III and IV, and senior studios. For example, senior studios this past year included designs for aging-in-place, inclusive cemetery design, and flexible refugee housing for diverse cultural situations. In addition, our Interdisciplinary Seminar (Conceptual Bases in Environmental Design) will be re-focused this coming year on environmental design problems of global cities, pushing students to look beyond local sites to the "global South" and other urban situations.

B2. Program Preparation.

This SPC is addressed primarily in three design studios, the Intermediate Studio and Comprehensive Design Studio, and to an increasing extent in Studio II (multi-use residential buildings). In these studios students develop a program for the buildings they design by analyzing the precedents pertinent to the building type or modifying the template program according to a project's site, function, or intention. Program development is most central to the Intermediate Studio. Given that the previous Visiting Team did not see evidence of this, we decided during the 2014 Program retreat that the Intermediate Studio will henceforth include a standalone assignment or deliverable that specifically demonstrates the students' process of preparing a program.

B3. Site Design.

This SPC is covered as a concept in our course Sustainability in the Built Environment, including a separate assignment on Site Design. Site is analyzed and responded to in all the first four studios, but the 2011 Visiting Team noted that the ability of students to respond to site conditions was not clearly evident. Studio I was re-structured last year to take on an urban park site, with students deploying urban studies methods to determine paths, usage, and diversity in perceptions to inform their designs. In Studio II, the semester began with a sectional analysis of downtown land use, to project future development before students focused on a site for their multi-unit residential building. Designs in the Comprehensive Studio clearly respond to site as well; this year's site was a triangular corner in Calgary, wedged between an established neighbourhood and a coming transit-oriented development, which resulted in students approaching the site in relation to neighboring buildings and uses. Finally, though they are elective studios, many of our senior studios take serious approaches to site, through urban design and studies of the public realm (e.g., our studios abroad).

B4. Sustainable Design.

The principles and theory of sustainability are taught in our required courses on Sustainability in the Built Environment and Conceptual Bases in Environmental Design. According to the Visiting Team, however, the integration of Sustainable Design in the studio courses was lacking. It is true that we do not offer a specific studio in Sustainable Design. Our first four studios incorporate sustainable design tenets in different ways and to different extents. Studio I in its grounding within the specific landscape of a park considers broad ecological issues; Studio II is concerned with social sustainability in its program for multi-use residential buildings, often for groups at risk; Intermediate Studio projects of the last few years have tasked students with developing a strategy in relation to sustainability and resilience for their overall design approach; and the Comprehensive Studio asks students to diagram and discuss the sustainable solutions included in their design. Our technical courses, taught by national leaders in sustainability research, foreground sustainable solutions through classroom material, exams, field trips, and technical desk crits and reviews that are integrated with the Comprehensive Studio. Finally, a number of our elective senior studios recently have taken on approaches to sustainability through materials recycling, responsive environments, densification, resilient housing, or urban design.

B5. Accessibility.

Accessibility is addressed in relation to codes in both Building Science & Technology II and in Architectural Professional Practice. In the latter course, a major assignment worth 25% of the course grade evaluates the student's competence in this subject. This building codes assignment is entirely focused on the barrier-free design section of the Alberta Building Code. Currently, there is no specific studio assignment that explicitly requires design of a barrier-free environment, though universal design requirements are embedded in the Comprehensive Studio. Accessibility was also a central component to our senior studio design-build of a laneway house for aging-in-place this year.

C4. Comprehensive Design.

Our MArch curriculum addresses comprehensive design criteria in multiple studios, but primarily through the Comprehensive Studio, in which students integrate structural and environmental systems, building envelopes, building assemblies, life-safety and accessibility provisions, and environmental stewardship. That studio is closely coupled with Structures II, Environmental Control Systems, and Building Science and Technology II, and includes desk crits by the instructors of these technical courses. The Visiting Team noted one problem was that students worked in pairs in this course, which impeded our ability to demonstrate that each individual student had developed the ability for comprehensive design. As explained above (see the first and second Causes of Concern), we experimented one year with solo projects in the Comprehensive Studio. However, it was decided by the teaching team in discussion with the Program faculty, that having the students work in pairs was better for a number of reasons. In returning to pairs we have instituted two new methods of individual assessment. Since 2011, we also have decreased the size of the project to approximately 1800m2 to allow students to wholistically engage with their design and its technical details. In general, we remain proud of our accomplishments in the Comprehensive Studio semester, and exhibited the best of the student work from it at the recent RAIC Festival here in Calgary.

4- OTHER RELEVANT INFORMATION

MArch Program activities and initiatives are discussed in the Introduction, above.

A-4• Human Resources Statistics Report • 2015 – 2016

School or Program: Master of Architecture Program, EVDS, University of Calgary

Professional Degree Accredited	Total nb of credits / degree	Total nb of terms / degree	Nb of credits / term	Nb of hours / credit	Total nb of hours / degree
• **Master of Architecture degree**	10.25	4	2.56	6	61.5
with a related pre-professional bachelor's degree					
• **Master of Architecture degree**	**15.75**	**6**	**2.62**	**6**	**94.5**
without a pre-professional requirement, and consisting of an undergraduate degree plus a minimum of three years of professional studies					
• **Bachelor of Architecture degree**					
minimum of five years of study, except in Quebec, where four years of professional studies follow two years of CEGEP studies					

Faculty Data	Faculty Credentials (highest degree only) Full-time (FT) + Part-Time (PT)													
	Ph.D or D.Arch		Post-Prof Ms		Prof. M.Arch		B.Arch		Other		Licensed architects		Studio teaching	
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT
Regular Faculty	5		6		2				1		4		10	
Men	4		4		2				1		3		8	
Women	1		2								1		2	
Total FT Equivalent (FTE) Regular Faculty: Number of FT Regular Faculty + a figure equating PT Regular Faculty	14													
Typical FT teaching load / year														
Other Faculty														
• Visiting		1		2		1						2		1
• Adjunct • Sessional • Lecturer		1		4		16						10		10
• Ph.D Candidate		2										1		
Men		2		3		13						6		8
Women		2		2		4						5		3
Total FT Equivalent (FTE) Other Faculty: a figure equating other faculty on the basis of a typical FT teaching load	9													
Total FTE Regular + Other Faculty	22													
Total Regular and Other Faculty who are licensed architects											17			
Total Regular and Other Faculty teaching in studio													21	
Nb of pre-professional studios taught by all Faculty for the year														
Nb of Masters studios taught by all Faculty for the year													6	

Student Data	Pre-professional degree				Master of Architecture degree or Bachelor of Architecture degree			
	Fall	Winter	Summer	Mean/yr	Fall	Winter	Summer	Mean/yr
Full-Time Students								130
Men (optional)								71
Women (optional)								59
Part-Time Students								n/a
Men (optional)								
Women (optional)								
Total Full-Time Equivalent (FTE) Students [1]								130
FTE Foreign Students [2] *(optional)*								16
Students in Design Studio								130
Studio Ratio (Students in Design Studios / Nb studios taught for a year)					11:1 or 130/12 studios per term			
	Fall	Winter	Summer	Total/yr	Fall	Winter	Summer	Total/yr
Number of applicants for a given term and total for a year								211
Number of entering students for a given term and total for a year								58
With advanced standing (optional)								
Total Degrees Awarded-Expected for a given term and total for a year							39	39
Men (optional)							22	22
Women (optional)							19	19
Graduation Rate (%) [3]								81.25

1 Full-Time Equivalent Students (FTE): Number of full-time students reported above + number of full-time equivalent for part-time students calculated on the basis of a full course load required to complete the program in the normal number of terms.

2 FTE Foreign Students : Students included in Total FTE Students who are not Canadian citizens or landed immigrants.

3 No of degrees awarded or expected / No of entering students at the beginning of the degree.

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