

# Azrieli School of Architecture & Urbanism

Architecture Program Report 2016-2017 Volume 2



**Canada's Capital University** 



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4.1 Introduction to the Institution and Program History

#### **4** SUPPLEMENTAL INFORMATION

#### 4.1 Introduction to the Institution and Program History

#### 4.1.a History and Description of the Institution

Carleton University will be 75 years old in 2017 when Canada celebrates its 150th birthday. The University's origins lie in a wartime initiative to offer university-level instruction to veterans and a younger generation of civil servants. Carleton College, as it was first known, began offering classes in 1942. During this period, the College operated out of the high-school facilities and temporary buildings under very stringent financial conditions. Enrolment continued to expand and in 1952 Carleton's degree-granting privileges were confirmed by the Province with the Carleton College Act. The College was renamed Carleton University in 1957.

Carleton had been the first post-secondary institution to be established in Ontario since the nineteenth century and its move to the current campus in 1959 coincided with a substantial expansion of the Provincial university system. The University's development in the 1960s was characterized by rapid increases in enrolment and by almost continuous construction activity. As organized at present, the University consists of five faculties offering more than fifty disciplines of study. The faculties of Arts and Social Sciences (FASS), Public Affairs and Management (PAM), Engineering and Design (FED), and Science provide instruction to some 27,000 full-time and part-time graduate and undergraduate students supported by approximately 2,000 faculty and staff.

#### 4.1.b Institutional Mission

#### **Mission Statement**

Carleton @ 75 builds on the current mission statement:

Carleton University is an independent, collegial university dedicated to the advancement of learning through disciplinary and interdisciplinary teaching, study and research, the creation and dissemination of knowledge, and the betterment of its community. It is centred in Ottawa and serves the people of Ontario, Canada, and the world.

Carleton's contemporary mission above reflects both its past and its present. Carleton @ 75 builds upon this mission statement, the 2008- 13 Strategic Plan, *Defining Dreams*, and Carleton's Strategic Mandate Agreement to set the direction for Carleton University.

Carleton's Strategic Integrated Plan Sustainable Communities – Global Prosperity

Carleton University will celebrate its 75<sup>th</sup> anniversary in 2017. The Strategic Integrated Plan lays out the vision, goals and strategic actions for Carleton@75 over the next five years from 2013 to 2018. Our vision for Carleton@75: Carleton University will be known nationally and internationally as a leader in collaborative teaching and learning, research and governance. Our students, faculty and staff will be critically engaged, productive citizens and highly qualified contributors to the 21st century.

At Carleton, we encourage creative risk-taking enabling minds to connect, discover and generate transformative knowledge. Through education, research, service and innovation, and through the building of sustainable communities, we can foster new ideas and future leaders to create a more sustainably prosperous future for Canada and the world.

 $\label{eq:response} \begin{array}{l} \mbox{READ OUR STRATEGIC PLAN} \rightarrow \\ \mbox{http://carleton.ca/sip/wp-content/uploads/Strategic-Integrated-Plan.pdf} \end{array}$ 

Carleton's Strategic Integrated Plan builds on four central themes:

**Theme 1:** Programs and Enrolment. Carleton University will be known nationally and internationally for its research and teaching in programs which respond to the needs of society today and which anticipate

the needs of the future.

**Theme 2:** Research. Carleton University will be known as a university that promotes research excellence and connectedness. It will be recognized as a leader in research that focuses both on tangible outcomes and the development of knowledge with longer-term impacts.

**Theme 3**: Students. Carleton University will be nationally and internationally known for being student centred, linking its academic endeavours and student supports to empower students as productive and engaged citizens in an increasingly diverse world.

**Theme 4:** Organizational Excellence. Carleton University will be known as a university that nurtures leadership, encourages innovation, recognizes achievement and embraces sustainability.

## Consistency of the Architecture Programs with the General Objectives of the University's Strategic Plan:

In 1997, the School of Architecture submitted a report entitled, "Criteria for Choice", to the Senate Academic Planning Committee that outlined a program restructuring specifically dedicated to enhance the University's two stated areas of focus: Public Policy and High Tech. (Ref: APR, 2004). In our conscious desire to align our program with the University's mission and developmental plan we addressed this objective in the restructuring of the program and its curricular structure as well as in our research objectives. This restructuring led to the 4 + 2 (BAS + M.Arch) between 1998 and 2004. These degrees were reviewed and accredited by the CACB (Canadian Architectural Certification Board) in the same calendar year.

The December 2008 launch of "Defining Dreams", the Draft for the University's Strategic Plan, reiterated the importance of Public Policy and High Tech with additional areas of endeavour meant to support the "Four Pillars of Identity" (Innovation, Location, Engagement with the Community, and Solutions to Real-world Problems). These central themes were reiterated and enhanced in the University's 2016 Strategic Integrated Plan: *Sustainable Communities – Global Prosperity*. Architecture as a discipline and the architecture programs in particular, are well aligned with the declared areas of endeavour; Sustainability and the Environment, Health (workplace, environment), New Digital Media (Content Design, Visualization) and Global identities and Globalization. The BAS Majors (BAS – Design, BAS – Conservation & Sustainability, and BAS – Urbanism), and the Professional and Post-professional graduate programs (M.Arch, MAS and PhD) include specializations that touch on many of these central themes.

#### Sustainable Communities – Global Prosperity

In the most general terms, Architecture is a public practice inscribed in a public world -- the polity of the city, suburb, etc. In both theory courses and in architectural design studios, emphasis on the public dimension of architecture and an awareness of sustainable development continues to increase. These are discussed and investigated at local, national and international levels.

History/theory courses like Introduction to Architecture (ARCH 1000), History of Modern Architecture (ARCH 2300), History of Canadian Architecture (ARCH 4002), Physical Morphology of the City (ARCU 3100), History of Post War Architecture (ARCH 4301), Foundations of Modernism (ARCH 4008) and Post WWII Urbanism (ARCU 4600) aim to equip students with the necessary foundations for understanding and being able to meaningfully participate in current architectural production and discourse. In this sense, these courses are valuable in supporting the University mission statement.

Architectural Technology and workshop electives have evolved to include contemporary concerns of sustainability and architectural conservation. Material studies, supported by the school's excellent facilities and research units, are also contributing to architectural production and discourse in the core curriculum including design studio. Sustainability in architectural design and production is addressed within a greater context of history and culture, globalization, local materials and craft, conservation and adaptive re-use, urban renewal, and alternative energy systems.

Along with the curricular changes, major initiatives have been taken in the area of Research, again with specific attention to complementing the general objectives of the University. The School of Architecture's research agenda draws on the School's established strengths in the pedagogy and *craft* of architecture. Our architectural research is informed by the interaction of experimental making, theoretical investigation,

and cultural insight and includes contributions to the areas of architectural history and theory, material and form studies, and the architectural and pedagogical applications of immersive and digital technologies.

#### 4.1.c Program History

The School of Architecture held its first classes in the fall of 1968, with twelve students and four faculty members. The School offered a five-year undergraduate professional degree, accredited, from the outset, by the Ontario Association of Architects. The first degree was awarded in 1973. In the fall of 1972, the School moved into its present purpose-built facility, designed by Toronto architects Carmen Corneil and Jeff Stinson. The Architecture Building was planned for a total of 250 students (a number long since exceeded). The building is highly regarded by the architectural community. It continues to provide a supportive, appropriate environment and to constructively influence the School's programs.

During the first few years, faculty ranks increased annually as the student body grew. By 1976 the School comprised five Full Professors, eleven Associate Professors, five Assistant Professors, and fifteen Sessional Lecturers (Contract Instructors). The School expanded further in the 1970s, reaching 300 students and 24 faculty members by 1983-84. The academic staff was supplemented by a technical staff comprised of a Photographic Supervisor and a Library Technician. The Technical staff expanded to include two full-time Shop Technicians supervising the School's wood and metalworking facilities. The Library Technician position was lost in 1991. A half-time Computer Technician position was created in 1997 through administrative restructuring. A second, full time Computer Technician was added in 2004.

The founding Director, Douglas Shadbolt, completed two full terms of office and retired in 1978. He was replaced by Professor Michael Coote. Professor James Strutt served as Acting Director in 1983- 84 following the tragic death of Professor Coote. Professor Alberto Perez-Gomez served as Director from 1983 to 1986, followed by Professor Robert Osler as Acting Director for one year. Professor Gilbert Sutton then held the office through 1991. Professor Stanley Loten served as Acting Director in 1991/92 while a search was conducted for a new Director. Benjamin Gianni was appointed in 1992 for a five-year term and re-appointed in 1997 for another 2.5 years. In 1999, Professor Gulzar Haider became Director until his retirement in 2004. In July of 2004, Professor Stephen Fai was appointed for a one-year term while an external search was conducted resulting in the appointment of Marco Frascari as Director of the School. During Prof. Frascari's protracted illness and following his untimely death, Prof. Sheryl Boyle assumed an extended interim directorship while a new Director search was held. In 2015, Prof. Jill Stoner joined the school to become its most recent full-term Director.

From 1968-78, the curriculum for the 5-year B.Arch. was comprised of thirty credits. This curriculum was organized around five "divisions": Division A - history and theory, human sciences, environmental sciences; Division B - structures, environmental controls, materials and methods of construction, design economics; Division C - general planning, policy planning and community development, management and development, professional practice; Division D - computations, design methodology, design education, communications; and the Studio Division. The elective portion of course work was relatively high, nearly 50% (14.5 of 30 credits). In the Studio, the first two years were foundation years focusing on basic design, problem solving, construction, planning, environmental factors and context. Studios in years three and four were defined on a building type basis -- "Work Environments, Living Environments", etc. -- and were not structured sequentially; students could take these Studios in any order. Colloquia, which were required in each semester, operated in a mixture of lecture, seminar, and guest lecture modes. They carried the humanities portion of the program, and were defined thematically, like the Studios, e.g. Technology, "Man and

Community," etc. Workshops were considered from the beginning of the program as intermediary devices between course subject areas and the design theatre of the Studios -- intended to apply the Studio mode of teaching/learning to selected subsets of the problems confronted in Studio. While this initial program underwent more or less continuous revision, it remained essentially in place until the retirement of the first Director, Professor Shadbolt. Some elements survive in the current curriculum.

The first major program overhaul came in 1978, under Director Michael Coote. Colloquia became electives and were replaced by seven mandatory "Theories of Environmental Design" courses, dealing with the history and theory of architecture and linking architecture to culture. The Design Studios became sequential from years one through four, each a prerequisite for the next, so that a more finely tuned progression through the years could be developed. The sequence established was: Basic Design (Year 1); site, climate and technology (Year 2); "Built Form Influenced by Environment" (Year 3); "Built Form Influenced by Technology" (4A); and "Built Form Influenced by Values" (4B). The previous divisional organization remained in place for courses, workshops and administration. The Studio program was divided into "Project" and "Seminar" courses (instituted earlier) in an effort to ensure more controlled input of information (a strategy that proved ineffective and was soon dropped). A significant revision took place in 1980, when the first year of the Studio program was radically transformed to pursue basic design grounded conceptually in "thoughtful making". This has proven to be one of the most far-reaching developments the program has seen. The elective portion of this program became somewhat reduced by the introduction of 'Theories Electives," which required that the majority of electives be taken from a list of courses emphasizing theory and history of architecture.

The next major change in the program came with the appointment of Professor Alberto Perez-Gomez in 1984. The commitment to 'thoughtful making' was given a more rigorous philosophical grounding and extended to all levels of studio instruction. The Studio work resulting from this thrust has given the School an international presence. The major structural reorganization at this time focused on fifth-year to provide a series of options (Design Studio 5A, Research Thesis, and Design Thesis), allowing students tremendous flexibility in choosing the final work best suited to their strengths and personal interests. Great emphasis was placed on the intellectual basis of design, the poetic power of form, and academic scholarship in Research and Design Theses. The impressive work produced in the fifth-year program has had an impact on nearly every aspect of the program.

The Senate of the University approved another set of program revisions in 1992, during Ben Gianni's term as director. These changes increased the number of mandatory architectural history courses from two to four half courses, restructured the Building Construction and Environmental Controls sequence to emphasize the interconnections between these sub-disciplines, and added a course in systems integration. This revision eliminated 'Theories Electives' and concentrated elective courses in the fourth year. This assured that students would cover courses more directly concerned with the profession in the lower years. While the previous sequential structure of the Studio program remained intact, the content of design projects evolved toward a greater emphasis on building design, site development, context, and planning as the media through which the conceptual emphasis of first year found its expression in the upper years.

In 1993-94 a proposal for a post-professional M.Arch. degree program was approved by the University Senate and the Ontario Council of Graduate Studies. The program began accepting students in the Fall of 1995 and graduated its first graduates in 1997. The degree was designed to accommodate a variety of emphases under the heading of "Design Studies," to promote research in the School, to emphasize design as a form of research, and to accommodate a range of thesis work (drawing, writing, etc.). In 1997, the

program was bifurcated into two research foci- "Design and Culture" and "Design and Technology". The first considered questions of history and theory and the second issues of information technology.

In 1997, the School developed a proposal to restructure its 5-year Bachelor of Architecture to a 4- year, preprofessional Bachelor of Architectural Studies (BAS) followed by a 2-year professional Masters of Architecture degree (M.Arch). The undergraduate component was approved by the University Senate in 1997 and began accepting students in the Fall of 1998. The graduate component was approved by the Ontario Council of Graduate Studies in 1998 as a variation on the previously approved post- professional M.Arch. The first class accepted into the professional M.Arch. entered in September of 2001. The first graduates from that class were conferred with the M.Arch degree in November, 2004.

The School instituted a formal co-op program in 1999 as an option within the BAS. Students must spend minimum of three terms (two of which are contiguous) to satisfy the requirements for the co-op designation. Work terms begin after students complete the second year of the BAS. This option is now well established in all majors of the BAS.

The 4+2 program at Carleton is now in its 17th year and has undergone only minor changes since its inception. Until 2008, the most significant of these changes was the development of the Directed Research Studio (DRS) as a thesis option in the final year of the M.Arch. The DRS is seen as an important research vehicle and a viable option for students less inclined toward independent research or who wish to focus their thesis within the research interest of the supervising faculty member. Other changes include a short duration (1-3 weeks) undergraduate DSA option in the third year of the BAS and a full term DSA in the first year of the M.Arch (Barcelona 2004-6, Bern 2006-08). The School offers a visiting critics studio as an option to graduate students who choose not to participate in the DSA.

The most recent and significant shifts began in 2009, one year ahead of the program's last Accreditation visit, as the school instituted 4 new Majors at the undergraduate level and a 3-year M.Arch (Professional) degree. Beginning in 2009, students were able to access undergraduate BAS programs with Majors in Design, Conservation & Sustainability, and Urbanism. A fourth BAS program in Philosophy & Criticism struggled with enrolment and has since been dismantled. At the graduate level, students with 4-year honours degrees (but without previous architectural studies), were admitted to a new M.Arch curriculum. This newest program, reviewed and accredited by a Focused Evaluation in 2013, is increasingly popular and shows a great potential for increased enrolment.

With these measures, the student population continues to grow and diversify. At the time of the 2004 program review, when the school was shifting from the 5-year B.Arch to the 4+2 structure, there were a total of 285 BAS students, 51 B.Arch students, and 40 M.Arch (post professional) students making the total population of the School 376. The 2010 APR reported a total of 286 BAS students, 7 Q-year students, 67 M.Arch (professional) students, for a total population of 359. The 2016 data shows totals of 249 BAS students, 123 M.Arch (professional) students, 7 MAS (post-professional) students, and 7 PhD candidates for a total population of 464. Since 2010 the school has increased its 1<sup>st</sup> year undergraduate intake from 72 to 92 in response to the restructured BAS program with three majors. The M.Arch (professional) has also increase its 1<sup>st</sup> year intake from 28 in 2009 to 58 in 2016 with the introduction of the new 3-year professional M.Arch. Together these increases project at total school population of roughly 460 students in the 2016-17 academic cycle and with these enrolment numbers, the School continues to be the largest architecture program in Canada.

#### 4.2 Student Progress Evaluation

#### 4.2.1 Transfer of Credit and Advanced Standing

The following is an excerpt from the Undergraduate Calendar

#### 4.2.1.a Transfer of Credit Prior to Admission (BAS)

When a student is considered for admission, credit may be granted for individual courses successfully completed at other recognized, post-secondary institutions, if:

the individual courses are relevant to a student's proposed program; and

2 the appropriate academic department recommends such action.

Each application is evaluated on its own merits.

#### 4.2.1.b Transfer of Credit Subsequent to Admission (BAS) Letter of Permission

Students who have been formally admitted to a degree, certificate or diploma program may apply to take courses at other recognized post-secondary institutions on Letters of Permission, and have the credits transferred to their Carleton programs.

Through the Committee and Standings and Promotion and under the review of the Assoc. Director (Professional Programs), the School has developed a specific policy for transfer of credits and advanced standing in undergraduate and graduate studies. The policy requires an application by students requesting advanced standing supported by information including, but not limited to, syllabi, credit values, the courses' hourly schedule, assignment list (and samples when applicable), and final official grades. Frequently, a number of combined past courses are used in order to match the course content of a Carleton architecture course and to derive equivalency for the transfer of credit.

The following is an excerpt from the Graduate Calendar

#### 4.2.1.c Transfer of Credit on Admission (M.Arch)

Graduate courses completed at another institution or at Carleton University that have not been used to fulfill the requirements of another degree program may be accepted in partial fulfillment of Carleton's degree requirements. Credit for such work will be determined in each case by the Faculty of Graduate and Postdoctoral Affairs on the recommendation of the program concerned.

Master's candidates will be permitted to transfer the equivalent of up to 40 per cent of their coursework credit requirements on admission. In addition, if a master's candidate is granted transfer of credit for 40 per cent of their coursework credit requirements, his/her remaining credits at Carleton must be at the 5000 level.

Graduate Calendar Regulations relating to Program Requirements and Transfer of Credits: <u>http://calendar.carleton.ca/grad/gradregulations/administrationoftheregulations/#5</u>

Given that a number of applicants to our M.Arch program hold undergraduate degrees in architectural studies or related design disciplines, the School has devised an internal policy to evaluate applicants in their request for the transfer of credits. The results of these assessments are then communicated to the Faculty of Graduate and Postdoctoral Affairs.

The following is an excerpt from the School's internal Policy on the transfer of credits at the Graduate level:

#### POLICY FOR THE EVALUATION OF COURSE EQUIVALENCY Transfer of Credits in the <u>M.Arch Program</u>

#### **Internal Policy - School of Architecture**

#### Internal Transfers: Core and Professional Curriculum - 0.5 credit courses

For internal (Carleton Univ.) applicants from BAS C&S, BAS-Urb, BA - H/T of Arch, evaluation for Transfer of Credits in 0.5 credit Core and Professional Courses will be processed by the Associate Director of Professional Programs in consultation with the Faculty Member(s) assigned to the course for which the transfer applies.

#### Process:

The evaluation of Core and Professional courses is based on the review of syllabi, audits and year of completion.

#### External Transfers: Core and Professional Curriculum - 0.5 credit courses

Requests for Transfer of Credit for 0.5 credit Core and Professional Courses by external applicants coming from Accredited and non-accredited programs in Architecture or related disciplines will be processed by the Associate Director of Professional Programs in consultation with the Faculty Member(s) assigned to the course for which the transfer applies.

#### Process:

For this evaluation, the student <u>must</u> submit the following documents:

- 1. A letter of request
- 2. An Official U/G Transcript
- 3. The Syllabi and Assignment Outlines from comparable Coursework

#### Performance:

The minimum grade for consideration of Transfer of Credit in 0.5 credit Core & Professional courses is: **B-** (GPA: 7.0, Percentage: 70%).

The School of Architecture follows the University Regulations as outlined above and works closely with the Admissions Office and the Registrar's Office when processing course equivalencies for prior post-secondary courses. The Admissions Office recognizes the unique course requirements of the BAS and M.Arch programs and their alignment with Accreditation Criteria. Hence, an internal evaluation of Advanced Standing and Transfer of Credit is prepared by the School's Associate Directors and is issued to the Admissions Office and/or Registrar for processing. The Associate Director's also consult with the Faculty Chair for each of the program's disciplines (i.e. Faculty Chair for Architectural Technology reviews courses from CAAT programs, Chair of History/Theory Curriculum reviews courses in History/Theory of Architecture, Etc.). More complex cases, or transfer of credits from international colleges and universities are often reviewed by a committee with diverse representation; the Committee on Standings, Promotion and Awards.

The School of Architecture regularly receives request for admission with advanced standing from a number of sources that have become familiar to the School's Faculty and the evaluation Committee. To facilitate the process at the time of admission, a number of "pre-approved" transfer of credits have been formulated and submitted to the Admissions Office and Registrar. The Admissions Officers for Architecture then verify the grades and GPAs to confirm that the request meets with the University Standards.

#### **Undergraduate Review BAS**

Pre-Approved CAAT institutions include: Algonquin College: Architectural Technology Cite Collegiale: Architectural Technology George Brown College: Architectural Technology Fanshawe College: Architectural Technology Sheridan College: Architectural Technology Humber College: Architectural Technology

#### **Graduate Review M.Arch**

<u>Pre-Approved institutions include:</u> Algonquin College: BID Bachelor of Interior Design BCIT British Columbia Institute of Technology: B.SC Arch (Bachelor of Technology – Arch. Science) Univ. of Manitoba: BED Bachelor of Env. Design – Landscape & Urbanism Univ. of Manitoba: BED Bachelor of Env. Design – Interior Design UQAM: BED Bachelor of Env. Design Univ. of Toronto: BA – Arch Studies Design

Architecture courses from other Canadian and U.S. Universities with professional and pre-professional programs in Architecture are reviewed in a similar way. The School aims at reciprocity with its North American

counterparts and looks for similarities in course content and delivery. It has been the School's experience however, that dissimilarities in Architectural programs results in a relatively low transfer rate for courses dealing with Accreditation material, especially in Studio courses and courses in Architectural Technology. Often, more than one transfer course is required to meet the required content of the credit being sought.

#### 4.2.2 Student Progress: Standing in the Program

Note – Additional information on Student status and progress described in the Undergraduate Calendar: General Regulations:

http://calendar.carleton.ca/undergrad/regulations/academicregulationsoftheuniversity/

Academic Performance:

http://calendar.carleton.ca/undergrad/regulations/academicregulationsoftheuniversity/acadregsuniv7/

#### **Calendar Regulations: Bachelor of Architectural Studies - BAS**

#### **B.A.S.** Conservation and Sustainability

#### B.A.S. Urbanism

These programs follow the academic performance evaluation regulations governing Honours programs as described within sections 7.1 - 7.4 of the Academic Regulations of the University.

#### B.A.S. Design

The B.A.S. Design follows the academic performance evaluation regulations for Engineering and Design programs as described in section 7.0 of the Academic Regulations of the University.

#### B.A.S. - all

The following additions and amendments apply to all B.A.S. programs:

- 3 Students are assessed at each Academic Performance Evaluation using the Core minimum as described below.
- 4 Good Standing requires a minimum grade of C- in each Design Core course.
- 5 The Design Core consists of the following courses:

B.A.S. Design	
ARCS 1005 [0.5]	Drawing
ARCS 1105 [1.0]	Studio 1
ARCS 2105 [1.5]	Studio 2
ARCS 2106 [1.5]	Studio 3
ARCS 3105 [1.5]	Studio 4
ARCS 3107 [1.0]	Studio 5
ARCS 4105 [1.5]	Studio 6
ARCS 4107 [1.0]	Studio 7
B.A.S. Urbanism	
ARCS 1005 [0.5]	Drawing
ARCS 1105 [1.0]	Studio 1
ARCU 3501 [0.5]	Fundamentals of Urbanism
ARCU 3303 [1.0]	Urbanism in Practice 1: Urbanism in the Core
ARCU 3304 [1.0]	Urbanism in Practice 2: Urbanism on the Periphery
ARCU 4304 [1.0]	Urbanism in Practice 4: Global Perspectives
ARCU 4304 [1.0]	Urbanism in Practice 4: Global Perspectives
B.A.S. Conservation and Sustain	ability
ARCS 1005 [0.5]	Drawing
ARCS 1105 [1.0]	Studio 1
ARCC 3501 [0.5]	Fundamentals of Conservation and Sustainability
ARCC 3301 [1.0]	Conservation in Practice 1: Historical Analysis and Adaptive Re-use
ARCC 3302 [1.0]	Conservation in Practice 2
ARCC 4301 [1.5]	Conservation in Practice 3
1 BAS students continue either	in Good Standing or on Academic Warning

4. B.A.S. students continue either in Good Standing or on Academic Warning.

5. Students whose academic performance evaluation results in Suspension must leave the B.A.S. degree.

Application for readmission to all B.A.S. programs may be made after one year.

#### Calendar Regulations: Graduate Studies - M.Arch

#### **Master's Programs**

A grade of B- or better must normally be obtained in each course credited towards the master's degree. A candidate may, with the support of the departmental graduate supervisor/associate chair (graduate affairs) and the approval of the Dean of the Faculty of Graduate and Postdoctoral Affairs, be allowed a grade of C+ in 1.0 credit. Some programs do not permit the C+ option and apply a B- minimum rule.

#### Academic Requirements

See the **General Regulations** section of the Graduate Calendar. Architecture permits the C+ option in the 13.0-credit M.Arch. 1 curriculum only. (see Section 11.2 of Regulations).

Graduate Calendar Regulations relating to: **Time of completion, Appeals and Graduation**:

http://calendar.carleton.ca/grad/gradregulations/administrationoftheregulations/#11

### 4.2 Current Course Descriptions

Azrieli School of Architecture & Urbanism															
Carleton University															
Bachelor of Architectural Studies/M.Arch Professional Programs															
CACB Performance Criteria Matrix															

(ARCH)	HISTORY,	/THEORY																														
Core Co	urses: BA	S - All Majors																														
Section	Number	Course Title	A1	A2	A3	A4	A5	A6	A7	A8	A9	B1	B2	B3	Β4	B5	B6	B7	B8	B9 E	310E	B11	B12	C1	C2	C3	C4	D1 [	D2 [	D3 D4	4 D!	5 D6
ARTH	1100	Art and Society - Prehistory to Renaissance																														
ARTH	1101	Art and Society - Renaissance to Present																														
ARCH	1000	Introduction to Architecture					0																					I				
ARCH	2300	Introduction to Modern Architecture																														
Core Co	urses: M.	Arch 1																														
ARCH	5010	History/Theory of Modern Architecture																														
Core Co	urses: AL	L M.Arch																														
ARCH	5200	Grad. Seminar 1: Intro to Critical Thought in Arch're			0																											
ARCH	5201	Grad. Seminar 2: Contemp. Theoretical Persp's in Arch.																														
			A1	A2	A3	A4	A5	A6	A7	A8	A9	B1	B2	B3	Β4	B5	B6	B7	B8	B9 E	310E	B11	B12	C1	C2	C3	C4	D1 [	D2 [	D3 D4	4 D!	5 D6

																														_			_
(ARCC)	TECHNIC.	AL & PROFESSIONAL																															
Core Co	urses: BA	S Design/BAS Conservation &Sustainability																															
Section	Number	Course Title	A1	A2	A3	A4	A5	A6	A7	A8	A9	B1	B2	B3	Β4	B5	B6	Β7	B8	В9	B10	B11	B12	C1	C2	C3	C4	D1	D2	D3	D4	D5	D6
ARCC	1202	History of Structures																															
ARCC	2202	Architectural Technology 1																															
CIVE	2005	Architectural Technology 2																															
ARCC	2203	Architectural Technology 3																															
ARCC	3202	Architectural Technology 4																															
ARCC	4500	Design Economics																															
Core Co	urses: M.	Arch 1																															
ARCC	5096	Building Technology 1 (x-listed to ARCC 2202)																															
ARCC	5097	Building Technology 2 (x-listed to CIVE 2005)																															
ARCC	5098	Building Technology 3 (x-listed to ARCC 2203)																															
ARCC	5099	Building Technology 4 (x-listed to ARCC 3202)																															
Core Co	urses: AL	L M.Arch																															
ARCC	5100	Advanced Building Systems																															
ARCC	5200	Professional Practice																															
			A1	Α2	A3	Α4	A5	A6	Α7	A8	A9	B1	B2	B3	Β4	B5	B6	B7	B8	B9	B10	B11	B12	2 C1	C2	C3	C4	D1	D2	D3	D4	D5	D6

(ARCU)	URBANIS	м																															
Core Co	urses: BA	S - All Majors																															
Section	Number	Course Title	A1	A2	A3	Α4	A5	A6	A7	A8	A9	B1	B2	В3	Β4	B5	B6	B7	B8	В9	B10	B11	B12	C1	C2	C3	C4	D1	D2	D3	D4	D5	D6
ARCU	3100	Morphology of the City																														ĺ	
			A1	A2	A3	A4	A5	A6	A7	A8	A9	B1	B2	В3	Β4	B5	B6	B7	B8	В9	B10	B11	B12	C1	C2	C3	C4	D1	D2	D3	D4	D5	D6
(ARCS/	ARCN) GR	APHICS & TECHNIQUES																															
Core Co	urses: BA	S - All Majors																															
Section	Number	Course Title	A1	A2	A3	Α4	A5	A6	A7	A8	A9	B1	B2	В3	Β4	B5	B6	B7	B8	В9	B10	B11	B12	C1	C2	C3	C4	D1	D2	D3	D4	D5	D6
ARCS	1005	Drawing																														ĺ	
ARCN	2105	Computer Modelling of Form			0																										1		
ARCN	2106	Introduction to Multimedia																															
			A1	A2	A3	A4	A5	A6	A7	A8	A9	B1	B2	В3	Β4	B5	B6	Β7	B8	В9	B10	B11	B12	C1	C2	C3	C4	D1	D2	D3	D4	D5	D6
Core Co	urses: M.	Arch 1																															
ARCN	5000	Digital Modelling & Form Finding (x-listed to ARCN 2105)			0																											1	
ARCN	5005	Architectural Representation - Theory & Pract.																															
			A1	A2	A3	A4	A5	A6	A7	A8	A9	B1	B2	В3	Β4	B5	B6	B7	B8	В9	B10	B11	B12	C1	C2	C3	C4	D1	D2	D3	D4	D5	D6

(ARCN)	CO-OP																																
Elective	Courses:	BAS - All Majors																															
Section	Number	Course Title	A1	A2	A3	A4	A5	A6	A7	A8	A9	B1	B2	B3	Β4	B5	B6	B7	B8	В9	B10	B11	B12	2 C1	C2	C3	C4	D1	D2	D3	D4	D5	D6
ARCN	3999	Co-operative Work Term																															
			A1	A2	A3	A4	A5	A6	A7	A8	A9	B1	B2	В3	B4	B5	B6	B7	B8	В9	B10	B11	B12	C1	C2	C3	C4	D1	D2	D3	D4	D5	D6
(ARCS)	design s	TUDIOS																															
Core Co	urses: BA	S - All Majors																															
Section	Number	Course Title	A1	A2	A3	A4	A5	A6	A7	A8	A9	B1	B2	B3	Β4	B5	B6	B7	B8	В9	B10	B11	B12	C1	C2	C3	C4	D1	D2	D3	D4	D5	D6
ARCS	1105	Studio 1																															
Core Co	urses: BA	S - Design																															
ARCS	2105	Studio 2																															
ARCS	2106	Studio 3																															
ARCS	3105	Studio 4																															
ARCS	3106	Studio 5																															
ARCS	3106	Studio 5 (DSA)																															
ARCS	4105	Studio 6												0														0	0				
ARCS	4106	Studio 7																															

Core Co	urses: M./	Arch 1																															
ARCS	5102	M.Arch1 - Studio 1																															
ARCS	5103	M.Arch1 - Studio 2																															
ARCS	5104	M.Arch1 - Studio 3																															
Core Co	urses: M./	Arch ALL																															
ARCS	5105	Graduate Studio 1 - Gateway																															
ARCS	5106	Graduate Studio 2																															
ARCS	5909	Thesis - Independent Study (2 terms)							0							0	0	0	0	0	0	0			0	0	0				0		
ARCN	5909	Thesis - Directed Research Studio							0							0	0	0	0	0	0	0			0	$\circ$	0				0		
			A1	A2	A3	A4	A5	A6	Α7	A8	A9	B1	B2	B3	3 B4	B5	B6	Β7	B8	В9	B10	B11	B12	C1	C2	C3	C4	D1	D2	D3	D4	D5	D6
(ARCH)	HISTORY/	THEORY																															
Elective	Courses:	BAS - All Majors																															
Section	Number	Course Title	A1	A2	A3	A4	A5	A6	Α7	A8	A9	B1	B2	B3	3 B4	B5	B6	Β7	B8	B9	B10	B11	B12	C1	C2	C3	C4	D1	D2	D3	D4	D5	D6
ARCH	2006	History/Theory of Industrial Design																															
ARCH	2101	Industrial Design Analysis																															
ARCH	3902	Theory of Architecture (Crossings)						0			0	0			_				0														
ARCH	4002	Canadian Architecture													_																		
ARCH	4009	Theory of the Avant-Garde																															
ARCH	4105	Theories of Landscape Design			0																							0		0			
ARCH	4201	History of Modern Housing																															
ARCH	4502	Research and Criticism																	$^{\circ}$														
ARCH	4808	Independent Study: History/Theory of Architecture						0	0																								
Core Co	urses MA	S; Elective Courses for M.Arch																															
ARCH	5003F	Design and Culture Workshop - (w ARCC 3004)																															
ARCH	5003W	Design and Culture Workshop - Theatre (w ARCN 3003)																															
ARCH	5101	Colloquium I																															
ARCH	5301	Vitruvian Exercises I																															
ARCH	5302	Vitruvian Exercises II																															
			A1	A2	A3	A4	A5	A6	Α7	A8	A9	B1	B2	B3	3 B4	B5	B6	Β7	B8	В9	B10	B11	B12	C1	C2	C3	C4	D1	D2	D3	D4	D5	D6
															_																_		
(ARCC)	TECHNIC/	AL & PROFESSIONAL							-	-	-	-	-	-	-	-	-	-							-			_	_	_	_	_	
Elective	Courses:	BAS - All Majors																															_
Section	Number	Course Title	A1	A2	A3	A4	A5	A6	A7	A8	A9	B1	B2	B3	3 B4	B5	B6	B7	B8	B9	B10	B11	B12	C1	C2	C3	C4	D1	D2	D3	D4	D5	D6
ARCC	3004	Workshop: Energy and Form		u -				_	Ч				<u> </u>			_		_			_	u	_			_							
ARCC	3305	Workshop: Materials Application		u				ш			Ľ		u			-	_	<u> </u>			Ц					<u> </u>		Ц				0	
ARCC	3902	Workshop: Arch Techn (Chair Wkshp 2016)									_		_	-	_	-	_																
ARCC	4202	Wood Engineering		_									_	_	_	_																	
ARCC	4808	Independent Study: Architectural Technology		u							_	_	_	-	_	-	_																
			A1	A2	A3	A4	A5	A6	A7	A8	A9	B1	B2	B3	3 B4	B5	B6	B7	B8	B9	B10	B11	B12	C1	C2	C3	C4	D1	D2	D3	D4	D5	D6
(40011																																	
(AKCU, /	AKCH) UK		-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-					-	-	-	-			-	-	-	-	-
Section	Number	Course Title	Δ1	٨2	٨3	ΛA	Δ5	16	47	18	10	B1	B2	B		B5	B6	B7	88	RQ	B10	R11	B12	C1	C2	C3	C4	D1	D2	D3	D4	D5	D6
APCU	2202	Urbanism in Practice 1: Urbanism in the Core		AZ.	AJ	A4	AJ	AU	A7	AO	AJ		52	D.			ВО	57	БО	65	ыо	ын	DIZ			03				03	04	03	00
ARCU	3303	Urbanism in Practice 1: Urbanism in the Core					_	-		17	17	13		12																			
ARCU	3504		-			-		-	-	12	12	-				-							9	-	-	-				9	9		9
ARCU	4200	History of Theories of Urbanism			9		0	-		17	17																	-	9		_		
ARCU	4300				-	-	-	-		-	12		-			-	-	-		-		-	-	-	-	-	-	$\overline{\mathbf{O}}$	$\circ$				
ARCU	4304	Urbanism in Practice 4: Clobal Devenanting				-		_	-	-							1-	-							-			5	5		+		_
ARCU	4700											-	-			-								-									
ARCU	4700	Coloritation Tables in Urbaniam				-		-																									_
ARCU	4001					-		-		12				-	-	+																	
ARCH	4201	History of Modern Housing	A 1		A 2	• 4	45	16	47	•		D1	P2	DO		DS	DG	P7	ро	PO	P10	D11	D12	C1	C2	C2	C4	D1	D2	20	D4	D5	DG
			AI	AL	AJ	A4	AJ	AU	A	AO	AJ	ы	62	Du	5 64	, DJ	00	57	БО	65	ыю	ын	DIZ		02	0.5	64		02	03	04	03	00
(ARCII)	IRBAN S	TIDES													-																		-
Flective	Courses:	RAS - All Majors								$\vdash$	-	-	-	1	+	+	-																-
Section	Number	Course Title	A1	A2	A3	A4	A5	A6	A7	A8	A9	B1	B2	B.ª	3 B4	B5	B6	В7	B8	В9	B10	B11	B12	C1	C2	C3	C4	D1	D2	D3	D4	D5	D6
ARCU	4400	City Organization and Planning									0					0		1	0			İ		Ē	1				-	~		~	-
ARCU	4600	Post-WWII Urbanism		Ū					ō			T				Ē	1	1							1								_
ARCU	4808	Independent Study										T	1	T	1		1	1							1				l	l		l	
Elective	Courses:	M.Arch		Ē				<u> </u>	Ē	[		1		1			1	1							1								_
ARCU	5001	City Organization and Planning (x-listed to ARCU 4400)									0					0	1		0														
		<u> </u>	A1	A2	A3	A4	A5	A6	A7	A8	A9	B1	B2	B3	3 B4	B5	B6	B7	B8	B9	B10	B11	B12	C1	C2	C3	C4	D1	D2	D3	D4	D5	D6
			_																														
(ARCH,	CDNS) HI	STORY/THEORY																															
Core Cor	IROOOL DA	Concentration & Sustainability	1	1	1		1		1	1	1	1	1	1	1	1	1	1					1		1		L						

Core Cou	irses: BA	S-Conservation & Sustainability																															
Section	Number	Course Title	A1	A2	A3	A4	A5	A6	A7	A8	AS	9 B1	B2	B3	Β4	B5	B6	Β7	B8	В9	B10	B11	B12	2 C1	C2	C3	C4	D1	D2	D3	D4	D5	D6
ARCH	4200	Conservation - Philosophy & Ethics																															
ARCH	4206	Recycling Architecture in Canada & Abroad																															
CDNS	2400	Heritage Conservation in Canada																				0											
			A1	A2	A3	A4	A5	A6	A7	A8	AS	9 B1	B2	B3	Β4	B5	B6	Β7	B8	В9	B10	B11	B12	2 C1	C2	C3	C4	D1	D2	D3	D4	D5	D6
(ARCC, C	IVE, ENV	E) TECHNICAL & PROFESSIONAL																															

#### (ARCC, CIVE, ENVE) TECHNICAL & PROFESSIONAL

Core Co	urses: BA	S-Conservation & Sustainability									Γ		Γ																				
Section	Number	Course Title	A1	A2	A3	A4	A5	A6	A7	A8	A9	B1	B2	В3	В4	В5	В6	В7	B8	В9	B10	) B1	1 B12	2 C1	C2	C3	C4	D1	D2	D3	D4	D5	D6
ARCC	3301	Conservation in Practice 1: Hist'l Analysis & Adapt.																															
ARCC	3302	Conservation in Practice 2																															
ARCC	3501	Fundamentals of Cons. & Sust.																															
ARCC	4207	Advanced Building Assessment (replaces ARCC 4900)																															
ARCC	4301	Conservation in Practice 3																															
ARCC	4909	Honours Project (to be replaced with Cons. in Pract. 3)																															
CIVE	2200	Mechanics of Solids 1																															
CIVE	2700	Civil Engineering Materials																															
CIVE	3204	Structural Design																															
ENVE	1001	Architecture & the Environment																												1			
ENVE	4105	Green Building Design																															
			A1	A2	A3	A4	A5	A6	A7	A8	A9	B1	B2	В3	B4	B5	B6	Β7	B8	В9	B10	B1	1 B12	C1	C2	C3	C4	D1	D2	D3	D4	D5	D6
																														_			
(ARCN)	TECHNIQ	UES																												$\square$			
Core Co	urses: BA	S - Conservation & Sustainability																													_		_
Section	Number	Course Title	A1	A2	A3	A4	A5	A6	A7	A8	A9	B1	B2	В3	B4	B5	B6	Β7	B8	B9	B10	B1	1B12	2 C1	C2	C3	C4	D1	D2	D3	D4	D5	D6
ARCN	4100	Historic Site Recording and Assessment																															
ARCN	4200	Building Pathology & Rehabilitation																								$\square$							
			A1	A2	A3	A4	A5	A6	A7	A8	A9	B1	B2	B3	B4	B5	B6	Β7	B8	В9	B10	B1	1 B12	2 C1	C2	C3	C4	D1	D2	D3	D4	D5	D6
			_										_													$\square$				$ \rightarrow$	_	_	
(ARCN)	TECHNIQ	UES	_								-	_	-	_	-			_			_	-	-	-		$\square$				$ \rightarrow$	$\rightarrow$	_	
Elective	Courses:	BAS - Design																				-	_			$\vdash$					_		
Section	Number	Course Title	A1	A2	A3	A4	A5	A6	A7	A8	A9	B1	B2	B3	B4	B5	B6	B7	B8	B9	B1(	)B1	1 B12	2 C1	C2	C3	C4	D1	D2	D3	D4	D5	D6
ARCN	3003	Theatre Production		_							<u> </u>		_													$\square$				$ \rightarrow$	_		
ARCN	4103	Digital Fabrication & Theory	<u> </u>	<u>u</u>		0					<u> </u>		_									-	_			$\square$							
ARCN	4808	Independent Study		u							_				_											$\square$				$\vdash$	_		
ARCN	4808B	Colour Workshop									0				-											$\square$				$ \rightarrow$	_		
Elective	Courses:	M.Arch																													_		
ARCN	5301	Daedalic Exercises I (also listed as ARCN 6001)																								$\square$							
ARCN	5302	Daedalic Exercises II (also listed as ARCN 6002)									-				-																		
			A1	A2	A3	A4	A5	A6	A7	A8	A9	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B1	1 B12	2 C1	C2	C3	C4	D1	D2	D3	D4	D5	D6
			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		$\vdash$				$ \rightarrow$	$\rightarrow$	_	
	LEGEND		-					-			-	-	-	-	-		-	-			-	-	-	-		$\square$				$ \rightarrow$	-	-	_
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	$\vdash$				$\square$	$\rightarrow$	-	_
		INDICATES CALENDAR COURSES NOT PRESENTED OFFER	=D biltis		 Dotin	in fo	r D A	S Do	cian	<u> </u>	-	-	-	-	-						-	-	-	-		$\vdash$				$ \rightarrow$	$\neg$	-	
		INDICATES CORE COURSE IN BAS CONSEIVATION & SUSTAINA	RAC	y (Eli		10		<u>з-ре</u>	sign	,	1	-	-	-	-	-	-	-	-		-	$\vdash$	-	-	-	$\vdash$				$\dashv$	$\dashv$	$\rightarrow$	_
		CACE CRITERIA MET RY COURSE			ign)		-	-	-		1	-	+	-	1	-	-	-			-	$\vdash$	-	-		$\vdash$				$\neg$	$\neg$	$\rightarrow$	
							- YT				1		1		1							1		-						$\neg$	$\neg$	-	
	0	CACE CRITERIA DEPENDENT ON COURSE OPTION PROJECT		ROPC	ISAI	OR		GNM	IFNT		1		1		1							$\vdash$								$\neg$	$\neg$	$\neg$	

#### **4.2 Current Course Descriptions**

The following syllabi represent all courses offered in the BAS Undergraduate and M.Arch Graduate Programs. They have been listed in the same order as the Program Matrix accompanying this section.

#### **ARCH History/Theory Core Courses: BAS All Majors**

ARTH 1100 Art & Society: Prehistory to Renaissance ARTH 1101 Art & Society: Renaissance to Present **ARCH 1000 Introduction to Architecture** 

ARCH 2300 Introduction to Modern Architecture Core Courses: ALL M.Arch ARCH 5200 Grad Seminar 1: Introduction to Critical Thought in Architecture ARCH 5201 Grad Seminar 2: Contemporary Theoretical Perspectives in Architecture

#### **ARCH, CDNS History/Theory**

#### **Core Courses: BAS Conservation & Sustainability**

ARCH 4200 Conservation Philosophy and Ethics ARCH 4206 Recycling Architecture in Canada CDNS 2400 Heritage Conservation in Canada

#### **ARCC Technical & Professional**

### Core Courses: BAS All Majors ARCC 1202 History of Structures ARCC 2202 Architectural Technology 1 CIVE 2005 Architectural Technology 2 ARCC 2203 Architectural Technology 3 ARCC 3202 Architectural Technology 4 ARCC 4500 Design Economics Core Courses: ALL M.Arch ARCC 5100 Advanced Building Systems

Core Courses: M.Arch1

ARCC 5096 Building Technology 1 ARCC 5097 Building Technology 2 ARCC 5098 Building Technology 3 ARCC 5099 Building Technology 4 ARCC 4500 Design Economics

#### ARCC, CIVE, ENVE Technical & Professional

ARCC 5200 Introduction to Professional Practice

#### **Core Courses: BAS Conservation & Sustainability**

ARCC 3301 Conservation in Practice 1 ARCC 3302 Conservation in Practice 2 ARCC 3501 Fundamentals of Conservation & Sustainability ARCC 4207 Advanced Building Assessment ARCC 4301 Conservation in Practice 3 CIVE 2200 Mechanics of Solids 1 **CIVE 2700 Civil Engineering Materials** CIVE 3204 Structural Design ENVE 1001 Architecture and the Environment ENVE 4105 Green Building Design

Core Courses: M.Arch1

ARCH 5010 History/Theory of Modern Architecture

ARCU Urbanism Core Courses: BAS – All Majors ARCU 3100 Morphology of the City

#### ARCU Urbanism

Core Courses: BAS – Urbanism ARCU 3303 Urbanism in Practice I ARCU 3304 Urbanism in Practice 2 ARCU 3501 Fundamentals of Urbanism ARCU 4300 History of Theories of Urbanism ARCU 4303 Urbanism in Practice 3 ARCU 4304 Urbanism in Practice 4 ARCU 4600 Post WWII Urbanism ARCU 4700 Urban Utopias ARCU 4801 Selected Topics in Urbanism ARCH 4201 History of Modern Housing

#### **ARCS/ARCN Graphics & Techniques**

Core Courses: BAS – All Majors ARCS 1005 Drawing ARCN 2105 Computer Modeling and Form Analysis ARCN 2106 Introduction to Multimedia Core Courses: M.Arch1 ARCN 5005 Architectural Representation – Theory & Practice

#### ARCS Design Studios

Core Courses BAS – All Majors ARCS 1105 Studio 1 Core Courses BAS – Design ARCS 2105 Studio 2 ARCS 2106 Studio 3 ARCS 3105 Studio 4 ARCS 3106 Studio 5 ARCS 3106 Studio 5 (DSA) ARCS 4105 Studio 6 ARCS 4106 Studio 7 Core Courses: M.Arch1 ARCS 5102 M.Arch 1 Studio 1 ARCS 5103 M.Arch 1 Studio 2 ARCS 5104 M.Arch 1 Studio 3 Core Courses: M.Arch ALL ARCS 5105 Graduate Studio 1 - Gateway ARCS 5106 Graduate Studio 2 ARCS 5909 Thesis ARCN 5909 Thesis, Directed Research Studio Core Courses: M.Arch1 ARCN 5000 Digital Modeling and Form Finding

#### **ARCH History/Theory**

#### **Elective Courses: BAS – All Majors**

ARCH 2006 History/Theory of Industrial Design **ARCH 2101 Industrial Design Analysis** ARCH 3902 Theory of Architecture - Crossings ARCH 4002 Canadian Architecture ARCH 4009 Theory of the Avant Garde ARCH 4105 Theories of Landscape Design ARCH 4200 Conservation - Philosophy & Ethics ARCH 4201 History of Modern Housing ARCH 4206 Recycling of Architecture in Canada & Abroad ARCH 4502 Research and Criticism ARCH 4808 Independent Study: Hist./Theory of Architecture Core Courses MAS; Elective Courses for M.Arch ARCH 5003 Design & Culture Workshop – Energy & Form ARCH 5301 Vitruvian Exercises I ARCH 5302 Vitruvian Exercises II

### **ARCC Technical & Professional**

#### **Elective Courses: BAS All Majors**

ARCC 3004 Workshop: Energy & Form ARCC 3902: Workshop: Arch Techniques - Chair **Elective Courses M.Arch** ARCC 5000 Directed Study: Architectural Technology

#### **ARCU Urban Studies**

#### **Elective Courses: BAS All Majors**

ARCU 3501 Fundamentals of Urbanism ARCU 4400 City Organization and Planning ARCU 4600 Post WWII Urbanism ARCU 4700 Urban Utopias ARCU 4801 Selected Topics in Urbanism ARCU 4808 Independent Study

#### **ARCN Techniques**

#### **Elective Courses: BAS All Majors**

ARCU 5001 City Organization and Planning

**Elective Courses M.Arch** 

#### **Elective Courses M.Arch**

ARCH 5003 Design & Culture Wshp – Theatre Production

**ARCN 3003 Theatre Production** ARCN 4100 Historic Site Recording & Assessment ARCN 4103 Digital Fabrication & Theory ARCN 4200 Building Pathology & Rehabilitation ARCN 4808 Independent Study: Colour Theory

#### **Core Courses MAS; Elective Courses M.Arch**

ARCN 5301 Daedelic Exercises I ARCN 5302 Daedelic Exercises II

#### 4.2.1 Course Descriptions – Boiler Plate

The Following Template outlines the boilerplate for all Syllabi/Course Outlines for all courses in the undergraduate (BAS) and graduate (M.Arch Professional) programs.

The course outlines which follow have been synthesized for clarity.

Azrieli School of Architecture & Urbanism

Course Number Term and Year Days and times of meetings

Instructors:

COURSE TITLE

INTRODUCTION

**COURSE THEME & FORMAT** (= number of projects and weight)

COURSE OBJECTIVES, PEDAGOGY and ASSIGNMENTS (kind of number of projects/ assignments).

**STUDENT RESPONSIBILITIES in this course** (= a mini boiler plate specific to that class about things including required materials, or attendance requirements, etc.).

CALENDAR (week by week schedule, lecture titles and projects)

#### **GRADING AND REQUIREMENTS**

Grading Criteria (= a section explaining grading philosophy or any other points about grading for that course)

Percentage Breakdown List TOTAL

100%

**CU LEARN:** This course uses cuLearn, Carleton's learning management system. To access your courses on cuLearn go to <u>carleton.ca/culearn</u>

For help and support, go to <u>carleton.ca/culearnsupport/students</u> Any unresolved questions can be directed to Computing and Communication Services (CCS) by phone at 613-520-3700 or via email at <u>ccs\_service\_desk@carleton.ca</u>

#### PAGE BREAK HERE

#### NOTE: ALL RELEVANT SPCs SHOULD BE CHECKED (X) WITHIN THE TABLE AND DESCRIBED BELOW

#### ACCREDITATION AND PROFESSIONAL EXPERIENCE

In Canada, all provincial/territorial associations/institutes/orders recommend a degree from an accredited professional degree program as a prerequisite for licensure. The Canadian Architectural Certification Board (CACB), which is the sole agency authorized to accredit Canadian professional degree programs in architecture, recognizes two types of accredited degrees: the Master of Architecture (M.Arch) and the Bachelor of Architecture (B.Arch). A program may be granted a six-year, three-year, or two-year term of accreditation, depending on its degree of conformance with established educational standards.

Masters 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.

#### **Guide to Student Performance Criteria**

#### http://cacb.ca/en/conditions-and-procedures-for-accreditation/#

This guide is written expressly for the faculty and students of professional degree program in architecture. It begins with a brief overview of the parameters for accrediting professional degree programs, including a list of the twelve conditions that your programme must address to maintain its accreditation.

However, the guide's primary purpose is to inform you about one of these conditions, namely the **Student Performance Criteria** (SPC). These are areas where every student, who graduates from an accredited architecture program, must demonstrate the required level of accomplishment. The criteria define the minimum requirements for your professional education in architecture.

For the purposes of accreditation, graduating students must demonstrate *understanding* or *ability* in the areas listed below, according to an established sequence.

Skills A		Skills B		Skills C,D
A1 Critical Thinking Skills.		B1 Design Skills	х	C1 Detailed Design Development
A2 Research Skills.		B2 Program Preparation	х	C2 Building Systems Integration
A3 Graphic Skills.		B3 Site Design	х	C3 Technical Documentation
A4 Verbal and Writing Skills		B4 Sustainable Design		C4 Comprehensive Design.
A5 Collaborative Skills	х	B5 Accessibility.		D1 Leadership and Advocacy
A6 Human Behavior		B6 Life Safety Sys, Bldg Codes & Stds		D2 Ethics and Professional Judgment
A7 Cultural Diversity		B7 Structural Systems		
A8 History and Theory		B8 Environmental Systems		
A9 Precedents		B9 Building Envelopes.		
		B10 Building Service Systems.		
		B11 Building Materials and Assemblies.		
		B12 Building Economics and Cost Control		

#### THIS COURSE MEETS THE FOLLOWING CRITERIA: (SAMPLE)

- B5 Accessibility: Ability to design both site and building to accommodate individuals with varying physical abilities
- **C1 Detailed design development**: Ability to assess, select, configure, and detail as an integral part of the design, appropriate combinations of building materials, components, and assemblies to satisfy the requirements of building
- C2 Building systems integration: Ability to assess, select, and integrate structural systems, environmental systems, life-safety systems, building envelope systems, and building service systems into building
- **C3 Technical documentation**: Ability to make technically precise descriptions and documentation of a proposed design for purposes of review and construction
- C4 Comprehensive design: Ability to produce an architecture project informed by a comprehensive programme, from schematic design through the detailed development of programmatic spaces, structural and environmental systems, life-safety provisions, wall sections, and building assemblies, as may be appropriate; and to assess the completed project with respect to the programme's design criteria

#### **PAGE BREAK HERE**

#### Azrieli School of Architecture and Urbanism – Student Information

#### ACADEMIC ACCOMMODATION

You may need special arrangements to meet your academic obligations during the term because of disability, pregnancy or religious obligations. Please review the above course outline carefully. Should you require special accommodation, please contact the course instructor during the first two weeks of classes. In cases where the need for accommodation develops during the term, please contact course instructor promptly.

Reviewing each request and arranging accommodations where necessary takes time: your cooperation is appreciated. Please make sure to respect the above notification timelines, particularly for in-class tests, mid-terms and final exams, as well as any change in due dates for assignments.

For more detailed information on the University's academic accommodation policies students may visit the Equity Service website. <u>http://carleton.ca/equity/accommodation</u>

#### ACCESSIBILITY

Students with disabilities requiring academic accommodation in this course must register with the Paul Menton Centre for Students with Disabilities (PMC) for a formal evaluation of disability-related needs. Documented disabilities could include but are not limited to mobility/physical impairments, specific Learning Disabilities (LD), psychiatric/psychological disabilities, sensory disabilities, Attention Deficit Hyperactivity Disorder (ADHD), and chronic medical conditions. Registered PMC students are required to contact the PMC, 613-520-6608, every term to ensure that course instructor receives your Letter of Accommodation no later than two weeks before the date of first assignment hand-in or in-class test. If you <u>only</u> require accommodations for your formally scheduled exam(s) in this course, please submit your request for accommodations to PMC by the deadlines published on the PMC website: http://www2.carleton.ca/pmc/new-and-current-students/dates-and-deadlines/

#### STUDENT CONDUCT

Please refer to <u>http://www.carleton.ca/calendars/ugrad/1011/regulations/acadregsuniv.html</u> for specific information regarding Student Conduct and Academic Integrity standards.

#### GRADING

For the grade in the "A" range, the instructor will have judged the student to have satisfied the stated objectives of the course in an outstanding to excellent manner; for the "B" range, in an above average manner; for the "C" range, in an average manner with C- being the lowest acceptable grade in the BAS - Design Core courses; for the "D" range, in the lowest acceptable manner in non-Core courses, and for "F", not to have satisfied the stated objectives of the course. Grades will be assigned as A+ (90-100%), A (85-89%), A- (80-84%), B+ (77-79%), B (73-76%), B- (70-72%), C+ (67-69%), C (63-66%), C- (60-62%), D+ (57-59%), D (53-56%), D- (50-52%), F (0-49%) and ABS. A grade of C- or better in each course of the BAS - Design Core is required for a student to remain in *Good Standing*. (Please refer to the Undergraduate Calendar <u>http://www.carleton.ca/calendars/ugrad/1011/regulations/acadregsuniv2.html#2.3</u> for regulations concerning grades and other program requirement information and <u>http://www.carleton.ca/calendars/ugrad/1011/programs/architecturalstudies.html</u> for regulations concerning grades and other program requirement information specific to the Architecture program.

Each grade will be based upon a comparison (1) with other students in the course and/or (2) with students who have previously taken the course and/or (3) with the Instructor's expectations relative to the stated objectives of the course, based on his/her experience and expertise.

#### ATTENDANCE

Attendance during arranged Studio hours is mandatory and an essential part of a student's contract with the School and their instructor. It is a student's responsibility to be informed of decisions and announcements made during these hours. Frequent unaccounted-for absences from studio meetings, seminars, reviews and desk crits, may result in a failing grade whether or not assignments have been completed.

#### **RETENTION OF WORK and PORTFOLIO**

(http://www.carleton.ca/calendars/ugrad/1011/programs/architecturalstudies.html)

Keeping a good portfolio is a most important part of architectural education. A portfolio represents a record of the student's progress and design experience over the years and is an indispensable document for any job application in the future. The School therefore requires that each student document their term's work with high resolution scans of manual drawings, photographs of models, and saved files of work produced digitally. From First Year through to graduation, students are to create the following:

- A digital Folder containing jpg files of all term's work
- A digital Portfolio saved as a PDF file.

Please title the digital folder following this example: "ARCS 3105\_Last name\_2016\_Instructor name." Please use the 11 x 17 landscape format and a simple and clear graphic language for the digital portfolio.

Submit Folder and Portfolio to your instructor digitally, and keep files carefully for your records. Note also that your instructor may require a printed copy of the Portfolio.

The School reserves the right to use the images for the following: retrospective exhibitions of work, accreditation, publications and references for pedagogic purposes. Original work is the property of the students, but the School retains the right to keep work of merit for up to two years after the date of submission. The School will make every effort to preserve the work in good condition, and will give authorship credit and take care of its proper use.

#### STEWARDSHIP

Architecture, urbanism and conservation are about stewardship, awareness, and thoughtful habitation. Please exercise consideration for the physical and social environment around you while using the studios. It is neither reasonable nor fair to place the burden of guessing whether an item on the floor is a discard or a precious process-sketch upon members of the custodial staff. Respect custodial staff and their mandate to clean the building's public spaces only (and not the studios).

#### Reduce, recycle, and reuse:

- Keep the creation of waste to a minimum through thoughtful decisions regarding model size, etc. As much as possible, recycle and reuse materials.
- Compress paper remnants and drawings into piles for reuse.
- Create a shared area for storing discarded but reusable model-making materials; note that this space should pose no hazard to others.

#### **Studio Maintenance**

- Furniture must not be moved or removed. Students are required to clean-up after reviews and return things to the proper locations.
- Alcoves must remain clean and available for common uses such as pin ups.
- Studios are to be tidied regularly. Individual workspaces must be kept free of debris. Tables must be devoid of clutter, bags and coats, or food and drink. Use lockers for storage. *No food/meals may be consumed in studio, especially during class hours.*
- Remove obvious garbage daily from table surfaces and chairs. Sweep between aisles and under tables regularly.

- Do not throw dangerous or hazardous materials (e.g. broken glass) in the garbage cans. Recycling bins are provided only for disposing typical items (e.g. soda cans).
- Collectively organize a schedule to take the garbage bin to the Street for emptying once a day.
- Students must remove all materials by date posted in studios each term. All remaining items will be discarded after this date. Drawings, models, supplies, or personal effects may not be stored in the Architecture Building between terms.

#### SECURITY AND SAFETY

For your health and safety and in keeping with the School's commitment to environmental stewardship, the School insists on responsible practices in the studio. Aerosol spray paints, aerosol fixatives and / or aerosol adhesives, pressurized containers, and the use of any other toxic material, glues, resins, or other chemicals, are strictly forbidden inside the School including stairwells and basement. Additionally, student projects containing aerosols or toxic materials will not be accepted or evaluated whether these were made in the building, outside the building, or off-campus. If you are unsure whether a material is toxic or not, use common sense. A material with a strong odor is likely highly toxic. Off-gassing fumes are distributed throughout the building through ducts, adversely affecting all occupants.

#### The following are also forbidden:

Open flames; soldering; power tools outside of a supervised workshop; extension cords (CSA approved power bars/surge suppressors <u>may</u> be used); smoking; vandalism (as defined by the municipality of Ottawa); obstructing aisles, walkways, corridors, doorways, stairwells and fire hose cabinets clear at any time; parking bicycles in the building; creating tripping hazards, fire hazards or excessive dust and noise.

First aid kits are found throughout the School. Alert the Instructor (during class hours) or call University Security (after hours) if an accident occurs or emergency arises.

Students are asked to take precaution when working after hours. Call the University Security (telephone extension 4444) if you see any suspicious activity and/or feel insecure in the studio or on campus. Identify the location of first aid kits, fire exits, fire alarms, and security telephones. Carleton Foot Patrol offers "safe-walk" services:

#### http://cusaonline.ca/footpatrol.

Exercise caution when working in studio. Set up a comfortable and well-lit workspace. Store your materials safely in lockers (which must be placed horizontally). Wear proper protective gear (e.g. gloves and safety goggles) for any tasks that require the snapping, cutting, or breaking of materials. *Do not perform dangerous tasks at your desk*; instead, use the model assembly room in the Architecture Building. *Power tools and hazardous materials are not permitted in studios and classrooms*. Students may not hang, install, or attach any materials (including models) to the walls, mechanical ducts, or other surfaces of Azrieli Pavilion. If you spot hazardous materials or potentially unsafe conditions in the Azrieli Pavilion or elsewhere, then notify the Studio Coordinator.

For additional information, refer to the Carleton Environmental Health and Safety website: http://www.carleton.ca/ehs/.

#### COURSE SCHEDULE: ARCX XXXX

Week	Readings	Deadlines/Assignments
1 Jan 4 <sup>th</sup>		
2 Jan 11 <sup>th</sup>		
3 Jan 18 <sup>th</sup>		
4 Jan 25 <sup>th</sup>		
5 Feb 1st		
6 Feb 8 <sup>th</sup>		
7 Feb 15 <sup>th</sup>	Study Break Week Classes Suspended Feb 16 <sup>th</sup> -20 <sup>th</sup>	
8 Feb 22 <sup>nd</sup>		
9 Mar 1 <sup>st</sup>		
10 Mar 8 <sup>th</sup>		
11 Mar 15 <sup>th</sup>		
12 Mar 22 <sup>nd</sup>		
13 Mar 29 <sup>th</sup>		
14 April 5	April 8 <sup>th</sup> is last day of class. April examination period runs from April 11-23 <sup>rd</sup> .	

## ARCH ARTH

History Theory of Architecture Core Courses

### Azrieli School of Architecture & Urbanism

ARTH 1100 Title: Art and Society: Prehistory to the Renaissance Class Time:

Hours Per Week: 2 hour lecture, 1 hour tutorial per week Credit Value: 0.5 Professor Contact Info: Stéphane Roy

#### Office Hours/Location:

**CU LEARN:** This course uses cuLearn, Carleton's learning management system. To access your courses on cuLearn go to <u>carleton.ca/culearn</u>

For help and support, go to <u>carleton.ca/culearnsupport/students</u> Any unresolved questions can be directed to Computing and Communication Services (CCS) by phone at 613-520-3700 or via email at <u>ccs\_service\_desk@carleton.ca</u>

- This course offers a survey of Western and non-Western art painting, sculpture, architecture from prehistory to the Renaissance. Given this broad chronological span, the course will inevitably be selective in its choice of topics and images. It aims to provide students with the basic notions for recognizing and understanding artefacts and art production from the major periods encompassed within this course. Through lectures and readings, students will acquire the necessary knowledge and develop skills enabling them to perform formal and contextual analyses of various works of art, from the earliest manifestation of human creativity up to medieval times. Textbook TBD.
- Evaluation
- 1. Short assignment (20%)
- 2. Midterm test (30%)
- 3. Final Exam (35%)
- 4. Tutorial participation (15%)

### Azrieli School of Architecture & Urbanism

ARTH 1101 Title: Art and Society: Renaissance to the Present Class Time:

Hours Per Week: 2 hour lecture, 1 hour tutorial per week Credit Value: 0.5 Professor Contact Info: Brian Foss

#### Office Hours/Location:

**CU LEARN**: This course uses cuLearn, Carleton's learning management system. To access your courses on cuLearn go to <u>carleton.ca/culearn</u>

For help and support, go to <u>carleton.ca/culearnsupport/students</u> Any unresolved questions can be directed to Computing and Communication Services (CCS) by phone at 613-520-3700 or via email at <u>ccs\_service\_desk@carleton.ca</u>

- This course surveys Western painting, sculpture and architecture from the beginning of the Italian Renaissance (c.1300) to the present. Through lectures, tutorials, readings and research, students will gain an understanding of the chronological and thematic development of visual art over the past 700 years. The course does this by examining key artworks that reflected the specific times and periods in which they were produced, and that were influential for later artists and societies.
- One two-hour lecture and one one-hour tutorial each week.
- Textbook: Stokstad & Cothren's "Art History"


# ARCH 1000 2016 Fall

# arch-one-and-three-zeros an introductory course in architecture and urbanism

Class Time: Thursday 8.35-11.25 102 Azrieli Theatre Hours Per Week: 3 Credit Value: 0.5 Instructor Roger Connah Contact Info: roger\_connah@carleton.ca Office Hours/ Thursday 14.30-17.30 Building 22 room 524

### Course Overview Architecture, Urbanism & the Critical Self - Thinking the world

What is architecture? What is urbanism? What is architectural knowledge? In spite of current media confusion and bubbles, this is not frightening. But for every new idea, concept and notion put forward in any introduction, we must try and understand the recognized sources and accepted critical histories. What is received wisdom in architecture? Or in urbanism? *What is wrong with this picture*? To balance this it would be wise to consider what is 'architecture' today in relation to our differing worlds; what cities make up an understanding of urbanism? Cities you have not been to? Why do engineers still not speak the same vocabulary as architects? How do you learn today? Can we switch codes? What do you need to help you as you pass through studio, seminar and semester? What sort of narrative will you build up over the years? What is Gonzo? What is the narrative I or others will present and what is the narrative you receive and adapt? And how do you use this to think architecture, think the city. How will all this help you design and think the world? Architect, Engineer, Art Historian? Do we really communicate between ourselves?

### **Course Underpinning**

Arc1000 is a menu of options and used to structure the course and sessions according to timing, context, current events and student participation. To explore this – to introduce architecture and urbanism to

architecture students, engineering student and art history students (and others) - we will concentrate on: 1 The Critical Self – what is it and how do you learn the things you will learn?

2 The Four Point Cognitive Model (fluency – infancy – truancy – redundancy) – how do you/we select/edit today?

3 Why is mapping and mental maps connected to the retention of 'learning' -

what is 'retention deficit disorder', what is the Disinternet?

4 Architectural knowledge as both static and relational. What does this mean?

5 The relations and dynamics between learning and design?

### To ask:

How do you learn to think and use 'thinking' in an age sometimes considered Post-Image, Post-Critical, Post-informational? Even Post-Truth?

How do we relate ourselves to history and what role does theory play? What is a Situated Self?

### Course Format 10x10 sessions

There will be 10 sessions + a final Rapid Fire Lecture summary of the course (selected, timed and run by students) These are interactive, cross-disciplinary sessions on architecture and urbanism & the conception of architectural knowledge using readings, film, media and mapping. Cultural theory and critical thinking and its relation to architecture & urbanism from the 20century to our current moment will be mapped in some detail. Significant architectural thinkers will be mapped synchronically and diachronically. Each session will consist of – a presentation – a mapping – learning modules – a film or visual narrative (these are called Teddy Boy talks) – discussion & open debate... There will be at least three live-design sessions (the right angle – the freeform – the hybrid) Three in-class film viewing exercises. One cognitive diagram presented in each session (see 16 mini-maps) The course will introduce students to understand how ideas and thinking from many diverse areas find their way into architecture? Plus:

Selected Pedagogies (from amongst) – short visiting sessions from other faculty introducing the notions of Architecture/Engineering Architectural Studio Culture Urbanism (program & pedagogy) Conservation (action & relevance) Art/Architectural History & Theory Engineering & Technology Sustainability & Material research), Software development Parametrics, scripting and algorithmic architecture Industrial Design (design thinking and strategies).

### Course Objectives & live pedagogy (ted talks=teddy boy talks)

To ask what is architecture and urbanism and why they are linked

- To introduce the conception of architectural knowledge
- To introduce talking and writing and how is (architectural) 'criticism' useful?
- To introduce design and research methodologies.
- To understand how to map ideas and produce networks -informational / relational mapping
- To approach cognitive modeling: the four-point model of 'knowledge in flux'.
- To think the world and begin to understand societal change

### **Course Menu/Options Content**

10x10 - menu of lectures - presentations - mappings - films - seminars - exercises - options

- 1 Never miss a beat (animations & departures) Keywords: reference narrative departure arrival text -
- 2 Blink and it hasn't gone Keywords: movements: idea concepts idiolect intertext
- 3 20 Century Journey (modernisms)
- 4 All this talk about space What is an urban (spatial) awareness?
- 5 The Structure of Structures Ask an Engineer
- 6 Form & Function an engineer imagines
- 7 The Post-Modernism Condition
- 8 The Critical Self
- 9 Narrative Busting let's get critical!
- 10 The Art and Architecture of Undoing (taking positions)

### Course References/Sources (menu)

### Primary

The Empty Space, Peter Brook Architecture Andrew Ballantyne What is Architecture Paul Shepherd Don't go so Fast you'll Crash into Roland Barthes Connah An Engineer Imagines Peter Rice **The Curious incident of the dog in the night-time** Mark Haddon I Swear I saw This Michael Taussig

Audio-Visual Sources (from among)

Series/Films:

*Engineering Connections* (Richard Hammond BBC, 2009) Wembley Stadium - Sydney Opera House - HMS Illustrious - Guggenheim Bilbao - Millau Sky Bridge - Hong Kong Int'l Airport

*The Secret Life of Buildings* (Dickoff, BBC 2011) explores the impact the design of buildings can have on us, from our identity and self-esteem to relationships, our chances at school, and even our weight and immune system. 1 Home - In our homes, light, room size, layout, proportion and materials all affect our lives. So why do we accept the smallest windows and the smallest room sizes in Europe?

2 Work - Workplaces should inspire and motivate the people that use them. But are they doing the opposite? How does the architecture of schools, factories and offices affect us.

3 Leisure - how are we affected by the design of buildings we visit in our leisure time - does narcissistic design ignore the needs of the people who use these spaces.

Metagraffiti (Ducant, Stockhlom 2009) I <3 Graffiti.de

RSA animate Ken Robinson *Changing Education Paradigms* https://www.youtube.com/watch?v=zDZFcDGpL4U https://www.youtube.com/watch?v=iG9CE55wbtY

*My Playground* (Parcours) https://www.youtube.com/watch?v=g0eZLI2w54s

Relational Art Ben Lewis 2011 http://www.benlewis.tv/films/films\_artsafari/relational-art/relational-art/

 $https://www.ted.com/talks/liz\_diller\_plays\_with\_architecture$ 



Azrieli School of Architecture & Urbanism

1125 Colonel By Drive Ottawa, ON K1S 5B6 Canada Tel: (613) 520-2855 Fax: (613) 520-2849

# arch 2300/arch 5010, fall 2016 Introduction to Modern Architecture

Instructor:Inderbir Singh Riar, Associate ProfessorTeaching Assistants: Lara Chow, Samuel Dubois, Hillary Little, Cristina Ureche-TrifuCourse Hours:Mondays, 8:35-11:25am



C-N Ledoux, The Theatre of Besançon, 1784

Vladimir Tatlin, Monument to the Third International, 1919

ARCH 2300/5010 explores modernism, modernisation, modernity, and the Modern Movement in architecture in a three-part sequence. The course begins in France and the United Kingdom with investigations on eighteenth-century architecture, the early scientific period, and nascent social utopias; the aim is to unearth the roots of subsequent modernising projects for a new society conjured at the start of the Enlightenment. The second part examines thematic tensions – between handcraft and machine production, structure and ornament, historicism and invention, the rise of the metropolis and the flight from it – marking architecture and its discourses throughout the nineteenth century; a key concern is the relation between aesthetic ideals and the industrial revolution. A concluding series of lectures explores efforts to define new architectural languages – for example, rationalism or expressionism –supporting a "changed life" in the twentieth century; here, the effects of mechanisation and the aftermath of world war become paramount.

ARCH 2300/5010 relies on dialectical thinking to untangle the many strands of modern architectural thought and production. Typical oppositions of modernity – nature versus the city, the handmade versus the machined, the individual versus the collective – are examined not as isolated phenomena but mutually reinforcing (though at times conflicting) aesthetic, cultural, and technological conditions. A key sub-theme is the relationship, at times contradictory and at times fluid, between utopian thought and the formal language of modernism. As such, emphasis is placed on engaging both *primary sources* (e.g. manifestoes) and *secondary sources* (i.e. critical interpretations of architects' statements, built works, and historical periods). The course aims, therefore, at a deep

engagement with the *history* and *theory* of *modernity* and *modern architecture*, the consequences of which, it may be argued, continue to inform our time.

ARCH 2300/5010 does not claim to be exhaustive. Rather, it focuses on the relationship between *forms* and *intentions* in modernism, thereby situating architects' written and built statements within broader historical conditions and *vice versa*. Students are expected to demonstrate the acquisition of an education in the history of modern architecture by analysing coherently the *meaning* of built works and polemics. The development of critical reading, writing, and research skills is crucial.

Evaluation	
Paper 1 (750 words)	20% (questions distributed: September 19; due: October 7)
Paper 2 (750 words)	30% (questions distributed: October 17; due: November 14)
Paper 3 (1,250 words)	50% (questions distributed: November 14; due: December 9)

Papers are to be well-researched, historically accurate, and intellectually rich reflections on key architects, buildings, and writings. Each paper must exhibit a clearly defined thesis, strength and coherence of argument, and effective writing in Standard English. Arguments should be substantiated with specific architectural examples. Topics will be distributed separately. Teaching Assistants will hold writing workshops during the term; all students are encouraged to attend. Grades will not be posted on cuLearn but given on each paper. See Student Information below for additional information on grading.

Reference – Histories of Modernity and Modern Architecture

The following works, many placed on MacOdrum Library Reserves, supplement weekly required readings and may prove useful when writing papers.

Banham, Reyner. *Theory and Design in the First Machine Age* (New York: Praeger, 1960). Benevolo, Leonardo. *The Origins of Modern Town Planning* (London: Routledge & K. Paul, 1967). ———. *History of Modern Architecture*, vol. 1 (Cambridge MA: The MIT Press, 1971).

Bergdoll, Barry. European Architecture 1750-1890 (Oxford: Oxford University Press, 2000).

Cohen, Jean-Louis. The Future of Architecture since 1889 (New York: Phaidon, 2012).

Colquhoun, Alan. History of Modern Architecture (Oxford: Oxford University Press, 2002).

Curtis, William. Modern Architecture since 1900 (London: Phaidon, 1996).

Eaton, Ruth. *Ideal Cities: Utopianism and the (Un)Built Environment* (New York: Thames & Hudson, 2001).

Forty, Adrian. *Words and Buildings: A Vocabulary of Modern Architecture* (London: Thames and Hudson, 2000).

Giedion, Sigfried. *Building in France, Building in Iron, Building in Ferro-Concrete* (1928; Santa Monica CA: The Getty Centre for the History of Art and the Humanities, 1995).

Hampson, Norman. The Enlightenment (London: Penguin Books, 1968).

Hobsbawm, Eric. The Age of Revolution, 1789-1848 (New York: Pantheon Books, 1987).

Kaufmann, Emil. *Three Revolutionary Architects* (Philadelphia: American Philosophical Society, 1952). ———. *Architecture in the Age of Reason* (Hamden CN: Archon Books, 1966).

Middleton, Robin and David Watkin. Architecture of the Nineteenth Century (Milan: Electa, 2003). Mumford, Eric. The CIAM Discourse on Urbanism, 1928-1960 (Cambridge MA: The MIT Press, 2000). Pérez-Gómez, Alberto. Architecture and the Crisis of Modern Science (Cambridge MA: The MIT Press, 1983).

Pevsner, Nikolas. *Pioneers of Modern Design: From William Morris to Walter Gropius* (1936; London: Pelican Books, 1960).

Rosenau, Helen. *The Ideal City: Its Architectural Evolution* (London: Studio Vista, 1974). Rykwert, Joseph. *The First Moderns* (Cambridge MA: The MIT Press, 1980).

Schaer, Roland, et al., eds. Utopia: The Search for the Ideal Society in the Western World (New York and Oxford UK: The New York Public Library and Oxford University Press, 2000).

Smithson, Alison and Peter. The Heroic Period of Modern Architecture (New York: Rizzoli, 1981). Summerson, John. The Classical Language of Architecture (London: Thames and Hudson, 1980). Tafuri, Manfredo and Francesco Dal Co. Modern Architecture Vols. 1 and 2 (London: Academy Editions, 1976).

Vidler, Anthony. The Writings of the Walls (New York: Princeton Architectural Press, 1987).

### Weekly Readings and Required Texts

Weekly readings are posted on cuLearn (under the Ares tab). Texts marked with an asterisk (\*) are found on MacOdrum Library Reserves. Additionally, two required books are available at the Carleton University bookstore:

- Kenneth Frampton, Modern Architecture: A Critical History (London and New York: Thames & Hudson, 2007, 4th edition).
- Ulrich Conrads, Programs and Manifestoes on 20<sup>th</sup>-century Architecture (Cambridge MA: The MIT Press, 1971).

An extensive range of books (listed under the Ares tab in cuLearn), which will assist research on all three papers, is placed on MacOdrum Library Reserves. For further help, students may wish to acquire the following, which contextualise architectural and philosophical ideas encountered in the class: Raymond Williams, Keywords (1983, revised edition) and Adrian Forty, Words and Buildings: A Vocabulary of Modern Architecture (2000).

- Lecture I Introduction: The "Crises" of Modernity and the "Histories" of Modern Architecture
- Lecture 2 "Quarrel of the Ancients and the Moderns": Claude Perrault and an Early Enlightenment Perspective on What it Means to be Modern
- Lecture 3 Nature, Architecture, Type: From the Primitive Hut to Debates on "Origins" in the Mid-Eighteenth Century
- Lecture 4 Thresholds of Change: Visionary Architecture and the Sublime, 1750
- Lecture 5 – Utopia, Reform, and the Centralised Plan: from Prisons to Ideal Cities
- October 3, 2016
- Paper Writing Workshop with Teaching Assistants
- Lecture 6 Freedom and Beauty in the Handmade Thing: The "Nature" of "Craft" in Nineteenth-century Britain
- Lecture 7 Liberation through the Machine: Mass Production and the Industrial Revolution Lecture 8 "Truth" in Building: Structural Rationalism (and the Gothic Revival) in Nineteenth-century France
- Lecture 9 - Vienna 1900: Art Nouveau and the Debate on Ornament
- Lecture 10 Americana I: From City to Skyscraper, 1889
- Lecture 11 Americana 2: Frank Lloyd Wright
- Lecture 12 Form and Revolution 1: De Stijl and the Dutch Avant-Garde
- Lecture 13 Form and Revolution 2: the Soviet Avant-Gardes, 1917-1932 .
- Lecture 14 The Metropolis as Programme, 1: the "Hausmannisation" of Paris; Tony Garnier and the Cité Industrielle; Italian Futurism
- Lecture 15 The Metropolis as Programme, 2: Le Corbusier
- Lecture 16 The Garden City (versus the Metropolis): Ebenezer Howard, Raymond Unwin, and Frank Lloyd Wright, 1890-1932
- Lecture 17 The Metropolis as Programme, 3: The Weimar Republic and the Housing Ouestion, 1919-1932
- Lecture 18 Form and Revolution 3: The Deustcher Werkbund Debates, or Standardisation versus Expressionism
- Lecture 19 Form and Revolution 4: The Bauhaus

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Azrieli School of Architecture & Urbanism

ARCH 5200 Title: Graduate Seminar I – Section G *Theory*. Class Time: Tuesday 18:05 – 20:55

Hours Per Week: 3 Professor Contact Info: Professor Claudio Sgarbi cldsgrb@gmail.com Theories and Research. The Necessity of

Credit Value: 0.5 Office Location: 313

#### INTRODUCTION

There are theories of everything and also theories of nothing. If someone writes "Theory of Architecture" we might assume that there is theory, there is architecture and they are not occupying exactly the same space.

Architects have been dedicating quite a lot of time to define principles, choices, expectations and hopes. They did it with writings, designs and buildings. Studying different architectural theories can be relevant for contemporary architects. This will be the topic of our collective seminars. Yet the lectures are not meant to provide rational guiding lines for understanding what other theoreticians have done or are in the process of doing. The purpose of the course is not that of classifying or codifying but that of comprehending the complexity and embrace the indeterminacy of architectural knowledge.

There will be 13 lectures where I will try to explain my tools of research (curiosity), exposing themes, methods and projects I am working on, to create a collective ground for sharing ideas and interests. The students, who are required to participate actively to the lectures, have two assignments: the first is to make presentations to the class discussing different theories of architecture; and the second is to create a multimedia document. For this second assignment I will encourage each student to design the guiding lines for a possible theory of architecture, creating an Atlas for the geography of an architectural imagination.



### Lectures and Seminars

Each meeting will be subdivided into a Lecture (approximately one hour and a half) and a Presentation. The Lectures will be held by the instructor (and a special invited guest) and the Presentations by the students.

### Lecture's Topics

0 - Introduction. Architectural Knowledge. Archi-Technè. What is Architecture and what is not Architecture. The Architecture of Thought. Archetypes: Huts and Wombs. The Ideal City and the Concentration Camp.
1 Theory and Theatre. The Scopic Eye. Seeing and Shutting the Eyes. Stage Sets and Scenarios. Knowing and Place. The Necessity of the Artifice.

**2** Body and Mind. Neurosciences. Conundrums. Fallacy and Fiction. Simulation and Dissimulation. Houses for the Souls.

**3** Who is the Architect. With or Without Architects. The Female Body of Architecture and the Place of Conception. Miscarriage of *Couvade*. The Oppressed Feminine.

**4** Architects and Death. Life and Death as Works of Art. The Problem of the Decaying Body. The Artist as a Young Man. Geriatric Spaces. Burials and Ceremonies.



**5** Gender and Space. Species of Spaces of Genders. The Centre of the Human Body. The Indertemination of the Flesh in the Public Space. Who's Inside the Walls.

**6** The Body. The Illusion of Proportion. Extraordinary Bodies. Body Functions in Space. The Organism and the Systems.

**7** The Space of Eros. Love and its Boundaries. The idea of pleasure and desire to build. Construction and satisfaction.

**8** Histories of Architecture and Architectural Histories. Origins and Futures. Inventions and Traditions. Renaissances and Revolutions. Modernities, Middle-Ages and Different Transitions. Relevant and Irrelevant Architectures.

**9** Memory and Time. Flying Houses. Storage Rooms and Memory Palaces. **10** The Time of the Un-finished Design. Architecture and Completeness. Waiting Spaces. The

Architecture of Procrastination.

**11** The Ephemeral and the Permanent. Dressing and Propping the Lasting. Scale. Portable (Pocket) Architecture.

**12** To Think, to Write, to Draw and to Make Architecture. Poetic, Practice and Knowing Without Knowing. Ethics and Politics. Concision and Frugality.

**13** Architecture and Building. Material and Concreteness. Facture Architecture.

### **REQUIRED TEXTS:**

A specific bibliography will be provided for each lecture.

Reference authors (my mentors and/or friends): Marco Frascari (*The Tell-the-Tale Detail, Eleven Exercises, The Body and Architecture*, http://www.marcofrascaridreamhouse.com/) Vittorio Gregotti (*The Territory of Architecture*) Ivan Illich (*H20 or the Waters of Forgetfulness, Tools of Conviviality, The Alphabetization of the Popular Mind*, http://infed.org/mobi/ivan-illich-deschooling-conviviality-and-lifelong- learning/). Donald Kunze, (*Metalepsis of the Site of Exception, http://art3idea.psu.edu/metalepsis/banner/publications.html*, http://www.metalepsisworkshop.com/) Joseph Rykwert, (*The Necessity of Artefice, The Idea of a Town, On* 

Adam's House in Paradise, The Dancing Column). Manfredo Tafuri (Theories and Histories of Architecture, The Sphere and the Labyrinth)

### COURSE ASSIGNMENTS

### Assignments 1 and 2

Assignment 1 - **Presentations**. Every Student will present and discuss a theory or a body of theories. Each time the student will choose an author, a manifesto, a text, or a selection of passages from the reference readings indicated in the bibliography (or other texts), expose what she/he has chosen and discuss its contents. There will be 30 minutes of presentation and then a guided discussion where questions and answers will be conducted by the student alone or together with one or more students acting as respondents and discussants for that presentation. The presentations are meant to become an open stage and a laboratory for collective sharing and discussion of theories.

Assignment 2 – **Atlas**. Each Student will start to work from the very beginning on the design of the guiding lines of an architectural theory. These guiding lines should be seen as a conceptual reference for any design project and particularly for the **STUDIO** project you will be working on during the semester. These guiding lines will be collected in an **atlas**, with a title, a frontispiece and an open diary – *taccuino* – where each student begins to collect all the reflections, suggestions, images and hypothesis for the definition of a theory.

### **EVALUATION**

Presentations 40% Participation in the discussion 10% Atlas 50% ARCH 5201W Winter 2016 W 6:05 – 8:55pm

Instructor: Paul Holmquist

# GRADUATE SEMINAR 2: CONTEMPORARY THEORETICAL PERSPECTIVES IN ARCHITECTURE

### Acting into the World: The Nexus of Architecture, Technology and Politics

At the center of politics lies concern for the world...

-- Hannah Arendt, The Promise of Politics

# TOPIC OF THE SEMINAR

Architecture has always existed at the intersection of the technical and the political. The city has always been the site of human desire, aspiration, and realization. Yet the autonomy of technological objects and systems in late-modernity poses crucial questions for architecture's potential to meaningfully respond to the possibilities of 'the city' as both an artifact and a political idea. Human action and agency, the very substance of politics according to Hannah Arendt, are increasingly actualized, displaced or subsumed within the capacity to act that is "built into" modern technology. The city, increasingly conceived and experienced as the aggregate apparatuses of control and consumption, captures human desire rather than engaging and liberating it. Architecture as a technical, ethical, and self-reflective practice has always proposed and brought into being the common world in which meaningful human action can take place. How does architecture as a discipline negotiate the technical and political in late modernity? What role does it play in bringing about the city as a place where, according to Jacques Derrida, "desire may live?"

ARCH 5201W explores architecture as a politics of making and of the made in relation to modern technology, in its capacity to constitute what Arendt has called the "common world." The agency of architectural making will be examined broadly within the framework of Arendt's critique of modern politics, and Martin Heidegger's critique of modern technology. We will interrogate specific modes of architectural practice relative to theories of the technical image and spectacle, spatial justice and play, and sustainability and bio-politics. An engagement with texts drawn from architectural theory, cultural theory, political philosophy and the philosophy of technology, as well as case studies of contemporary practice, will open up new ways of thinking about the relationship of architecture and technology to the essential human condition of the city.

# Course format:

Lectures delivered through visual presentations in conjunction with discussions of assigned reading, and weekly presentations of ongoing student research. Assigned readings and research paper will allow students to become familiar with various theoretical responses to the interrelationship of architecture, technology and politics.

# Course objectives:

- 1. To become familiar with issues of contemporary theory concerning the interrelationship of architecture, technology and politics.
- 2. To establish a critical framework in which the students can develop their own research interests, particularly their graduate thesis.
- 3. To demonstrate the above through participation in class discussions, through development and presentation of research in oral and written forms.
- 4. To prepare students to work independently and to impart and improve research, writing and critical thinking skills.

# **Course Assignments:**

Course assignments comprise weekly readings, writing, a research paper, and presentations of research.

# Readings:

Two reading selections are required for each session: the designated primary reading, and one reference reading (see schedule of sessions below). Students should be prepared to discuss the readings in class; reading discussion will contribute to the overall evaluation for participation.

# Weekly 'blog' writing:

Six (minimum) short blog entries to be posted on the class intranet site on cuLearn. A minimum of two entries are due by the fifth week. Entries should be 250 words each, and address a question or topic that I provide related to the readings for the coming session. The blog writing is intended to foster a dialogue between the course readings and students' ongoing research, and to prepare the ground for the in-class discussion. In addition, students are encouraged to post thoughtful responses to other's entries. Postings should be as early as possible to allow for others to read and respond, and no later than **midnight** (11:59 pm) on the Monday before the subsequent class meeting. **First entries will be due January 11**.

# Research paper:

Students will research a topic, chosen in consultation with me, over the course of the semester. Research topics should relate to, and extend upon, the student's ongoing thesis research. Research will focus on a particular building, site, artifact, event, practice, or theory, and situate it with respect to the issues of the course. The length of the paper should be approximately 2500-3500 words (10-12 pages, 12pt double spaced, not counting notes or bibliography). Use Chicago Style notes and include a focused, general bibliography including all works cited. The paper will be developed in phases per the following schedule:

# Topic consultation

Initial topic paragraph and bibliography: Outline summary (working), 3-5 pages: Final paper summary presentation Final paper due: weeks 1-4 February 3 (week 5) March 9 (week 9) March 30, April 6 (weeks 12, 13) April 23

# Course Assignments (cont'd):

All progress work and the final paper will be submitted to the course cuLearn site as a pdf file. All work will be due by **the beginning of class** for the dates indicated above. Every attempt will be made to review and return feedback on interim progress work within one week.

# Research presentation:

Students will present their research in progress once, in teams of three or four students, as a coordinated discussion for the class. Guidelines for these presentations will be provided separately. Presentation groups and dates will be set by the fifth week according to chosen topics.

# Texts:

Course readings and references are drawn from a large number of individual texts (see schedule of readings below). All texts will be placed on reserve in the University library. The required and highly recommended texts below are available for purchase in the University bookstore. Additional reference texts and resources that may be useful throughout the course are included below.

# **Required:**

- The Human Condition, Hannah Arendt, University of Chicago Press.
- Basic Writings, Martin Heidegger, Harper Perennial.

# Highly recommended:

- Towards a Philosophy of Photography, Vilém Flusser, Reaktion.
- The Society of the Spectacle, Guy Debord, Black and Red.

# **References:**

- Rethinking Architecture: A Reader in Cultural Theory, ed. Neil Leach, Routledge. (e-resource)
- Theorizing a New Agenda for Architecture, ed. Kate Nesbitt, Princeton Architectural Press.
- Constructing a New Agenda: Architectural Theory 1993-2009, ed. Krista Sykes, Princeton Architectural Press.
- Architecture Theory Since 1968, ed. K. Michael Hays, MIT Press.
- *Rethinking Technology: A Reader in Architectural Theory*, ed. William W. Braham, Jonathan Hale, and John Stanislav Sadar.
- Stanford Encyclopedia of Philosophy, <u>http://plato.stanford.edu</u>.
- Carleton Student Academic Success Centre, Writing Resources, <u>http://www1.carleton.ca/sasc/writing-</u> tutorial-service/writing-resources/
- Purdue Online Writing Lab, http://owl.english.purdue.edu/owl/

### **GENERAL INFORMATION**

### GRADING

Blog writing:	20%
Research presentation:	20%
Research paper:	50%
Participation:	10%

TOTAL 100%

For the grade in the "A" range, the instructor will have judged the student to have satisfied the stated objectives of the course in an outstanding to excellent manner; for the "B" range, in an above average manner; for the "C" range, in an average manner with C- being the lowest acceptable grade in the BAS - Design Core courses; for the "D" range, in the lowest acceptable manner in non-Core courses, and for "F", not to have satisfied the stated objectives of the course. Grades will be assigned as A+ (90-100%), A (85-89%), A- (80-84%), B+ (77-79%), B (73-76%), B- (70-72%), C+ (67-69%), C (63-66%), C- (60-62%), D+ (57-59%), D (53-56%), D- (50-52%), F (0-49%) and ABS. A grade of C- or better in each course of the BAS - Design Core is required for a student to remain in *Good Standing*. (Please refer to the Undergraduate Calendar http://www.carleton.ca/calendars/ugrad/1011/regulations/acadregsuniv2.html#2.3 for regulations concerning grades and other program requirement information and http://www.carleton.ca/calendars/ugrad/1011/programs/architecturalstudies.html for regulations concerning grades and other program requirement information specific to the Architecture program.

Blog writing and research papers will be evaluated on the (1) strength of intellectual engagement with course topics, questions and readings, (2) development and articulation of the student's own research, and (3) the clarity, craft and completeness of the work submitted. Each grade will be based upon a comparison (1) with other students in the course and/or (2) with students who have previously taken the course and/or (3) with the instructor's expectations relative to the stated objectives of the course, based on his/her experience and expertise.

A progress evaluation will be made in week of Session 7 (February 24) based on presentations, blog writing, research paper progress, and participation through the week of Session 6 (February 10).

Other than the research presentations and final paper, late work will be accepted with a one-letter grade penalty for every two days past the due date.

### ATTENDANCE

Attendance constitutes your contract with the School and your instructor. Attendance is mandatory for all sessions unless excused in advance due to illness and other University approved reasons, including cases of emergency. You must contact me by email prior to the missed class meeting, or as soon as possible in cases of emergency. Two unexcused absences will result in a half-letter grade reduction in the final grade, and further absence will be grounds for being dropped from the course. Arriving late disrupts the entire class. Please ensure that you are on time and ready to begin by the class starting time. Egregious tardiness will count as unexcused absence.

# ARCC

Technical & Professional Core Courses

### CARLETON UNIVERSITY AZRIELI SCHOOL OF ARCHITECTURE AND URBANISM

COURSE SYLLABUS SESSION: WINTER 2016

# **COURSE: HISTORY OF STRUCTURES**

COURSE NO.: ARCC 1202 HOURS PER WEEK: 3 Fridays: 8:35 to 11:25 INSTRUCTOR: Professor Manuel A. Báez CREDIT VALUE: 0.5 Minto Centre Room 5050 Special guests and events: TBA

# **Structural Intuition and Imagination**

*History of Structures* offers a general overview and introduction to architectural construction through an understanding of the **interrelationships** between architectural and structural principles, thus providing students with the possibility of acquiring the critical knowledge and perspective that is necessary towards an insightful production of intuitive and imaginative work. Through a survey of basic **structural principles**, that includes contemporary, modern & historical structural systems, construction techniques, materials and details, including the cultural elements involved in the synthesis of traditional structural designs, the course intends to provide insights into the **how** and the **why** of architectural production. This will be offered through an overview of the history, theory and science of structures and how this pertains to buildings and civic works through a detailed analysis of specific structural developments and construction details.

The course will focus on modern as well as historic works, structures, construction techniques and materials where **innovative structural imagination** has played a key role. These critical reflections will provide a historical perspective on the use of materials such as wood, stone, brick, concrete, steel, glass, etc., and their relationship to construction technologies and structures. The technical characteristics (physical and mechanical properties) of materials will be explored in conjunction with their use in construction and in their relationship to structural typologies.

Theoretical aspects of the design process will be addressed from both a philosophical and practical perspective in order to develop an understanding and appreciation for the potential of material properties and structural principles as vehicles for the construction and development of conceptual ideas. Materials are not just recipients of architectural ideas, i.e. vessels for meaning, but have a way of in-forming the making process through their inherent properties.

The general topics covered in the individual lectures will be addressed with an emphasis on our inherent **embodied awareness** (both consciously and unconsciously) of the structural principles being highlighted. This innate intuition and direct physical comprehension has evolved and plays a key role in our **imaginative** capabilities. Both architects and engineers have relied on this ability as a means of conceiving, visualizing and implementing innovative structural ideas. The acclaimed engineer and architect Pierre Luigi Nervi has made the following observation regarding the value of this intuition:

"It is highly regrettable that some of the highest qualities of the human mind, such as intuition and direct apprehension, have been banned from our schools and have been overwhelmed by abstract and impersonal mathematical formulas. We cannot forget that in the distant past intuition allowed the execution of works which cannot be analyzed by mathematical theories, although they are extremely efficient from a technical, economical, and architectural viewpoint."

Often, structural concepts and principles are physically and intuitively apprehended (meaning **seized** or **grasped** by the human hand and, therefore, the mind) before they are imaginatively realized through drawings, the selection of appropriate materials and construction methods. This transformative learning process offers great potential through **intimate embodied comprehension and awareness** of the interrelationships between basic structural principles, the nature of materials and architecture. This is the **imagination** that will be highlighted through the course material.

"I am enough of an artist to draw freely upon my imagination. Imagination is more important than knowledge. Knowledge is limited. Imagination encircles the world." Albert Einstein

\*\*\*\*

# **COURSE CONTENTS and SCHEDULE:**

**Lecture topics:** A full weekly breakdown of these topics will be provided. **Introduction to the Overall Structure and Themes of the Course Structuring Space**:

Spatial and Mechanical aspects

# Statics:

Structural Actions and Re-actions, Weight vs. Lightness, Forces and Moments, Equilibrium, Pushing & Pulling (Compression and Tension)

# Loads:

Dead and Live Loads,

# Materials:

The Nature and Structure of Material: Wood, Concrete, Steel, Glass

# The Hanger and the Tie:

Ties and Guys, Tension Connections

# The Beam and the Slab:

Straight vs. Skewed Geometry, Visualizing Beam Actions, Deformation and Internal Stresses

# The Column and the Wall:

Compression Elements and their Shapes

# The Truss and the Space Frame:

Triangulation and Internal Stability, Truss Forces, Joint and 3-D Action, Tensegrity Structures

# The Frame and Lateral Stability:

Framing Light and Space, Stabilizing Subsystems, Frame Form and Behavior, Fixed and Rigid Connections

# The Cable and the Membrane:

Ropes and Cables, Cable Shapes and Forces, Cable Nets, Fabric Membranes, Pneumatic Membranes, The World Wide Weave (On Textile Structures)

# The Arch and the Vault:

The Stone Arch, Arch Behavior, Compression Forces and Bending Moments, Arch Foundations, The Vault and Light

# The Dome and the Shell:

Arch Action and Domes, Shell Domes, Folded Plates, Cylindrical Shells, Hypar Shells, Beyond Surface and Geometric Purity

# **New Directions and Concepts**

# **Course Assignments Values:**

The final grade will be determined as follows:Four Exams:40% (10% each)Term Project Report50% (15% Mid-term and 35% Final)Discretionary Evaluation:10%, for participation, initiative, and effort is part of the overallfinal course grading.

# The Interim Grades will be posted on-line through cuLearn.

# **Attendance**

No more than <u>3</u> sessions can be missed and no more than <u>6</u> late arrivals to sessions (this will require an evaluation/discussion of your borderline (pass/fail) situation.) Every class session consists of two lectures and counts as two sessions.

# **Required Reading:**

Sandaker, Bjorn N., Eggen, Arne P. & Cruvellier, Mark R., The Structural Basis of Architecture, Routledge, 2011 second edition.

Plus additional hand-outs.

# **Suggested additional reading:**

Billington, David P., The Tower and the Bridge. Princeton University Press, 1985.

Deplazes, Andrea, Constructing Architecture, Materials, processes, Structures, Birkhauser, Basel, 1999.

Salvadori Mario & Robert Heller, Structure in Architecture: The Building of Buildings, Prentice Hall, 1975.

# **General Bibliography**

Acland, James. Medieval Structure: The Gothic Vault. Toronto: University of Toronto Press, 1972. Alberti, Leon Battista. On the Art of Building in Ten Books. Translated by Joseph Rykwert, Neil Leach, Robert Tavernor, The MIT Press, 1997 [1452].

Allen Edward & Joseph Iano. Fundamentals of Building Construction: Materials and Methods. Hoboken, N.J. : John Wiley & Sons, c2004.

Anderson, Stanford. Eladio Dieste, Innovation in Structural Art, Princeton Architectural Press, 2004.

Benvenuto, Edoardo. Introduction to the History of Structural Mechanics. Part 1: Statistics and Resistance of Solids, Springer 1991.

Berger, Horst. Light Structures-Structures of Light: The Art and Engineering of Tensile Architecture Illustrated by the Work of Horst Berger, AuthorHouse 2005.

Bradford Landau, Sarah & Carl W. Condit. Rise of the New York skyscraper, 1865-1913. New Haven : Yale University Press, 1996

Brent, Richards. New Glass Architecture. Yale University Press, 2006.

Britton, Karla. Auguste Perret. London; New York : Phaidon, 2001.

Canada Mortgage and Housing. Canadian Wood Frame House Construction: Bilingual English and French, Audio cd, C.M.H.C. 2001.



2016-2017

#### Azrieli School of Architecture and Urbanism ARCC 2202 Architectural Technology 1 - 0.5 credit

Scott Bucking Canal Rm. 5209, ext. 3099 <u>scott.bucking@carleton.ca</u> Course Outline Fall Session

Th. 6:05-8:55 ME3380

### **Course Description:**

General introduction to materials and methods of construction with focus on wood and timber frame construction. Site conditions, foundations, structure and envelope design in terms of their response to local climate: sun (light and heat) wind, moisture.

### **Course Texts:**

Fundamentals of Building Construction (5<sup>th</sup> or 6<sup>th</sup> Edition) by Edward Allen, John Wiley and Sons (2008 or 2013) Canadian Wood-Frame House Construction CMHC 2014. (available as free download from CMHC)

### **Course Objectives:**

At the conclusion of the course, the student is expected to have a clear understanding of the important role that the design of building technologies plays in reinforcing a design concept, and a basic understanding of the construction materials and methods typically used in small building projects. Specifically he/she must

- be aware of site resource issues: sun, water, wind, soil, etc.
- be familiar with the basic building elements and their roles in the architectural project.
- be familiar with basic concepts of structure
- have a basic knowledge of wood, steel and concrete construction systems and the design implications and appropriate use of each.
- detailed knowledge of wood frame house construction.
- be able to design and document a specific component of a building.

Assessment	
Revit/BIM Assignments:	10% (1% per assignment, max 10 assignments)
2 Tests @7.5%:	15%
Assignment 1:	10% (Groups of 2)
Project Proposal	
Assignment 2:	25% (Groups of 2)
Final Report & BIM	
Final Exam:	40%

# Office Hours: Wednesday, 4-5pm at CB 5209

Or by appointment. Please allow two business days for any email responses. Use "ARCC2202:" in email title and state you question clearly. Make sure you question isn't already answered in the course outline/schedule!

# ACADEMIC ACCOMMODATION

You may need special arrangements to meet your academic obligations during the term because of disability, pregnancy or religious obligations. Please review the course outline promptly and write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist.

# 2015 Course Outline

Architectural Technology II - CIVE 2005/ARCC 5097

January 6, 2015

# INSTRUCTOR

Jacobus (Jack) van den Berg M.Eng., P.Eng. Dept. of Civil & Environmental Engineering Phone: 819-420-4920 (w) 613-592-3555 (h) Email: *jack.vandenberg@carleton.ca* Rm. 3054MC (Minto)

# LECTURES

Room: To be determined Tuesday 6:00 – 9:00 pm

Attendance to lectures is mandatory. Material discussed in the lectures is designed to promote further reading and study. Lectures introduce concepts and terminology related to structural analysis and design.

# TUTORIALS

Section A1: Thursday 6:00 – 9:00 pm.	Room 209 – Architecture Building
Section A2: Friday 8:30 – 11:30 am.	Room 209 – Architecture Building

Teaching Assistants: To be Announced

One of the teaching assistants will be present during the tutorial to answer questions relative to the assignments and to provide students with feedback on their marked assignments and tests. Assignments will be given during the Tuesday lectures and are due the following Tuesday at the beginning of the class. No late submissions will be accepted. Assignments will be returned during the following lecture and solutions will be posted on cuLearn after the papers are returned.

# **EVALUATION**

Assigned Problems: 10 Assignments will be provided during the term.		
<i>Tests:</i> 4 tests will be given throughout the term during the tutorial sessions.	30 %	
Final Exam: Scheduled by the University. 3 hours.	50 %	
Total	100 %	

Note: The final exam will not be returned to the students

# **REQUIRED TEXT**

Statics and Strength of Materials for Architecture and Building Construction – 4'th Ed., B. Onouye and K. Kane, Prentice-Hall.

# SUGGESTED READINGS

Structures, or Why Things Don't Fall Down. J.E. Gordon. Pelican Books. Elementary Structures for Architects and Builders, 3 Ed, R.E. Shaeffer. Prentice Hall. 1998

Fundamentals of Structural Analysis, 3 Ed., Kenneth M. Leet, McGraw Hill.

# LECTURE OUTLINE

The following outline is provided as a guideline and may change through the term.

Week	Date	Торіс	Section
1	January 6	Introduction	Chapter 1/2
		Basic Engineering Concepts:	
		Forces, Equilibrium	
2	January 13	Introduction to Statics	Chapter 2/3
		Loading Conditions	
		Calculations of Reactions	
3	January 20	Centre of Gravity	Chapter 2/3/5
		Tension and Compression	
		Members	
		Introduction to Trusses	
4	January 27	Trusses	Chapter 3
5	February 3	Pinned Frames	Chapter 3
6	February 10	Introduction to Shear and	Chapter 6
		Bending Moment Diagrams	
7	February 17	Winter Break –	
		no lecture or tutorials	
8	February 24	Shear and Bending Moment	Chapter 6
		Diagrams	
9	March 3	Strength of Materials	Chapter 4
		Stress and Strain	
10	March 10	Bending Stress and deflection in	Chapter 7
		beams	
11	March 17	Parallel Axis Theorem	Chapter 5
		Bending Stresses in Beams	
12	March 24	Shear Stresses in Beams	Chapter 7
13	March 31	Review	
14	April 7	Preparation for Final Exam	

# DATES FOR TESTS

Tests will be 1 hour long and will take place during the tutorial period. Test will start at 7:00 pm on Thursdays and 10:00 am on Fridays. This will provide at least one hour in advance of the tests to ask questions to the TAs.

The dates for the tests are: (Section A1 / Section A2):

Test 1 – January 29/30 Test 2 – February 12/13 (Thursday/Friday before study break) Test 3 – March 5/6 Test 4 – March 19/20

You must consult cuLearn regularly to check your grades. If there are any issues with the grades for the assignments or tests, the issue must be resolved with the TA within two weeks of the posting of the grades.



Course:	ARCC 2203 + ARCC 5098– Architectural Technology 3
Faculty:	Jay S. Lim, OAA, AIA, LEED AP, B.Tech, M.Arch, MSAUD
Contact:	jay.lim@carleton.ca
Skype:	jay.s.lim [Ottawa] [Online meetings available by appointment]
Office:	RM. 416 [Office hours available by appointment]
TA's:	Nicole Howell, Marie Eve Lagine, Lihzi Jiang
Lecture:	Wednesday 8:35-11:35 am
Labs:	TBD [as required]
Location:	Steacie Building, RM103

# COURSE DESCRIPTION

This course investigates the relationships between how architecture is conceived and its eventual manifestation in built form. Using case studies, students will explore the work of architects and their projects and examine them in light of their intentions, their ideologies as well as their relationship to their times. Special attention will be placed on architects' contributions to the changing technology of architecture in their uses of materials and construction methodologies. One component of this course, therefore, views architecture as an expression of ideas, i.e.: architecture as "language" which expresses ideas and ideologies in an attempt to creatively elucidate "meaning" in artefact form. A second intertwined component of this course proposes that in the making of an "expressive" architecture, every decision holds a certain weight and serves to give an explicit and/or implicit reading of the work. The exploration of contemporary and historical issues will be analyzed through structure, mechanical systems, materials, formal devices and production. The focus suggests that the study of the history/theory of architecture is not separate from the study of the technology of architecture. The etymological root of the word technology in ancient Greek can be traced to the words techne and logos [techne-logos - technology] which loosely translate to "thoughtful making" suggesting that "making" is not a neutral enterprise and requires a reflective and critical position.

In presenting case-studies and the works of historical and contemporary practises, fundamentals of building convention must be explored. An introduction to traditional and alternative building systems, materials and method is therefore necessary in order to explore the present and future possibilities of architectural explorations. Lectures will present key concepts of "building" interwoven by relevant works of architects that elucidate the principals in practice.

# COURSE OBJECTIVES

- 1 To develop a more comprehensive understanding of the methods and materials of mid to large scale buildings.
- 2 To explore the nature and use of architectural language and apply them in a practical manner.
- 3 To examine the elements, relationships and ordering systems inherent in architecture including the way in which buildings are conceived, drawn, detailed and built.
- 4 To gain an understanding of 'systems' (structure, mechanical, electrical, fire) that shapes the form and function of architecture.
- 5 To critically analyse the necessary life safety and accessibility standards required of all buildings.



# APPROACH AND ORGANIZATION

In general, classes will be organized into a single 3 hr. weekly lecture that will consist of formal presentation of a technological innovation that will be supported with case studies. Occasionally 2 hr labs will be announced [as required] to discuss assignments or to review the progress of work. Student participation is critical to the success of the class and the labs.

After each lecture session students will be given a short quiz about the presentation material that day.

# COURSE EVALUATION CRITERIA

Assignments, will be judged on their tecnical response and demonstrated insight into the material, issues and problems in question. In addition, demonstrated effort, quality of production, degree of development and completion will play a significant role.

Quizzes	20%
Assignment 1a: Site Plan Application	30%
Assignment 1b: Permit Set	30%
Assignment 3: Construction Log	20%

\*Note: Absence from more than 2 lectures, without notice or medical certificate, may result in a failing grade.

\*Students will be required to actively participate in final reviews. Absence and/or lack of participation will result in a deduction of 5% from the overall final grade.

BIBLIOGRAPHY Reference Texts:

Allen, Edward - "Fundamentals of Building Construction - Materials and Methods - 3rd Ed.", available at Carleton University Bookstore. Previously purchased as required by Architectural Technology 1.

Stein, Reynolds – "Mechanical and Electrical Equipment for Buildings", available via Online Bookstores. While this course will focus mainly on Chapter 4, the text is required by Architectural Technology 3.

Recommended Texts:

Ching, Francis - "Building Construction Illustrated".

Ontario Building Code 2012 Edition

The content of this course is supplemented by a website available on CU Learn.



# SCHEDULE: SUBJECT TO CHANGE

Week	Date	Agenda
1	Sept 7	<ol> <li>Introduction</li> <li>Course Outline</li> <li>Drawing Techniques</li> <li>Phases of Design</li> <li>Zoning</li> <li>Building Code</li> </ol>
2	Sept 14	<ol> <li>Site Preparation: Civil Works</li> <li>Bricks + Mortar: Concrete Examples</li> <li>Foundations</li> <li>Confirm groups for Assignments 1</li> <li>Confirm buildings for Log Book</li> </ol>
3	Sept 21	<ol> <li>Steel</li> <li>Technological Shift: Craft vs. Mass Production</li> <li>Rationalization: Towards a New Architecture</li> </ol>
4	Sept 28	<ol> <li>Building Envelopes: Rain Screen + Curtain Walls</li> <li>Roofs</li> <li>Vertical Circulation</li> </ol>
5	Oct 5	ASSIGNMENT 1a: Due 8:31am 1. Masonry Cladding 2. Specifications 3. Review Requirements for Assignment 1b
6	Oct 12	<ol> <li>Mechanical-HVAC</li> <li>Electrical</li> </ol>
7	Oct 19	<ol> <li>Plumbing &amp; Wastes Systems</li> <li>Fire Protection</li> </ol>
8	Oct 26	FALL BREAK NO CLASS
9	Nov 2	1. Thermal Comfort [Insulation & Calculations] Thermal Gradient Lab with TA's
10	Nov 9	<ol> <li>Interior Finishes</li> <li>Acoustics</li> <li>Assignment 2 Desk Review</li> </ol>
11	Nov 16	Assignment 1b – Technical Drawing: Due 8:31am 1. Digital Architecture 2. Ephemeral Architecture & Pre-fabrication ASSIGNMENT 3-LOG BOOK: Early submissions
12	Nov 23	FAB-Architecture: Tensile Structures     Environmental Hazards
13	Nov 30	1. Sustainability ASSIGNMENT 3-LOG BOOK: Final Submissions

# **CARLETON UNIVERSITY**

### FACULTY OF ENGINEERING AND DESIGN AZRIELI SCHOOL OF ARCHITECTURE AND URBANISM

BACHELOR OF ARCHITECTURAL STUDIES PROGRAM

COURSE OUTLINE 2016 - 2017 SESSION

COURSE TITLE: ARCHITECT	OURSE NO.: ARCC 3202A			
TERM: Fall	CREDIT VALUE	E: 0.5 H	OURS PER WEEK: 3	
SCHEDULE: Thursday 2:30 pr	m to 5:30 pm	R	OOM NO.: AA204	
<b>INSTRUCTOR:</b> Larry Hately	Office: AA416	613-520-2600 ext.2883	Larry.Hately@carleton.ca	
TEACHING ASSISTANT: Jeniffer Milburn Jeniffer Milburn@cmail.carleton.ca				

# **1.COURSE DESCRIPTION:**

This course will provide the student with an introduction to advanced building technologies and advanced construction methods and materials and an introduction to "Building Science Principles", "Building Envelope Design" and "Environmental Issues" related to the design, construction and operation of a variety of commercial and residential building types.

### 2. COURSE OBJECTIVES:

- At the conclusion of this course the student will be familiar with the following concepts and issues:
- 1. The importance of Architectural Technology to the practice of Architecture, Engineering and Construction.
- 2. The multi-disciplinary nature of the design and construction industry.
- 3. The importance of the coordination and integration of Architectural, Mechanical, Electrical and Structural systems in buildings.
- 4. The characteristics, properties and use of advanced construction methods and materials.
- 5. "Building Science" principles and "Building Envelope Design" technologies and approaches.
- 6. The impact of "Environmental Issues" on the design, construction and operation of sustainable, environmentally responsible, energy efficient buildings.
- 7. The application of advanced building technology components and assemblies for a variety of commercial and residential building types.

### 3. METHODOLOGY:

Lectures, demonstrations, visual presentations, supplementary readings, assignment and examinations.

### 4. EVALUATION:

The final grade for this course will consist of the following evaluation components:

<b>COMPONENT</b>	VALUE	DATE
1. Mid -Term Examination	35%	Wednesday, November 2nd, 2016 from 5:30pm to 8:30pm (3 Hours) in Room (TBA)
2. Architectural Detailing Assignment	30%	Introduction to assignment on Thursday, November 3rd, 2016 at 2:30pm in Room AA204 Final submission due Wednesday, November 30th, 2016 at 12:00pm in Office AA416
3. Final Examination	35%	Monday, December 12th, 2016 from 2:30 pm to 5:30pm (3 Hours) in Room (TBA)
TOTAL	100%	

### 5. COURSE CONTENT and SCHEDULE :

<u>WEEK</u>	DATE	TOPIC	COMMENTS
1	Thursday, September 8th	Course Introduction	
2	Thursday, September 15th	Introduction to	First Lecture
		'Building Science Principles'	
		and 'Building Envelope Design'	
3	Thursday, September 22nd	Cladding Principles	
4	Thursday, September 29th	Foundations	
5	Thursday, October 6th	Foundations and Floors	
6	Thursday, October 13th	Floors and Wall Systems	
7	Thursday, October 20th	Wall Systems	
8	Monday, October 24th to		
	Friday, October 28th	Fall Break	No Classes
9	Wednesday, November 2nd	Mid-Term Examination	5:30 pm in Room (TBA)
	Thursday, November 3rd	Wall Systems	Introduction to A.D. Assignment
10	Thursday, November 10th	Wall Systems and Roofing	
11	Thursday, November 17th	Roofing	Mid-Term Examination Review
12	Thursday, November 24th	Openings	
13	Wednesday, November 30th	Submit A.D. Assignment	12:00 pm in Office AA416
	Thursday, December 1st	Openings and Environmental Issues	Final Lecture
14	Monday, December 12th	Final Examination	2:30 pm in Room (TBA)
	-		and Return of A.D. Assignment
15	Thursday, December 15th and	Friday, December 16th	Final 4th Year Studio Reviews

### 6. REQUIRED TEXT :

None

### 7. REFERENCE MATERIAL :

- 1. Canadian Wood Frame House Construction, Canada Mortgage and Housing Corporation
- 2. Durable Wood Frame Construction for All Climates, Canada Mortgage and Housing Corporation
- 3. Builders Manual, Canadian Home Builders' Association
- 2. Architectural Details for Insulated Buildings, Dr. Ronald Brand, Van Nostrand Reinhold
- 3. Builders Guide for Cold Climates, Dr. Joseph Lstiburek, Building Science Corporation
- 4. Building Science for a Cold Climate, Neil Hutcheon and Gustav Handegord, John Wiley & Sons
- 5. Walls, Windows and Roofs for the Canadian Climate, J.K.Latta, National Research Council of Canada
- 6. Builder's Guide to Energy Efficiency in New Housing, Canadian Home Builders Association
- 7. National Building Code, 2010, National Research Council of Canada
- 8. Ontario Building Code, 2011, Government of Ontario
- 9. Exterior Wall Construction in High-Rise Buildings, Canada Mortgage and Housing Corporation
- 10. Building Science and the Building Envelope, Gustav Handegord
- 11. Canadian Building Digests, National Research Council of Canada
- 12. Construction Technology Updates, Institute for Research in Construction, National Research Council of Canada
- 13. Best Practice Guides, Building Technology, Canada Mortgage and Housing Corporation
- 14. Advanced Houses Guide, CANMET Building Group, Natural Resources Canada
- 15. Leadership in Energy and Environmental Design (LEED) Program, Canada Green Building Council

### 8. WEB SITES :

- irc.nrc-cnrc.gc.ca 1.
- 2. cmhc-schl.gc.ca
- 3. nrcan.gc.ca
- 4. nbec.ne
- 5. obec.org 6. becor.org

- 7. obc.mah.gov.on.ca nationalcodes.ca / nbc 8.
- csc-dcc.ca 9.
- 10. chba.ca
- 11. buildingenvelopeforum.com
- 13. buildingscience.com 14. cagbc.org
- 15. athenasmi.ca
- 16. arcat.com
- 17. aecinfo.com
- 18. energydesignresources.com

- 12. ecohome.net



### Carleton University SCHOOL OF ARCHITECTURE Design Economics

ARCC 4500 Fall Term, 2016 Tuesday 8:35–11:25 AM

Instructor, Jeff Salmon B.A.S. M. Arch. MRAIC jeffrey.salmon@carleton.ca Office Hours: Tuesdays 6:30PM, Room 407 Architecture Building

Teaching Assistants: Carolyn Gillespie (<u>carolyngillespie@cmail.carleton.ca</u>) Gandhi Habash (<u>gandhihabash@cmail.carleton.ca</u>) Sarah McIntosh (<u>sarahlmcintosh@cmail.carleton.ca</u>) Antoinette Tang (<u>antoinettetang@cmail.carleton.ca</u>)

### **COURSE DESCRIPTION**

The purpose of ARCC 4500 Design Economics course is to provide you as Architects and Engineers with a working knowledge of real estate development from project conception to completion. The course will teach basic economic principles to enable students to analyze, interpret, and implement design strategies that are in line with the financial objectives of the project without compromising the integrity and quality of design.

The success of any project hinges on achieving a balance between the embodied cost and the end product.

To better understand the factors – contextual, financial, political, etc. – that influence and drive a development project students will be required to wear two distinct hats throughout the course, that of the developer and that of the architect.

As the developer it is necessary for you to assess the viability of a given project from a financial perspective by first asking these questions:

Why Develop? (Need) What to Develop? (Program) Where to Develop? (Site Selection) When to Develop? (Market Timing) How to Develop? (Process)

As the Architect your role as the prime consultant is to contribute your expertise on a range of topics including, but not limited to:

Program Site Selection Design Efficiency & Appropriateness Project Construction & Delivery

As architects, the better our grasp is of the developer's objectives and motivations the more likely we will be able to find design solutions that fulfill the developer's criteria but also achieve excellence in design. This will be the challenge put to you throughout the course and later throughout your career.

### LECTURE SCHEDULE

ARCC 4500 is a lecture based course. Guest lecturers will be invited to present case studies to provide students with tangible examples as they relate to the course work and the term project. Note, all lecture topics and speakers are subject to change.

	Lecture Content	Submission Deadlines & After Class	Additional Notes
		Assignments	
Week 1:	Course Introduction	M.Arch & B.Arch Design stream to	
Sep. 13		create pairings	
	A Development Primer		
Week 2:	Key Economic Concepts		Groups finalized
Sep. 20			
	Market Analysis		
Week 3:	Site Selection and Feasibility		Site Study Project
Sep. 27			Assigned
	Site Planning Basics		
			Group
			Development
			Proposal Assigned
Week 4:	Site Planning Processes	Quiz #1	
Oct. 4			
	Financing – Everything Costs		
	Money, Even Money!		
	(Guest Lecture: TBC)		
Week 5:	Pro-forma		
Oct. 11		Site study project due	
Week 6:	Pro-forma 2.0 – What do the		
Oct. 18	numbers Mean?		
	(Guest Lecture: TBC)		
	Land Acquisition		
Week 7:	Fall Break	Fall Break	Fall Break
Oct. 25			
Week 8:	Design review with Prof/TA's	Midterm Project due	
Nov. 1	C .		
Week 9:	Marketing/Branding/Selling	Quiz #2	
Nov. 8	Strategies	-	
	(Guest Lecture: TBC)		
	· · · · · ·		
	Programming for Economy /		
	Design Efficiency		
Week 10:	Project Delivery/Project		
Nov. 15	Management		
	Organizational Strategies &		
	Scheduling		
Week 11	Project Turnover	Ouiz #3	
Nov. 22			
	Responsibilities of the		
	Developer		
Week 12.	Pre-presentation review with		
Nov 29	Prof/TA's		
Week 13		Final Projects due: Public	
Dec 6		Presentations	
		i i escritutions	

### GRADING

Exercises	5:	
	Site Analysis	12.5%
	Quiz #1	12.5%
	Quiz #2	12.5%
	Development Proposal Midterm Submission:	15%
	Quiz #3	12.5%
	Final Development Proposal Submission:	35%
TOTAL		100%

### SUBMISSIONS

Students will be required to submit material and assignments throughout the course. Each submission must have your full name and student number clearly visible.

Late submissions without the consent of the Instructor will be deducted marks based on schedule below:

Deduction	Submission
-10%	Within 10 minutes of deadline
-25%	Within 6 hours of deadline
-50%	Within 24 hours of deadline
-75%	Within 36 hours of deadline
s received 36 hours	after the deadline or later will receive a grade of a

Submissions received 36 hours after the deadline or later will receive a grade of zero.

#### RESOURCES

Finance for Real Estate Development, Charles Long

Professional Real Estate Development 3<sup>rd</sup> Edition, Richard B. Peiser and David Hamilton

The Canadian Handbook of Practice for Architects, RAIC

The Architect's Studio Companion: Rules of Thumb for Preliminary Design, by Edward Allen, Joseph Iano

Building Construction Illustrated, by Francis D. K. Ching

Hanscomb's Yardsticks For Costing - Canadian Construction Cost Data, by RSM Eng. Dept.

### ACADEMIC ACCOMMODATION

You may need special arrangements to meet your academic obligations during the term because of disability, pregnancy or religious obligations. Please review the course outline promptly and write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist.



### Advanced Building Systems [ARCC 5100-F] Course Syllabus

Semester: Fall 2016Instructor:Prof. Giancarlo Mangone, PhD, M. Arch<br/>(e) giancarlo.mangone@carleton.ca, (o) Architecture Building Rm 527,<br/>Office Hours: Wednesdays 1pm-1:30pm + 5:30pm-6pm

Class time: Wednesdays 6:05 - 8:55pm Location : Architecture Building, Rm 209

### INTRODUCTION

The previous Building Technology courses have provided a fundamental understanding of building systems. The focus of Advanced Building Systems is to foster the ability of students to incorporate building systems into their design process, in ways that improve the performance of their building projects, as well as the aesthetic quality and experience of the building projects by the building occupants. This is achieved through the development of a deeper, more critical understanding of building systems, and the potential benefits of integrating building systems into the design process.

It is important to note that the goal of this course is not to develop higher efficiency technical building systems than are currently available, as this is the scope of engineers. In contrast, the goal of this course is to rigorously explore and expand the potential role of architects in the development and integration of building systems and performance based design.

This will be accomplished by exploring and evaluating how the integration of building systems with the design and experience of buildings and building spaces can improve the project's economic, social, and ecological performance, as well as the design quality of buildings and building spaces. Specifically, students' knowledge of building systems will be broadened and deepened, and students will acquire the necessary skills and experience that is necessary to rigorously investigate how the economic, social, and ecological performance and design quality of buildings and building spaces can be improved through the integration of building systems into the design process and design solutions.

### COURSE OBJECTIVITES, PEDAGOGY, & ASSIGNMENTS

- Broaden and deepen understanding of building systems
- o Develop an understanding of current high performance building systems and strategies
- o Develop an understanding of effective building system solutions within the local context
- Develop an understanding of how to develop high performance and high quality building systems and spaces
- Develop an understanding of how the design, development, and integration of building systems into the design process can improve building performance, as well as the quality of design solutions
- Develop the ability to effectively integrate building systems with each other, as well as with the design of buildings and building spaces
- Develop a critical understanding of sustainability, building performance, and their interrelationships with the design process
- o Develop an understanding of how to evaluate the performance of buildings and building systems
- o Develop the ability to incorporate performance analysis and design tools into the design process
- o Provide experience working in interdisciplinary project teams

As graduate students, you will be more responsible for your learning than in undergraduate courses. The course will be structured partly as lecture, and partly as a collaborative, interdisciplinary workshop seminar that complements the development of students' Gateway projects. The course will employ a design research-based pedagogical model, in which a substantial portion of the learning will be developed individually and peer-to-peer. Student evaluation will be based on three projects: a high performance building system design, a design charrette focused on maximizing project performance, and a final integrated building system and performance based space design project. Students

will learn energy modeling + environmental footprint analysis, among other performance metric analysis tools. This course will require the use of Autodesk Revit and Climate Consultant for conducting climate analysis. Furthermore, students will also use Autodesk software for energy and wind modeling, as well as Athena Life Cycle Analysis software, among other performance design + analysis tools.

### **GRADING & REQUIREMENTS**

Project 1 : High Performance System Analysis + Design Project	35%	Due Oct. 5, 2015
Project 2 : Maximize System Performance Design Charrette	20%	Due Nov. 2, 2015
Project 3 : Final System Design + Performance Analysis Project	40%	Due Dec. 19, 2015, noon
Discretionary Grade	5%	

### REFERENCES

### **Required Reading**

• Stein, B., Reynolds, J.S., Grondzik, W.T., and Kwok A.G. *Mechanical and Electrical Equipment for Buildings* (MEEB), New Jersey. John Wiley and Sons.

### Suggested Reading (by research topic) – see expanded Syllabus

### ACCREDITATION AND PROFESSIONAL EXPERIENCE

For the purposes of accreditation, graduating students must demonstrate *understanding* or *ability* in the student performance criteria listed below, according to an established sequence. *Specifically, this course meets the following criteria: A1, A2, A3, A4, A5, A6, A9, B4, B8, B9, B10, B11, C1, C2, C3* 

Azrieli School of Architecture & Urbanism

Course Number:	ARCC 5200
Term and Year:	Fall 2016
Days and times of meetings:	Thursday 6-9pm, SA 404

Instructor:

Lucie Fontein

### COURSE TITLE: INTRODUCTION TO PROFESSIONAL PRACTICE

### INTRODUCTION

This course is an introduction to the practice of architecture. It will provide you with an understanding of the broader social framework within which buildings are built. We will discuss the issues involved in becoming an architect and setting up a practice, including the responsibilities of the architect through the stages of design and construction. Whenever possible, practicing architects and related professionals will be invited to contribute to the lecturers and discussion.

The lectures are grouped broadly around three themes.

- The structure of the profession, laws and conventions that govern business and construction.
- Factors that affect the development of design in an office, and different contractual approaches to construction.
- The requirements of registration, the challenges facing the profession, and some of the alternative forms which architectural careers might take.

### COURSE FORMAT

The course will be delivered through a series of lectures on the following topics:

- Ethics and Professionalism
- Structure of the Profession
- Things to consider when starting a small practice
- Client Architect relationship
- Project Management
- Construction Management
- Building Code, building regulations and authorities
- Zoning issues
- Public Relations and marketing
- Alternative practices
- Getting licensed
- Design Economics

### COURSE OBJECTIVES:

- Knowledge of the structure, responsibilities and ethics of the profession.
- Familiarity with the broad range of people involved in the profession; clients, authorities, consultants, contractors, users, neighbours, bankers, insurance companies ...together with an understanding and respect for their role in design and construction.
- Familiarity with the legal framework, including contracts, and regulations, which governs business relationships, construction processes and impacts on design.
- Familiarity with the economic context of the design and construction industries.
#### ASSIGNMENTS:

Assignment 1:	Job Application
Description:	Prepare a CV, a covering letter for a job application
Due:	September 22 <sup>nd</sup> , 2009 at the beginning of class.

#### Assignment 2: City Hearing/Meeting Report

Description: Students are to attend a City Hearing/Meeting (dates and times will be made available in class) and submit a report (500 words) on one of the items / discussions that they found of interest.

Due: The class following the date of the Hearing/Meeting

#### Assignment 3: Critical Paper

Description: The course is organized around a series of guest lectures. During the first class, you will select a topic from the list of assigned topics below. At the end of the course, you will write a critical paper on your topic, making particular reference to some of the guest speakers and the issues that they raised. In the paper, you must set forth an ethical question and present your own critical position with respect to that question. (1500 words)

Due dates:October 20th: Submit a paragraph describing the ethical question you will be exploring<br/>November 10th:November 10th:Submit a detailed outline/draft of your paper<br/>December 20th:December 20th:Submit final paper via email to lucie.fontein@carleton.ca

#### Assigned Topics:

- Getting jobs/marketing
- Client interactions
- Architectural services and fees
- Zoning and code issues
- Competitions
- Construction project delivery and tendering
- Organization of a practice
- Cost planning and control
- Post occupancy evaluation

#### STUDENT RESPONSIBILITIES

Attendance in class is compulsory. Unaccounted for absence from more than 2 classes will constitute grounds for a failing grade in the course.

SCHEDULE (see below)

#### GRADING AND REQUIREMENTS

Grading Criteria : Assignments will be graded based on the following criteria:

- 60% Content
- 30% Effectiveness of writing
- 10% Spelling and grammar

#### Percentage Breakdown List

1.	Assignment 1:	Preparation of a CV and letter of interest	15%
2.	Assignment 2:	Attendance at City Hearing/Meeting and Report	20%
3.	Assignment 3:	Critical Paper	45%
4.	Mini Tests (2)		20%

**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.

**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.

**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.

**D6** Professional Internship: Understanding of the role of internship in professional development, and the reciprocal rights and responsibilities of interns and employers.

#### COURSE SCHEDULE:

Week	Торіс	Readings	Assign- ments	Guest
08/09	Introduction and Course	1.1.1 The Role of the Architect		
	Organization	1.1.2 The Architect as a Professional		
	Ethics and	1.1.3 Professional Conduct and Ethics		
	professionalism	Quebec Code of Ethics		
		Dana Cuff: Architecture, The Story of Practice Chapters		
		1&2		
15/09	Structure of the	1.1.5 The Organization of the Profession in Canada		(Alex Rankin)
	Profession	1.1.6 International Architectural Organizations		
		1.2.1 The Construction Industry		
		1.2.2 The Client		
		1.2.3 Consultants		
		The Architects Act of Ontario 1990		
		Regulation 27		
		2.3.4 Pre-design		
		2.3.5 Schematic Design		
		2.3.6 Design Development		
	Management of the	2.3.7 Construction Documents — Drawings		
	Project	2.3.8 Construction Documents — Specifications		
22/09	Client Architect	3.1.2 Canadian Standard Form of Contract Between	Assign-	Andrew Reeves
	Relationship	Client and Architect: RAIC Document Six	ment 1 due	
		3.1.3 Canadian Standard Form of Agreement Between		
		Client and Architect — Abbreviated Version: RAIC		
		Document Seven		
		2.1.3 Public Relations and Marketing		
29/09	Codes	1.2.5 Standards Organizations, Certification and Testing		Judy Jeske
		Agencies, and Trade Associations		
		The Ontario Building Code		
06/10	Running a Practice	2.1.1 Organization of an Architectural Practice	Test 1	Toon Dreessen
		2.1.3 Public Relations and Marketing		

r			1	
	Ontario Association of	2.1.4 Financial Management		
	Architects	2.1.5 Office Administration		
		2.1.9 Risk Management and Professional Liability		
	Career Opportunities in	2.1.10 Architectural Services and Fees		
	the Public and Private			
	Sectors	1.1.4 Admission to the Profession		
	000000			
13/10	Bassai/Denegri Lecture	Emerging Practice		Tom Bassai,
	@ OAA			Maria Denegri
20/10	Architect/Contractor	2.3.1 Management of the Project	Assign-	Derek Hardy,
	Relationship	2.3.2 Types of Construction Project Delivery	ment 3	BBB Architects
	Types of Construction	2.3.3 Cost Planning and Control	Question/is	
	Project Delivery	2.3.9 Construction Procurement	sue due	
	Troject Delivery	2.1.4 Canadian Standard Form of Contract Between	Sucuue	
		Architect and Consultant: BAIC Decument Nine		
		Architect and Consultant: RAIC Document Nine		
		3.2.1 Stipulated Price Contract — CCDC 2		
		3.2.2 Cost Plus Contract — CCDC 3		
		Alternative Finance and Procurement		
27/10	STUDY BREAK			
02/11		1.2.2.0		
03/11	Contract Administration	1.2.3 Consultants		Emmanuelle van
	War Museum/Aga Khan	2.3.10 Contract Administration —Office Functions		Rutten, Moriyama
		2.3.11 Contract Administration — Field Functions		Teshima
		2.3.12 Take-over Procedures, Commissioning, and Post-		Architects
		occupancy Evaluations		
10/11	Building Permits and	1.2.4 Building Regulations and Authorities Having	Assign-	Jim Collizza
	Municipal Planning	Jurisdiction	ment 3	
	Low budget /public	City of Ottawa Official Plan	outline/	
	projects		draft due	
	projects		didit due	
17/11	Design Economics		Test 2	Jeff Salmon
24/11	Design Economics			Jeff Salmon
0.1./1.0				
01/12	Design Economics			Jeff Salmon
08/12	Where is the profession	Round table discussion.		
	going?		1	
	Post Occupancy			
	Evaluation		1	
20/12			Assign-	
			ment 3 due	

## ARCU

Urbanism & Urban Studies Core Courses

Azrieli School of Architecture & Urbanism

Carleton University AZRIELI SCHOOL OF ARCHITECTURE & URBANISM Morphology of the City Course Instructor: Benjamin Gianni ARCU 3100 Winter Term, 2016

T, Th, 1:00 - 2:30

#### **COURSE DESCRIPTION**

The Morphology of the City explores the spatial structure and character of metropolitan areas, cities, and towns. The course material and approach is broadly connected to the discipline of Urban Morphology, which is the study of the form of human settlements. We will examine how the multiple and intersecting influences of social mores, political ambitions, as well as the every day activities of citizens, inspire, and are equally inspired by, the formation and transformation of cities.

Lectures and assignments will involve analysis of physical structures of cities at different scales, such as civic infrastructure (roads and sewers), the patterns of spatial practice (movement through cities, for example), and land use in terms of ownership, access, control, and occupation. The study of urban transformation is necessarily inter-disciplinary. As such course content addresses a range of forces on cities – political, social, demographic, technological, economic, environmental and ideological. Course lectures, readings and assignments challenge students to explore these forces as catalysts of urban form and as agents of urban growth and transformation.

#### **Course Objectives:**

At the conclusion of the course students will:

- 1. Be able to analyze, characterize and urban form.
- 2. Be conversant with key conventions for documenting and representing urban form.
- 3. Understand the range of determinants of urban form as well as agents of transformation over time.
- 4. Have gained an appreciation for the persistence of forms and urban infrastructural patterns across time.
- 5. Possess a deeper knowledge, understanding and appreciation for cities.

Schedule of Classes and Lectures				
Date		Lecture topic	Readings to have completed	
Introduct Week 1	ion			
	Thu, Jan 7	Ways to Discuss Cities		
Week 2	Tue, Jan 12	The Phenomenon of Urbanization: What, Why & When	Kostof, 29 - 64	
	Thu, Jan 14	Cities and Civilization		
Theme 1:	the Pre-Mode	rn city		
Week 3	Tue, Jan 19 Thu, Jan 21	Ancient Planned Cities Imperial Rome: center and colonies	Kostof, 69-95	
Week 4	Tue, Jan 26 Thu, Jan 28	Medieval Cities The Renaissance: Local Interventions and Ideal Cities	Kostof, 95 - 123	
Week 5	Tue, Feb 2 Thu, Feb 4	Baroque City Planning The 18 <sup>th</sup> -century City	Kostof, 124 - 158	

Theme 2:	Theme 2: the 19 <sup>th</sup> -century city					
Week 6	Tue, Feb 9 Thu, Feb 11	Introduction: Rapid Urbanization Retrofitting the City 1: arcades, roads and transportation	Kostof, 159 - 173			
Week 7		Winter Break, no classes				
Week 8	Tue, Feb 23 Thu, Feb 25	Retrofitting the City 2: new plats The City as a Pathological Subject	Kostof, 174 - 208			
Week 9	Tue, Mar 1 Thu, Mar 3	Rail-based Suburbanization The City Beautiful Movement	Kostof, 209 - 229			
Theme 2:	the 20th-centu	ry city				
Week 10	Tue, Mar 9 Thu, Mar 11	Garden City Movement Geddes, Mumford and the Regional City	Kostof, 230 - 278 Mumford, <i>The 4<sup>th</sup> Migration</i>			
Week 11	Tue, Mar 15	Meet with TAs to discuss mid-term submissions				
	Thu, Mar 17					
Week 12	Tue, Mar 22 Thu, Mar 24	Zoning and the "City Practical" Modernism	Kostof, 279 - 308			
Week 13	Tue, Mar 29	Pre-WWII automobile suburbanization and the rise of the multi-nodal city	Kostof, - 309 - 335			
	Thu, Mar 31	Interwar housing estates				
Week 14	Tue, Apr 5 Thu, Apr 7	Capital Cities Conclusion: Ways to discuss cities				

#### **Required Readings:**

Kostof, Spiro, *The City Shaped* Knox, Paul, *Atlas of Cities* Articles as assigned

Both books are available at the Carleton bookstore

#### Grading:

In-class quizzes: 20% Urban mapping/analysis exercise:

- Midterm: 30%
- Final: 40%

Participation and engagement: 10%

## ARCS ARCN

Representational Techniques & Media Core Courses

#### ARCS 1005. DRAWING-OUT THE ARCHITECTURAL IMAGINATION - FALL 2016

#### Associate Professor Federica Goffi Federica\_Goffi@Carleton.ca office 402B

Teaching Assistants: Simon Petepiece <u>spetepiece@gmail.com</u> Frank Yao Wen <u>frankyaowen@hotmail.com</u> Lynn Pfeffer <u>lynnpfef@gmail.com</u> Andrej Iwanski <u>andrejiwanski@gmail.com</u> Alberto Temprano <u>AlbertoTemprano@cmail.carleton.ca</u>

**Tuesday 11.35-2.25** –Architecture Building (room 204), followed by 2 hours of studio time

11.35 Lecture starts (room 204) 12.20 Pin-Ups (OPEN FORUM) & review of the work 1.35 Individual feedback (studio space 4<sup>th</sup> floor)



**Thursday 11.35-2.25** Architecture Building (4<sup>th</sup> floor studio space) Credit value: <u>0.5 (BAS Core)</u>

#### **Course description & philosophy**

This course provides an introduction to the field of architectural representation offering the student a critical understanding of this fundamental instrument of the imagination. Drawings and models are the principal means of communication of architectural ideas. Architectural communication is often regarded as a predominantly visual phenomena, but it is also and eminently a tactile three-dimensional haptic phenomena. All of the body and the human senses are engaged in both the representation and mediated perception of objects through drawing. Drawing is a translation of materials into ideas and vice versa. This process of transmutation takes place through the use of purposefully chosen mediums and techniques.

Architects think through making. Drawing is the physical place where architectural design and thinking first take place through a mediated mimetic process. The act of drawing is an act of thoughtful construction and imagination. Drawings are in-formed by making & thinking. Architectural drawing is essentially a writing act. Representation has a key role in the process of design. The materiality of the architectural drawing is the primary place where transformation processes mimetic of actual construction processes are daydreamed about through an activity of **margin drafting**. It is through representation that the dialogue between imagination and the real is first ignited and then carefully articulated.

The course is structured to provide students with both theoretical and practical knowledge of different techniques and methods of representation. The topics of individual lectures are addressed with an emphasis on drawing within the field of architecture. The lectures cover both historical and current issues and practices in the representation of architecture. The historical and theoretical considerations discussed in class with the students aim at building a critical point of view through which the student's gaze is directed towards the subjective and cultural dimension of the representation methods employed. By merging the practical and the theoretical aspects of representation, this course intends to stimulate architectural imagination and to allow students to develop the critical abilities required in selecting and designing methods and techniques of representation in relationship to the design process.

This course challenges a current predominant understanding of drawing as image production, portraying mirror-like pictures of future buildings. This notion has reduced drawing to a final short act of performance, leading to the production of seemingly finished images of architecture. Through crafted drawing exercises,

students are brought to experience the imaginative nature of architectural drawing as process rather than instant production. The notion of drawing as process inscribes within the concept that design drawings are to be conceived as a means of discovering ideas. Architectural drawings are hybrid constructs, which comprise both high and low technologies, a merging of different mediums, techniques and ideas. Drawings can be precise and imprecise, regulated and unruly at the same time.

We explore the **traction of drawing**<sup>1</sup> as an essential and central aspect of architectural imagination. Drawing-traction is an ability to draw-out the imagination. This ability can be transferred from drawings to buildings as a completed act. This happens when the drawing remains open and ambiguous, which is not to say vague or imprecise. A calculated ambiguity, which entails an ability to read a text or an image in more than one way, allows for on-site interpretations and future reimagining of a building. Only when unfinished a drawing retains its ability to draw-out the imagination, facilitating multiple readings, and keeping the design and construction process open ended.

#### **Course Objectives**

- 1. proficiency in assigned drawing media and techniques.
- 2. facility and ingenuity in drawing as a means of design speculation.
- 3. facility and ingenuity in drawing as recording.
- 4. introduction to the history and theory of architectural drawing.

#### **Course Requirements**

The course is composed of **11 exercises** in **drawing-thinking**, which build in the assimilation of basic drawing board skills, such as **"how to"** set up orthographic projections, isometric, axonometric, single point / two-point perspective, etc. while elucidating the theoretical underpinnings of hand drawing to comprehend the **"why to"** of the drawing by hand in a digital age. The practice of drawing will be introduced through a theoretical underpinning of critical aspects of representation methods and techniques. The lectures, require students' participation, in class discussion and are intended to inform a way of learning by **-thinking through drawing**. Critical questions regarding the nature of architectural drawings will be introduced, challenging the student's cognitive understanding and interpretation of representation.

In order to explore these notions through both theory and practice, some of the drawing exercises will be linked between the drawing and the multimedia course which is taught by Adriana Ross. One of the multimedia exercises (multi-perspective photomontage), once completed will be carried on and continued through multiple exercises conducted in the drawing course adding an additional layer of making and thinking to an initial photographic exploration, allowing students to learn about the notion of drawing as process and its hybrid nature, though multimedia explorations. Similarly, one of the models made in the drawing course will be taken into the Multimedia course and explored through the making of a blueprint.

Attendance to the lectures, pin ups and desk crits is mandatory. We will take attendance during each class and make this part of the final evaluation. Unjustified absence from more than 2 class meetings may cause failure in the course.

#### Semester & Weekly Assignments

The students will perform one imaginative drawing exercise each week for eleven weeks, building towards a portfolio comprising 11 drawings. Weekly assignments will be given out each week on *Tuesday* following the lecture period. Completed assignments will be pinned up for review and grading the following week on Tuesday at 12.20 pm in the OPEN FORUM.

A group of 11 drawings will be selected each week for discussion. Drawings must be collected at the end of the pin up. Faculty, TAs and students go back to the studio space and offer feedback on the work produced individually. Each exercise must be collected into a portfolio, which ought to be either kept in studio or made available during each class for evaluation purposes.

<sup>&</sup>lt;sup>1</sup> <u>http://www.interstices.auckland.ac.nz/files/cfp11.pdf.</u>





Azrieli School of Architecture & Urbanism

1125 Colonel By Drive Ottawa, ON K15 586 Canada Tel: (613) 520-2855 Fax: (613) 520-2849

Course Outline ARCN 2105 / 5000 Computer Modeling and Form-making Winter 2016 Instructor: Johan Voordouw

#### The course consists of a lecture and lab component. ATTENDANCE TO ALL LECTURES AND LABS IS MANDATORY.

The lectures has three pedagogical aims:

#### 1) To improve your written communication and critical thinking skills

2) To make you aware of differing theoretical positions concerning technology and the cultural implications of technology / fabrication in architecture

3) To introduce digital modes of representation (new techniques for drawing and digital / physical modeling in architecture)

The labs teaches three critical skills:

#### 1) Improve your computer skills

- 2) Continued creative skills in drawing (digital) and modeling (physical & digital)
- 3) Introduction to fabrication technology (laser cutter, CNC & 3D printing)

#### COMPUTER SOFTWARE:

You will learn a number of programs in the labs and be introduced to additional programs in the lectures

Labs: AutoCAD, Rhino, V-ray & Revit

Lectures: Adobe Illustrator, Indesign & Photoshop, 3DS Max

#### FABRICATION TECHNOLOGY:

You will use the CNC machine, laser cutter and 3D printer.

You can 3D print either here on campus (Arch. Bldg or Library) or using the mail service Shapeways. Please note that Shapeways may take 1-2 weeks to send the finished 3D printed model. Please note that those 3D-printing for project 3 will have to complete the work early to account for printing & shipping time so that the work arrives before the Digital Reef installation date.

#### STUDENT BACKGROUNDS:

The ARCN 2105/5000 course includes students from the undergraduate Conservation and Sustainability, Design and Urbanism program and M.Arch(1) program. It is a very diverse group of students. The lectures have been organized to discuss a range of issues that are pertinent to all three streams (C&S, Design and Urbanism). The skills based labs have projects that divide across a series of scales and ideas. There will be a number of different methods to approach each project.

Please approach each project in a mode that is relevant to your curriculum of study.

#### DIGITAL REEF PROJECT

Because of the size of the class, we will divide the class into two groups based on surname:

- All students will complete Project 1 by the same due date so that we have sufficient time to CNC mill the project

- A-K (inclusive) will complete the laser cut for Project 2 and the 3D print for Project 3

- L-Z will complete the 3D print for Project 2 and the laser cut for Project 3

Please refer to the project brief for more information

#### TERM SCHEDULE

January 4 <sup>th</sup>	University opens
January 6 <sup>th</sup>	Winter Term begins
Friday February 5 <sup>th</sup>	Project 1 – submit to TA for CNC milling
February 15 <sup>th</sup> - 19 <sup>th</sup>	READING WEEK – No class
Tuesday March 1 <sup>th</sup>	Project 2 – add work to base
March 25 <sup>th</sup>	Statutory Holiday
Tuesday March 22 <sup>th</sup>	Project 3 – add work to base
Tuesday March 29 <sup>th</sup>	Digital Reef Installation – Project Due
April 8 <sup>th</sup>	Winter Term ends
April 11 <sup>th</sup> – 23 <sup>rd</sup>	Exam Period

#### PROJECTS / MARKING BREAKDOWN:

Lab Work (10 in-class drawings)	30%	In Weekly Labs
Lecture Comments (5 in-class comments)	20%	In Lectures
Project 1 & 2	20%	
Project 3 & Total Composition	20%	
Discretionary Grade (incl. Copy Work – Image Submission)	10%	

#### GRADING

Please read the grade criteria in the Boiler Plate at the end of this document for additional information.

#### LATENESS

3% of the project grade will be deducted for every day of lateness. The first -3% is initiated directed after the deadline.

#### ATTENDANCE:

Note: Missing either three classes (a combination of labs or lectures) means you risk failing the course regardless of your performance in the course projects. We reserve the right to deem a student's performance unacceptable due to poor attendance and fail them as a result of non-attendance.

The skills learned in this course are critical for both practice and your continued studies here at the Azrieli School of Architecture and Urbanism. As you continue with your architectural education, knowledge of computer software and fabrication technology is increasingly an integral part of Studio and other core courses.

#### MISSED CLASS

If you do miss a lecture or a lab (for non-medical or bereavement reasons), please get the notes from your fellow students. The instructor and TA's are not responsible for supplying missed lecture and/or lab notes.

#### TIME MANAGEMENT

It is your responsibility to plan your time accordingly. Do not plan shift work, appointments or other non-academic activities during lecture or lab times.

Please note that due to the diverse student body in ARCN 2105/5000 it is very difficult to ensure the course is coordinated with every other studio or elective course. While we endeavor to organize the term, overlap with other courses may occur.

#### ARCN 2106 Introduction to Multimedia

Fall 2016

Instructor Adriana Ross adriana\_ross@carleton.ca Teaching Assistants Emelie Desrocher-Turgon emelierocks@gmail.com Dorothy Lee Dorothy Lee Dorothy Lee Dorothy Lee Dorothy Lee Dorothy Lee Corothy Lee Dorothy Lee Corothy Lee Co

Credit value5 (BAS Core)LecturesWednesday 8:35 - 11:35 - lecture, pin ups, discussions and exercisesLocationRoom 204 Architecture Building

#### **Course Description**

This course offers an introduction to the theoretical, conceptual and technical aspects of working with different media such as digital photography, photograms, cyanotype, photomontage, crumplage, scanning, collage-de-collage-hybrid, Photoshop, sound and movies. The course is structured around two main themes, *Traces in Time* and *Presence and Absence*. The assignments are designed to incorporate the work from the ARCS 1005 Drawing course which is used as a basis to introduce and put into practice a variety of techniques that lead to creative transformations.

#### **Course Learning Objectives**

Students will learn how to change original artifacts from one medium to another using a variety of processes. Through these processes they will exercise their imagination to go beyond the given material and realize the dreams and potentialities that each student finds in the original medium. The six assignments are conceived to stimulate students' thoughts and dreams and to represent things metaphorically. The students are asked to read *The Metamorphosis* by Franz Kafka, and to challenge and question the limitations of the digital and analogue realms. Students will be expected to produce a *creative fusion* that involves personal engagement, curiosity and a vision of latent possibilities. This transformational process throughout the semester aims to equip the students as future architects with creative insight

#### Assignments and Grading

There are 6 (six) assignments each worth 15% of the final grade.

The assignment is assessed on the following: **concept** (strength of intent), **execution** (how well the assignment is executed), **presentation** (how well the work is presented), **reflection** (how well the written work discusses the project and links to the themes of the assignment)

Tutorials

Monday 8:35-10:00 (group 1) room 434 Monday 10:00-11:30 (group 2) room 434 Tuesday 14:35-16:00 (group 3) room 434 Tuesday 16:00 - 17:30 (group 4) room 434 Tuesday 19:05-20:30 (group 5) room 434

#### **Attendance**

The lectures and the tutorials are mandatory and attendance will be taken each time. You are permitted two absences with an official document (i.e. doctor's certificate). Your third absence will result in an automatic half grade deduction. Notes from your doctor and personal circumstances such as a family emergency will be taken into consideration on a case to case basis. Please contact your assigned TA if you are not able to attend a lecture or tutorial. Two late arrivals to class result in one absence. You are in a program that is preparing you to be a professional. Please be on time.

#### Due Dates

Assignments are due on the stated deadline. A 2% grade deduction will be factored for each day past the deadline.

#### **Course Readings**

The primary text for this course is *The Metamorphosis* by Franz Kafka, which is available on the internet for free. Any additional readings for this course will be posted during the lectures.

#### **Supplies**

The main materials needed for this course can be found at **De Serres** art supply store located at 1200 St. Laurent Blvd, (613-238-3303). A few other **special materials can be purchased from your TA**. You may use the DSLR digital cameras from our Loan Pool or your own recording device.

#### Loan Pool

Cameras and tripods will have a three day sign out period (not including weekend days) with \$10/day late fee.

#### Azrieli School of Architecture & Urbanism

Course Outline ARCN 2105 / 5000 Computer Modeling and Form-making Winter 2016 Instructor: Johan Voordouw

#### The course consists of a lecture and lab component. ATTENDANCE TO ALL LECTURES AND LABS IS MANDATORY

The lectures has three pedagogical aims:

1) To improve your written communication and critical thinking skills

2) To make you aware of differing theoretical positions concerning technology and the cultural implications of technology / fabrication in architecture

3) To introduce digital modes of representation (new techniques for drawing and digital / physical modeling in architecture)

The labs teaches three critical skills:

- 1) Improve your computer skills
- 2) Continued creative skills in drawing (digital) and modeling (physical & digital)
- 3) Introduction to fabrication technology (laser cutter, CNC & 3D printing)

#### **COMPUTER SOFTWARE:**

You will learn a number of programs in the labs and be introduced to additional programs in the lectures Labs: AutoCAD, Rhino, V-ray & Revit Lectures: Adobe Illustrator, Indesign & Photoshop, 3DS Max

#### FABRICATION TECHNOLOGY:

You will use the CNC machine, laser cutter and 3D printer. You can 3D print either here on campus (Arch. Bldg or Library) or using the mail service Shapeways. Please note that Shapeways may take 1-2 weeks to send the finished 3D printed model. Please note that those 3D-printing for project 3 will have to complete the work early to account for printing & shipping time so that the work arrives before the Digital Reef installation date.

#### STUDENT BACKGROUNDS:

The ARCN 2105/5000 course includes students from the undergraduate Conservation and Sustainability, Design and Urbanism program and M.Arch(1) program. It is a very diverse group of students. The lectures have been organized to discuss a range of issues that are pertinent to all three streams (C&S, Design and Urbanism). The skills based labs have projects that divide across a series of scales and ideas. There will be a number of different methods to approach each project. **Please approach each project in a mode that is relevant to your curriculum of study.** 

#### DIGITAL REEF PROJECT

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- All students will complete Project 1 by the same due date so that we have sufficient time to CNC mill the project
- A-K (inclusive) will complete the laser cut for Project 2 and the 3D print for Project 3
- L-Z will complete the 3D print for Project 2 and the laser cut for Project 3

Please refer to the project brief for more information

#### **TERM SCHEDULE**

University opens
Winter Term begins
Project 1 – submit to TA for CNC milling
READING WEEK – No class
Project 2 – add work to base
Statutory Holiday
Project 3 – add work to base
Digital Reef Installation – Project Due
Winter Term ends
Exam Period

#### **PROJECTS / MARKING BREAKDOWN:**

Lab Work (10 in-class drawings)	30%
Lecture Comments (5 in-class comments)	20%
Project 1 & 2	20%
Project 3 & Total Composition	20%
Discretionary Grade (incl. Copy Work - Image Submission)	10%

#### GRADING

In Weekly Labs In Lectures

Please read the grade criteria in the Boiler Plate at the end of this document for additional information.

#### LATENESS

3% of the project grade will be deducted for every day of lateness. The first -3% is initiated directed after the deadline.

## ATTENDANCE: Note: Missing either three classes (a combination of labs or lectures) means you risk failing the course regardless of your performance in the course projects. We reserve the right to deem a student's performance unacceptable due to poor attendance and fail them as a result of non-attendance.

The skills learned in this course are critical for both practice and your continued studies here at the Azrieli School of Architecture and Urbanism. As you continue with your architectural education, knowledge of computer software and fabrication technology is increasingly an integral part of Studio and other core courses.

#### **MISSED CLASS**

If you do miss a lecture or a lab (for non-medical or bereavement reasons), please get the notes from your fellow students. The instructor and TA's are not responsible for supplying missed lecture and/or lab notes.

#### TIME MANAGEMENT

It is your responsibility to plan your time accordingly. Do not plan shift work, appointments or other non-academic activities during lecture or lab times. Please note that due to the diverse student body in ARCN 2105/5000 it is very difficult to ensure the course is coordinated with every other studio or elective course. While we endeavor to organize the term, overlap with other courses may occur.



Sean Fright, [2016]

### ARCN 5005:

# Theory and Practice of Architectural Representation

Fall 2016

Class Time and Location: Thursdays 11:30-2:30 - 434 Computer Lab, Architecture Building Hours per Week: 3 Credit Value: 0.5 Instructor: Sean Fright, M.Arch. Contact Information: seanfright@cmail.carleton.ca / 613-863-3213

## **Course Description and Objectives**

#### Theory and Practice of Architectural Representation (Theory/History Elective)

This course will complement the objectives of ARCS 5102 - Graduate Studio

ARCN5005 is a workshop-style class made up of brief tutorials and weekly exercises focusing on the translation/transition from freehand drawing/sketching and observation to 3D modelling techniques using Rhinoceros3D, Adobe Photoshop, Adobe Illustrator and CAD software.

The primary objective of ARCN5005 is to build a portfolio of material that can be used not only to complement the core-studio, but also to further-explore and experiment with the representation techniques taught in the tutorials.

The goal of the objective is to provide students with the technical competency required to efficiently use some of the representation techniques typical of the architecture studio. Further, students will learn to recognize and develop a sense of craftsmanship as it relates to architectural media using digital tools.

Through these exercises, students will begin to develop a highly specific graphic language that will be practiced and refined in studio with continued feedback from their instructors.

\*

## Workshops/Labs

Each lab session will contain an approx. 1 hour long tutorial, and the rest of the time will be dedicated to work on assignments with assistance from the instructor. Each assignment will be due by 12:00pm on the following day and must be uploaded to the lab folder on Shareme. Please save your files using the following naming structure:

- Surname\_Firstname\_Workshop#\_YYMMDD.jpg
  - (e.g. Fright\_Sean\_Workshop01\_160915)

Please save a copy for yourself incase the file is misplaced / wrongly saved.

\*

## Evaluation

Students will be evaluated by their attendance/attentiveness, engagement during workshops, file organization, comprehensiveness/cohesiveness, quality of production, overall effort, and the ability to work imaginatively and with rigor as evidenced by the work produced. Students will receive written feedback at mid-term.

Grade-weight distribution:

- Workshop 1-4 20% of final grade (5% each)
- Workshop 5-8 30% of final grade (7.5% each)
- Workshop 9-12 50% of final grade (12.5% each)

## Schedule

DATE	THEME	TASKS & DEADLINES	NOTES
Week 1: Sept 8	Introduction to ARCN 5005 Photoshop	Workshop 01• Hand Sketch• Photograph• Scanning• Photoshop• Image Principals• File Management	- Directors Project in progress - Review outline and weekly project descriptions -
Week 2: Sept 15	Rhino / Illustrator	Workshop 02         • Navigation         • Simple shapes: move, scale, rotate.         • Line drawing Export from Rhino         • Intro to Illustrator	
Week 3: Sept 22	Rhino / CAD /	<ul> <li>Workshop #3</li> <li>Multi-media layered scale drawing</li> <li>Graphite, Rhino, CAD</li> </ul>	
Week 4: Sept 29		Workshop #4         • Site Sketching         • Site section & elevation         • Site Photo & Video	
Week 5: Oct 6		Workshop #5         • Rhino Site Modelling         • 3D/2D Section         • Workflow with AI	- 3D Scanning
Week 6: Oct 13		<ul> <li>Workshop #6</li> <li>Spatial composition &amp; translation</li> <li>Rhino make 2D + Lineweight</li> <li>Rendering with VRAY</li> </ul>	Interim reviews next week. (19th and 21st)
Week 7: Oct 20		Workshop #7           • Project 1 portfolio           • Photoshop/Indesign/Illustrator workflow	Interim reviews on Friday 21st
Week 8: Oct 27	Reading Week		
Week 9: Nov 3		Workshop #8           • Rhino Trim, mirror, boolean operators, split, join, rotate, contour.	
Week 10: Nov 10		<ul> <li>Workshop #9</li> <li>Rhino to Illustrator plan, elevation, section</li> <li>Rhino make 2D + Lineweight</li> </ul>	
Week 11: Nov 17		Workshop #10           • File preparation for CNC & Laser-cutter 01	
Week 12: Nov 24		Workshop #11 • File preparation for CNC & Laser-cutter 02 •	

## ARCS

Design Studios Core Courses

CARLETON UNIVERSITY	ζ		Course Syllabus
<b>AZRIELI SCHOOL OF AF</b>	<b>CHITECTURE &amp; U</b>	RBANISM	SESSION: WINTER 2016
COURSE: ARCS 1105A	First Year Desi	gn Studio	CREDIT VALUE: 1
HOURS PER WEEK:	TUESDAYS 1:30 to 5	:30 &	FRIDAYS 1:30 to 5:30
<b>STUDIO INSTRUCTORS:</b>			
Manuel A. Báez, Coordinator	Rm. 229 ext.	2879	manuel_baez@carleton.ca
John Cook	Rm.		<u>cook@grcarchitects.com</u>
H. Masud Taj	Rm.		blackcube@taj.ca
Adriana Ross	Rm.		Adriana.Ross@carleton.ca
Karen Conty	Rm.		karen.conty@carleton.ca
Kristen Gagnon	Rm.		KristenGagnon@cmail.carleton.ca
Pallavi Swanranjali	Rm.		PallaviSwaranjali@cmail.carleton.ca

#### **THE SENSE OF WONDER and INSIGHTFUL IMAGINATION**



Emblem of Renaissance Architect/Artist Leone Battiste Alberti: The Winged Eye of insightful imagination

"Wonder is in us—you might say—a record of the way we were made. It is a well, which is completely full of all the things you will ever learn; because nature, in making things, records every step of its making. It is, one may call it, a **seed**. But it's understood much more if you realize that in wonder lays the source of all that we'll ever learn or feel. Knowledge, which is derived from wonder, is unhappy unless it relates itself to other knowledge. And this relation of knowledge to knowledge is what you might call, a sense of order; a sense of the position of this knowledge in relation to other things around. When we get a sense of order—not just knowledge or information—then we are very happy. We wink at wonder and say, "How am I doing, wonder?" Because wonder is activated by this knowledge and better still, by this sense of order. And wonder becomes more reachable, more full of that of which we were made."

"Logic will get you from A to Z; imagination will take you everywhere."

Albert Einstein

Design Studio ARCS 1105 is your first architecture studio in the Bachelor of Architecture Studies Program. As such, it seeks to introduce you to fundamental principals governing the natural and manmade environment. A fundamental question (or probe) of this objective relates to the interrelationship, or reciprocal relationship, between the world of phenomena and its equivalent embodiment within us and the things we choose to make. This theme will be explored by focusing on what Louis Kahn refers to as "the sense of wonder" as we investigate, ponder and respond to the work of several assigned artists. The inherent principals lurking within phenomena and material/matter, along with their informative and trans-formative potential, will be encountered through a series of hands-on investigative projects. This intimate, embodied, and mindful process is a threshold through which we enter the magical realm of creative thinking, learning and making. The reflective nature of this process should remind us of the interrelationship between the environment that surrounds us and our embodied instincts, capabilities, actions, and impulses. We need to remind ourselves of the fact that such words as material, matter and matrix all originate from the same root word "Mater", meaning mother (as in "matr," womb). The projects will develop through an investigative process of discovery as each individual student researches and explores their assigned artist and the conceptual ideas that emerge from the work. Eventually you will realize how these artists are addressing architecturally related themes and concepts. Louis Kahn's and Albert Einstein's quote above (along with other required readings) will serve as inspirational guides through this investigative process. As we go through this journey, we should remember, as nature's imagination demonstrates and reminds us, that the creative process inherently involves paradoxical interactions of constrained freedom: order and fantasy, invention and necessity, law and exception.

Architecture is a transcendent and creative discipline distinct from mere efficient and/or adequate building. By investigating and intimately knowing the fundamental principals lurking within the materials, methods, techniques, and tools available to us for conceptual constructions, interpretive documentation and drawings, we can fully grasp and appreciate the trans-formative nature of architecture. Through this intense experience, you will gradually acquire an ability to develop the language and expressive skills necessary to present and openly discuss your creative interpretations, constructions, and ideas regarding the subtleties of architectural thought and imagination.

The Studio will be organized into seven tutored groups with common projects and overall investigative themes for all groups. The individual group tutors will further define their interpretation of the projects and themes in addition to their project requirements and schedule, while adhering to the common Studio themes and course objectives.

#### **Remember:**

"Ignorance is a treasure of infinite price that most men squander, when they should cherish its least fragments; some ruin it by educating themselves, others, unable so much as to conceive of making use of it, let it waste away. Quite on the contrary, we should search for it assiduously in what we think we know best. Leaf through a dictionary or try to make one, and you will find that every word covers and masks a well so bottomless that the questions you toss into it arouse no more than an echo."

"What we know of ourselves, our acts, our impulses, of what satisfies our instincts and fits in with our structure, in other words the "forces," the "time," the "space" that suits us, these are the instruments by which we reduce all things to **our measure**."

Paul Valéry

#### **SCHEDULE:**

#### JANUARY

Jan. 6	Winter-term classes begin					
Jan. 8	First studio class, <b>Project I</b> begins Reading and essay assignment: from <i>The Thinking Hand: Existential and Embodied Wisdom in</i> <i>Architecture</i> , by Juhani Pallasmaa: Introduction: <i>Embodied Existence and Sensory Thought</i> , p. 10-23					
Jan. 15	Project I due date, Project II begins: Artist/Analysis					
Jan. 19	Last day for registratio	n for Winter Term courses.				
	Last day to change courses (including auditing) or sections for winter term courses.					
Jan. 31 <sup>st</sup>	Last day for withdrawal from winter term and winter portion of fall/winter courses with full fee adjustment.					
FEBRUARY	5					
Feb. 8	Mid-Term Reviews	9:00 – 1:00				
Feb. 9	Mid-Term Reviews 9:00 – 5:30					
Feb. 15 – 19	Reading Break - Read	ling and essay assignment: The Thinking Hand: Existential and Embodied				
	Wisdom in Architectur	e, by Juhani Pallasmaa.				
Feb. 23	Project III begins					
MARCH						
March 8	Project III due. Project IV Final Project begins					
March 25 <sup>th</sup>	Statutory Holiday. University closed					
APRIL		•				
April 8	Winter term ends. Last Studio Session.					
	Last day of fall/winter and winter-term classes.					
	Last day for academic withdrawal from fall/winter and winter-term courses.					
April 13	<b>Final Reviews</b>	9:00 - 5:30				
April 14	Final Reviews	9:00 – 5:30				
Proiect I	5%	Body Measurement Assignment				
Project II 25%		Artist Analysis				
Reading week	10%	Reading and essay assignment: The Thinking				
8		Hand: Existential and Embodied Wisdom in				
		Architecture, by Juhani Pallasmaa.				
Project III	15%	Explorations from the analysis				
Final Project I	V 35%	Project derived from previous work (A Pavilion)				
<b>Overall Evalua</b>	ation: <u>10%</u>	Discretionary evaluation for participation, initiative, and effort.				
Total:	100%					

At key strategic intervals during the projects you will receive a grade for your work:  $\mathbf{H}$  (high),  $\mathbf{M}$  (medium), and  $\mathbf{L}$  (low), each within a range from **plus** (+) to **minus** (-).



Azrieli School of Architecture & Urbanism

1125 Colonel By Drive Ottawa, ON K1S 5B6 Canada Tel: (613) 520-2855 Fax: (613) 520-2849

#### Bachelor of Architectural Studies (Design), Carleton University ARCS 2105 Studio 2, fall 2016 GENERAL SYLLABUS

Architecture in (the) Detail Bachelor of Architectural Studies (Design), Carleton University Instructors: Janine Debanné (Co-ordinator), Federica Goffi, Paul Kariouk, Honorata Pienkowska Course Hours: Monday, Wednesday, Friday, 1:30-5:30pm

Foreword

Detail = Definition: the material resolution of construction questions, in particular joining things together, be it column to beam, roof to wall, or building to earth.

"God lies in the details" Mies van der Rohe "Details are much more than subordinate elements but rather they can be regarded as the minimal units of architecture... The joint, that is the detail, is the place of the meeting of the mental construing and the actual construction." Marco Frascari, *The Tell The Tale Detail* (1996)

#### **Course Description**

ARCS 2105 marks an important moment in the BAS-Design curriculum as you enter fully into the study of Design and tackle the resolution of small to medium scale architectural programs. This studio focuses on methodology. First isolating architecture's fundamental conditions – from a building's relationship to the ground (how a construction bears on the earth) to its vertical deployment (how a construction meets the sky), the studio culminates with simple design problems that ask important architectural questions that future studios will build on.

Throughout ARCS 2105, you will be asked to respond to a series of architectural problems in quick succession. Your task will be to learn to analyze a problem, to develop a response at the scale of the site, and to delineate a material strategy at the scale of the detail. The goal is to learn to design delightful and well-conceived spaces while also "thinking them through" as material constructions.

Projects are cumulative, with knowledge from the Project 1 transferred to and expanded in Project 2, and so on. Circumscribed in this way, ARCS 2105's projects emphasize architecture's material essence, and its coming together as an assemblage of frames, planes, and skins. As such, *details* will be given much attention here. We will prefer substantive and necessary details to ones that are needlessly finicky.

Architecture opens up words of habitation through acts of making. Coming back to our title, "ARCHITECTURE IN (THE) DETAIL", this studio invites you to dwell on construction thinking as architectural beginning. We'll learn to compose inspiring and spatially engaging works of architecture that are well attuned to use and purpose, considerate of light and environment, materially thoughtful, economical and intelligently restrained.

#### **Teaching Goals**

- Understanding of fundamental tectonic questions of building, including: structure, envelope/ skin, systems.
- Understanding fundamental spatial ideas, including: journey, threshold, interstitial space, interior and exterior space ability to organize these;
- Learning the craft of architectural model making;
- Developing competence and refinement of competency in the use of the conventions of architectural drawing;
- Understanding the organization and hierarchies of uses, both practical and symbolic;
- Understanding of manipulation of natural light and artificial lighting;
- Understanding of acoustical considerations /sound;
- Understanding of principles of ventilation, the sensations of heat and cold, and related phenomena;
- Developing a sense of architecture's social considerations.

#### **CACB** Criteria

#### ACCREDITATION AND PROFESSIONAL EXPERIENCE THIS COURSE MEETS or PARTIALLY MEETS THE FOLLOWING Student Performance Criteria

A1 Critical Thinking Skills.	B5 Accessibility	
A2 Research Skills.	B6 Life Safety Sys, Bldg. Codes & Stds	
A3 Graphic Skills.	B7 Structural Systems	
A4 Verbal and Writing Skills	B8 Environmental Systems	
A5 Collaborative Skills	B9 Building Envelopes.	
A6 Human Behavior	B10 Building Service Systems	
A7 Cultural Diversity	B11 Building Materials and Assemblies	
A9 Precedents.	B12 Building Economics and Cost Control	
B1 Design Skills	C2 Building Systems Integration	
B2 Program Preparation	C3 Technical Documentation	
B3 Site Design	C4 Comprehensive Design.	
B4 Sustainable Design		

#### **Organization of Term**

Students will complete three inter-connected projects of varying lengths, some with sub-parts. Schedule attached. Studio policies (including deadlines, etiquette, and grading) are listed below. Specific Azrieli School Student Information appears at the end of the syllabus. Additional handouts will supplement the syllabus. The requirements of these documents are binding – *review them carefully*.

#### Preparing for Your Desk Crit

Three weekly studio desk crits and regular reviews are the main means of instruction in ARCS 2105. To be eligible for a "desk crit," you must present manifestations of your architectural thoughts to your instructor, not simply verbal descriptions of your ideas. Prepare new or developments of earlier

explorations through models and drawings - including idea sketches and conceptual models - for each class. Students are required to prepare all materials – drawings, models, etc. – and accompanying explanations prior to each desk crit. Drawings – especially plans and sections – must be printed in order to facilitate discussion with Instructors; except for renderings, drawings will not be reviewed on computer screens.

Desk crits will proceed by a daily sign-up sheet. Students are to be on time, present, and engaged during course hours and throughout the term. Depending on class size, desk crits may periodically require additional time.

Lectures, site visits and group reviews also will take place. At the Instructor's discretion, students will complete readings or investigate architectural precedents, among other tasks. Studio sessions will periodically be supplemented by required lectures central to the course content.

#### Grading

<u>Breakd</u>	own
5%	Director's Prize
15%	Project 1 "Architectonic Exercise"
30%	Project 2 (2a = 5%, 2b = 25%) "Canal"
35%	Project 3 "City"
10%	Discretionary Grade (
5%	End of Term Portfolio

#### Discretionary Grade

The Discretionary Grade is based on: effort and attitude; commitment to and positive participation in the studio and its culture; preparedness for class with tangible evidence of thoughtful new work at each desk crit; degree of self-initiative; collaborative skills (where necessary); overall improvement; and self-evaluation and intellectual growth. Attendance. (See above).

#### End of Term Portfolio

To simplify your work at the end of the term, update your portfolio after each project. Include clearly labelled drawings, diagrams, model photographs, process images, and renderings accompanied by brief but well-written descriptions for each studio project through all phases. The portfolio need not be "slick"; rather, strive for clear, unfussy graphic design. Instructors will provide helpful examples. See also "Retention of Work and Portfolio" below, for additional details.

Upload to CuLearn one week after your final review, on Wednesday Dec. 14<sup>th</sup> by midnight.

#### ARCS 2106

## STUDIO 3

#### Azrieli School of Architecture, Carleton University

Winter 2016 M W F 13:30 – 17:30



#### **COURSE SYLLABUS**

#### Instructors:

Yvan Cazabon (520.2600 X2863; Yvan.Cazabon@carleton.ca) – COORDINATOR Eric Archambault (<u>Eric\_Archambault@carleton.ca</u>) Giancarlo Mangone (giancarlo.mangone@carleton.ca) Peter Mansfield (<u>peter.Mansfield@Carleton.ca</u>)

#### **COURSE DESCRIPTION AND OBJECTIVES**

Crafting Architecture's Thresholds

ARCS 2106 builds upon earlier acquisitions within the curriculum while expanding upon them. ARCS 2106 pursues design thinking within a wider strategy of urban engagement and introduces analytical thinking regarding the interrelationships of programming, context, and architectural planning

The studio title ,"Crafting Architecture's Thresholds," underscores architecture's role as a maker and organizer of relationships, at both the scale of the building proper and that of its larger context and setting. The projects assigned in ARCS 2106 will explore how architecture and the built environment simultaneously organize spatial relationships internally and urban relationships externally. They additionally invite students to consider the "thresholds" between a work of architecture's fundamental realms, including the interface of a building with the street and the many significant seams within a building such as those between public and private spaces, and celebratory and ordinary spaces, among others. Relatedly, the architectural aperture (door, window, etc.) will be an important topic of study throughout the term.

Finally, ARCS 2106 considers architecture's thresholds at the scale of construction, and specifically, how a building joins together structure, envelope, and materials, in order to realize a broader design intention. In learning how to create thoughtful experiences of spaces and apertures, students will study how to "craft architecture's thresholds." To this end, each project will pay special attention to structure.

Following a sequence of three projects, students will be presented with increasingly complex programs and architectural conditions. The term's efforts will culminate with an architectural project in an urban setting. While the project sequence and schedule will be shared by all studio groups, investigation exercises within each studio group (which may include presentations, mini-workshops, lectures, field trips, and additional exercises relating to the subject matter) may vary slightly.

#### **Term Structure**

Project 1	Urban	Plaza - Winter Wonderland	:	30%
Projec	t 1b	Facade	(	(incl.)
Projec	t 1c	Site Documentation	(	(incl.)
Project 2	Buildin	ig Block Phase I	:	30%
Project 3	Buildin	ig Block Phase II	4	40%

Note: A discretionary evaluation (10%) for participation, initiative, and effort is part of the course grading.

*Studio 3* studies the theory and practice of relationships and thresholds in architecture: the relationship between building and context, idea and construction, the parts of the building to each other, and the parts to the whole. The contextual focus is the building within the city, with projects destined for particular city neighbourhoods. As well as requiring skills in handling new complexities in programming and planning, Studio 3 demands an increased understanding of technical requirements and environmental conditions in design, construction techniques and the principles of building codes and regulations as they apply to residential and public buildings. Underscoring these requirements is the expectation that students will push their creative and theoretical inquiries to the limit, while developing primary means of representation within the public context. Research, sensibility and responsibility are critical to the articulation of project goals. Understanding of basic code requirements, construction techniques, parking accommodations, building systems, accessibility and environment issues will also be part of the final project evaluation.

#### METHODOLOGY

Although the Studio will incorporate different scripted modes of exploration, the primary methods will focus on the representational conventions of drawing and modelling AS PROCESS. Your ability to '*inhabit*' and to communicate *inhabitation* through representation is a crucial element in your development as an architect. *Craft* is central to the communicative and expressive aspects of studio projects. The incorporation of computer technology will be discussed in individual tutorial groups and in the context of general studio expectations of crafted process and presentation development. Final presentation work is to be complete, comprehensive, professional, eloquent and communicative with or without verbal accompaniment. Work in progress is a vital part of the cumulative nature of the design process and inevitably forms part of the evaluation process. All final work is expected to be complete as described in the individual project outlines.

#### GOALS

Develop students' abilities to work within limits of program, context, construction methods and materials.

Develop students' abilities to extract and question ideas and organisation taken from a specific architectural, public, and human context.

Develop students' abilities to use different media to explore and reinforce conceptual and tectonic architectural intentions. Models & drawings must critically engage design and not simply "illustrate" it.

#### STUDIO ORGANISATION AND POLICIES

The second-year class is divided into five groups; each assigned to a specific instructor held for the duration of the term. All groups share the same general topics, though precise theoretical emphasis may vary from group to group. Each tutor is responsible for supervising the shared project outlines. The Studio will therefore operate at two levels: the class as a whole and the tutoring groups. At the class level, the faculty will arrange for general project briefings and introductory lectures as well as final design reviews. At the tutoring group level, desk crits, interim reviews and occasional workshops will be conducted. The primary learning experience will be gained through the assigned tutor although students are welcome to discuss projects with other tutors, as time permits.



Azrieli School of Architecture & Urbanism

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#### ARCS 3105 Studio 4, fall 2016

Instructors: Eric Archambault, John Cook, Giancarlo Mangone, Inderbir Singh Riar (studio coordinator) Course Hours: Monday, Wednesday, Friday, 1:30-5:30pm

#### Architecture's Measures



Le Corbusier, Mill Owners' Building, Ahmedabad, India, 1954 (*left*); Unité d'habitation, Nantes, 1955 (*right*). Photographs by Lucien Hervé

We think and of course we hope that our work at least tries to appeal to life, and to liveliness, it appeals to the five senses.... The material world is what we deal with – we try to understand what matter is. What it is and how we can use order to enhance its qualities.

Jacques Herzog describing the work of Herzog & de Meuron, 1997

#### **Course Description**

ARCS 3105 is a "comprehensive studio" inviting students to tackle complex building programs by emphasizing the spatial and tectonic qualities of architecture. The course explores the following: the sensory components of architecture; "structure and skin", or how buildings stand up and engage the environment; materials and materiality; the qualities of heat, cold, and related phenomena; the social considerations of architecture (including use and symbolic potential); and the conventions of architectural representation. Above all, the studio stresses the thoughtful making of meaningful space.

#### Architecture: Opening, Gathering, Journeying, Enclosing

At its most poignant, architecture orients us in and mediates our experiences of the world. That is why built form must adjust itself to the scale of the individual body while also organizing the greater social whole. The building inserts itself into its site, playing into larger social, cultural, and environmental forces. At the same time, the work of architecture responds to the much more modest dimensions of embodied human experience. It is this delicate adjustment of multiple scales that will guide our studio.

Students will complete two projects: first, a Carleton University Pavilion exploring points of contact between the "ivory tower" of academic life and the needs of communities beyond; second, a suburban Kindergarten located in a park-like setting and emphasizing the social world of children as the cornerstone of a better society. Both programs are to be rooted in prevailing site conditions. The resulting works are meant to safeguard architecture's mission of elevating the most ordinary of human experiences.

Students will also participate in the Azrieli School Director's Project and the 2016 Canadian Centre for Architecture Inter-university Charrette (an annual competition).
#### Comprehensive Studio and Student Performance Criteria

As a comprehensive studio, ARCS 3105 will emphasize "structure and skin". Students shall explore how structural systems, material assemblies, and building envelopes shape aesthetic, environmental, and social qualities of built space. This will be undertaken through drawings, models, and detailed 1:20 sections required on the final reviews.

ARCS 3105 aims at meeting key Student Performance Criteria (SPC) set by the Canadian Architectural Certification Board. (For a complete list of SPC, see Student Information below.) The following SPC indicate how students will demonstrate ability in or understanding of these skills:

Developed during desk crits and on reviews
Addressed in "Structure + Skin" assignments
Shown in required drawings and on final review presentations
Practised during desk crits and on reviews
Site documentation exercises and completing the 2016
Canadian Centre for Architecture Charrette
Historic precedents discussed in lecture
Developed in Structure + Skin assignments
Practised during class discussions and on reviews
Demonstrated in project drawings and models
Demonstrated in project drawings and models
Discussed in lecture
Discussed in lecture and expressed in drawings
Discussed in lecture
Discussed in lecture and expressed through design
Discussed in lecture and expressed through design
Discussed in lecture and expressed through design
Demonstrated in project drawings and models
Discussed in lecture and expressed in drawings

#### Pedagogy

Design studios are privileged sites of teaching and learning in all architecture programs. ARCS 3105 aims at a vibrant environment for developing notions on culture and society through the making of architecture. Studio is a place for exploring new ideas, but it always takes time to learn new skills (e.g. digital design) or to refine existing techniques (e.g. model making); these practices require continuous practice throughout the term. You are invited to participate in the studio with dedication and commitment. Make sure to read the syllabus – and all handouts given throughout the term – in order to ensure the best experience possible for everyone.

ARCS 3105 follows multiple stages and involves different kinds of work. These include advancing innovative techniques of space-making and architectural representation (e.g. drawing and model-making) along with site visits, cultural research, shop-based fabrication, digital production, and graphic design. Thrice-weekly desk crits and periodic reviews are the main means of instruction. Establishing "critical path" work schedules is crucial to manage expectations and to meet deadlines. At the Instructor's discretion, students will complete readings or investigate architectural precedents, among other tasks. Studio sessions will be supplemented by required lectures central to the course content.

Emphasis will be placed on *drawing* and *model-making* as means of studying, refining, and making architectural form.

#### Grading

- 5% Director's Project
- 30% Project 1
- 45% Project 2
- 5% 2016 Canadian Centre for Architecture Inter-university Charrette. (In case the Charrette is cancelled or cannot be accommodated, the mark will be added to Project 2.)
- 15% Discretionary Grade



#### General Studio Outline ARCS 3106: BUILDING IN THE CITY

Instructors :

Honorata Pienkowska, AA Rm. 416 ext. 5021, honorata\_pienkowska@carleton.ca Benjamin Gianni, AA Rm. 423, ext. 2870, benjamin\_gianni@carleton.ca (co-ordinator) Thomas Leung, Thomas.Leung@carleton.ca Jay Lim, AA Rm. 416, Jay\_Lim@carleton.ca Winter Term, 2016 Schedule: Monday, Wednesday, Friday : 1:30-5:30 PM Studio Lectures (as announced) : 1 :00 PM, Wednesdays, Rm. 204

#### **Course Description:**

This studio in the Bachelor of Architectural Studies Program focuses on architecture as participant in a larger urban network. The "building in the city" here takes precedence over the iconic, stand-alone work of architecture. ARCS 3106 examines urban ideas and theories through the design of buildings, as well as through workshops and class lectures. The design problems assigned consider buildings as inscriptions into existing urban fabrics as well as their relationship – be it oppositional or continuous – with these fabrics.

By exploring how cities inform works of architecture, ARCS 3106 emphasizes what could be referred to as buildings' "back-stories" – i.e. the narratives, forces (environmental, physical, social, political, economic, or "tactical" (M. de Certeau)), and voices (forceful or repressed) that underlay each and every city plan, and influence the shape and practice of buildings in urban contexts.

This studio is also punctuated by Directed Studies Abroad (DSA) travel. Many students in ARCS 3106 will take part in a one to two week study trip that will take them to places and cities outside of Ottawa. This year, these trips include Japan and Europe (Berlin, Amsterdam and Rotterdam). Naturally, the term as a whole is deeply marked by these adventures; participation of students not traveling is indirect but nonetheless important and travel experiences will be shared upon return to Ottawa. ARCS 3106 seeks to capitalize on the rich urban and architectural visits that DSA affords, explore the role of history in design, develop urban thinking, and underscore the experience of cultural alterity (or *otherness*) in architecture made so poignant when traveling.

The term is therefore organized in three stages – pre-DSA, DSA proper, post-DSA – which together describe an arc of anticipation, direct experience, and, finally, recollection, reflection and remembrance. The structure of the term seeks to make sense of this rhythm. Each stage will include design exercises and or lectures and organized visits. Participation to all events scheduled during studio hours is mandatory.

While furthering the basic design skills learned in earlier studios, this term's studio emphasizes a greater sense of public responsibility and theoretical positioning within a wider strategy of urban intervention. Design projects are expected to reflect an understanding of urban questions and a maturation of knowledge regarding meanings of urbanity, city form, and city life. Projects should also reach a high degree of tectonic, environmental and regulatory resolution using sophisticated modes of representation.

#### **Organization:**

The Third Year class will be divided into four tutorial groups. All groups share the same general topics, although project outlines and precise theoretical emphasis may vary from group to group. Each tutor is responsible for his/her own project outlines, phasing and grading.

#### **Pedagogical objectives:**

- To develop an understanding of architecture as urban event.
- To further an understanding of basic planning and internal hierarchies (such as served and service space), and to learn how these relate to urban planning and hierarchies.
- To demonstrate an understanding fabric and figure and the role of that public urban buildings may play within the urban context

- To demonstrate an ability to organize a number of disparate but complementary institutional programs into a cohesive building or complex of buildings.
- To demonstrate the ability to competently address complex planning and programming issues.
- To demonstrate a 'reasonable' understanding of structure and materials applications, with an emphasis on building systems integration.
- Building on your previous term's work, this studio challenges you to explore digital modeling as a tool to evaluate the way buildings sit in larger, urban environments and to understand the impact/presence of buildings from key points of view.

#### Assignments:

The term's work will be divided into two assignments. Individual groups may divide the second assignment ("Project 2") into sub assignments.

#### **Evaluation and Grading:**

Project 1: 15% Project 2 (multiple components): 75% Participation and improvement over the course of the term: 10%

#### Schedule:

#### WINTER TERM SCHEDULE - important dates

Wednesday, January 6, 2016

- Winter term begins. 1:30 Meeting in studio regarding desk relocations and Health and Safety rules communication, deadlines and grading issues, studio recycling program.
- Monday, January 18
  - Review, Project 1: PIT
  - Last day for registration for winter term courses.

Wednesday, January 20

• Project 2 assigned.

Wednesday, February 10:

• First interim review, Project 2

Friday, February 12:

• DSA trips depart (Japan and Berlin/ Rotterdam /Amsterdam)

Week of Feb. 15-19

• Winter Break

- Week of Feb. 23-27
  - DSA Europe trip continue; all others back.

Wednesday, March 16

• 2nd interim review, Project 2

Friday, April 8

- Last day of class
- Last day to withdraw from classes
- Thursday and Friday, April 14 & 15
  - Final Reviews

Carleton University SCHOOL OF ARCHITECTURE Studio 6: Urbanity, Dwelling and Community Campos, Gianni, and Kramer Sections ARCS 4105 Fall Term, 2016 M, 1:00–5:30 PM, W,F 1:30–5:30 PM

#### **COURSE DESCRIPTION**

Following the larger theme of *Urbanity, Community and Dwelling,* ARCS 4105 explores the development of a multiunit residential complex on an urban infill site in Ottawa.

Statistics indicate that all population growth projected for Ottawa in the next 20 years can be accommodated within the green belt. With the exception of a few large vacant sites, much of Ottawa's new housing will be accommodated in existing neighborhoods, along "traditional main streets" and close to transit stations. Increasing the residential density of existing neighborhoods is known as "intensification."

Because the form and density of new urban housing frequently differs from that of the existing fabric, many residents – even those vehemently opposed to sprawl – resist intensification. Recent multi-unit residential development in Ottawa has taken the form of high-rise apartment blocks. Residents contend that these buildings are unsympathetic to the urban fabric – exacerbating, rather than addressing, existing irregularities and discontinuities in the grain of the neighborhood. Moreover, high-rise housing appeals to a limited cross section of the city's population. Recently built projects are comprised primarily of small condos for first-time homebuyers (young professionals) and luxury condos for empty nesters. Despite its obvious advantages, many residents believe intensification threatens the integrity of the form and demographic balance of their neighborhoods.

This studio's project challenges you not only to consider what constitutes great housing, but the form and character of great streets, neighborhoods and cities. When trading large houses and spacious lawns for apartments and townhouses, the quality of the public realm (streets, neighborhoods, parks, etc.) means everything. The quality of public space compensates for the quantity of private space.

Your challenge, then, is not only to design humane and flexible living spaces for a community of strangers, but to augment the quality of character the urban environment in the process.

#### **COURSE OBJECTIVES**

Upon completion of this studio students will:

- 1. Will be familiar with key 20<sup>th</sup> century precedents for multi-unit housing.
- 2. Be familiar and literate with a range of housing typologies.
- 3. Be conversant with challenges of balancing community with privacy in multi-unit residential developments.
- 4. Understand the advantages and challenges associated with urban intensification and the mixing of demographics, uses and income levels.
- 5. Be able to demonstrate a solid understanding of egress, accessibility and visitAblilty as it applies to multiunit residential construction.
- 6. Have a basic familiarity with zoning bylaws, how and why they function, and how and when to go about requesting changes.
- 7. Have explored the concept of sustainable design from the "triple bottom line," namely economic and social viability in tandem with energy performance and environmental impact.

- 8. Have investigated various constructional systems in relation to building heights, cost and building envelope alternatives.
- 9. Have taken a project from basic programming and site design through detailed construction documentation.
- 10. Have demonstrated a basic understanding of mechanical and electric systems in multi-unit residential buildings.
- 11. Have honed their presentation skills, especially in the area of graphic communication

#### STUDIO AND LECTURE SCHEDULE

ARCS 4105 includes a lecture component. Topics will include presentations from local architects, City staff and developers, and code experts.

	Monday (lecture); begins at 1:00 PM	Tue	Wednesday	Thu	Friday
Week 1: Sep. 5-9			Director's Project/Murray & Murray Competition assigned		Lec. 1: B. Gianni. Overview of Housing Typologies (1;30 PM, Rm. 204)
			First Class Precedent Analysis assigned, all groups.		
Week 2: Sep. 12-16	Lec. 2: B. Gianni Intensification and Growth Management in Ottawa. Goals, processes.		Directors Project/ Murray & Murray Competition Due. 12:00 PM, all groups.		Precedent Analysis Due, all groups Unit Design Exercise assigned, C, G & K Groups
Week 3: Sep. 19-23	Lec. 3: Roger Gervais: Accessibility and VisitAbility		Unit Design Exercise Due: C, G & K Groups		Phase 1 assigned; potential site visits, C, G & K Groups. Zoning Envelope Exercise assigned, C, G & K Groups
Week 4: Sep. 26-30	Lec. 4: <b>Randolph Wang</b> on CDP and Secondary Plan process. How they work and their impact on zoning ordinances.		Zoning Envelope Exercise due: C, G & K Groups Site Analysis Exercise assigned		Phase 1 Reviews: Andonian Group Site Analysis Exercise Due
Week 5: Oct. 3-7	Lec 5: <b>Rod Lahey (TBC)</b> . Architect's role in determining what should get built and, applying for zoning variances.	DE: Quiz 1			
Week 6: Oct. 10-14	Thanksgiving (no class)	DE: Site study project due			Phase 1 (Urban Design) Reviews: Campos, Gianni and Kramer Groups Phase 2 (Building Design) assigned, C. G & K Groups
Week 7: Oct. 17-21	Lec. 6: <b>Gord Lorrimer</b> . Integrating a mix of housing into a single project: Innovative approaches to energy.				Building System Exercise Due

	Building Systems Exercise Assigned.				
Week 8: Oct. 24-28	Fall Break		Fall Break		Fall Break
Week 9: Oct. 31 - Nov. 4	Lec. 7: Building Systems for multi-unit residential. Recap of key approaches based on assignment.	DE: Midterm Project due	Tech 4 Mid-Term (5:30 PM)		
Week 10: Nov. 7-11	Lec. 8: Judy Jeske. Building Codes foe multi- unit residential buildings.	DE: Quiz 2			Phase 2 Reviews Andonian Group
Week 11: Nov. 14-18	_		Phase 2 (Building Design) Reviews: Campos, Gianni and Kramer Groups		
Week 12: Nov. 21-25	Lec. 9: <b>Peter Trotschka</b> (TBC). Affordable housing.	DE: Quiz 3			
Week 13: Nov. 28-Dec. 2	Lec. 10: <b>Anthony Bruni</b> , Multiples and modular housing. Examples from his practice.		Tech 4 Construction Detailing Assignment Due (12:00 PM)		
Week 14: Dec. 5-9	Lec. 11: <b>Larry Hately</b> and B. Gianni. Key issues and details in multi-unit housing.	DE: Final Projects due; Public Presentati ons			Last official day of classes.
Week 15: Dec. 12-16	Tech 4 Final Exam	Grad open house (4:00 PM)	Phase 3/Final Reviews (TBC)	Phase 3/Final Reviews (TBC)	
GRADIN	G				

Exercises:	
Precedent Analysis:	5%
Director's Project/Murray & Murray	2.5%
Unit Design Exercise:	5%
Zoning Envelope Exercise	2.5%
Site Analysis	2.5%
Building System Exercise	2.5%
Major Reviews	
Phase 1:	20%
Phase 2:	20%
Phase 3:	30%
Participation and improvement over the course of the term:	10%
TOTAL	100%

ARCS 4106 Studio Winter 2016 MWF 1:30 – 5:30 Instructor Roger Connah Office rm 525 consultation M F 9.30-11.30



#### OTTAWA: YOU'RE SO VANIER 2030 - an Urban Agenda

As the final studio in the Bachelor of Architectural Studies program, ARCS 4106 is intended as a comprehensive urban studio that engages the issues of strategic urbanism, leading to an urban framework with urban designs in a detailed and inclusive manner. The combined projects are expected to reach a high degree of strategic thinking using sophisticated modes of mapping, data analysis, urban morphology and representation. Students are expected to carefully study the strategic systems and urban shaping designs of the proposals. The studio will also consider the social, economic and environmental implications of the urban choices made. Known as the Archipelago Studio this is a collaborative atelier studio continuing from the fall housing studio (4105\_Dirty Realism). To begin research and strategic planning, Vanier 2030 is essentially broken into four interlacing concepts a) Vanier Ecologies b) Embedded Neighbourhood Housing (Sigma Cooperative) c) Mainstreets Urbanism and d) the High-Rise Vanier City Smart Hub (Gossiping Towers).

#### **TOPIC** of the studio

The overall topic of Studio 7 (ARCS 4106) is *Urbanity*, *Action and Agency* – an urban agenda consisting of understanding mapping, proposing and demonstrating strategies and framework.

There are many urban design models available but the studio will also explore urban action and agency. How does Vanier do this – at a more local level, at the municipal level, at the federal level? Is it agreed and proposed by the City of Ottawa Planning (Secondary Plan that Vanier will soon be densified in a serious way. What are the issues, predictions, hopes? How could Vanier be treated separately, engagingly and not only remain part of Ottawa but become Ottawa's new representative city. Could this be the city that the city of Ottawa lacks, not mimicry of other settlements within Ottawa? What is the City in the City? this studio addresses selected urban thinking and planning through detailed integration of urban mapping, data analysis, community concepts urban parcel and site analysis, urban form, including suggesting components, systems, structure, materiality, and the logic of densification and intensification. The studio frames an emerging urban interest and tests the connections for the student from their architectural design and commitment to the practice of architecture to issues concerning societal change.

#### FRAMING the Studio

Are the current codes and guidelines steered by Ottawa City Planning able to produce a new morphology for the city? What is this morphology? What is the future shape of Vanier that is not just the shape of Ottawa? We are optimistic that Ottawa is at the precise stage in the re-shaping of the city to take on something of extreme contemporary existence. Most of the models being built today are competent but to many they demonstrate a mimicry of housing developments somewhere else; Toronto or Vancouver. Ottawa? Not a world city? Ottawa can be more than what it is today. Ottawa is sometimes described as beautiful, sometimes tranquil, sometimes sleepy, often safe, sometimes dull. It is all of these. Consider if Ottawa needs to develop diverse urban forms into to distinguish it from when the French planner Jacques Grébert started planning for the autombile in the 1950s. As the City of Ottawa and the NCC have since continued trying to knit the city back together, what do we make of the pioneering city camp with its driveways and Federal monuments. Ottawa has spread itself, beyond the Greenbelt. Some go as far as describing it a Paradoxical city-in-a-rural-idyll. Is this a resistance to, or denial of, a city. Whatever improvements are suggested, whatever new developments accepted, pushed through, accepted or rejected, everything Ottawa offers appear reluctant to embrace the contemporary. The groups have merged naturally from discussion and work achieved in the preceding Housing Stuio.

#### 1 Vanier Ecologies (I still haven't found what I'm looking for)

**Exploration of** Vanier Ecologies – Socio-Political - Economic – Environmental – health What is the future of Community in Vanier? Ecology is seen as the study of interaction among organisms and their environment. The term encompasses a wide variety of topics, including:

- life processes, interactions and adaptions
- movement of materials + energy through living communities
- successional development of ecosystems
- abundance and distribution of organisms and biodiversity in the context of the environment including nutritional education
- agriculture community garden parks & green Space food Deserts

Building on this definition, there will be three distinct ecologies, inter-related narratives that will offer a new way to map Vanier and agency, and propose a new relational urbanism for Vanier.

#### 2 The Sigma Housing Urban Group (Where the streets have no name!)

Revitalizing Vanier Neighbourhoods

New post-developer infill housing models

lintegrating with the designation of Vanier characterized as Low Social Economic

BBRN – Building Better Revitalised Neighbourhoods\

How to: integrate into different communities - navigate association meetings - deal with developers - work with community planning

#### 3 Mainstreet Urbanism (The Sweetest Thing)

Montreal Road and MacArthur Road contrasting with Beachwood Avenue re-development, mapping and new (urban interventions) proposals for these two major arteries in Vanier included mapping, transit & shuttle solutions, retail and housing proposals.. and valid urban 'gateway' projects at St Laurent -

#### 4 Smart Vanier - the Gossiping Towers (With or Without You)

digital cluster business/retain/high-rise/tower building development area near Vanier parkway hub for future Vanier development – digital Vanier

models of interconnected towers, housing and city- a new metropolis - the city in the city.

#### Course format

Sessions, consultations, tutorials and lectures delivered through in-studio exercises, detailed mapping and data analysis and other visual presentations in conjunction with the weekly studio based program.

Assignments – individual and group - will allow students to explore the creative possibilities of urbanism and understand and position themselves in the new turn to urban thinking and societal change

Various visual communication techniques will be introduced through a variety of media for the preparation of a) publication b) urban model c) exhibition.

#### **Course objectives**

- 1. To become familiar with an emerging urbanism, and fluent with urban mapping and strtagic thinking.
- 2. To situate and expand an architectural commitment within city planning and societal change.
- 3. To use a variety of multimedia processes and devices both analog and digital in communicating urban issues, to extend beyond conventional image making.
- 4. To establish a critical framework for understanding an urban agenda with respect to implications in (urban) theory and practice.
- 5. To demonstrate the above through a studio atelier methodology where individual and group participation in class discussions decides the frame and pace of the studio itself.
- 6. To prepare students to contest and measure research, writing on urbanism and other critical thinking skills.
- 7 Through urban revitalization learn how to integrate the positive tensions require from a city.

8 To learn how to take a position on how Vanier become more than an experiment in urban settlement, housing and community?

9 To consider future studies and relate to (theoretical) utopias and explore the relationship between urban speculations and focused city thinking and development.

#### **Course Assignments**

The students will work the urban program in association with the instructor – they will frame the issues and monitor progress and potential outcomes.

The Studio will be group and self-assessed with clear outcomes – this demands individual timing and pacing and a shared ethical approach to the combined work of the studio.

Any competition between projects or groups is removed; students are encouraged to work Across groups, and help peer-to-peer learning.

Shared work with individual emphasis becomes the heart o the urban studio.

The completed assignments – publication – model – exhibition – are structured, timed and agreed on by the studio structure.

All work and assignments – self-framed and group-framed – will be collected into The three outcomes.

This Sketch for an Urban Biennale in Vanier is nothing less than a sketch for a new city, a city within a city, a city of 200-250K by the year 2030. This is the sort of innovative urban utopia we are suggesting for Vanier – it is not politically impossible.

Shocked? We don't think so. Vanier 2030 will offer Ottawa not only a city within a city. It will not complete with Downtown, Elgin St, Glebe, Le Breton Flats, Hintonburg, Lower Town or ByWard Market. It will be the most unique city of Canada, fitting for a Capital of the 21<sup>st</sup> century...

An Urban Biennale in the form of an Expo has to be about cultural and political agency. If we are all to become agents of change, we must know more about planning, design and implementation, about ecologies, mainstreets, integration and sustainability, about inclusion and adaptability.

Above all an Expo has to be about the most humane innovative sites of the new city of Vanier. With its gossiping towers, its air trams, caterpillar housing developments, torso towers and embedded housing situations. The most exciting development since Jacques Gréber ripped through this city. That is our plan.

References

Steffan A (ed) World Changing – A User's Guide to the 21<sup>st</sup> Century, Abrams (2008)
Kossak F (ed) Agency, working with Uncertain Architectures, Routledge (2010)
Burla M Cityscape Die Getsaltan Verlag (2008)
Blostan B (ed) Design Ecologies: Essays on the Nature of Design (2008)
Mostafavi, M & Doherty, G (ed) Ecological Urbanism, Lars Muller (2010)
Fareiss, K & Commarell, H-J, Aedes, Cultural Ecologies Texcoco Lake Ecology Park, Mexico, (2011)
Detroit Future City/Detroit Strategic Framework Plan, Inland Press 2013
Pople, N Small Houses, Universe (2003)
Dickson, J S Move: Sites of Trauma Princeton Architectural press (2002)
Tarbatt J The Plot: Designing Diversity in thee Built Environment. A manual for Architects & Urban Designers, Riba (2012)
Bain, L Living Streets: Crafting Public Space New Jersey, Wiley (2012)
Bullivant L. Masterplanning Futures, Routledge (2012)
Zyscovich, B & Porter D Getting Real about Urbanism: Contextual Design for Cities, Urban Land Institute (2008)

roger.connah@carleton.ca winter 2016

ARCS 5102 / M. Arch. 1 - Studio I Fall 2016 / Monday, Wednesday, Friday 1:35 – 5:25pm Instructors: Catherine Bonier & Johan Voordouw

#### Space and Site // Visualization and Translation

#### The fall term runs from September 7<sup>th</sup> to December 22<sup>nd</sup> 2016

#### INTRODUCTION

This is an introductory architectural studio, in which students will learn to work in multiple media, and to understand and develop their projects under the mentorship of their instructors. Students will learn the languages and techniques that will allow them to work towards professional competence within a collaborative profession. At the same time, each student will be required to develop their independent voice as a designer. While each student will have particular strengths, each student will develop their ability to actively interrogate images and objects, and to develop new products, questions, and ideas based on their own interpretations.

#### **COURSE THEME & FORMAT**

Because this studio provides an introduction for students with varied educational and professional backgrounds, assignments may be undertaken through various techniques, and will broach a range of complexities. Students more familiar with design techniques are welcomed to expand their projects, pushing their skills further. We also request that you assist your fellow students through positive mentorship. For those new to architectural studies, we recommend that you focus on the quality and craft of your work, and exercise patience. Each step will build on the next, and instructors and teaching assistants are available to help. Use this studio for vital skills acquisition, design development and as a first step towards the three studios and thesis to follow. Each student will have the opportunity to undertake collaborative research and critical analysis, while developing their communication skills.

This studio will undertake three projects that allow students to build the fundamentals of architectural design. The first design investigation takes on issues of material, construction and space. The second project will allow students to construct and to analyze site. The third project will allow students to synthesize the two prior projects into a small building project, to develop preliminary skills of program preparation and design.

#### **COURSE OBJECTIVES, PEDAGOGY and ASSIGNMENTS**

Students will develop their design abilities in this course through regular design projects, desk critiques, group critiques, informal pin-ups, formal reviews, project and program proposals, and other assignments.

Course Objectives:

- 1. To demonstrate basic mastery of architectural conventions, including the techniques of plan, section, elevation, axonometric drawing, and 3D physical and digital model construction.
- 2. To consistently produce drawings, models, writings, and other design studies which are carefully crafted, thoughtfully constructed, and complete.
- 3. To explore procedures of layering and transformation, in order to creatively develop design ideas and questions.
- 4. To develop a foundation for architectural literacy: visual, verbal, and written.
- 5. To begin to generate architectural projects situated in ideas, and iteratively modified to engage particular and informed readings of site and environment.

#### STUDENT RESPONSIBILITIES in this course

#### STUDIO CULTURE

- Carleton has a long established studio culture. This culture has evolved with new modes of working, particularly the computer. We are aware of the transition of students away from studio and into the computer lab. We request that students actively counter this migration. Please work in studio either on laptops, desktops or via analog means. Working in studio is fundamentally important for establishing a collegiality which will lead to lasting friendships and the development of an important support network that will aid in the development of each student's work through peer learning and collective engagement.

#### CONTACT INFORMATION:

Catherine Bonier, Arch Bldg. 407 E-mail: catherine.bonier@carleton.ca Office Hours: Wednesday 11:00 – 12:30pm

Johan Voordouw, Arch Bldg. 314 E-mail: johan.voordouw@carleton.ca Office Hours: Wednesday 11:00 am – 12:30 pm

- E-mail is a permanent record of communication and should be used professionally. Prior to contacting your instructor please reference the Course Outline, Project Brief, and CULearn.

- E-mail should be used to make an appointment prior to any meeting

- We will respond to non-emergency student e-mails twice per week

- Please do not contact the via phone. If you need to make an appointment, please do so during studio or set up a preferred date and time via e-mail

- If you are not receiving e-mails through your Carleton Account it is the student's responsibility to contact CCS to resolve the issue.

CALENDAR (See Schedule PDF on CULearn)

#### **ACCEPTABLE ABSENCES & EXTENSIONS**

- Illness, with proper medical documentation, and family grievance are examples of acceptable absences.

- Employment responsibilities, whether on or off campus is **<u>not</u>** an acceptable reason for lateness, lack of attendance or an extension.

- It is the student's responsibility to periodically back-up their work. While we empathize with data loss due to corruption, deletion or theft it is not grounds for an extension.

#### GRADING AND REQUIREMENTS

"Studio projects will be evaluated on the (1) strength of design concept/concepts, (2) development and articulation of the concept according to the objectives set forth in the project assignment, and (3) the clarity, craft and completeness of the work submitted at the hand-in deadline."

Percentage Breakdown List	
Director's Charrette	5%
Project 1 (Catalogue of Carved, Cast & Constructed Spaces)	25%
Project 2 (Site)	25%
Project 3 (Building)	25%
Final Portfolio	10%
Discretionary	10%

- Every day a submission is late is a 3% reduction in the project grade.

- The first 3% reduction occurs directly after the deadline time.

- To ensure parity, final grading will be completed collectively and final grades will be in agreement of both studio instructors. Therefore, your final grade is 1) a reflection of our collective expectations for the studio, 2) the quality of your work in relation to your studio group and 3) in relation to the year as a whole.

#### ARCS 5103

#### M. Arch 1; Studio 2

Prof. Paul Kariouk (paul@kariouk.com) Winter 2016

#### Transforming Program into Architectural Space: A Help Center for Urban Immigrants

The aim of this studio is to advance the fundamental architectural skill of translating a given program into an effective, functional, spatially provocative set of hierarchically-related architectural spaces. Similarly, just as the building itself must be as pragmatic as it is spatially beautiful, an urban solution must be achieved simultaneously whereby the building is as pragmatic in its context as it is a vital, artful addition to its urban context.

The project at hand is a center for newly-arrived immigrants, to be built in Chinatown (bear in mind that despite the name, "Chinatown," this area is perpetually in flux as is any urban area). The project site is located on Somerset Street. The program of this center geared to individuals and families is to provide a range of free services that most any "Canadian" would find so trivial as to hardly require any consideration, but for a newcomer, are associated with seemingly insurmountable difficulties. For example, staff here would assist registering children for school and that requires outlining procedures for immunization; the writing of a CV that accords with "our" standards; the explanation of local public transportation; the opening of a bank account; assistance to locate permanent lodging; legal advice that ensures new immigrants are not being exploited; etc. The center would also offer English and French language classes in its large gathering space and in the evenings this space would serve as a gathering space for newly arrived groups; consider that urban immigrants are often forced to live in very small, crowded quarters that don't allow for larger social gatherings so this becomes a type of community hall. So, while a large space such as this can at times become a vessel for structuring joyous moments, the majority of the time visitors to this center will be arriving alone or in small groups, and as such, the prevailing emotions here would range from anxiety to panic and other sentiments associated with an absence of personal control. The design of your proposal's presence on the street, its sequences from outside to inside, its interior volumes and lighting and materials MUST be absolutely clear so as to work without signage and MUST aim to communicate a sense of peacefulness and trust.

Site facts: The address for the project is 816 Somerset Street; Somerset is the primary East-West commercial street in this section of Ottawa's downtown. The site is currently an empty lot that is 50' wide by 90' deep and requires a 30' rear setback, hence, the footprint of the new building is limited to 3,000 sf. There is no side yard setback requirement but this can be proposed. The maximum height permitted at this site is 45 feet; there is no limit on depth below grade.

#### Required public building areas:

-Arrival and information: 500 sf

-Waiting: 1,000 sf

-Individual general staff offices: 100 sf each (10 total)

-Legal offices and an assistant's space: 100 sf each (2 total with a separate secretarial area)

-Public meeting/presentation/gallery/celebration area for approx. 200 people: 2,000 sf

-Bathrooms: 1,000 sf Note: this would include bathrooms for men, women, and also family bathrooms -Public Garden/landscape: 2,500 sf

Note: This "garden" may be located on the ground level, at a roof level, or anywhere in-between, as a sculptural component of the larger massing, or any combination thereof.

#### Required private building areas:

Director's Office and assistant space: 200 sf Staff kitchenette: 50 sf

#### Conference room: 500 sf

**Circulation**: Expect that *at least* 20% of the total area will be required for primary stairs/ramps, hallways, and an elevator; It should go without saying that all of the above spaces are accessible for all abilities. The above program includes spaces of many different sizes, but moreover of different degrees of privacy and publicness. The association and separation of all these parts is always a matter of cultural propriety but there is no single "appropriate" solution: it just depends on the manner in which space is deployed, which requires both daring ingenuity *and* subtle nuances. "Everything is possible" is not the same as "anything goes." Note that at times a programmatic requirement is identified as a "room," which implies actual partitioning, whereas an "area" or "space" can be more spatially ambiguous. Note that the total required program is just under 8,000 sf, which requires less than three storeys above grade, whereas within the allowed height limit you could achieve four storeys above grade, thus accommodating 12,000 sf of program. This is to say that the programmatic requirements are very modest for this urban site; it is your responsibility to put unprogrammed space to extraordinary spatial use...

#### Schedule:

-Wednesday, January 6: Project 1 assigned (duration approx. 4 weeks) -Monday, January 11: Group site model due. This to be built at 1:200 -Friday, January 15, two complete schematic iterations with all plans, one section, and massing models; 1:200 -Additional deadlines for group reviews TBD -Monday, February 8: Project 1 Final Review -Wednesday, February 10: Departure for Barcelona -Friday, February 12: Project 2 assigned (duration approx. 8 weeks) -Saturday, February 20: Return from Barcelona -Additional deadlines for group reviews and a midterm TBD -Tuesday, April 19: Project 2 Final Review (Date to be confirmed)

#### Total Grade Distribution:

-Project 1 is worth a total of 25% of your final grade

Of this 25%, 60% of that total reflects the degree of spatial development achieved; 30% reflects the quality of your representations of the ideas and spaces; 10% reflects the articulated delivery of the project's intentions.

#### -Project 2 is worth a total of 60% of your final grade

Of this 60%, 50% of that total reflects the degree of spatial development achieved; 20% reflects tectonic/structural resolution in conformity with the spatial intentions; 20% reflects the quality of representations of the ideas and spaces; 10% reflects the articulated delivery of the project's intentions.

-The discretionary segment of your grade is worth 10% and the final portfolio is worth 5%

#### Final Deliverables:

-Site model at 1:200

-Plans at 1:200

-Significant section through the building and immediate site 1:200

-Perspectival drawings: 1 from the street, and a second view showing your primary interior special experience -Verbal Presentation: Prepare a succinct presentation of your project, *lasting no more than one minute.* 

#### Site Visit:

On our group visit to the site bring the following:

- measuring tapes and personal embodied measuring devices (such as your gait or arm span measured in advance)
- sketchbooks, drawing pencils and pens; cameras.

#### WHAT TO VISIT - HOW TO "SEE"

- Notice scale in relation to the human body (nothing is grandeur than it needs to be);
- Notice materials; study how doors and windows are produced within, and result from, a clear logic of material assembly;
- Observe roof slopes and eave troughs; see their "intelligence" and take notes;
- Understand joints and connections be they material or spatial;
- Contemplate ratios of wall surface to aperture size, and the art of proportion

Carleton University Azrieli School of Architecture and Urbanism M. Arch 1; Studio 3 ARCS 5104 Prof. Paul Kariouk (paul@kariouk.com) Summer 2016

I make a project and I panic. Which is good; it can be a method. First panic, second, conquer panic by working. Third, find ways to solve your doubts. Eduardo Souto de Moura, Architect, Pritzker Prize Winner

#### The Resolution of Architectural Space, Site, Structure, Envelope, and Building Systems

In the following six weeks you are required to design a work of architecture that is at once symbolically notable, eminently pragmatic, spatially profound, structurally developed, and rigorous in its environmental performance. In essence, this term serves as your entry gate to the Gateway Studio that follows in September.

The class will be divided into two sections that run from May 2<sup>nd</sup> until the mid-term on Monday, May 16, and then from the mid-term until Tuesday, June 14. The first section is dedicated to the development of the site strategy and architectural development of the program. This initial work will be entirely completed and presented in pairs. The second section will require the elaboration and transformation of your proposal based on the sustained development of the proposed structure, and the development of the building envelope and mechanical systems, which will be an extension of your coursework in Tech 3. Work in this second part of the term can be completed in pairs or individually.

For each half of the term there will be mandatory studio sessions held from 9:00 - 12:00 each day and at least once each week a required group review will be held on Monday, Wednesday, or Friday afternoon.

Please review the Handout provided on the first class day of the prior Winter term for a detailed list of class and university requirements and policies, which remain in place for this term.

#### **Carleton Centre: A New Entry and Orientation Place for the University**

This new center is essentially a new Uni-Center (Let's assume the existing one, very sadly, was the victim of arson). The new Carleton Center is to be located directly in front of the Architecture Building. As such, the new "CC" must be a powerful visual and symbolic gate to the university that will be adopted by all members of the school community as the heart of campus.

#### **Required public building areas:**

Campus arrival area (this will need to be a long-span space): SF as needed

- Consider that a semi-protected car and bus drop-off and waiting area is needed, as well as bypass lanes. Study and measure the existing arrangements on campus and make relevant and common-sense solutions that are simultaneously provocative spatially.
- Campus reception, orientation and information area: SF as needed
- Assembly space (this will need to be a long-span space for campus groups to set up booths, town hall meetings, performances): 12,000 SF
- Food hall, dining area, kitchens (this will need to be a long-span space): 15,000 SF This space must have a connection to a loading dock.

Bookstore: 10,000 SF This space must have a connection to a loading dock.

Commercial area for a minimum of 5 private concessions (general store, post office, bank, café, etc.): 5,000 SF with shop areas minimum of 1,000 SF each

Washrooms: SF as required and distributed relative to common sense

Student organizations office area with a minimum of 15 separate offices: 7,500 SF with offices of a minimum of 500 SF each

Tunnel connection: See existing map of tunnels

Landscape and semi-outdoor areas to knit the new CC to the surrounding context: Many of the above programmatic

requirements could be associated with outdoor areas that are managed architecturally. Likewise, as Carleton's if a suburban campus, there is the possibility to create significant spatial linkages to the adjacent buildings via deliberately designed outdoor areas or semi-protected zones.

### Note that the above square footages are approximations and the associated programs can very well be given due space in different quantities of area; it all just depends on your vision and spatial skills...

#### **Circulation**:

Expect that *at least* 25% of the total area will be required for primary stairs/ramps, hallways, and elevators; it should go without saying that all of the above spaces are accessible for all abilities.

Circulation must include a stair and an elevator connection to the existing tunnels and two fire stairs located at opposite ends of the building.

The above program includes spaces of many different sizes, but moreover of different degrees of privacy and publicness. The association and separation of all these parts is always a matter of cultural propriety but there is no single "appropriate" solution: it just depends on the manner in which space is deployed, which requires both daring ingenuity *and* subtle nuances. "Everything is possible" is not the same as "anything goes." Note that at times a programmatic requirement is identified as a "room," which implies actual partitioning, whereas an "area" or "space" can be more spatially ambiguous.

It is *impossible* to create a functional work of architecture that houses a varied program without the scrupulous use of hierarchy. Architecturally speaking, hierarchy of program are managed by utilizing a range of scales, materials, lighting conditions, the obvious and/or hidden placement of parts at various point in a general massing and sequence, and the manner in which circulation is used to lead one through the spatial and sculptural arrangement. Each student pair will need to asses which parts of the program will receive different degrees of hierarchical importance at which point in the total indoor and outdoor spatial system.

Approximate building footprint: 25,000 SF Approximate amount of programmed space: 100,000 SF

#### **Requirements:**

To be determined on a weekly basis, however, in general, the architectural requirements for this studio will move in tandem with the requirements for Tech 3.



COURSE TITLE	Gateway Studio
Instructors:	Sheryl Boyle, Lucie Fontein, Jill Stoner, Maria Denegri (Visiting Critic)
Course Number Term and Year Days and times of meetings	ARCS 5105 Fall Term 2016 Monday, Wednesday, Friday from 1:30pm to 5:30pm

#### INTRODUCTION

In his book, Stuff Matters, materials scientist Mark Miodownik describes the workshop of the future as a critical space of collaboration, exchange, innovation and invention. This social and interdisciplinary approach to design and material culture would seem to be at odds with the specialization of industrial production and their corresponding specialized environments. Production spaces regulate humidity, light, dust, noise and fumes and these levels are precisely determined by the equipment and materials.

How might architecture serve to redefine the modern workshop to allow for greater social and cultural exchange and collaboration? Many building environmental systems have also followed the path of specialization and exclusion from one another. While building codes and industry may seem to impose limitations on the design of integrated systems, this course will aim to illuminate areas where the comprehensive design of buildings, systems and the environment, in tandem with building program, will highlight the awareness of these boundaries and aim to expand their potential to create a delightful architecture with a very small environmental footprint.

Working together with the graduate course in Advanced Building Systems, this studio will build upon the lectures and assignments provided to create a socially, culturally and environmentally responsible architecture documented in a robust set of architectural drawings.



Tinsmith workshop from the Encyclopedia of Sciences, Arts and Trades, Diderot and D Alembert, 1763.

#### **COURSE THEME & FORMAT**

This studio-based course is specifically targeted at addressing the idea of singular comprehensive design engaging the theme of "Workshops for the Next Century" through the development of a rigorous series of design drawings that synthesize design expertise and technical knowledge. In addition to the lectures received in Advanced Building Systems, the Studio program will also provide several lectures and workshops with experts in the fields of daylighting, stair & bathroom design, building codes, structural integration in building systems, building envelope, technical drawings, creative systems integration, lighting and acoustics.

The studio will be divided into two groups based on two distinct sites in Ottawa - one in Vanier which will propose a new construction and another in Mechanicsville which will incorporate adaptive reuse and new construction. Each site will incorporate and design an adjacent urban landscape as part of the building systems design.

Group A: Vanier Site: Professor Lucie Fontein & Maria Denegri (Visiting Canadian Architect) Group B: Mechanicsville Site: Professor Sheryl Boyle & Professor Jill Stoner

#### GRADING:

30%	drawing set	20%
Mid r	eview	20%
60%	drawing set	20%
90%	drawing set	20%
Final	Review	20%

#### **COURSE OBJECTIVES, PEDAGOGY and ASSIGNMENTS**

Drawings will be developed in a comprehensive drawing package with 30%, 60%, and 90% completion before the final deadline. These packages will be submitted for review and red-marking on the designated dates in the schedule below. Students are encouraged to use the specialized lectures and workshops within studio as well as the Advanced Building Systems design charette to advance the comprehensive design of this project. Students will be required to develop and submit their specific building program as part of the drawing set.

#### 30% Drawing Package - due Friday, October 7th 60% Drawing Package - due Friday, November 4th 90% Drawing Package - due Wednesday, November 30th

The final drawing set will contain thirteen (or more) sheets, plotted on tabloid size A3 paper. The scales refer to drawings when plotted full size. Reduce as necessary for this set. Wall sections may be cut for set, or reduced to fit. APPLY GRAPHIC SCALES TO ALL DRAWINGS, so that scale will be accurate when drawings are reduced.

All sheets should be REVISED significantly, and should now include EXTENSIVE NOTES. Pay attention to placement of drawings relative to the page, line weights, density of information, New sheets include stair drawings, wall sections details, and schedules.

#### Schedule of Reviews:

The studio will be divided into 5 review phases as follows:

1.	Analysis and definition of Site and Program	due Monday September 19th
2. 3.	Design Probes (site / program / conceptual framework) Schematic Design Mid Term Review Oct 19.	due Wednesday September ti8th due Wednesday October 19th
4.	Building area @ 1:50	due Monday November 7th
5.	Conceptual Detail	due Monday November 21st
6.	Synthesis	due December 12th
	Final Review Dec 12 & 13	



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#### PERKINS+WILL (OTTAWA) SPONSORED STUDIO ARCS 5106 GRADUATE STUDIO 2, WINTER 2016

#### Ice

Instructor: Inderbir Singh Riar Course Hours: Monday, Wednesday, Friday, 1:30-5:30pm



Caspar David Friedrich, *Das Eismeer* (1823–1824), oil on canvas



Mathias Kessler, *Das Eismeer* (2013), 3D Maya rendering

"The sorceress saw him go. She ran into the water to catch him but when she could not reach him she slashed at the granite rock with her ulu as easily as if she were cutting meat. But Kivioq harpooned a stone and it smashed. He warned her that he would have harpooned her in the same way. She asked him to become her husband, but he refused. She was so maddened with rage that she threw her ulu at him and turned all the water to ice."

Inuit legend

"'My reign is not yet over' (these words were legible in one of these inscriptions); 'you live, and my power is complete. Follow me; I seek the everlasting ices of the north, where you will feel the misery of cold and frost to which I am impassive.'"

The Creature addressing Victor Frankenstein in Mary Shelley's Frankenstein (1818)

"Nature is perhaps the most complicated word in the language." Raymond Williams, Keywords (1976)

*Ice* proposes ways to consider anew the built and unbuilt worlds. Drawing on many cultural, material, and social concerns – myths of the Canadian North, our shared experiences of the cold, the pressing realities of climate change, or rising geopolitical concerns tensions around the Arctic – the studio will explore the environmental, physical, and spatial properties of ice in order to advance new scapes.

In our day and age, does *ice* immediately conjure dire predictions of irreversible ecological catastrophe – or can its properties be harnessed to produce meaningful social- environmental relations (associations that may have existed in societies well before the advent of modernity)? As such, can *ice* help us to define notions on *time*, of things unfolding slowly (cyclical experiences of seasons) or accelerating quickly (melting polar caps) or occurring suddenly (Russia planting its flag under the North Pole in August 2007)? Will our considerations lead to immediate (and necessarily short-lived) solutions or long-term (and possibly lasting) results? What could *architectures of ice* look like – will they be rooted in history or project the future? Do we imagine these works in far-flung places or could their effects be discovered much closer to home?

The studio will begin by undertaking two concurrent comprehensive investigations: first, research on environmental, social, and technological conditions of ice encountered in local, regional, national, or global spheres as well as in multiple histories across different cultures; second, aesthetic representations of ice as material form and spatial phenomenon. Drawing on these studies, students will project architectures of ice. The final works – whether squarely practical or utterly experimental – may be realised at any number of scales. In all instances, students will remain attentive to contemporary politics surrounding their work. Projects must, therefore, situate both critique and solution. No matter how visionary, each result will be led by a thoughtful resolution of program, space-making, and tectonics.

Critical to this effort is approaching environments of ice - that is, sites - not as tabulae rasae but as vast, complex worlds with deep meanings and histories including those of indigenous peoples. At the same time, *ice* may provoke explorations at molecular levels or at the expanse of the solar system. In other instances, notions on *time* may become paramount (for example, the differences between, say, melting and cryonics). Scientific, literary, and artistic narratives – whether ancient practices of alchemy or visions of the "crystalline" in early twentieth-century Expressionism – offer countless ways to register the effects of ice on human consciousness. Projects could, therefore, respond to greater dimensions of life – namely, a vast biodiversity of fauna and flora that easily eclipses needs of human habitation and projections of the built world. Throughout, we will consider the degrees to which current discourses on the Anthropocene are the truest measures of our epoch and future.

note: *Ice* is the sixth in a series of M.Arch studios based on the theme of *political science*. The aim is to project representative architectures for the renewal of public space, civil discourse, global environments, and everyday life. The studio is animated by a belief in *design* as the best means for spurring ideas on improving the world.

**Sponsored Studio** The studio is generously sponsored by Perkins+Will (Ottawa). Among the resulting initiatives will be a monograph on research and design work produced this term.

#### Pedagogy

For successful completion of the studio, students must possess the following: strong reading and writing skills; effective oral communication; ability to complete library- and archive-based research, which assumes facility with database searches, conducting interviews, and techniques of recording site information (including GIS); ease with shop-based production including the use of hand and machine tools; knowledge of digital design and fabrication; the ability to work well with others, which includes sharing tasks, delegating where necessary, and balancing varying skillsets; and, finally, commitment to the studio ethic – namely, a spirit of exchanging ideas among the group.

Given the multiple stages and different kinds of work – again, research, graphic design, shop-based and digital fabrication, and advanced techniques of architectural representation - the pace will be demanding. Students are expected to be self-starters and capable of collaborating efficiently. When working in pairs, a clear appraisal of tasks and deadlines must be communicated to the Instructor.

#### Part I – Defining Ice

Part I concludes in the Preliminary Review (constituting 10% of the course grade).

#### Part 2 – Architectures of Ice

Part 2 is divided between several phases comprising 90% of the course grade.

#### **Bibliography**

See full Syllabus





1125 Colonel By Drive Ottawa, ON K1S 5B6 Canada Tel: (613) 520-2855 Fax: (613) 520-2849

#### ARCS 5909 Thesis - Directed Research Studio (DRS), Winter 2016

Instructor: Janine Debanné (Janine.debanne@carleton.ca) Course Hours: Monday, Wednesday, 1:30-5:30pm Office Hours: Friday 12:30 – 1:30 or by appointment

### Theory at the Seam of Making

#### Description

Drawing from your experience in studio classes and in seminars dealing with theoretical approaches and research methodologies relevant to the discipline of architecture, you will now embark on the realization of a thesis proposition. This work represents the fulfilment of your MArch cursus and a contribution to architectural discourse.

This course guides and supports students through to the completion of their Masters' Thesis work, to be submitted June 17th and defended on July 4, 2016. The time frame of the first part of this course follows the Winter Semester calendar.

Notable dates are: Colloquium 1 = Wednesday February 29 Colloquium 2 = Tuesday April 19

Class format and structure Meetings are Monday and Wednesday afternoons, and, while much more selfdirected than a normal studio, follow a traditional architecture studio format. Sessions will include a combination of group discussion, individual "desk crits" and pin-ups /reviews.

#### Theory at the Seam of Making: introduction and pedagogy

We live *in* history, and we do not escape our epoch. By virtue of this, each of your theses investigations falls into the larger discourse of post-modernity. Whatever your area or topic, these will typically tie into influential theoretical constructs from the second part of the twentieth-century into the present, including structuralism, post-structuralism, phenomenology, regionalism, and historicism. Our one-on-one discussions will focus each of your topics as theoretical investigations, while also identifying fruitful venues of exploration through specific, tangible, architectural propositions. These may include interventions onto existing sites or buildings, or may take the form of experiments in architectural representation, or of critical re-workings of conventional approaches to professional practice, among others.

During our discussions (one-on-one or in groups) we will explore how your lines of investigations relate to broader lines of inquiry in contemporary architecture. You will be responsible for locating and framing your work in relation to critical approaches within contemporary architectural theory and practice, in areas ranging from approaches to history and memory, the environment, technology, parametric design, design/build and community-building paradigms, among others. Our overarching goal will be to "frame" architecture's questions – broad and multifarious as they may be – in the context of a well-focused design problem / exploration. I invite you to remember that "big," beautiful ideas, and even brilliant ones, emerge from specific and well-circumscribed investigations. Let us keep this humbling truth in mind, throughout this journey together.

The architect's thesis is a very unique academic form for which few models exist in other fields. Your final

thesis will take the form of a book, as per examples seen together during our meeting of November 20 2015. This book will contain reproductions of your thesis artefacts (models and drawings), including foldout sheets, as appropriate. The writing compliments these images, and decodes them, to guide the reader into a thorough and deep understanding of them.

The book as a whole constitutes a complete "working-through" of an architectural idea or question. The text will alternately be descriptive and factual, or speculative, and perhaps even literary in nature. As discussed during our fall meetings, we invite you here to privilege making over "too many words," and to edit your work finely. Words, as images, are abundant in our age. We seek here to achieve a balanced contribution to architectural discourse, in which all images and all words play an important and necessary role in your thesis story. The question of how words and images relate to each other in each of your theses will be a constant topic of discussion during our time together.

#### Theory at the Seam of Making: working method

Design studios are privileged sites of teaching and learning in all architecture programs. In this very special Thesis DRS, our physical space offers itself to us as a true laboratory of testing and investigation of architectural ideas. Our aim is to make ARCN 5909 a vibrant environment for developing your thesis questions through the making of meaningful forms. As thesis students, you will avail yourselves of known and familiar techniques, but will also push these into new territories of exploration, whether digital design, physical model making, manual or hybrid drawing, or other.

The discipline of architecture unfolds at the seam between theory and praxis; it is paramount that your work inhabits that seam responsibly and in a provocative manner. You are encouraged to be avid *makers* throughout this journey, and to be involved in translating ideas and research into artefacts and propositions, with curiosity, carefulness (and sometimes careful abandon!) and in a constant way.

We will consider our work in four-parts: "research – measuring – action - words" as a framework for our pin up review sessions.

#### Important Events / Dates

Colloquium 1 = Monday February 29 (1:30 -7:00, 30 minutes each) Colloquium 2 = Tuesday April 19 (time and duration tba) Thesis submission (June 17, 2016 \*)Thesis Defence (July 4, 2016\*)

#### **Grading Breakdown**

Colloquium 140%Colloquium 220%Attendance10%Discretionary10%

#### **Recommended Readings**

Wayne C. Booth, Gregory G. Colomb, and Joseph M. Williams. *The Craft of Research*. 3rd edition. Chicago: University of Chicago Press, 2008. ISBN: 9780226065663P

Bolker, Joan, *Write your Dissertation in Fifteen Minutes a Day* (New York: Holt Paperbacks, 1998) ISBN-10: 080504891X

Robert Peters. *Getting What You Came For: The Smart Student's Guide to Earning a Master's or PhD.* New York: Farrar, Straus and Giroux, 1997. ISBN 0-374-52477-7 *Chicago Manual of Style*.

#### **Class Schedule**

Please note: the outline could be altered in accordance with the emerging interests of the class.

#### ASSIGNMENTS

Assignment 1 Question in the form of a Haiku

Assignment 2 Critical Description and Commentary

Assignment 3 Bibliography

Assignment 4 Refined Research Statement and Sample Text

Assignment 5 "Book" Review

**SPC:** A2, A4, A5, A6, A7, A8, A9, D1 and D2.

### ARCH

History Theory of Architecture Elective Courses

IDES 1000 (Arch2006) – Fall 2016			
Instructor:	Brian Burns	(emails will be forwarded to instructor by TA when appropriate)	
TA:	Leilla Czunyi	(LeillaCzunyi@cunet.carleton.ca)	

#### **Office Hours: TBD**

**Note:** Please contact the TA via email for any questions you may have outside of office hours. They will contact instructor in case they are unable to address the question.

Time and location: Friday 8:35am -11.25am in 3380ME

Student Emails: Students should monitor their CuLearn emails.

**Course description**: The theoretical and historical background of industrial design and design; disciplinary foundations and interdisciplinary connections; methodological aspects and economic and social contexts; contemporary scenarios in design; technological innovation and manufacturing processes.

Also listed as ARCH 2006.

Learning Outcomes: By the end of this course, students will be able to:

- 1. Recognize professional definitions of industrial design and professional organizations nationally and internationally
- 2. Describe typical work responsibilities of an industrial designer
- 3. Describe interdisciplinary connections with social sciences, engineering and business
- 4. Identify historical events associated with the development of the industrial design profession from the 18<sup>th</sup> to 21<sup>st</sup> century
- 5. Describe the evolving nature of design by outlining contemporary issues in design
- 6. Name common plastic, wood and metal materials and be familiar with their primary properties
- 7. Describe mass production processes in plastic, metal, fabric and wood
- 8. Describe the steps associated with the design process, including: research, concepts, manufacturing and sales
- 9. Apply creativity methods in a group setting including mind maps and brainstorming
- 10. Acquire theoretical skills, critical attitudes and design thinking

### **Course Schedule**

	First Half of Class (Theory and Profession)	Second Half of Class (History and Context)
Week 1 Sep. 09	<ul> <li>Course Introduction</li> <li>Course Outline is presented and course is overviewed</li> </ul>	Movie "Objectified"
Week 2 Sep. 16	<ul> <li>A: What is Industrial Design?</li> <li>Textbook: Ch1:Introduction</li> <li>Group project is distributed and groups are released</li> </ul>	B: Historical Context and Overview Textbook: Ch1: Introduction CuLearn: Week 2 Readings Raizman Pg.31-36
	Group Assignment handed out Students are a	assigned to groups (check CuLearn)
Week 3 Sep. 23	A: Research, Briefs and Specifications Textbook: Ch2. Research, Brief and Specifications	B: Mechanization & Design 1830-1914 CuLearn: Week 3 Readings Spark 37-56
	Quiz 0: This quiz is a practice quiz only worth	n 0%
Week 4 Sep. 30	A: History of Mass Production (Paul Thibodea No readings this week	au-guest)
	Group Project Step 1: Hand In Project Identi	fication on CuLearn
Week 5 Oct. 07	<ul> <li>A: Conceptual Design-I deation</li> <li>Textbook: Ch.3 Concept Design <ul> <li>In class ideation exercises on project</li> </ul> </li> </ul>	B: Art Nouveau, CuLearn: Week 5 Readings Ferebee 63-85
	Quiz 1: All Readings Week 1- 3 + Lecture Ma	terial
Week 6 Oct. 14	A: Conceptual Design- Drawing Textbook: Ch.3 Concept Design In class ideation exercises on project	B: The Bauhaus and Die Stijl CuLearn: Week 6 Readings Penny Sparke
Oct. 21	Materials of Manufacture Textbook: Ch4. From Manufacture to Market Pg 107 – 127 (e 1780 – 2023)	torial (Cuest lecture is not included)
Mook 0	Call Brook	terial (ddest lecture is not included)
Oct.24- 28		
Week 9 Nov. 04	Manufacturing Processes Textbook: Ch4. From Manufacture to Market Pg. 128-153 (e 2023-2557)	
Week 10 Nov. 11	B: Modernism after WWH CuLearn: Readings Raizman 260-291	B: Postmodernism CuLearn: Readings Raizman 370-374
	Group Project Step 2: Hand In Brief on CuLea presentation	arn and bring in the DIY project for
Week 11 Nov. 18	A: Marketing and Selling Textbook Ch4. From Manufacture to Market Pg.156-166 (e 2587-5047)	B: Contemporary Issues in Design Textbook: Ch5. Contemporary Issues (except for ethical design) (Pg. 168 – 200)
Week 12 Nov. 25	A: The Product – Aspects to Consider CuLearn: Readings Gilles Ch. VII Aspects to Consider CuLearn: Readings Gilles Ch. VIII The product-It's presence	B: Ergonomics and Human Factors (Prof. Chantal Trudel-Guest)
	Quiz 3: All Readings from Week 8- 11 + Lect	ure Material

Week 13	Design in Asia	B: Course Review and Presentation
Dec.02	(Prof. WonJoon Chung-Guest)	Instructions
Week 14 Dec. 09	Group Project Step 3: Final project presentat	tions in-class and hand-in on CuLearn

#### **Course Projects/Assignments/Exams**

There is one group project for the term. Students will be assigned by the instructor into groups of 5 students. The group project includes group activities and is focused on applying design principles introduced in the class.

#### **Course Evaluation Information**

Participation:	10% (undertaken on-line and in the classes)
Quiz 1:	10% (All tests will be undertaken on-line in class using CuLearn Quiz)
Quiz 2:	10%
Quiz 3:	10%
Group Project:	25% (Team Project)
Final Exam:	35% (During Exam Period in December)

**Textbook:** Rodgers P., Milton A. "Product Design" Laurence King Publishers (London, UK). 2011 (available as an e-book on Amazon.com as well as electronic version online at library (4 people at a time)

#### Please note:

The textbook covers most of the professional aspects of industrial design, while the additional reading covers the historical and contextual developments of design. The textbook should be purchased electronically, whereas the readings are available *(for free)* as PDF documents on CuLearn under ARES link to the Carleton Library. Note that the readings are tagged by week. They have been scanned and made available to you for free.

#### Materials:

Some simple materials may be required as part of in-class exercises and students will be notified what to bring. Some simple materials may also be required for the project.

#### **Additional Notes:**

• Individual/Group Work

Courses may include various combinations of individual and group work. Students must demonstrate individual aptitude. It is important where collaborative work is undertaken that students be able to clearly demonstrate that individual contribution has been made. Where the evaluation for individual work is below a passing grade, that grade will be awarded for the course.

#### • Late Submission of Deliverables

All deliverables submitted late will accrue a 10% per day deduction from the determined grade, to a maximum of 3 days, from the original deadline time and date. Failure to submit within 3 days, without approval from the instructor, will result in a grade of F.

Instructor	Thomas W. Garvey, B.I.D, M.Sc., Ph.D.
Office	3481 MacKenzie Building (ME)
Office Hours	By appointment
Teaching Assistant	Leilla Czunyi / leillaczunyi@cmail.carleton.ca
Office Hours	During class or by appointment
Course Time and Location	Thursday 11:35 – 14:25 / 342 TB (Tory Building)

#### IDES 1001 / Arch 2101 – Industrial Design Analysis – Winter 2016 COURSE OUTLINE

#### **Course Description**

Principles of comparative industrial design analysis covering marketing and sales, manufacturing techniques and materials, ambiance and qualities of the object/context relationship, and design analysis from the perspective of the designer, the maker and the user.

#### Learning Outcomes

- Demonstrate qualitative and quantitative comparative product analysis techniques
- Identify and describe fundamental human factors elements and evaluation techniques
- Disassemble, analyze, and identify product components and production techniques
- Describe products and environments using professional terms for ambiance, form, color and style
- Carry out and demonstrate application of preliminary research regarding market, use, manufacture, and environmental context along with observational research of product use
- Discuss the principles of sustainability of products and manufacturing methods
- Write a basic product design brief based on analysis process and findings
- Understand better the challenges and advantages to teamwork and the need to develop interpersonal communication skills for teamwork
- Demonstrate improvement in presentation and graphic skills, and make group presentations of knowledge gained

Course schedule - attached as separate document

#### **Course Support**

This course will be supported by the cuLearn Course Management System. Course-related announcements and a variety of resources (some readings, handouts, class presentations or relevant links) will be made available through the cuLearn site. Make sure that your cuLearn account is activated (webct.carleton.ca) and check the class site well before each class. You are responsible for reading and responding to all information distributed through cuLearn.

#### **Course Materials**

Course Reference Textbooks:

Gilles, W. *The Context of Industrial Product Design*. Ottawa: Carleton University, 1999. Norman, D. *The Design of Everyday Things*. New York: Basic Books, 2013.

*Additional readings may be added. You will be notified in advance.* Durable Consumer Product:

Required for Assignment 1 (to be purchased by team as advised in class)

#### **Course Format**

The course consists of lectures, hands on analyses of existing products and student presentations, and in class exercises and quizzes. Each lecture presents a different approach to product analysis. Readings will be assigned in order to prepare for the next lecture and/or for the exercises and quizzes. Attendance and participation is required and critical to learning and success. Those who do not attend classes are unlikely to achieve their full potential in this course.

#### **Course Assignments**

Assignment 1:

Students will work in teams to analyze various aspects of a consumer product according to material delivered in the course, and will make final public presentations of their results. For this purpose, a portion of the class time will be allocated to teamwork and consultation with the instructor and teaching assistants.

Assignment 2:

Students will individually complete an Ambiance/Form Analysis of a product series and environment.

In class exercises and quizzes:

There will be a range of in class exercises and quizzes to periodically evaluate comprehension of the ongoing readings.

Course Evaluation Information		
Assignment 1 - Product Analysis (team):	40%	
Assignment 2 - Ambiance/Form Analysis (individual):	30%	
In class exercises and quizzes	30%	

#### Individual/Group Work

Courses may include various combinations of individual and group work. Students must demonstrate individual aptitude, and achieve a passing grade for individual work, in order to pass the course. Where the evaluation for individual work is below a passing grade, that grade will be awarded for the course. It is important where collaborative work is undertaken that students be able to clearly demonstrate that individual contribution has been made.

#### Late Submission of Hand-in Deliverables

All hand-in deliverables submitted late will accrue a 10% per day deduction from the determined grade, to a maximum of 3 days, from the original deadline time and date. Failure to submit within 3 days, without prior approval from the instructor, will result in a grade of F.

#### **Review Attendance and Deliverables**

Attendance at scheduled project reviews is mandatory. Failure to attend and present as scheduled will result in a grade of F for the review. If you are not able to attend a review, please call the instructor or the General Office (520-5672) and leave a message in advance. A comprehensive medical certificate or other documentation to substantiate the absence must be submitted as soon as possible after the review. Such documentation must state the date of illness onset, the expected date of recovery, and the extent to which the student is incapacitated. A grade of F can be modified only if a student submits such documentation and completes the project requirements on a date agreed upon CARLETON UNIVERSITY SCHOOL OF ARCHITECTURE COURSE OUTLINE Session Winter 2016

COURSE TITLE: COURSE NUMBER: INSTRUCTOR:	Canadian Architecture ARCH 4002 and ARTH 3002 Janine Debanné
SCHEDULE:	Friday 8:30-11:30
LOCATION:	Architecture Building, Room 204
OFFICE HOURS	Monday 11:00 – 12:00 room 411 or by appointment.
E-Mail	janine.debanne@carleton.ca 520-2600-x2876

**COURSE DESCRIPTION** Course examines architecture in Canada from the 17th century to the present day including both stylistic and technological developments, with an emphasis on the Post World War II period and the modern movement in the Canadian Capital. Building styles, methods and materials will be covered in the context of social and economic conditions.

**COURSE OBJECTIVES** The object of this course is to give students an introduction to, and basic knowledge of, the history and historiography of architecture in Canada. Seen as a part of a universal human activity defined by, at first, a geographical, and, later, a political reality, the practice of architecture in Canada reveals itself to be a complex phenomena intimately connected with the common architectural culture of the western world as well as the ongoing traditions of the First Nations. At the same time, over its long history, Canadian architecture has proven itself to be an important site for the emergence and development of a localized sensibility and culture.

Is there such a thing as "Canadian Architecture" (defined by specific features, attitudes, and approaches) or can we only speak of "Architecture in Canada"? And in what manners does Canada's architecture and building culture reflect and contribute to Canadian identity? How does contemporary practice in Canada fulfill, or alternately, constitute, a new departure vis-à-vis historical traditions and memory? These are some of the questions we will broach in this class.

COURSE REQUIREMENTS

- 1. Test 1
   20%

   2. Group Presentation
   15%

   3. Presentation Paper
   20%

   4. Test 2
   20%
- 5. Take Home Exam 25%

<u>REQUIRED READINGS</u> Readings will (for the most part) be assigned from the following texts: Geoffrey Simmins, *Documents in Canadian Architecture* (Peterborough: Broadview Press, 1992); Harold Kalman, *A Concise History of Canadian Architecture,* (Toronto: Oxford University Press, 2000) or Harold Kalman, *A History of Canadian Architecture* (Toronto: Oxford University Press, 1995).

See Supplemental Reading List (CuLearn)

CLASS SCHEDULE: Note that readings for each class are listed and linked through *Ares* (CuLearn)

January 8

Part 1 Introduction: Canadian Architecture – Architecture in Canada? Part 2 Architecture, Landscape and Material Imagination of Canada's First Nations. Film: Aboriginal Architecture (excerpts) Readings:

#### January 15

Part 1 The French

Ecclesiastical and domestic fabric: transpositions and integration. Some insights for the present: a legacy to reinterpret.

Part 2 English and American Influence: Early Architecture in the Maritimes Part 3 Class Presentation (1)

#### January 22 ..... Walk and Visit (1 of 2)

- 8:30 Meet at Eternal Flame on Parliament Hill
- 9:05 Visit of Parliament (begin security a few minutes earlier)
- 10:00 Walk to 125 Sparks Street
- 10:15 Visit of Bank of Nova Scotia (John Lyle 1924)
- Walk to Supreme Court of Canada
- 10:50 Visit of Supreme Court of Canada (Ernest Cormier 1939)

#### January 29

- Part 1 Guest Lecture: Peter Coffman "Gothic Revival in Canada"
- Part 2 Guest Lecture: Peter Coffman: Gothic as the National Style A look at Secular Buildings

#### February 5

- Part 1 ..... Test 1
- Part 2 Class Presentation (1)
- Part 3 Guest Lecture Daniel Millette Indigenous Architecture

#### February 12

- Part 1 Continentalism The Railway
- Part 2 Continentalism –Legislative Buildings
- Part 3 Class Presentations (1)

#### February 19..... Winter Break

#### February 26

- Part 1 Art Deco Introduction
- Part 2 Class Presentations (1)
- Part 3 Guest Lecture: Michael Windover: "Art Deco and the Entry of Modernism in Canada"

#### March 4

Part 1: Modernism: Canada's New Universities

Embracing Modernity – Shifts In Architectural Pedagogy, Education Buildings, Transportation And Civic Bldgs Part 2: "Expo'67"

Part 3 Class Presentations (2)

#### March 11

- Part 1 Centennial Buildings
- Part 2 Canada's Domestic Landscape
- CMHC history, Regent Park, Don Mills; CMHC Small House Plans; New Housing Forms
- Part 3 Class Presentations (1)

#### March 18

- Part 1 ..... Test 2
- Part 2 Domestic Modernism in Ottawa: Case studies of Ottawa Modern Houses
- Part 3 Class Presentations (2)

#### April 1..... Walk and Visit (2 of 2)

Part 1 Meet at the Museum of Canadian History (formerly, the Museum of Civilizations), Gatineau and walk to National Gallery.

Part 2 Douglas Cardinal and Moshe Safdie: Visions of Nation in the Postmodern Period

**April 8** (Last Class) Part 1 Contemporary Issues Part 2 Class Presentations (5) Take Home Exam assigned.



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ARCH 4009 & ARCH 5201Y GRADUATE SEMINAR 2, WINTER 2016

## Theory of the Avant-Garde

Instructor: Course Hours: Office Hours:

Inderbir Singh Riar Wednesday, 8:35-11:25am, Architecture Building Room 425 By appointment



Raoul Hausmann, editor, *Der Dada* (August 1918)



Ludwig Hilberseimer, Großstadt Architektur, 1927

This seminar explores the idea of an "avant-garde" in modern architecture. The inquiry follows the late architect, critic, and historian Alan Colquhoun's observation, made when introducing his book *Modern Architecture* (2000), that it remains difficult to distinguish clearly between "an avant-garde that sought to change the status of art within the relations of production and a Modernism that sought only to change its forms." No matter how radical, prewar modernists – in other words, those figures, often European, leading the Modern Movement in architecture – never escaped the demands of aesthetics and form. Behind artistic and political notions on an *avant-garde* (in other words a force capable of intervening in human affairs) was an abiding faith in *progress*, in being able to guide the course of history. This idea of *Zeitgeist*, of a "spirit of the age", remained at the heart of pragmatic and prophetic declarations on the "future".

The course will use Peter Bürger's important book *Theory of the Avant-Garde* (1984) to examine ways in which artistic avant-gardes have shaped modern consciousness. Key philosophical texts and architectural case studies will be situated alongside Bürger's work as means to study significant passages through modernity reaching back to the late eighteenth century but largely focusing on the twentieth century. Along the way,
students will encounter groups, ideas, and thinkers dedicated to *a revolution of everyday life*. This leitmotif of avant-gardism spurred visions of, among other things, remaking the modern metropolis. At stake is evaluating the degree to which an architectural avant-garde could ever become truly *autonomous* – that is, as an unfettered form of critique (like, for example, art practice) – or remained, by virtue of the very act of *building*, bound to systems of culture and capital (thereby perhaps limiting its full utopian thrust). Understanding links between aesthetics, politics, and technics – whether in written statements or built symbols – is a crucial ambition of this seminar. As such, attention will be paid to primary sources of philosophy and critical theory as well as architectural manifestoes. Critical histories of modernism – for example Manfredo Tafuri's *Architecture and Utopia* (1976) – offer concluding notes on ways in which intellectuals and designers have envisioned further openings or final closures to avant-gardism in the late twentieth century.

# Enrollment

*The seminar is limited to approximately fifteen students.* Priority will be given to graduate students (M.Arch or M.A.) and upper-level undergraduates, though not necessarily in this order. If the course is over-subscribed, then enrollment may be decided by a writing assignment or interview and at the Instructor's discretion. The resulting shortlist will be opened if space becomes available.

Master of Architecture students must have passed ARCH 5200 Graduate Seminar 1. Undergraduate architecture students must have successfully completed ARCH 2300 Introduction to Modern Architecture (or its equivalent). Participants should possess a good grounding in the history and theory of modern architecture and urbanism. Non-architecture students are welcome to contact the Instructor to assess their eligibility.

ARCH 4009 is not a lecture class but a seminar. The course requires, therefore, sustained critical engagement with the assigned readings. Students must possess strong writing skills and be committed to generating weekly discussion.

# Assignments and Evaluation

- 20% Seminar Presentation (of approximately 45 minutes see Seminar Format below). Depending on class enrollment, additional presentations may be required; the grade will be divided accordingly
- 15% Research Paper Proposal; submission: March 2, 2016, in class
- 50% Final Research Paper (12 pages); submission: April 11, 2016 (location to be announced)
- 15% Class Participation; see above for description on seminar participation. Failure to complete weekly readings or not speaking regularly (i.e. during each session) will be noted and contribute to a lower mark. Unexcused absence will result in losing 5 marks (out of 15); two unexcused absences will lead to 0 marks (out of 15); additional unexcused absences will see the deduction of 5 marks (out of 100) per missed class

### CARLETON UNIVERSITY Azrieli School of Architecture & Urbanism

#### Course: **ARCH 4105** <u>Theories of Landscape Design</u> Instructor: Professor Paul Kariouk (paul@kariouk.com)

#### THE DESIGNED LANDSCAPE: From Arcadia to Necessary Aesthetics

## **COURSE SUMMARY**

This course brings attention to issues bearing upon the modern landscape in order to observe how at the first part of this new century landscape design and land art address social and environmental shortcomings. The overarching intention of this class is to address not merely the benefits that design disciplines can derive from a critical understanding of landscape, but also the benefits that landscape practices might garner from a rigorous consideration of other areas of study. Through coursework, students will examine questions pertinent to contemporary landscape using an interdisciplinary approach where material is taken from the fields of art and landscape art, architecture and western landscape architecture, as well as from social and critical theory, cultural geography, philosophy, and design history. The class adopts a case-study method where in each class current landscape practices are examined alongside historical examples. Note: In this course "landscape" refers to the entwined presence of humans, nature, and artifice; "landscape" does not refer to an *exclusively* natural (nor exclusively human-made nor abstract) topography.

### COURSE OUTLINE

This course aims to introduce students to significant historical and theoretical issues in the design of the landscape. Coursework will introduce works of landscape, the intentions of designers and authors whose subject is landscape, and contemporary theoretical issues that bear upon a studied consideration of landscape in our current era. Topics are arranged thematically, however, due to the character of the themes and the complexity of the subject of landscape, themes will invariably overlap; at times themes will seemingly contradict each other. These gaps are precisely the basis for subsequent discussions.

### Week 1: Imagining the Landscape: From Arcadia to Necessary Aesthetics

Week 2: Historical Landscape Precedents and Modern Interpretations

Week 3: Imaging the Landscape: The Significance of Pictures

Week 4: Recording the Landscape: Cartography and the Mapping of Culture

Week 5: Politicizing the Landscape: Memory, Nationalism, and Propaganda

Week 6: Landscape as Infrastructure: Naturalizing Urbanism Through Public Parks

Week 7: Landscape and Architecture: Urban and Architectural Extensions of the Landscape

Week 8: Landscape and Environmentalism: Art as Ecology

#### Week 9: Metaphors of Landscape: Invocations of Gender, Morality, and Physical Health

Week 10: The Designed Landscape: Art, Critique, and Necessary Aesthetics

Week 11: Case Study (TBD)

Week 12: Case Study (TBD)

#### COURSE ASSIGNMENTS

There are two papers required in this class due at the semester's midpoint and end (dates to be announced in class). For each paper a general topic will be assigned where each student will select and develop his/her own subject to explicate the given topic. Each paper will be a minimum of 1,000 words long, and will be submitted on each due date both as a hard-copy and as a Word format email attachment.

Essay # 1 is worth 35% of the final grade; Essay #2 is worth 40%, quizzes totaled are worth 25% of the final grade.

#### **COURSE FUNDAMENTALS**

The larger part of each meeting day will be dedicated to a lecture presented by the professor, while the second, smaller part, will be used for discussions led by students that incorporate each week's lecture, readings, material covered previously, as well as "outside" material deemed to be pertinent to the topic at hand. The success of the class is directly linked to each student's preparation for, and participation in, each class discussion. The objective of the discussion portion is not to reiterate read or presented materials but to apply these materials in original, creative and synthetic ways.

# GENERAL COURSE OUTLINE ARCH 4201 R – History of Modern Housing

Winter Term, 2015 Instructor: Benjamin Gianni, AA 423, Benjamin\_gianni@carleton.ca TA: Jayla Dekraker, JaylaDekraker@cmail.carleton.ca

#### **Course Description**

Our primary experience with architecture is with the "house" – in the form of the domestic environments with which we interacted as children. These environments exert a profound influence on us, frequently forming the basis of our decision to pursue architecture. Ironically, however, architects play a relatively minor role in the housing marketplace.

This seminar will begin by looking broadly at housing as a function of social organization, demographics, and market demand. We will then explore the evolution of house form over time, tracing influences and identifying types. Next we will examine the evolving role of the state in provision of housing – both through direct participation (i.e., social housing projects) and by means of incentives to the private sector. Finally we will review key attempts by architects to influence the housing marketplace – promoting design as a form of social reform.

#### **Course Objectives**

- To become familiar with a variety approaches to the question of housing
- To understand the forces that produce housing and their impact on the kinds of housing produced
- To be able to identify key housing categories (owner-occupied, rental, etc,) and types (courtyard, villa, etc.), permutations of which appear throughout time
- To understand the architect's role in the provision of housing
- To understand the government's role in provision of housing through both direct and indirect interventions
- To be able, as an architect, to meaningfully engage the question of housing in the current governmental and economic climate of Canada.

#### **Course Schedule**

Date	Торіс	Readings to have completed	
Lecture 1	Introduction: Tenancy and Typology		
Lecture 2	Overview of housing in Canada at the end of the 20 <sup>th</sup> century	Sewell, Ch. 1-4	
Lecture 3	Types Throughout Time 1: ancient and medieval		
Lecture 4	<b>Types Throughout Time 2:</b> 18 <sup>th</sup> century residential squares, districts and terrace housing	Arendt, Ch. 1 & 2 (on reserve)	
Lecture 5	Types throughout time 3: 19 <sup>th</sup> century urban housing	Wright, Ch. 2, 8	

Lecture 6	<b>Reactions to Urbanity 1: Suburban Housing 1</b> 19 <sup>th</sup> and early 20 <sup>th</sup> century	Wright, Ch. 4, 5, 6, 9
February 9	Take-home exam posted online.	
February 15	Winter Break: no class	
February 23	Take-home Mid-Term exam due.	
Lecture 7	Reactions to Urbanity 2: Social Housing 1	Wright, Ch. 7
Lecture 8	<b>Reactions to Urbanity 3: Suburban Housing 2</b> Post WWII housing types	Wright, Ch. 11, 13 Sewell, Ch. 5
Lecture 9	<b>Reactions to Urbanity 4: Social Housing 2</b> The ascendance of modernism and the influence of CIAM.	Wright Ch. 12 Sewell, Ch. 8
Lecture 10	Prefabrication	
Lecture 11	<b>Urbanity Revisited 1:</b> the anti-sprawl debate and variations on suburban density	Sewell, Ch. 6 Duany, <i>Suburban Nation, Ch. 10</i> (handout)
Lecture 12	Urbanity Revisited 2: Resettling the City (addressing the ageing post-war social housing stock, demographic changes and effect on demand for urban housing, etc.)	Sewell, Ch. 7, 9, 10, 11
Friday, April 8 <sup>th</sup>	Take home final examination posted online	
Saturday, April 23 <sup>rd</sup>	Take-home final examination due	

## Readings

Wright, Gwendolyn, *Building the Dream, a Social History of Housing in America,* HD7293.W74 Sewell, John, *Houses and Homes, Housing for Canadians* HD7305.A3S48 Arendt, Hanna, *The Human Condition*, HM211.A7 1998 Duany, Andes, *Suburban Nation*, HT384.U5D83

Readings are on reserve at the McOdrum Library. You are also encouraged them to purchase them online. *Houses and Homes* is out of print but used copies are available on Amazon.

## Grading

Mid-Term exam	40%
Final exam	60%

## Azrieli School of Architecture & Urbanism

ARCH 4502 W Research & Criticism Winter 2016 Title: THE SITUATED SELF WHAT IS ARCHITECTURAL KNOWLEDGE ?

Instructor: Roger Connah Class Time: Tuesdays 11.35- 14.25 (Jan 6 – April 8) Room: Architecture 515 (seminar rm) Hours Per Week: 3 hours Credit Value: 0.5 Professor : roger\_connah@carleton.ca Office Hours/Location: Tuesdays 15.00 – 17.30 Room 524

#### **COURSE OVERVIEW** The Situated Self

Thinking Architecture, Researching Concepts & The Critical Clue: https://www.youtube.com/watch?t=34&v=x1bX3F7uTrg

To understand why 'research' has become so important (even a fetish) in architectural education, and why the 'criticality' favored by the academy may have all but disappeared in the professional field of architecture, we will need to take a fresh look at the 'conception of architectural knowledge'. What is architectural knowledge? This is not frightening. But for every idea, concept and theoretical notion put forward by recognized (canonical?) sources and accepted critical histories (often called 'received wisdom') we have to understand what it means to talk of situated and even subjugated knowledge.

#### What is wrong with this picture?

To balance this it would be wise to consider what is 'architectural knowledge' today. Has it remained unchanged in the vastly changed and relentlessly changing world today? What is your 'conception' of that knowledge as you pass through studio, seminar and semester? What over the years has built this up? What is the narrative presented and what is the narrative you receive and adapt? And how do you use this to research, think and help you design.

#### COURSE FRAMING - critical focus

To explore 'architectural knowledge' the course concentrates on:

1 The Critical Self - what is it and how do you train it and use it?

2 The Four Point Cognitive Model (fluency – infancy – truancy – redundancy) – how do you select/edit today? 3 Is architectural knowledge static but relational. What are the relations and dynamics between research, design & critical thinking (criticism)?

4 What is criticality? How do you/we use it in an age considered both post-critical and post-informational? How does this relate to the history and theory presented? What is a Situated Self?

#### **COURSE UNDERPINNING**

We read texts to read architecture, to read the world. In spite of everything that features architecture today in the trend magazines, and daily online sites, it seems so few hold critical views that last. Why is this? Is the iconic lazy? Is Immediacy too prominent? Not in the academy so much, as in the profession. Then there is the general fear of theory and contest since the turn of the new millennium. This may have invited a spectacular architecture to fit in with, or utilize with, the market a little too easily. Is this a laissez-faire attitude with bells and whistles? Is this a conformity producing a sort of mimic architecture of high image value and seduction seen daily online and changing daily?

#### Is this the (architectural) meme machine?

How might this affect those of you about to move into the profession? How can we be critical today? Faced with the richness and excess of online information and media, there is courage in editing, in selecting what's available for your own life and education. But how do you do it? To be in ignorance of something is surely only useful if we know about it. And skepticism is positive if we edit aggressively. These questions will help understand and shape your own thinking and thus research.

This is the situated self.

#### COURSE FORMAT Who speaks, who writes, who lectures?

The set of seminar sessions, lectures, mapping and visual presentation will explore research and criticism, architectural knowledge and non-knowledge.

The course consists of 10 interactive, cross-disciplinary sessions on the conception of architectural knowledge using deep reading and mapping aspects of cultural theory and critical thinking from the second half of the 20 century to our current moment.

Each class will consist of - a presentation - a mapping - reading an extract - student presentation(s) - a discussion/debate.

Sessions will tie up with the weekly topics, material covered and student weekly seminar presentations<sup>\*</sup>. We will also have short weekly debates around the idea of the use/abuse of theory. Students will be encouraged to take researched positions; for or against architectural theory. Each student will present twice (before and after mid-term) short seminar presentations from a shared list of critical options. The course will consider how these ideas have found their way into architecture?

#### **COURSE OBJECTIVES**

To ask what is architectural knowledge, what is research and how is (architectural) 'criticism' useful?

To learn about research methodologies and how to utilize them.

To be introduced to critical thinking and cultural theory: what is the intertext?

To approach cognitive modeling: the four-point model of (your) 'knowledge in flux'.

To understand and use contradictions & generalizations; for example

- we are bombarded with so much 'information' & 'knowledge', how do we choose?

- to understand how we have to remain in ignorance of some of this information

- to understand what it might mean to speak of "retention deficit disorder".

To understand and exercise informational/relational mapping

To understand architectural knowledge in flux

To write, re-write, edit and prepare a text.

To research the Critical Self, to shape the Situated Self

To situate oneself in the (contemporary) conception of Architecture

#### Part 1 Critical theory & Research methods

1 Jan 12- 5 Easy Pieces - course structure - introduction –assignments introduced – 1- mapping (We didn't Start the Fire) - assignment 1 (blind text)

2 Jan 19 mapping the origins of critical theory: Agency - Politics - Language - Truth - Meaning - Human Nature - Architectural Knowledge - what is it? - Research Methodologies 1

3 Jan 26 Six Big Ideas & a Spanner - Critical Theory (Movements, ideas & Architecture)

student presentations 1 (group a) – The Post Modern Condition.

4 Feb 2- Selected Ignorance - Critical Writing workshop session - Cognitive Modeling/Deconstruction -

Thinking Architecture - Drawing Architecture - Four Points - student presentations group B/C

5 Feb 9<sup>-</sup> The Rhetoric of the Text – writing, re-writing, erasing and re-making - student presentations (Group D) Mapping, Diagramming and Text – Research Methodologies 2

### Part 2 Cultural Theory & Post-Criticality – Living in a Post-Truth World?

6 Feb 23- Structuralism, Taboos, Networks and Fictions – Mapping (RC) student presentations group A

7 March 1st North South-East-West – Cultural theory, movements, ideas & post-structuralism (group B)

8 March 8- Research Methodologies 3 - the notebook - mapping, text and new graphics

9 March 15 Cultural Theory 2 - mapping of Architectural Thinkers vis a vis Philosophers

10 March 22 Portfolio - Post\_Criticality/Post-Truth/Post-Image?

- Writing and Diagram workshop

11 March 29 Closing Session : the Rapid Lecture - the Acceleration manifesto.

On Lying and a Debate : For or Against Architectural Theory (Timo Penttilä, The School of Exile, Connah, Datutop, Finland 2015)

12 April 5 Celebrations

17 April 5 Easy Assignments

#### **Weekly Seminar Presentations**

Using Neil Leach's **Re-Thinking Architecture - A Reader on Cultural Theory** (1997 Routledge) each student will present the following as a narrative (Prezi) presentation from a significant thinker of the 20-century, followed by an 'echo' to an architectural thinker.

- 1 Research the thinker & introduce & introduce the 'research'
- 1 Offer and discuss 5 keywords
- 2 Trace any links to architecture
- 3 Add one caste study where possible
- 4 Consider the diaspora of architectural ideas or (thin/thick) application of theory

Stage 1: Thinkers (for architects):

Jacques Derrida, Jurgen Habermas, George Bataiile, Fredic Jameson, Jurgen Habermas, Jean-Francois Lyotard, Helene Cixous, Walter Benjamin, Gianni Vattimo, Thheodor Adorno, Roland Barthes, Jean Baudrillard, Martin Heidegger, Michel Foucault, Paul Virilio, Henri Lefebre..

#### Stage 2 Architects (practitioners, critics and historians) as Thinkers

Each student will study an architect practitioner, thinker linked with each thinker identified above (details to follow – elected from the following)

Le Corbusier – Naum Gabo – Theo Van Doesburg – Siegfried Giedion – Bruno Zevi – Jane Jacobs – Brenard Rudovsky – Cedric Price – Robert Venturi – Reynar Banham – Manfredo Tafuri – Kenneth Frampton – Alison & Peter Smithson - Aldo Rossi – Herman Hertzberger – Aldo Van Eyck – Giancarlo de Carlo - Charles Jencks – Colin Rowe – George Baird – Rem Koolhaas - Bernard Tschumi – Stan Allen – Winy Maas - Beatriz Colomina – Teddy Cruz - Alejandro Aravena

#### **COURSE ASSIGNMENTS 5 Easy Pieces**

Exercises – which run in parallel - will be scripted by each student and eventually build up to become a final portfolio of text and image on (Situated) Architectural Knowledge. More details will follow on discussion and shared agreement in class. Assignment 1 The text a an Untutored Blind essay called *The Situated* Self (1) 750 words (by January 19th) . b a Revised version of this essay called *The Situated Self (2)* 1500 words (by 23- February) c A Final expanded, revised, changed essay *The Situated Self (3)* 3000 words (by march 28th) including all other assignments. Assignment 2 The (Cognitive) Mapping Exercise – (details to follow) Assignment 3 The Accelerated Exercise (tbd) – the (new selected) seminar notebook Assignment 4 The Politics of Common Sense – diagrams of life and architecture – weekly presentations Assignment 5 The Manifesto is Dead (tbd)

COURSE READING/BIBLIOGRAPHY (selected) Key texts: Building Change Lisa Findlay Keywords Raymond Williams Architectural Research Methods Groat & Wang Reality Hunger David Shields Theories & Manifestos ed Jencks & Kropf Beginning Theory: an introduction to Literary & Cultural Theory Peter Berry Re-Thinking Architecture Neil Leach

For personal Topic (concept) selection for Assignments: I Swear I Saw This, Michael Taussig, (Chicago 2011) Despatches from Dystopia (Histories of Places not yet Forgotten) Kate Brown (Chicago 2015) Cartographies of the Absolute, Toscano & Kinkle. (Zero 2015) Postmodern Geographies The Reassertion of Space in Critical Social Theory, Edward W Soja, (Verso 1989) Extrastatecraft – The Power of Infrastructure Space, Keller Easterling, Verso 2015.

Toward a Minor Architecture Jill Stoner (MIT Press 2012) Building Change – Politics & Cultural Agency Lisa Findlay, (Routledge 2005) Buildings Must Die, A Perverse View of Architecture Cairns & Jacob (MIT Press 2014) Learning from Las Vegas Venturi, Rauch and Brown (MIT Press 1977) How Architecture Got its Hump Roger Connah (MIT Press 2001)

Accelerate - The Accelerationist Reader ed Mackay/ Avanessian (Urbanomic 2014) Cyclonopedia: Complicity with Anonymous Materials (Anomaly) Reza Negarastani (re.press 2008) The Ontology of the Accident, an essay on Destructive Plasticity Catherine Malabou (Polity 2012) In the Dust of This Planet (Horror of Philosophy) Eugene Thacker (Zero 2011) The Nightmare of Participation Markus Miessen (Sternberg 2011)

Cities John Lorinc (Groundwood 2008) Cities are Good For Us, The genius of the metropolis Leo Hollis (Bloomsbury 2013) The Death & Life of Great American Cities, Jane Jacobs, Random House (Vintage 1961) For Space Doreen Massey (Sage 2005) Losing Control? Sovereignty in the Age of Globalisation Saskia Sassen (Columbia 2015)

# ARCH ARCC

History/Theory Techniques

Elective Course for M.Arch





# Azrieli School of Architecture & Urbanism

1125 Colonel By Drive Ottawa, ON K1S 5B6 Canada Tel: (613) 520-2855 Fax: (613) 520-2849

ARCC 3004A – Energy and Form Workshop *[Ecologically Positive Community Design] Semester*: Winter 2016

*Instructor*: Giancarlo Mangone, (e) <u>giancarlo.mangone@carleton.ca</u>, (o) Architecture Building Rm 409 Class time: Tuesday + Thursday, 2:35 – 5:25 pm Location : Architecture Building, Rm 435

*Office Hours + Communication*: Office hours are 5:30-6:30pm on Thursdays. Students must notify the instructor at least 24 hours in advance if they are planning to attend office hours. E-mail correspondence is permissible for making an appointment or emergency situations only. The Instructor will respond to permissible, non-emergency e-mails one day a week, by Thursday evening. The course email policy is outlined in detail in the **Email Policy** section below.

#### **PROJECT BRIEF**

The goal of this course is to explore the maximum potential of buildings to improve the ecological integrity [health] of local ecosystems. Students will explore the potential effectiveness of diverse ecological design strategies, including design for ecological behavior, design for ecosystem functions, and design for biodiversity.

The ecological explorations for this semester will be applied to the design of a mixed use development in Puerto Morelos, Mexico, in a way that promotes the preservation and restoration of the local wetlands and forest ecosystems. This project will be developed in collaboration with a sociology research team in Mexico, as well as collaborators from other disciplines.

Students will work both individually and in groups, in order to develop deep and broad design solutions. The coursework will be collaborative in nature, whereby each student is contributing to the overall development of the project, and students are working together, rather than competitively. Therefore, collaboration is encouraged.

Through the coursework, students will broaden and deepen their knowledge about ecological design, as well as improve their ecological design skillset. In addition, by working with a real world community and context, students will gain experience in working on ecological design projects.

#### **LEARNING OBJECTIVES**

- Broaden and deepen understanding of ecological design
- Develop an understanding of current ecological design strategies
- o Develop an understanding of how to develop high performance and high quality buildings and building spaces
- o Develop a critical understanding of sustainability, and its interrelationships with the design process
- o Develop an understanding of how to evaluate the ecological performance of building projects
- o Provide experience working in interdisciplinary project teams

#### **METHODOLOGY**

The course will be structured partly as collaborative, interdisciplinary workshop seminar, partly as lecture, as well as partly as a multidisciplinary design studio. The course will employ a design research-based pedagogical model, in which a substantial portion of the learning will be developed individually and peer-to-peer. Evaluation will be based on three projects: high impact ecological behavior design solutions, project site analysis, and an ecological building design project. This course will require the use of digital modeling and visualization programs, as well as Adobe Illustrator and Photoshop.

#### **COURSE EVALUATION CRITERIA + CALENDAR**

Project 1 : High Impact Ecological Behavior Design Solution	20%	Due Jan. 21, 2016
Project 2 : Site Analysis	25%	Due Feb. 11, 2016
Project 3 : Ecological Building Design Project	45%	Due April. 23, 2016, noon
Individual In-Class + Group Participation	10%	

## REFERENCES

For a map of the project site, input the following into Googlemaps : Jardin Botánico Alfredo Barrera Marin en Puerto Morelos, Quintana Roo

## **Required Reading**

Chapter 9 in : 'Performative Microforests: Investigating the potential benefits of integrating spatial vegetation environments into buildings, in regards to the performance of buildings, their occupants + local ecosystems', Giancarlo Mangone, A+BE | Architecture and the Built Environment 10. TU Delft, 2015. **A pdf version of this book is available for free via** : <u>www.abe.tudelft.nl</u>

## Suggested Reading (by research topic)

Ecological Performance

- Michael L. Rosenzweig, *Win-Win Ecology: How the Earth's Species Can Survive in the Midst of Human Enterprise*, 2003, Oxford University Press
- o Emma Marris, Rambunctious Garden, Bloomsbury, NY, 2011
- Vishaan Chakrabarti, A Country of Cities: A Manifesto for an Urban America, Metropolis Books, 2013

#### Social Performance (Design for People)

- David Abram, *Becoming Animal*, Vintage Books, 2010
- o www.Simpl.biz
- o <u>www.Centerforactivedesign.org</u>

#### Water Systems

- o Helene Izembart, Bertrand Le Boudec, Waterscapes : Using plant systems to treat wastewater, Ianoografica, 2003
- o Italo Calvino, The Call of the Water, in : Numbers in the Dark and Other Stories

#### Nutrient Systems

- William McDonough + Michael Braungart, *The Upcycle : Beyond Sustainability –Designing for Abundance*. North Point Press, N.Y., 2013
- William McDonough + Michael Braungart, *Cradle to Cradle: Remaking the Way we Make Things*. North Point Press, N.Y., 2002
- Okala Ecodesign Strategy Guide [Ecological Material Design]

### Comprehensive Building Systems (Overall)

- o Daniels, K. 2003. Advanced Building Systems, Berlin. Birkhäuser (Princeton Architectural Press)
- o Behnisch Architekten + Transsolar ClimateEngineering, Ecology.Design.Synergy, Aedes
- www.wbdg.org (Whole Building Design Guide)
- o www.architecture2030.org

### Wall Assembly + Structures

- o Buckylab.blogspot.com TU Delft Wall Assembly Innovation Research Lab
- o <u>www.transmaterial.net</u>
- o <u>www.case.rpi.edu</u>
- Stephen Timberlake, James Kieran. *refabricating ARCHITECTURE : How Manufacturing Methodologies are Poised to Transform Building Construction.* McGraw-Hill
- o Detail Magazine <u>www.detail-online.com</u>
- Architect Magazine www.architectmagazine.com
- o Edward Allen and Joseph Iano. The Architect's Studio Companion : Rules of Thumb for Preliminary Design
- The American Institute of Architects. Architectural Graphic Standards: The Architect's and Builder's Guide to Design, Planning and Construction Details. Hoboken, New Jersey: John Wiley and Sons Inc.

### Thermal Environments

- Lisa Heschong, Thermal delight in architecture, MIT Press, 1979
- o Edward Mazria, The Passive Solar Energy Book, Rodale Press, 1979
- o S.R. Kurvers, et al. Robust Climate Design Combines Energy Efficiency with Occupant Health and Comfort
- J. Yu, etc. A comparison of thermal adaptability of people accustomed to air conditioned environments and naturally ventilated environments. Indoor Air. 2012
- o Paul, J.K. Passive Solar Energy Design & Materials. Park Ridge, New Jersey: Noyes Data Corporation, 1979.
- o IECC 2009, International Energy Conservation Code

- o Edward G. Pita, Air Conditioning Principles and Systems : An Energy Approach, Prentice Hill
- Steven Winter Associates, Inc. The Passive Solar Design and Construction Handbook. New York, NY: John Wiley & Sons Inc., 1998

#### System + Space Visualization

o Pixelflakes.com

#### Diagraming

- Edward Tufte, Beautiful Evidence, 2006, Graphics Press, Cheshire, Conn.
- o Alan Berger. Drosscape : Wasting Land in Urban America
- Edward Tufte, Visual Explanations, 1997, Graphics Press, Cheshire, Conn.

## **EMAIL POLICY**

Please read through the syllabus and project briefs <u>before</u> sending emails to the Instructor. Historically, the majority of emails by students are asking questions that are directly answered in the project briefs or syllabus. In addition, *email is <u>not</u> a substitute for meeting with the Instructor.* If necessary, then use the time before or after class for scheduling an office appointment, to ask questions about course material and assignments, or to address any concerns regarding your performance. Email is appropriate to notify of an absence for legitimate reasons (e.g. family emergency or illness, the latter which must be identified by a doctor's note); other emails may not be acknowledged. Do not send the following kinds of emails: messages that use inappropriate language and/or formatting (e.g. addressing the Instructor as "hey", writing entirely in lower cases, slang, etc.); requests for information if you miss a class; any internet jokes, chain letters, junk email, and invitations to join Facebook, LinkedIn, or other social media. The Instructor may use email to communicate with the class as a whole – for example, to inform of class progress, modifications to the course schedule, or miscellaneous announcements. Additionally, the Instructor may ask students to work together by email for group assignments and research. Failure to comply with the email policy may result in referral to the Director of Student Affairs.

## ACADEMIC ACCOMMODATION

You may need special arrangements to meet your academic obligations during the term because of disability, pregnancy or religious obligations. Please review the course outline promptly and write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist.

It takes time to review and consider each request individually, and to arrange for accommodations where appropriate. Please make sure you respect these timelines particularly for in-class tests, mid-terms and final exams, as well as any change in due dates for papers.

You can visit the Equity Service website to view the policies and to obtain more detailed information on academic accommodation at <a href="http://carleton.ca/equity/accommodation">http://carleton.ca/equity/accommodation</a>

### ACCESSIBILITY

Students with disabilities requiring academic accommodation in this course must register with the Paul Menton Centre for Students with Disabilities (PMC) for a formal evaluation of disability-related needs. Documented disabilities could include but are not limited to mobility/physical impairments, specific Learning Disabilities (LD), psychiatric/psychological disabilities, sensory disabilities, Attention Deficit Hyperactivity Disorder (ADHD), and chronic medical conditions. Registered PMC students are required to contact the PMC, 613-520-6608, every term to ensure that I receive your Letter of Accommodation, no later than two weeks before the first assignment is due or the first in-class test/midterm requiring accommodations. If you <u>only</u> require accommodations for your formally scheduled exam(s) in this course, please submit your request for accommodations to PMC by the deadlines published on the PMC website: http://www2.carleton.ca/pmc/new-and-current-students/dates-and-deadlines/

### GRADING

For the grade in the "A" range, the Instructor will have judged the student to have satisfied the stated objectives of the course in an outstanding to excellent manner; for the "B" range, in an above average manner; for the "C" range, in an average manner with C- being the lowest acceptable grade in the BAS - Design Core courses; for the "D" range, in the lowest acceptable manner in non-Core courses, and for "F", not to have satisfied the stated objectives of the course. Grades will be assigned as A+ (90-100%), A (85-89%), A- (80-84%), B+ (77-79%), B (73-76%), B- (70-72%), C+ (67-69%), C (63-66%), C- (60-62%), D+ (57-59%), D (53-56%), D- (50-52%), F (0-49%) and ABS. A grade of C- or better in each course of the BAS - Design Core is required for a student to remain in *Good Standing*. (Please refer to the

ARCH 5003 – Grad ARCN 3003 – U/Grad Theatre Production Workshop

0.5 Credit Workshop Elective

Winter 2016 T Th 2:30 – 5:30

Instructor: Yvan P Cazabon

(Yvan.Cazabon@Carleton.ca); xt 2863

## COURSE DESCRIPTION AND OBJECTIVES

This Workshop will introduce the complex workings of live theatre. It will be concerned with the theoretical and technical aspects of theatre production including questions of interpretation, abstraction, representation, design and construction. Students in this workshop will work closely in teams in order to communicate and debate ideas about specific scenes in plays as well as more general concepts relating to (re)-presentation and live performances.



Robert Lepage tells us:

"There is a great affinity between theatre projects and architectural preoccupations, relating to space, function, philosophy and especially the poetics of building. This is especially true of our company "Ex Machina" where we attempt to extract poetry and magic from technology and architecture. We share in our reflections on the "metaphysics" of space as a vehicle for assembly and cultural fiction." - Le Devoir (trans. ypc)

The structure and scheduling of this workshop will be in large part determined by the readings, rehearsals and the eventual live performances of a Shakespearean-themed play, as set by the Drama Workshop group from Carleton's English Department. Working in concert with the School of Architecture, students and experts from both departments will undertake to prepare, produce and present:

Soliloquies, Sonnets & Selfies scenes of self-reflection by numerous authors (incl. Shakespeare)

Participants in this workshop will be assigned to scene-teams that will be comprised of students from the architecture program and the English Department's Drama Workshop. Teams will be responsible for various aspects of the production and performance including:

- 1. The assembly of a collaged narrative in multiple parts
- 2. The design, design development and construction of all required sets and stage features. Drawings, Models, etc. *Note: All productions will benefit from "elegance of means" and rarefied abstraction.*
- 3. Collection, editing and projection of images and videos as settings.
- 4. Lighting & Sound design Cueing and Presentation.
- 5. The design and mock-up of the "press-package" including posters & flyers.

Delegation of work will be discussed within the group in consultation with the course's tutor and representatives from the Drama Workshop unit. By the end of Week One, groups will have been formulated and assigned readings will have been distributed to all group members. It is the responsibility of each participant to complete all readings and to remain in close contact with other team members. Due to the fast-pace of theatre production in the early part of the plays development, impromptu gatherings, and presentations will be necessary in order to deliver the product in time for the fixed deadlines. A supplementary schedule, highlighting important dates will be distributed under a separate cover.

Also, this workshop will introduce participants to the personnel of theatre production (directors, lighting designers, artistic directors, etc.) who will be invited to give lectures and presentations.

## SPECIAL REQUIREMENTS

Due to its design/build aspects and to the short working schedule, this workshop will be limited to eighteen (15 to 18) students distributed into four to five teams. All participants as a co-operative effort will produce the final presentation. While related construction experience is an asset, it is not mandatory to the selection of participants for this workshop.

## ASSIGNMENTS

Minimum Workshop deliverables, expected of all participants are as follows:

- 1. A working script with one scene per working group
- 2. Set design (drawings and models physical/digital) of individual interpretation of assigned play, acts or scenes.
- 3. Group critique and proposal of final design for construction.
- 4. Set construction (design/build) & digital projections.
- 5. Lighting + Sound installation.
- 6. Press Kit mock-up: Posters, flyers and programmes.
- 7. Personal contributions identified within Group Logbooks documenting lectures and presentations, design and construction processes and final results. This "team diary" should include photographs, drawings and sketches, as well as production notes and instructions.
- 8. Participation in final Performance(s): Anticipated Date: April 5, 2016

## ACCREDITATION ADN PROFESSIONAL EXPERIENCE

Student Performance Criteria (STC)

For the purposes of accreditation, graduating students must demonstrate understanding or ability in the 31 student performance criteria according to an established sequence.

## THIS COURSE MEETS THE FOLLING CRITERIA:

- A3: Graphic Skills are demonstrated through the presentation of design proposals for sets and stage-design, lighting, etc. In addition, digital media complements the physical sets presented in the live performance.
- A5: Collaborative Skills: Teams of 3 to 4 students are responsible for the design, construction and live presentation of individual scenes from the play. Teams collaborate within their scenes as well as with other teams across sequential scenes.
- A9: Precedents: The history of Theatre is explored and precedent studies of performance practices are examined in order to explore contemporary scenography and set design.
- B1: Design skills, similar to architecture studios, are demonstrated through the design proposals presented to all parties of the Theatre production. Detail design is discussed in the workshop in order to refine design-build elements and constructions.

Azrieli School of Architecture & Urbanism

ARCH 51101, ARCH 6101, ARCH 6102 Title: PhD Colloquium Class Time: Thursday 14:35 – 17:25

Hours Per Week: 3 Professor Contact Info:

Professor Claudio Sgarbi cldsgrb@gmail.com Office Hours: Friday 10:00 – 13:00 Credit Value: 0.5 Office Location: 306

The aim of this graduate course is to gain a shared operative definition of "research project". What does it mean to undertake a research project today and what does it means to "write" a dissertation as a research project? The contemporary distinction between "highest", "higher" and "moderate" research activity (Carnegie Classification) requires a stance.

First of all we will explore, in our colloquium setting, the themes that are part of our current research (the students' dissertation proposals and the designs and researches that I conduct and share with other colleagues). I propose to analyse the dissertation research based on the <u>methods</u>, <u>themes</u>, <u>finalities</u> and the type of <u>public</u> to which it is addressed. The three terms are written in the plural form to point out their possible multiplicity, while the word "public" already implies this plurality and we all know that there are many diverse type of "public". The Biennale of Architecture in Venice will be our initial space of confrontation: the international exhibition is meant to expose to the "general public" precisely the innovative kind of research projects that we might try to pursue, to discuss and to analyse. Its terrain is a good ground to begin our discussion.

The methods can be confronted with three very general categories: Practice, Theory and History; as there are very specific and diverse methods for each of them. The themes are the subject matters involved in the dissertation research. The finalities include scopes, aims, objectives and intentions that we should try to define and have been generally distinguished between those that are <u>operative</u> and those that are <u>not-operative</u> (a very fragile distinction that we will discuss). The public is the audience, spectators and readers to which the research projects is addressed. All these definitions are obviously very problematic – and their voluntary exclusion from our consciousness can also be a valid choice, but we should anyway be aware of this exclusion.

Secondly - We will organize interviews with practicing architects who seem to be willing to contribute to the theoretical debate through their designs. The issues that they are raising and the questions we will formulate for them together with their answers will become part of the course material.

#### Thursday Sept 15 INTRODUCTION.

Interior and Exterior	. Extreme Cases: a Subverted Camp and a "De-sacrated" Church
Thu. Sept 22	The Body as a Theme. Micro-historical Research on Vintruvian Men.
Thu. Sept 29	The Body of the Architect. The Problem of Conception and Gender.
Thu. Oct 6	What's Inside the Wall. Interview
Thu. Oct 13	Comprehensive Design of Buildings. The Specificity of Tectonics as Modernity.
	The Case of the Hospital False Ceiling (with Federica Goffi) Interview
Thu. Oct 20	The Notion of Systems and the Power of Technocracy. Interview
Thu. Oct 27	FALL BREAK
Thu. Nov 3	Dissertations's Outlines Discussion
Thu. Nov 10	Dissertations's Outlines Discussion
Thu. Nov 17	Dissertation's Outlines Discussion
Thu. Nov 24	Dissertation's Outlines Discussion
Thu. Dec 1	Dissertation's Outlines Discussion
Thu. Dic 8	Conclusions

#### **Requirements:**

1<sup>st</sup> assignment. Provide the most recent version of your Dissertation Outline (including an Abstract) to be discussed collectively. This should be made in a format that can circulate between the group of students and should be handed out (e-mailed) by the second week of classes: Sept. 22

2<sup>nd</sup> assignment. Correct and eventually rewrite one of your colleagues' Dissertation Outlines. The distribution of the Outlines between the students will be worked out during the third meeting.

3<sup>rd</sup> assignment. Rewrite your Dissertation OUTLINE / describing (written document?) the dissertation in term of <u>methods</u>, <u>themes</u>, <u>finalities</u>, <u>public</u>, **and** include a draft/summary of one of its central chapters. Deadline – wed. December 4.

#### **Reference Readings**

Biennale of Architecture 2014 Catalogue, *Fundamentals* Biennale of Architecture 2016 Catalogue, *Reporting From The Front* Mark Jarzombek, *A Global History of Architecture*, 2011

#### General Reference Texts (one for each author)

Gunther Anders, The Obsolescence of Man, 1956 Walter Benjamin, The Work of Art in the Age of Mechanical Reproduction, 1936 Geroge Bataille, Story of the Eye, 1928 Pierre Bordieu. La Domination Masculine. 1998 N. O. Brown, Love's Body, 1966 Italo Calvino, Six Memos for the Next Millenium, 1988 Michelle Foucault, The Will to Knowledge, 1976 Marco Frascari, Eleven Exercises, 2011 James Frazer, The Golden Bough, 1915 Umberto Galimberti. I Miti del Nostro Tempo (The Myths of our Time). 2009 Carlo Ginzburg, The Judge and the Historian, 1991 Vittorio Gregotti, The Territory of Architecture, 1966 Ivan Illich, H20 and the Waters of Forgetfulness, 1985 Donald Kunze, The Unsung Role of Metonimy, 2014 Claude Levi-Strauss, Tristes Tropiques, 1955 Marcel Mauss, The Gift, 1923 Octavio Paz. In Search of the Present. 1990 Uwe Porkesen, Plastic Words, 1995 Joseph Rykwert. The Idea of a Town, 1963 Emanuele Severino, La Potenza dell'Errare, 2013 Carlo Sini, The Ethic of Writing, 2009 Manfredo Tafuri, The Sphere and the Labyrinth, 1980 Mario Vargas Llosa, In praise of Reading and Fiction, 2010

Carleton University Fall 2015 Azrieli School of Architecture and Urbanism Room 306 Architecture Stephen Fai sfai@cims.carleton.ca

## Vitruvian Exercises I ARCH5301/ARCH6001



Philibert de l'Orme "The Good Architect" and "The Bad Architect" Le premier tome de l'architecture (1567)

"Architecture encompasses many theoretical fields from theory of beauty to theory of construction, from sociological theories to medical theories, from theory of education to theory of knowledge and so on. The same is true for practice, from drawing to construction from financing to maintenance, etc. Architecture incorporates an extraordinary wide collection of subjects. Using the Vitruvian tradition of story telling and mapping, these exercises intend to bring into play the enigmatic origin and nature of a discipline to develop an illustration and promise of what should be a proper architects' oeuvre. The seminar will direct the student through a sequence of seminar presentations to the discovery of the common roots existing between the theory and the practice of architecture. The proposed exercises are based on Drawing. Reading and Writing. The assumable result of these exercises is that the union of theory and practice is a demonstration of the elegant power of architecture, a discipline that is still resourceful, resilient, and comprehensible." Marco Frascari, 2011.

### **COURSE REQUIREMENTS**

All PhD and MAS students are required to read *all* of the assigned texts and submit a copy of their notes at the end of each class. Each student will prepare one seminar presentation and a final paper (5000 words) based on their presentation. The paper should follow the rules of the Chicago Style Manual. The essay will also include an original frontispiece made by the author.

Final essay due: 18 December 2015. Digital (by email) and paper (Room 306).

### **EVALUATION**

Weekly readings/writings/participation:	20%
Seminar Presentation:	30%
Final essay:	50%

### SCHEDULE

Session 01 / 10.09	INTRODUCTIONS Vitruvius. De Architectura / On Architecture. Trans. Richard Schofield. Toronto: Penguin Books, 2009.
Session 02 / 24.09	Eco, Umberto. Interpretation and overinterpretation http://tannerlectures.utah.edu/_documents/a-to-z/e/Eco_91.pdf Weisheipl, James. The Development of Physical Theory in the Middle Ages. Ann Arbor: The University of Michigan Press, 1971.
Session 03 / 01.10	<ul> <li>Ginzburg, Carlo. "The Judge and the Historian." <i>Critical Inquiry</i>, 18.1, 1991. 79-92.</li> <li>Ricoeur, Paul. "History and Hermeneutics." <i>The Journal of Philosphy.</i> 73.19, 1976. 683-695</li> <li>Frascari, Marco. "Maidens 'Theory' and 'Practice' at the Sides of Lady Architecture." <i>Assemblage</i>. 7, 1988. 14-27.</li> <li>Frascari, Marco. "A New Angel/Angle in Architectural Research." <i>Journal of Architectural Education</i>. 44.1, 1990. 11-19.</li> <li>Rykwert, Joseph. "Translation and/or Representation." http://www.cca.qc.ca/en/study-centre/mellon-senior-fellows</li> </ul>
Session 04 / 08.10	Celsus: De Medicina Virgil Aeneid Quintilian Institutio Oratoria
Session 05 / 15.10	Leon Battista Alberti (Miquel) On the Art of Building in Ten Books, trans. J. Rykwert, N. Leach, and R. Tavernor. Cambridge: The MIT Press, 1988.
Session 06 / 22.10	Antonio Averlino also known as Filarete (Lynn) Filarete's Treatise on Architecture: Being the Treatise by Antonio di Piero Averlino, Known as Filarete, trans. J.R. Spencer. New Haven and London: Yale University Press, 1965.
/ 29.10	Reading Week.
Session 07 / 05.11	Philibert De L' Orme I (Group) Le premier tome de l'architecture http://architectura.cesr.univ-tours.fr/Traite/Auteur/De_L_Orme.asp?param= http://architectura.cesr.univ-tours.fr/traite/Images/Les1653Index.asp
/ 12.11	Class Postponed.
Session 09 / 19.11	Andrea della Gondola known as Palladio. (Lara)The Four Books of Architecture. Trans. Robert Tavernor and RichardSchofield.Cambridge/London: MIT Press, 1997.Schofield.
Session 10 / 26.11	<b>Sebastiano Serlio</b> (Martine) <i>On Architecture</i> . Trans. Vaughan Hart and Peter Hicks. New Haven: Yale University Press, 2005.
Session 11 / 03.12	Henry Wotton (Trina) <i>The Elements of Architecture</i> Also see poem: "The character of a Happy Life" <u>http://www.bartleby.com/101/179.html</u>
Session 12 / 04.12	Claude Perrault (Group) Ordonnance for the Five Kinds of Columns after the Method of the Ancients. Trans. Indra Kagis McEwen. Chicago: University of Chicago Press, 1992. CONCLUSIONS

## SUGGESTED READING

#### 1. What is architectural theory?

Kruft, Hanno-Walter. A history of architectural theory: from Vitruvius to the present. Princeton Architectural Press, 1994.

Mallgrave, H.F. The Architect's Brain: Neuroscience, Creativity, and Architecture

Mallgrave, H.F. Architecture in Theory: Vitruvius to the Present. Oxford: Blackwell Publishers, 2005. Rykwert, Joseph. Adam's House in Paradise.

Sennett, Richard. *Flesh and stone: the body and the city in Western civilization*. NewYork: W.W. Norton, 1994. Tafuri, Manfredo *Theories and History of Architecture*. Harper & Row, 1968

#### 2. Is architectural history the same as history of architecture?

Beltig, Hans. Art History after Modernism. Trans. Caroline Saltzwedel and Mitch Cohen. Chicago: University of Chcago Press, 1987.

Ginzburg, Carlo. *The Cheese and the Worms: The Cosmos of a Sixteenth Century Miller*, Baltimore: Johns Hopkins University Press, 1980.

Ginzburg, Carlo. "Microhistory: Two or Three Things that I Know about it" Critical Inquiry, 20 (Autumn 1993), pp. 10–35.

Smail, Daniel Lord. *On Deep History and the Brain*, University of California, 2008. Watkin, David. *The Rise of Architectural History* 

## 3. Architecture: Art, Craft or Profession?

Trachtenberg, Marvin. Building in Time: From Giotto to Alberti and Modern Oblivion. Vesely, Dalibor. Architecture in the Age of Divided Representation: The Question of Creativity in the Shadow of Production

Warburg, Aby. *Mnemosyne Atlas.* Woods, Mary N. *From Craft To Profession.* 

#### ACADEMIC ACCOMMODATION

You may need special arrangements to meet your academic obligations during the term because of disability, pregnancy or religious obligations. Please review the course outline promptly and write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist.

It takes time to review and consider each request individually, and to arrange for accommodations where appropriate. Please make sure you respect these timelines particularly for in-class tests, mid-terms and final exams, as well as any change in due dates for papers.

You can visit the Equity Service website to view the policies and to obtain more detailed information on academic accommodation at http://carleton.ca/equity/accommodation

#### ACCESSIBILITY

Students with disabilities requiring academic accommodation in this course must register with the Paul Menton Centre for Students with Disabilities (PMC) for a formal evaluation of disability-related needs. Documented disabilities could include but are not limited to mobility/physical impairments, specific Learning Disabilities (LD), psychiatric/psychological disabilities, sensory disabilities, Attention Deficit Hyperactivity Disorder (ADHD), and chronic medical conditions. Registered PMC students are required to contact the PMC, 613-520-6608, every term to ensure that I receive your Letter of Accommodation, no later than two weeks before the first assignment is due or the first inclass test/midterm requiring accommodations. If you <u>only</u> require accommodations for your formally scheduled exam(s) in this course, please submit your request for accommodations to PMC by the deadlines published on the PMC website: <a href="http://www2.carleton.ca/pmc/new-and-current-students/dates-and-deadlines/">http://www2.carleton.ca/pmc/new-and-current-students/dates-and-deadlines/</a>

#### GRADING

Each grade will be based upon a comparison (1) with other students in the course and/or (2) with students who have previously taken the course and/or (3) with the instructor's expectations relative to the stated objectives of the course, based on his/her experience and expertise.

#### Student Conduct

Please refer to <u>http://calendar.carleton.ca/undergrad/regulations/academicregulationsoftheuniversity/acadregsuniv15/</u> [item 15.0] for specific information regarding Student Conduct and Academic Integrity standards.

## Vitruvian Tradition II

Azrieli School of Architecture and Urbanism Winter 2016 Room 306 Architecture

ARCH 5302/ARCH 6002

Louis Brillant - Lbrillant3@bellnet.ca

In the Spirit of Jacques-François Blondel's *Cours d'architecture*, this Seminar proposes a *praxis* of comparative readings of key treatises, architectural, philosophical, scientific and poetic texts as applied hermeneutics. Working hand in hand with the Daedalic Tradition Seminar it seeks to provide participants with a foundation for theoretical discourse in architecture. It builds upon the previous –Fall Term- Vitruvian Tradition Seminar and places itself in the spirit of Marco Frascari's material investigations.

Schedule			
January 7 <sup>th</sup> 2016	Introduction – Presentation of participants		
	Thesis topics/Fields of interests		
	Distribution of Reading Material for the Term	า	
	Coordination with Daedalic Tradition II		
January 14 <sup>th</sup> 2016	Opening-up Printing Strategies		
-	Francesco Colonna	1433-1527	
	Aldus Manutius	1449-1515	
	Cesare Cesariano	1475-1543	
	Sebastiano Serlio	1475-1554	
	François Rabelais	1494-1553	
	Philibert de l'Orme	1514-1570	
	Andrea Vesalius	1514-1564	
	Giordano Bruno	1548-1600	
January 21st 2016	Movement and the Gesture of Displacem	ent	
	Domenico Fontana	1543-1607	
	Vincenzo Scamozzi	1548-1616	
	Galilei Galileo	1564-1642	
	William Harvey	1578-1657	
	Gian Lorenzo Bernini	1598-1680	
	Francesco Borromini	1599-1667	
	Nicola Zabaglia	1667-1750	
January 28 <sup>th</sup> 2016	Societies and the Explosion of Corresponent	ndence	
	Raphael's Lettera a Leone X	1514	
	Giorgio Vasari	1511-1574	
	Cassiano dal Pozzo	1588-1657	
	Marin Mersenne	1588-1648	
	Athanasius Kircher	1602-1680	
	Claude Perreault	1613-1688	
	Christopher Wren	1632-1723	
	Isaac Newton	1642-1727	
February 4 <sup>th</sup> 2016	Maieutic of Architectural History		
	Juan Bautista Villalpando	1552-1608	
	Juan Caramuel de Lobkowicz	1606-1682	
	Johan Bernhard Fischer von Erlach	1656-1723	
	Carlo Lodoli	1690-1761	
	Jacques-François Blondel	1705-1774	

	Francesco Milizia	
February 25 <sup>th</sup> 2016	Society and the Critical Self	
	John Locke	1632-1704
	Marie-Francois Arrouet de Voltai	re 1694-1778
	Jean-Jacques Rousseau	1712-1778
	Claude-Nicolas Ledoux	1736-1806
	Donatien Alphonse Louis de Sad	e 1740-1814
	Jean-Jacques Lequeu	1757-1820
March 3rd 2016 Resetti	ng the clock: Rethinking Histor	v
	Giambattista Vico	1668-1744
	Étienne Boullée	1728-1799
	Jean-Nicolas-Louis Durand	1760-1834
	Alexandre Lenoir	1761-1839
	Geora Wilhelm Friedrich Heael	1770-1831
	Eugène-Emmanuel Viollet-le-Duo	c 1814-1879
March 10th 2016	In what Style should we build?	It's not Style stupid, it's craft!
	A. Welby Pugin	1812-1852
	John Ruskin	1819-1900
	William Morris	1834-1896
	Louis Sullivan	1856-1924
	Edward Maxwell	1867-1923
	Victor Horta	1861-1947
March 17 <sup>th</sup> 2016A diffic	ult passage: Craft and Industria	lization
	Gustave Eiffel	1832-1923
	Alois Riegl	1858-1905
	Auguste Perret	1874-1954
	Siegfried Giedion	1888-1968
	Walter Benjamin	1892-1940
	Cesare Brandi	1906-1988
March 31st 2016	No-Ornament – Orna-Mentis	
	Surrealist Imagination and the	Poetics of space
	Lewis Carrol	1832-1898
	Antoni Gaudi	1852-1926
	Adolf Loos	1870-1933
	James Joyce	1882-1941
	Gaston Bachelard	1884-1962
	Ludwig Mies van der Rohe	1886-1969
	Edouard Jeanneret Gris dit Le Co	orbusier 1887-1965
	T.S. Eliott	1888-1965
	Louis Aragon	1897-1982
	Alvar Aalto	1898-1976
	Malcolm de Chazal	1902-1981
Assignments & Gradin	<b>q</b> will be as follows:	
<b>J</b>	Class participation:	20% (attendance is mandatory)
	Class presentations:	30% (each student will have five)
	Draft Term Paper:	$20\%$ (to be handed in on March $10^{\text{th}}$ )
	Term Paper:	30% (to be handed in on April 21st)
		(

# ARCC

Technical & Professional Elective Courses





# Azrieli School of Architecture & Urbanism

1125 Colonel By Drive Ottawa, ON K1S 5B6 Canada Tel: (613) 520-2855 Fax: (613) 520-2849

ARCC 3004A – Energy and Form Workshop *[Ecologically Positive Community Design] Semester*: Winter 2016

*Instructor*: Giancarlo Mangone, (e) <u>giancarlo.mangone@carleton.ca</u>, (o) Architecture Building Rm 409 Class time: Tuesday + Thursday, 2:35 – 5:25 pm Location : Architecture Building, Rm 435

*Office Hours + Communication*: Office hours are 5:30-6:30pm on Thursdays. Students must notify the instructor at least 24 hours in advance if they are planning to attend office hours. E-mail correspondence is permissible for making an appointment or emergency situations only. The Instructor will respond to permissible, non-emergency e-mails one day a week, by Thursday evening. The course email policy is outlined in detail in the **Email Policy** section below.

#### **PROJECT BRIEF**

The goal of this course is to explore the maximum potential of buildings to improve the ecological integrity [health] of local ecosystems. Students will explore the potential effectiveness of diverse ecological design strategies, including design for ecological behavior, design for ecosystem functions, and design for biodiversity.

The ecological explorations for this semester will be applied to the design of a mixed use development in Puerto Morelos, Mexico, in a way that promotes the preservation and restoration of the local wetlands and forest ecosystems. This project will be developed in collaboration with a sociology research team in Mexico, as well as collaborators from other disciplines.

Students will work both individually and in groups, in order to develop deep and broad design solutions. The coursework will be collaborative in nature, whereby each student is contributing to the overall development of the project, and students are working together, rather than competitively. Therefore, collaboration is encouraged.

Through the coursework, students will broaden and deepen their knowledge about ecological design, as well as improve their ecological design skillset. In addition, by working with a real world community and context, students will gain experience in working on ecological design projects.

#### **LEARNING OBJECTIVES**

- Broaden and deepen understanding of ecological design
- Develop an understanding of current ecological design strategies
- o Develop an understanding of how to develop high performance and high quality buildings and building spaces
- o Develop a critical understanding of sustainability, and its interrelationships with the design process
- o Develop an understanding of how to evaluate the ecological performance of building projects
- o Provide experience working in interdisciplinary project teams

#### **METHODOLOGY**

The course will be structured partly as collaborative, interdisciplinary workshop seminar, partly as lecture, as well as partly as a multidisciplinary design studio. The course will employ a design research-based pedagogical model, in which a substantial portion of the learning will be developed individually and peer-to-peer. Evaluation will be based on three projects: high impact ecological behavior design solutions, project site analysis, and an ecological building design project. This course will require the use of digital modeling and visualization programs, as well as Adobe Illustrator and Photoshop.

#### **COURSE EVALUATION CRITERIA + CALENDAR**

Project 1 : High Impact Ecological Behavior Design Solution	20%	Due Jan. 21, 2016
Project 2 : Site Analysis	25%	Due Feb. 11, 2016
Project 3 : Ecological Building Design Project	45%	Due April. 23, 2016, noon
Individual In-Class + Group Participation	10%	

## REFERENCES

For a map of the project site, input the following into Googlemaps : Jardin Botánico Alfredo Barrera Marin en Puerto Morelos, Quintana Roo

## **Required Reading**

Chapter 9 in : 'Performative Microforests: Investigating the potential benefits of integrating spatial vegetation environments into buildings, in regards to the performance of buildings, their occupants + local ecosystems', Giancarlo Mangone, A+BE | Architecture and the Built Environment 10. TU Delft, 2015. **A pdf version of this book is available for free via** : <u>www.abe.tudelft.nl</u>

## Suggested Reading (by research topic)

Ecological Performance

- Michael L. Rosenzweig, *Win-Win Ecology: How the Earth's Species Can Survive in the Midst of Human Enterprise*, 2003, Oxford University Press
- o Emma Marris, Rambunctious Garden, Bloomsbury, NY, 2011
- Vishaan Chakrabarti, A Country of Cities: A Manifesto for an Urban America, Metropolis Books, 2013

#### Social Performance (Design for People)

- David Abram, *Becoming Animal*, Vintage Books, 2010
- o www.Simpl.biz
- o <u>www.Centerforactivedesign.org</u>

#### Water Systems

- o Helene Izembart, Bertrand Le Boudec, Waterscapes : Using plant systems to treat wastewater, Ianoografica, 2003
- o Italo Calvino, The Call of the Water, in : Numbers in the Dark and Other Stories

#### Nutrient Systems

- William McDonough + Michael Braungart, *The Upcycle : Beyond Sustainability –Designing for Abundance*. North Point Press, N.Y., 2013
- William McDonough + Michael Braungart, *Cradle to Cradle: Remaking the Way we Make Things*. North Point Press, N.Y., 2002
- Okala Ecodesign Strategy Guide [Ecological Material Design]

### Comprehensive Building Systems (Overall)

- o Daniels, K. 2003. Advanced Building Systems, Berlin. Birkhäuser (Princeton Architectural Press)
- o Behnisch Architekten + Transsolar ClimateEngineering, Ecology.Design.Synergy, Aedes
- www.wbdg.org (Whole Building Design Guide)
- o www.architecture2030.org

### Wall Assembly + Structures

- o Buckylab.blogspot.com TU Delft Wall Assembly Innovation Research Lab
- o <u>www.transmaterial.net</u>
- o <u>www.case.rpi.edu</u>
- Stephen Timberlake, James Kieran. *refabricating ARCHITECTURE : How Manufacturing Methodologies are Poised to Transform Building Construction.* McGraw-Hill
- o Detail Magazine <u>www.detail-online.com</u>
- Architect Magazine www.architectmagazine.com
- o Edward Allen and Joseph Iano. The Architect's Studio Companion : Rules of Thumb for Preliminary Design
- The American Institute of Architects. Architectural Graphic Standards: The Architect's and Builder's Guide to Design, Planning and Construction Details. Hoboken, New Jersey: John Wiley and Sons Inc.

### Thermal Environments

- Lisa Heschong, Thermal delight in architecture, MIT Press, 1979
- o Edward Mazria, The Passive Solar Energy Book, Rodale Press, 1979
- o S.R. Kurvers, et al. Robust Climate Design Combines Energy Efficiency with Occupant Health and Comfort
- J. Yu, etc. A comparison of thermal adaptability of people accustomed to air conditioned environments and naturally ventilated environments. Indoor Air. 2012
- o Paul, J.K. Passive Solar Energy Design & Materials. Park Ridge, New Jersey: Noyes Data Corporation, 1979.
- o IECC 2009, International Energy Conservation Code

## ARCC 3902

## CHAIR PROTOYPE WORKSHOP 2015-2016 WINTER TERM

## **INSTRUCTORS:**

## MARK MACGUIGAN mark.macguigan@carleton.ca x2853

## ROBERT WOOD robert.wood@carleton.ca x 2854

N.b. Successful completion of this course requires a high degree of autonomy and workshop experience, including thorough knowledge of safe workshop practice as instructed in the School. It is therefore restricted to fourth year.

## Course Overview:

Chair design is relevant to architectural designers because successful designs incorporate strength under live load, a wide variety of fabrication techniques, and efficient use of materials. Design and fabrication of chairs is regarded as being among the most challenging woodworking projects. In this .5 credit course students will have the opportunity to design and make functional chair prototypes (a prototype is an experimental iteration, not a finished product, and students are encouraged to use inexpensive materials. e.g. a wood frame chair can be made of poplar or pine, rather than maple or walnut). The completed project will function as a load- bearing, ergonomically sound prototype. Design parameters are based on the footprint, size and ergonomics of a common dining or desk chair (footprint not to exceed 20" by 20"). Student deliverables include shop production drawings, photo documentation of fabrication of final projects.

## Practical objectives:

Various aspects of design will be explored, including ergonomics, aesthetic design, practical parameters, and material explorations. Technical exploration tutorials will include aspects of wood theory and technology, metalwork, machining procedures, use and care of hand tools, building fixtures and jigs as part of the fabrication process, and other topics determined by students' design choices. At least one main component of each chair must be made of wood.

## Learning objectives:

By the end of the term, each student should be capable of demonstrating: design and execution of furniture projects using a variety of common woodworking (and for some, metalworking techniques). In addition, they should have gained an appreciation of design as it relates to materials and structural integrity.

Class will meet Tuesday and Thursday from 6pm until 9pm. Additional class hours will be scheduled as needed.

Readings will be discussed in class.

## Grading will break down as follows:

Assignment #1: 10% of final grade

Shop drawings—One side elevation, one rear elevation, one front elevation, and one 3/4 or isometric paraline view. Descriptive drawings of all structural elements, e.g. joints and/or fastenings. Although the exact format of the drawings is not specified, the instructor will evaluate based on whether the chair could be fabricated from the drawings provided.

Assignment #2: 40% of final grade

Attendance—More than two unexplained absences will result in penalty.

Assignment #3: 40% of final grade

Chair prototype—Prototypes will be evaluated on craft, ergonomics, and utility within the project's requirements for size, strength, and weight.

Assignment #4: 10% of final grade

Documentation— 3 digital photos of each project required.

## CARLETON UNIVERSITY AZRIELI SCHOOL OF ARCHITECTURE & URBANISM

SESSION: Fall 2015

CROSSINGS WORKSHOPCOURSE NO.ARCC 4200 ACREDITVALUE:0.5HOURS PER WEEK: 6 hoursLOCATION: Room 209 and 420INSTRUCTOR: Professor Manuel A. BáezRm. 229 ext. 2879 (manuel\_baez@carleton.ca)VALUE:0.5

## **CROSSINGS SEMINAR: STRUCTURE, FORM AND PROCESS**

The Crossings Workshop offers a more hands-on focused direction to the themes of the History and Theory Crossings Seminar that is offered usually in alternating years. Both the Workshop and the Seminar explore developments in architecture, the arts and sciences that reinforce or re-introduce the interrelationships between these diverse disciplines. While in the Seminar there is more of an emphasis on theoretical research and speculation (through writing), in the Workshop we will focus more on the *act of making* things based on the course themes. To a lesser extent, theoretical research and speculation will still be a vital part of the process. Let's not forget that "knowledge," according to Vitruvius, "is the child of **practice and theory**." Overall, Crossings as a Workshop and Seminar focuses on the implications of recent scientific and cultural developments that have led the chemist/theoretician Ilya Prigogine to describe our time as:

"A period of scientific revolution – one in which the very position and meaning of the scientific approach are undergoing re-appraisal – a period not unlike the birth of the scientific approach in ancient Greece or of its renaissance in the time of Galileo."

This renewed "renaissance" crosses and disrupts the established boundaries and foundations resulting from the compartmentalization of disciplines and provides us with new insights into the natural processes within the rich diversity of nature. A revitalized and stimulating uncharted field of inquiry is offered to the creative individual. Within this 'cross-fertilizing' open forum, with its technological and cultural implications, students are encouraged to investigate and speculate, through their projects, research, and writings on the possible implications of these developments to the discipline of architecture. A research topic will be selected (and approved) from a list that will emerge from the reading requirements, course theme, and the class discussions. Overall, the Crossings Workshop and Seminar offer a *hands-on* approach to *intuitive learning* and *making* while simultaneously establishing a theoretical framework and foundation for the exploratory and/or investigative theme and process.

# COURSE THEME: CRYSTAL & FLAME, FORM & PROCESS

A series of projects, lectures, and reading assignments, followed by class discussions, will investigate the theme of the *Crystal and Flame* and all its variations (i.e., Discrete and Continuous, Form and Process, Counting and Measuring, Order and Fantasy, Invention and Necessity, Law and Exception, Constraints and Freedom, etc.). The architectural implications of these ideas will be discussed along with examples of architects, engineers, writers, and theoreticians that are investigating and speculating on these concepts.

One primary course project will be developed throughout the first half of the semester as a full- scale construction derived and developed by student groups. The full-scale construction will be installed at the Aberdeen Pavilion for the 2015 Maker Faire, November  $7^{th} - 8^{th}$  (installed at the Azrieli School of Architecture and Urbanism instead).

# The lectures, reading, and discussions will address the following topics:

Special Lecture/performance on Bach Canons and Fugues
Special guest musician Andrew Fox.
The work and speculations of Leonardo Da Vinci on:
"Geometria Naturale" and Dynamic Generative Processes
The structure of dynamic and complex systems:
Discrete and Continuous Structures.
The interrelationships between Form, Structure and Process. The nature of our embodied structural awareness
Fractal Geometry, Complexity and Emergence
Examples of work by:
Leonardo Da Vinci, Antoni Gaudi, Robert Le Ricolais, Pier Luigi Nervi, Buckminster Fuller, Kenneth Snelson, Eladio Dieste, Cecil Balmond, Olafur Eliasson, and other more recent individuals.

# Developments in cognitive science and speculations on the nature of consciousness

The nature vibratory phenomena: Sound, Light and other phenomena Musical space-time structures and elements. The dynamic nature of Patterns and In-formation. Excerpts from Italo Calvino's: Invisible Cities: The Hymn of Dialectic Mr. Palomar and Leonardo Da Vinci: The Depth of Light The Chaos in Quantum Dynamics Understanding the nature of wave phenomena Minkowski Space: The Garden of Relativity Greek Mythology: The Duality of Dionysus vs. Apollo and Narcissus The nature of the Metamorphoses inherent in the Crystal and Flame

# **REQUIRED READINGS:**

"Prelude ... Ant Fugue" by Douglas Hofstadter Mr. Palomar by Italo Calvino (excerpts)Six Memos for the Next Millennium by Italo Calvino (suggested)Other course reading assignments during the term (i.e., Oliver Sacks readings).

Students are required to submit to the instructor an essay (500 words) for specified required reading assignments. These essays and readings will complement the ideas explored through the course projects. The course requirements will be considered <u>incomplete</u> until this has been done.

# **EVALUATION:**

Mid-Term Essays and Project(s) (40%) Final-Term Essays and final Project(s) (50%) A discretionary evaluation (10%) for participation, initiative, and effort is part of the final course grading process.



Carleton University Department of Civil and Environmental Engineering CIVE 4202/ARCC 4202: WOOD ENGINEERING Course outline Winter 2016

## Instructors

**Dr. Mohammad Mohammad** Tel: 343-292-8496 mohammad.mohammad@fpinnovations.ca

### Dr. Jasmine Wang Tel: 613-747-5544 x. 240 Jasmine.Wang@carleton.ca

Tutorial	Week	Date	Topics
1	1	(W) 13 Jan	Mass-Water relationships
2	3	(W) 27 Jan	Specified Strengths, Tension, Compression
3	5	(W) 10 Feb	Columns, built-up, beams
4	7	(W) 24 Feb	Bending
5	9	(W) 9 March	Mid-term solutions, fastenings
6	11	(W) 23 March	Fastenings
7	13	(W) 6 April	Introduction to lateral loads resisting systems/review

### Lectures

Mondays 18:05 to 20:55 (Minto Centre 5050)

### Problem analysis/Tutorials: ODD WEEKS ONLY

L10: Wednesdays 8:35am - 11:25am (University Centre 282) L20: Wednesdays 8:35am - 11:25am (Southam Hall 502)

## **Teaching Assistants and Office Hours**

- Samantha Faddoul (<u>samanthafaddoul@cmail.carleton.ca</u>)
- Sean Miller (sean.miller.canada@gmail.com)
- Hunter Davis (<u>hunterdavis@cmail.carleton.ca</u>)

Office hours to be announced.

### **Course Website and Communication**

All course information and online quizzes will be available through cuLearn. All students are responsible for ensuring that they are correctly registered through cuLearn and that they are receiving messages properly through their official university email address. Students are responsible for checking the *cuLearn* course management site and their official email account frequently.

#### Textbooks

- Wood Design Manual (2010) Canadian Wood Council (required)
- Introduction to Wood Design. Canadian Wood Council (recommended)

It is necessary that all students own a copy of the 2010 Wood Design Manual. All assessment will be open book using this design manual only. It is not available at the university bookstore. You must get a copy on your own from the Canadian Wood Council (CWC). Below are the instructions to do so:

- 1. Register to create an account or Sign in at *webstore.cwc.ca*
- 2. Place your order online and choose "Pick up at 99 Bank Street, Suite 400, Ottawa" option.
- 3. Enter Promo Code "Student" in the Promotion field and finalize your order.
- 4. Email an image of the front and back of your student card to orders@cwc.ca your order <u>will</u> <u>be on hold</u> until they receive the ID.
- 5. The first email you receive will be an automated order confirmation.
- 6. The second email you receive will be entitled "Order Ready for Pick up" and confirms that your order is now ready.
- 7. Bring the "Order Ready for Pick up" email to 99 Bank Street, Suite 400, Ottawa (print or electronic) during CWC business hours.
- 8. CWC's Front Desk staff will have the item ready for you.

To pick up your order, you only need your "Order Ready for Pick up" email in printed format or electronically. Someone else can pick up your order for you as long as they have a copy of your "Order Ready for Pick up" email (print or electronic).

Student Evaluation	Weight
<b>Assignments</b> . Selected problems assigned. A professional level of performance (clarity, legibility, presentation, neatness) is expected in all students submissions	15%
Mid-Term Exam. Monday Feb 29, 2016	35%
Final Exam. (date to be determined)	50%

### Lecture Outline 2016

Wk	Date	Lectures	Topics	Instructor	
1	Jan 11	<ul> <li>Introduction, Course outline</li> <li>Mat. Prop./ mass- water relations</li> </ul>	<ul> <li>Why wood?</li> <li>Cell structure, physical and mechanical properties, volume change</li> </ul>	MM	
2	Jan 18	<ul> <li>Design methodology</li> <li>Factored resistance</li> <li>Wood based products</li> <li>Structural forms</li> </ul>	<ul> <li>Limit States Design</li> <li>Review of loads: Dead, Live, Snow wind, earthquake.</li> <li>Lumber grades and species grouping. Characteristic values,</li> <li>Modification factors.</li> <li>Sawn lumber, glulam, panels, and other engineered wood products</li> <li>wood frame, post-and-beam, and special forms</li> </ul>	JW	
3	Jan 25	<ul><li>Tension</li><li>Compression 1</li></ul>	<ul> <li>Design of tension members (solid lumber and glulam)</li> <li>Design for compression of solid columns</li> </ul>	JW	
4	Feb. 1	Compression 2	Design of compression members in glulam. Built-up columns	MM	
5	Feb 8	Bending 1	Sawn lumber beams, joists and planks, straight glulam, combined loading	JW	
Feb 15- 19 Reading Week- No classes					

7	Feb. 22	<ul> <li>WoodWorks Software</li> <li>Fire Safety</li> </ul>	<ul> <li>Introduction to Wood Design software (AR)</li> <li>Guest lecture (IZ)</li> </ul>	MM		
Monday, Feb. 29 Mid-term exam						
9	Mar 7	Bending 2	Sawn lumber beams, joists and planks, straight glulam, combined loading	WL		
10	Mar 14	<ul> <li>Fastenings 1</li> <li>Fastenings 2</li> </ul>	General requirements; Bolts & dowels Split rings, shear plates, factors	MM		
11	Mar 21	<ul><li>Fastenings 3</li><li>Fastenings 4</li></ul>	Nails, spikes, lag screws Glulam rivets	MM		
12	Mar 28	<ul> <li>Shear walls/ diaphragms</li> <li>Case studies</li> </ul>	Introduction to lateral load resistance systems. Analysis and design <b>Guest Speaker (MM)</b>	JW		
13	April 04	<ul> <li>Cross Laminated Timber (CLT)</li> </ul>	Manufacturing, structural design, connections & other performance attributes	MM		
Final Exam (Date to be determined)						

## **COURSE POLICIES**

Academic Integrity: Academic integrity is essential to the pursuit of learning and scholarship in a university, and to ensure that a degree from Carleton University is a strong signal of each student's individual academic achievement. As a result, the University treats cases of cheating and plagiarism very seriously. Carleton University's Policy on Academic Integrity (http://www.carleton.ca/studentaffairs/academic-integrity) outlines the behaviours that constitute academic dishonesty and the processes for addressing academic offences. It is your responsibility to be familiar with these policies.

#### Academic Accommodation

Students with diverse learning styles and needs are welcome in this course. You may need special arrangements to meet your academic obligations during the term. For an accommodation request the processes are as follows:

*Pregnancy obligation:* write to me with any requests for academic accommodation during the first two weeks ofclass, or as soon as possible after the need for accommodation is known to exist. For more details visit the Equity Services website: http://www2.carleton.ca/equity/

*Religious obligation:* write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details visit the Equity Services website: http://www2.carleton.ca/equity/

Academic Accommodations for Students with Disabilities: The Paul Menton Centre for Students with Disabilities (PMC) provides services to students with Learning Disabilities (LD), psychiatric/mental health disabilities, Attention Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorders (ASD), chronic medical conditions, and impairments in mobility, hearing, and vision. If you have a disability requiring academic accommodations in this course, please contact PMC at 613-520-6608 or pmc@carleton.ca for a formal evaluation. If you are already registered with the PMC, contact your PMC coordinator to send me your Letter of Accommodation at the beginning of the term, and no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with me to ensure accommodation arrangements are made. Please consult the PMC website for the deadline to request accommodations for the formally-scheduled exam (if applicable) at http://www2.carleton.ca/pmc/new-andcurrent-students/dates-and-deadlines/

You can visit the Equity Services website to view the policies and to obtain more detailed information on academic accommodation at http://www2.carleton.ca/equity/
# ARCU ARCH

Urbanism Core Courses



### CARLETON UNIVERSITY SCHOOL OF ARCHITECTURE

Urbanism in Practice 1: Urbanism in the Core Instructor: Christopher Hoyt <u>christopher.hoyt@ncc-ccn.ca</u> ARCU 3303 Fall, 2016 M,W 1:30–5:30pm

"Find optimism in the inevitable" — Rem Koolhaas

## COURSE OUTLINE

### **COURSE DESCRIPTION**

Urbanism in Practice 1 is the first in a two--course sequence, organized as a series of design and analytical exercises. Students will explore contemporary issues in urbanism through the process of design – the translation of data into architectural form. The focus of Urbanism in Practice 1 is on urbanism in the core while Urbanism in Practice 2 explores urbanization on the periphery.

After a series of introductory exercises, the course will focus on the design of a major urban redevelopment. Working in teams, students will assess what can and should be built on the site, what form it should take, and what its impact will be on the adjacent neighborhood and the city as a whole.

#### **COURSE OBJECTIVES**

Upon successful completion of the course students will have demonstrated:

- 1. Ability to graphically describe and communicate information in a cohesive and compelling way.
- 2. Ability to present project information and abstract concepts in an ordered and easily understood way, tailoring the presentation to the audience.
- 3. Understanding of and facility in consultation of stakeholders and for translating their interests into a project.
- 4. Ability to explore and assess the form of the built environment through computer drawing, modeling, and illustrative drawings.
- 5. Understanding of the range of forces that shape the built environment. These include market forces, policies, politics, plans and ordinances, and the provision/distribution of infrastructure.
- 6. Understanding of the effect of these forces on the form of the city; an appreciation of the impact of the form of this built environment on its inhabitants and, specifically, those who work and live in or close to the urban core.
- 7. Familiarity with key issues and terminology associated with contemporary discussions about cities, density and urbanism, with a particular appreciation of the potentials and limitations of urban intensification as both a policy and paradigm.

#### SCHEDULE

	Monday	Wednesday	Notes
Week 1 – Sept 5	No Class: Labour Day	No Class: All school Mtg. Director's Project /Murray & Murray Competition assigned	
Week 2 – Sept 12	Assignment 1: Setting The Context given	Directors Project/ Murray & Murray Competition Due. 12:00 PM, all groups	
Week 3 – Sept 19	Assignment 1 Due & Presentations by students Assignment 2: Case Studies Given	LeBreton Discussed: Miriam MacNeil (TBC) Team work & Desk crits	
Week 4 – Sept 26	Assignment 2 Due & Presentations by students Assignment 3: Site Documentation Given	Heritage Discussed: Heather Thomsen (TBC) Team work & Desk crits	
Week 5 – Oct 3	Assignment 3 Due & Presentations by Students Assignment 4: Needs Analysis & Program Development given	City of Ottawa Perspectives: Nelson Edwards / C. Moise (TBC) Team work & Desk crits	
Week 6 – Oct 10	Assignment 4 Due & Presentations by students Assignment 5: Program Given	Traditional Town Development Discussed: Stan Leinwand (TBC) Team work & Desk crits	
Week 7 – Oct 17	Assignment 5 Due & Presentations by Students Assignment 6: Main Project	Sustainability Strategies Discussed: Stephen Pope (TBC) Presentation of analysis to comn	nunity
group (TBC)	Given		
Week 8 – Oct 24	Fall Break	Fall Break	
Week 9 – Oct 31	Jeek 9 – Oct 31Team work & desk critsCity of Ottawa Perspectives: Christopher Moise (TBC) Team work and desk crits		
Week 10 – Nov 7	Team work and desk crits	Realty Issues in Development: Marco Zanetti (TBC)	

Week 11 – Nov 14	Team work and desk crits	Midterm Review	
Week 12 - Nov 21	Team work and desk crits	Team work and desk crits	
Week 13 – Nov 28	Team work and desk crits	Team work and desk crits	
Week 14 – Dec 5	Team work and desk crits	Team work and desk crits	
Week 15 – Dec 12	Final Reviews (TBC)	Final Reviews (TBC)	
GRADING			
Project 1 – Setting the Context:		10%	
Project 2 – Case Studies:		10%	
Project 3 – Site Documentation:		10%	

Project 4 – Needs Analysis and Program Development:10%Project 5 - Program:10%Project 6 – Civic Hospital Mixed-Use Village:40%Book report/presentation:10%TOTAL100%

Participation and improvement over the course of the term: 10% (extra credit)

#### ATTENDANCE

Attendance during arranged Studio hours constitutes your contract with the School and your instructor. It is your responsibility to be informed of decisions and announcements made during these hours. Students are expected to submit work in the required format on time and at a high level of craft. Frequent unaccounted-for absences from studio meetings, seminars, reviews and desk crits may result in a failing grade, whether assignments are done or not.

#### GRADING

NOTE: see supplemental course outlines (distributed by your instructor) for breakdown of assignments and grading.

For the grade in the "A" range, the instructor will have judged the student to have satisfied the stated objectives of the course in an outstanding to excellent manner; for the "B" range, in an above average manner; for the "C" range, in an average manner with C- being the lowest acceptable grade in the Design Core courses; for the "D" range, in the lowest acceptable manner in non-Core courses, and for "F", not to have satisfied the stated objectives of the course. Grades will be assigned as A+ (90-100%), A (85-89%), A- (80-84%), B+ (77-79%), B (73-76%), B- (70-72%), C+ (67-69%), C (63-66%), C- (60-62%), D+ (57-59%), D (53-56%), D- (50-52%), F (0-49%) and ABS. A grade of C- or better in each course of the Design Core is required for a student to remain in *Good Standing*. (Please refer to the Undergraduate Calendar



#### Azrieli School of Architecture & Urbanism

#### ARCU 3501 Fall 2016 FUNDAMENTALS of URBANISM Workshop & Mini-Studio

Core course (Urbanism): Tuesdays/ Thursdays 08.25-11.25 rm 512 Instructor: Roger Connah roger.connah@carleton.ca office hours: rm 524 tuesday & thursday 13.00 – 15.30

A Bento-Urban Mapping studio integrating the Fundamentals of Urbanism working on a chosen site in Ottawa: the aesthetics of the urban lunchbox

#### Course format:

Weekly sessions include lectures, delivered through visual presentations in conjunction with a studio component in bi-weekly workshops. Assignments will allow students to explore the creative possibilities of various mapping conventions and visual communication techniques introduced through a variety of media. A small urban intervention will form part of the workshop as a mini-studio project.

#### **STUDIO CONTENTS**

The Bento Studio will proceed as follows – group and individual exercises will help introduce, study and exercise basic urban tenets – the fundamental of urbanism and the conventions necessary to move from detailed site documentation to urban parcel, community mapping to city mapping.

Site Documentation Urban Parcel Mapping City Mapping Cognitive mapping Relational Urban mapping

The following fields will also be introduced alongside the mapping conventions taught and prepared – organized as seminar sessions analyzed, mapped and presented in group form to the class.

- informational/relational mapping, (radical) cartographies/tactical urbanism
- morphology, cities & urban form (towers in the park etc), density, & Intensification;
- street section zoning & community, segregation/integration of uses; NIMBY
- flow and transit systems;
- ecological urbanism/bio-urbanism/landscape urbanism (LEED-ND)
- modern- new & postmodern urbanism,
- spatial practice & the public realm
- neoliberalism & the city
- smart growth, bot-culture, drone infrastructure;
- changing ideals/ideologies on urban renewal and the necessity of ruins
- the global city, the rebel city, the multi-nodal city/ the shifting centre city and post-urbanism

#### Narrative/Relational Urban Mapping

Pt 1 Relational complete all 6 maps (12 for the larger group) plus others outlined in pt.2

**1 figure-ground -** add legend and any details about the area you think appropriate (small right hand corner box as discussed) - add identifying small map right hand corner showing this part in red in relation to the whole of Vanier

2 plot lines, road and boundary map - add legend etc - add all plot details only of the strip – Montreal road - see GeoOttawa - plot address, size of building sq.ft. fl/a, age of building, zoning codes etc (put this info in small text areas above and below with very thin lines pointing to the plots/parcels)

3 aerial (Google) add legends - identify all vacant lots, existing green spaces, miscellaneous

- space, car parks...add details above and below with thin line identifying each space also add notes
- about the type of construction, condition of the building and general 'appearance'

#### 4 land use mix map

- complete legends using agreed colours for categories (on the board) .. add up totals/sq. ft along the strip as follows:
- building total = x residential = x retail/commercial + office = x hotel = x civic/institutional = x
- parking = x vacant = x sq.ft.
- 5 image strip map identify with thin line all commercial signs, shop fronts, public amenities consider potential
- communities and 'invisible' narratives' (street-walking/homelessness/liquor etc)
- look up and read about 'psychogeography' (Merlin Coverley)
- 6 Flow, Transit & Zoning use Digital version (clean) as a layer showing plot size, boundaries, roads etc. Begin to identify on this: flow/transit zoning conditions, codes, utility lines (electric-water etc) this will also become an economic mapping of the area (land prices etc).

#### Pt 2 Narrative Mapping & Spatial Practice

- 7 Using a copy of no 6 (digital) prepare Proximity Map for your chosen strip:
- transport bus stops supermarket park green space school bank medical facility -library -faith
- on this also identify *crime mapping* assaults etc (see Ottawapolice.ca) begin to identify a 'community' space(s) within your strip area and psychogeographic narrative

#### 8 Using another copy of 6 prepare Site Force/Line & Space Diagram & Future

- showing existing 'conditions' using colour conventions etc as in G/S/P pdf (lineandspace.com)
- consider ecological conditions/natural urbanism/bio-urbanism/landscape urbanism (LEED-ND)
- show on this map any future conditions for this area from City of Ottawa Future Plan
- - roads development zones re-zoning planned expansion intensification transport paths etc....
- 9 on a clean new aerial map show solar orientation map Climate Mapping prevailing winds snow patterns (see pdf G/S/P designshare.com)

#### 10 Tactical Urbanism identify the 'Urban Cut' in your selected site (individually)

- that you find interesting and may wish to work on later for an 'Urban Games/Urban Flash' proposal.
- This is vertical to the road/strip 1 draw a street section showing zoning & community any segregation/integration of uses; (what is NIMBY?) imagine the flaneur/the walker in Vanier
- Cut it out and present it on one sheet 11x17 for later work and development.
- (Details about this exercise will follow in November)
- please identify any other material, information that you find interesting about the strip Montreal Road in note form and/or diagram form)

#### Pt.3 Morphology and Urban Form – Agency, Tactical Urbanism, Image building & Transformation & Psychogeography

Details of this will follow in November covering more general urban issues: morphology, cities & urban form (towers in the park etc), density, & Intensification; spatial practice & the public realm – psychogeography – spatial/geographic imaginations - changing ideals/ideologies on urban renewal - the necessity of ruins - the global city - the rebel city - the multi-nodal city-informal urbanism - the shifting centre city - post-urbanism.

#### **Course objectives**

- To become familiar with and fluent in the conventions necessary for urbanism and an Urban understanding of geographical imaginaries and relational urbanism.
- To move from site documentation to urban parcel, community mapping to city mapping.
- Site Documentation Urban Parcel Mapping City Mapping Cognitive mapping Relational Urban mapping
- To learn the necessary peer-shared software/multimedia processes in data collection and diagram/mapping preparation (analog and digital) and develop critical, graphic and modeling (urbanism) skills.
- To establish a critical framework for understanding urban thinking, urban design and planning with respect to their implications in urban theory and urban practice.
- o The studio will also ground the students in a design approach to tactical urbanism.
- The mini studio part of the workshop is essential to meet the first full urbanism studio (3rd year) and contemplate what is implied in the transfer of urban thinking and ideas to urban design
- To introduce design and planning briefs and understanding the already predicated in terms of planning and conventional urban renewal programs.
- To demonstrate the above through participation in class discussions, through research, projects and in written/mapped form through the assignments.

COURSE REFERENCES (from among) lan Mcharg Design with Nature Peter Gould and Rodney White Mental Maps Jane Jacobs The Death and Life of American Cities Jonathan Barnett City Design: Modernist, Traditional, Green and Systems Perspectives Alex Marshall How Cities Work Venturi – Brown Leaning from Las Vegas R Connah How Architecture got its Hump Leo Hollis Cities are Good for Us ETH Zurich After Crisis Contemporary Architectural Conditions Choi & Trotter Architecture at the Edge of Everything Else J Stoner Towards a Minor Architecture



# Azrieli School of Architecture & Urbanism

ARCU 4801 / Selected Topics in Urbanism Fall 2016 / Monday 8:35 - 11:25pm Instructor/ Catherine Bonier - catherine.bonier@carleton.ca Office Hours/ Wednesdays 11:00 – 12:30pm and by appointment - Arch Bldg. 412

# Between Architecture and Infrastructure Water, Cities, Nature, Technology, and Health

#### INTRODUCTION

This seminar investigates the relationship between advancing technologies, medical theories, and ideas of art, nature, and public life - and the ways in which the dialog between these forces has shaped and reshaped cities. Water and circulation are threads that pass through all of our studies, linking the basic sustenance of life with the highest cultural aspirations towards improvement, democracy, freedom, and beauty.

#### COURSE THEME AND FORMAT

This is an advanced seminar in selected topics related to urbanism. The course combines lecture and seminar formats. Each three hour session will include a brief lecture by the instructor, as well as presentations by students on assigned topics. In addition, students will develop their own research questions, and generate final projects that engage issues of urbanism for the 21st century in the global context.

This class demands independent intellectual effort and engagement on the part of students. Weekly readings will challenge students to grasp the meanings of health and the artifacts of urban infrastructure and remediation throughout history. From this perspective, students will be required to ask questions regarding our own time. Final projects will require that students understand and document a city of today, in order imagine a healthy city of the future.

#### COURSE OBJECTIVES, PEDAGOGY and ASSIGNMENTS

Students will develop their knowledge of urban development in relation to public health, infrastructure, and technology. Through presentations and term projects, students will advance their research abilities and critical faculties.

#### Course Objectives

1. To interrogate the relationship between ideas of health and environment, techniques of infrastructural management, design and planning around civic space and urban settlement, and the experience of urban landscapes.

2. To thoughtfully consider how designers, planners, and engineers engage the inherent complexity of social, political, cultural, technical, and scientific issues surrounding urban sustainability in the global context.

3. To develop excellent skills of interpretation and comparison, using clear and succinct written, visual, and verbal communication to describe and to understand historical and contemporary urban issues.

### Assignments and Grading

participation and weekly assignments (including blog posts, discussion, attendance) = 35% in-class presentations = 20% (the number of presentations will depend on the enrollment count) research outline and bibliography = 15% final project draft = 10% final term project = 20% (graded upon successful completion of revisions)

#### STUDENT RESPONSIBILITIES in this course

Attendance to all classes is required, and no late work will be accepted. If for any reason the goals of the class seem unmanageable, it is the student's responsibility to schedule a meeting with the instructor to discuss the issue and to actively seek a solution that supports the student's progress. Meetings can be scheduled outside of office hours upon request.

#### **Class Participation**

- You are required to read all the required texts and to post to the blog every week prior to class.
- You are required actively participate in all class discussions.
- You are required to attend all classes.
- Cell phones may not be used in class, not ever, for anything.

#### Term Project

• You will complete one research project on selected topics approved by the course instructor. This will be a selfdriven project. Your will conduct research on a contemporary city independently, outside of class. Your term project will be a synthetic report, which documents existing conditions of a city through text and mapping, and includes an imagined narrative and a graphic (mapped and human's eye view) which forecasts the implications of future revisions to urban infrastructure, technology, or theory of health. (Total word count, body text only, 2500-3000 words, double-spaced. Put the word count at the end of the paper.)

• You will present this synthetic project in special class sessions for comments and suggestions from your peers.

• You will revise your project based on these comments and suggestions and upload them to CULearn in a final single synthetic document. This constitutes your final exam.

#### Work Expectation

A large portion of your time for this course will be devoted to the weekly readings. Although many of the readings are difficult, it is expected that you will dedicate the time to develop your own understanding of the texts. If you are having difficulty, please schedule a meeting, so we can review the ideas together. Also use the blog as a means to work with your colleagues to raise your questions regarding the readings.

### CALENDAR

Week 01:		Classes begin Wednesday, Sept. 7.
Week 02:	Sept 12	Introduction - Themes + Responsibilities / Water + H2O
Week 03:	Sept 19	Why Water?/ Transitional States
Week 04:	Sept 26	19th c. Stinks + Structures / London + Paris
Week 05:	Oct 03	Floods, Control + Resistance / New Orleans + Mumbai
Week 06:	Oct 10	No Class Meeting- Statutory Holiday - Term Project Topics Due Tues 10/11
Week 07:	Oct 17	Mosquitos + Supermodernity / Lagos + Lagos
Week 08:	Oct 24	No Class Meeting- Reading Week
Week 09:	Oct 31	Industry + Greenery/ Central Park + Columbian Exposition - Outline + Bibliog. Due
Week 10:	Nov 07	Surface + Structure / Parc de la Villette Competition + 1980s Barcelona Recovery
Week 11:	Nov 14	New Ecologies + Resilient Infrastructures/ New York + Toronto
Week 12:	Nov 21	Super-urbanization + Meta-infrastructure/ Quezon City, Manila + Shenzen SEZ Term Project Drafts Due
Week 13:	Nov 28	In-Class presentations - Term Project Presentations Due
Week 14:	Dec 5	In-Class presentations (cont)
Week 15:	Dec 12	No Class Meeting.
Week 16:	Dec 19	No Class Meeting. Term Project with Revisions Due Thurs, Dec. 22.

While assignment due dates are fixed, calendar may be modified at any time by the instructor.

#### WEEKLY INDIVIDUAL STUDENT PRESENTATIONS

\*\*Digital copies of presentations - text, powerpoints, and handouts - are due at the start of class via CULearn.

Each of you will be responsible for presenting critical summaries of urban case studies and readings understood together. You must also lead the class discussion on the scheduled theme of the week. Class presenters must conduct additional research inspired by their chosen reading. Presentations will be at least thirty minutes in length with fifteen minutes for discussion, a total of 45 minutes per student.

A 30 minute presentation is roughly ten double-spaced pages of text or 2,500 words. <u>Students are required to meet with the instructor at least 1 week prior to their presentation.</u> Preferable meeting times are between 10-12:30 Wednesdays, or immediately following class on Monday, but alternate times may be scheduled. The initiative lies with the student to email and arrange this <u>required</u> meeting in advance. At this meeting <u>they will have already completed the readings for their presentation</u>, and will be prepared to discuss their beginning research, bibliography, and thesis, and get help with additional sources and ideas. The students must have an idea for the outline and angle of their presentation.

1. You are responsible for creating a powerpoint presentation and accompanying typed, scripted text version of your presentation. Your text presentation is not an informal outline or a book report, but a formal critical presentation with thesis, supporting images, quotes, research, and a conclusion and questions. You may read it directly, as one would a conference paper. It must be accompanied by a bibliography of all sources consulted. For many projects, you may need to request books or articles via interlibrary loan, so start your research ASAP.

A good source for journal articles is the Avery Index to Architectural Periodicals which you can access through the library website. JSTOR is another source for downloadable scholarly (not wikipedia) pdf articles. Web research is not sufficient to complete a scholarly presentation. You must craft your presentation of the designed works around the readings and ideas from that week, guided by your own thesis and questions!

The Carleton MacOdrum Library provides access to many information resources, including books and journals (both electronic and paper-based), as well as useful databases. https://library.carleton.ca/find/databases There are also specialized research librarians who can help you to locate scholarly sources.

2. You are responsible for an outline and framing questions for discussion, which you will print and distribute at the start of your presentation. Include key terms and definitions that are important to the project or reading.

#### WEEKLY READING RESPONSES by all students, except those presenting for the week. (CULearn Forum)

Do your readings with the following questions in mind:

What is the understanding of health in this time and place? What is the understanding of dangers to health or environment? What is the social or governmental response? What is the architectural, planning, or engineering response? What is the result to city form and city life?

By 7pm Sundays, post a short reading response that includes the following:

• Big ideas? What seems to be one of the most important or interesting ideas from the text? This might be an idea you'd like to discuss further in class, even if you don't agree with it. You should take the quote, and try to learn more to understand it.

"Direct quote from the text." (author's last name, pg no)

1-2 Sentences: Your first understanding or analysis of the quote, from reading

1 Question: Question about the quote, or what you'd like to know more about

2-3 Sentences: What you learned by looking further OUTSIDE the readings

• Definitions?

1-2 Terms that you found new or interesting, with 1-2 sentences defining each. Please use the OED for all definitions: http://www.oed.com.proxy.library.carleton.ca/

# ARCU

Urbanism & Urban Studies Elective Courses

#### CARLETON UNIVERSITY COURSE OUTLINE SCHOOL OF ARCHITECTURE 2015-16 Academic Year COURSE TITLE: **City Organization & Planning** COURSE #: ARCU 4400B SPECIAL FOCUS: **Genetics of Urbanism** TERM: Fall **INSTRUCTOR:** Greg Andonian Greg.Andonian@carleton.ca Office: 442 AZ; ext. 2868 HOURS PER WEEK: 3 TIMETABLE: Tuesday 6:00-9:00 PM CREDIT VALUE: .5 ROOM #: 444 AZ

# ARCU 4400 B: City Organization & Planning

### CALENDAR DESCRIPTION:

Structure, form & functioning of cities. Infra-structure, facilities & networks, ecosystems, demographic & social organization, government, quality of life, goals & perceptions, urban management, development, regulation & codes, design, planning & policy-making. (Elective Course)

# Special Focus: Genetics of Urbanism

#### COURSE DESCRIPTION:

An introduction to the broad field of urbanism as it relates to the architecture of the city and the general field of design. The course is given in seminar mode and will promote debate on issues of the city as a work of art from historical, modernist and post-modernist perspectives. In general, topics discussed will be adhering to the assigned order in selected chapters from references cited below, but will not be limited to their content. Students will be encouraged to voice their independent judgment, and will be invited to articulate plausible positions as they become more familiarized with the challenges poised by urban dwelling in the postmodern age.

#### COURSE OBJECTIVES:

- 1) Help students to gain critical insights on **why** issues of urban content impact the profession of architecture and society as a whole
- 2) Promote awareness on how technology transforms the urban rhythm and the concept of cadence
- 3) Advance understanding on **what** characteristics of the cultural landscape of the city, as embodiment and expression of art work (form and space), promote human interaction that contextualizes urban dwelling beyond time constraints
- 4) Expose students to relevant and important texts on issues pertaining to contemporary urbanism

#### **REFERENCES**:

- 1) The Idea of a Town: The Anthropology of Urban Form in Rome, Italy and the Ancient World, by Joseph Rykwert. Princeton University Press, 1976. (TEXTBOOK-1)
- 2) A Theory of Good City Form, by Kevin Lynch. The MIT Press, 1981. (TEXTBOOK-2)
- 3) RECOMBINANT URBANISM: Conceptual Modeling in Architecture, Urban Design & City Theory, by David Grahame Shane. Wiley-Academy, 2007.
- The City in History: Its Origins, Its Transformations, and Its Prospects, by Lewis Mumford. A Harvest Book Harcourt Inc. 1961, 1989.
- 5) The Architecture of the City, by Aldo Rossi. Introduction by Peter Eisenman. The MIT Press, 1982.
- 6) COLLAGE CITY, by Colin Rowe and Fred Koetter. The MIT Press, 1984.
- 7) City of Bits, by William J. Mitchell, The MIT Press, 1995
- 8) FLESH & STONE: The Body & City in Western Civilization, by Richard Sennett. Norton & Co. 1996.
- 9) Cities & the Wealth of Nations: Principles of Economic Life, by Jane Jacobs. Vintage Books, 1985.
- 10) The Seduction of Place: The History & Future of the City, by Joseph Rykwert. Oxford University Press, 2000.
- 11) URBANIZME, by Le Corbusier (in French). Flammarion, 1994.
- 12) Structure & Meaning in HUMAN SETTLEMENTS, Tony Atkin & Joseph Rykwert, editors. University of Pennsylvania Museum of Archaeology and Anthropology, 2005. (Note: More to follow in the class)

#### **COURSE GRADING:**

Grading will be based on the following:

I)	Weekly Chapter Reviews	20%
II)	Book Presentation:	20%

- III) Topic Presentation: 20%
- IV) Term Paper: 30%
- V) Attendance & Class Participation 10%

#### A) BOOK PRESENTATION: 20% OF TERM GRADE

A book will be assigned to you for your critical reading. Your task will be preparation of a synopsis of the book in written form for distribution to students in class and power-point presentation for discussion. Your synopsis should comprise five pages typed (maximum, double spaced) and could have an addendum of footnotes and graphic illustrations. In your presentation you should include the following:

- 1) Profile of the Author (R&D and Publications)
- 2) Intentionality and articulation: Why & when the book was written and in what way its content is still relevant to our present condition?
- 3) Summary of author's position on urbanity.
- 4) Identify high points re critical issues, important concerns, and emerging challenges.
- 5) Your Criticism (Positive & Negative)

After in-class presentation and discussion your written synopsis will be submitted for evaluation.

Date of Book Assigning:	Tuesday, September 08, 2015
Date of Book Presentation:	Tuesday, September 22, 2015

#### B) TOPIC PRESENTATION: 20% OF TERM GRADE

The student in consultation with the instructor will choose a city as a topic for presentation. The city topic investigation could relate to issues of art & urban design, architecture of the city & dwelling, craftsmanship & identity, place-making & space narrative, ritual & artifact, color-texture-materiality articulation & sense of vitality etc.

Your city topic for presentation could be a prelude for your follow up term paper. After your presentation and discussion in class you could use the feedback to better position yourself regarding comparative issues of two cities.

You should submit the following short outline after your topic selection:

- 1) Relevance of your topic in our present day Urban Design and Recombinant City condition
- 2) Objectives and method of your topic investigation
- 3) A thorough bibliography

After in-class presentation and discussion the evaluation will be based on the following:

- 1) Intentionality and Merits
- 2) Main points of the Argument
  - Identification of the critical issues
  - -- Questioning the position of primary authors
    - Formulate a personal position
- 3) What does the future hold?

Date of Topic Choosing:	Tuesday, October 06, 2015
Date of Topic Presentation:	Tuesday, November 03, 2015

# ARCH CDNS

History Theory of Architecture Core Courses for Conservation & Sustainability

**INSTRUCTOR:** Lyette Fortin (email: lyette.fortin@carleton.ca)

COURSE NUMBER: ARCH 4200A

TIMETABLE: THURSDAYS 8:30am to 11:30pm

COURSE LOCATION: Room 209 Architecture Building

OFFICE HOURS: THURSDAY 11:30am to 1:30pm. All appointments to be organised by e-mail.

**OFFICE NUMBER:** Room 416 Architecture Building

**CREDITS:** 0.5

TEACHING ASSISTANTS: Students last names A to H: Miquel Reina Ortiz: <u>miquelreinaortiz@cmail.carleton.ca</u> Students last names I to W: Johanna Abril: <u>johannamoscoso@cmail.carleton.ca</u>

#### COURSE DESCRIPTION:

This seminar is an introduction to the history of architectural conservation with an overview of the evolution of heritage conservation, from Antiquity to the present in the context of world built heritage. Conservation philosophy, theories, practices, questions of ethics and related approaches to the material transformation of heritage buildings will be examined, especially looking at how these philosophical theories and experimental practices made it possible to redefine and advance new concepts of architectural conservation.

Heritage buildings will be examined in their broader context. They are not isolated symbols; they form part of a larger network of areas, places, towns and cultural landscapes. In making decisions regarding the conservation of the built heritage, the setting and context of a heritage building is as important as the building and its material components. Architectural conservation is not simply about buildings, it is also about people, and the approaches to conservation at any time will inevitably be linked to the values of society at that time.

The course will explore the changing notion of built heritage and the implications of this evolution on heritage theories, processes and practice at the local, national and international level. The course will point out how conservation has evolved to be considered a sustainable approach as it maximizes the use of existing materials, reduces waste and safeguards the main values of the built heritage. The course will emphasize that architectural conservation is a creative design process.

#### COURSE OBJECTIVES:

Through the study of evolution of philosophies, theories, practices and related ethical aspects of heritage conservation:

- students are made aware of the historical and international roots of conservation and the various schools of thoughts in conservation over time;
- students are provided with a framework of internationally accepted contemporary conservation concepts: goals, approaches, principles and process to guide decisions;
- students recognize the importance of understanding, defining and respecting heritage values and character-defining elements of cultural heritage in order to intervene in a manner that will protect these values;
- students develop both the skills and knowledge for analytical reflection and critical thinking in the ethics of heritage conservation;
- students realize that conservation has realistic application in their design projects and future
  professional practice where conservation is a valid and sound sustainable approach to deal with
  the built fabric, to address society's changing needs, respect inherent values and to add
  meaningful, creative layers to our built environments.

METHOD OF INSTRUCTION:

- This course is taught in weekly lectures with discussions. Students are expected to come to class prepared to discuss assigned mandatory readings and assigned exercises.
- Case studies will be used as a way to explore issues and understand approaches of architectural conservation.
- During the course, two quest speakers (a conservation engineer and a landscape architect) will come to share their knowledge on the practice of heritage conservation.

#### METHOD OF EVALUATION:

Participation	Attendance, quizzes, exercises	(15%)
Assignment due date	September 22, 2016	(15%)
Test/Exam date	November 17, 2016	(30%)
Term paper due date	December 8, 2016	(40%)

Mandatory readings and mandatory exercises will prepare students for in-class lectures, discussions and guizzes and will facilitate their understanding of the subject matter that will be presented in class.

\*\*If any students miss more than 3 classes, without a medical report, they can fail the course. Please, send an email to the Instructor if you cannot attend a class.

#### Assignment – Heritage Sites

You have to select two Heritage Sites - one in Canada and one abroad. The sites should be designated either as a World Heritage Sites or as a National Historic Sites in Canada. The sites can be cultural or a mixed cultural/natural sites. You have to analyze and compare both sites, you have to discuss why you chose these sites, what impressed you about these sites, reasons for designations, identify heritage value, describe in your words the character-defining elements and identify potential conservation challenges and ways to mitigate these. The text is to be 1500 words (4 pages). Images are to be used to support your written text and be placed after the written part.

#### Test/Exam

The closed-book test consists of a combination of short to long answers (essay style) with a few multiplechoice questions. The questions will be based on the assigned mandatory readings, on the themes presented during class lectures by instructor and guest speakers, as well as on the assignment.

#### Term Paper - Adaptive Reuse Case Study

Submit a paragraph to our Teacher Assistant (TA) with the explanation of the proposed adaptive re-use case study by November 10.

The term paper will consist of an analytical reflection and critical thinking of an adaptive re-use case study on any heritage architecture, engineering work, landscape or urban design project that was done in the last 20 years in Canada or abroad. The paper will analyze:

- History of the heritage resource and its evolution
- Heritage values of the resource and the character-defining elements
- Cultural landscape in which the site is located
- Criteria for the design/conservation concept and philosophy making references to the theories, the Standards and Guidelines (Canada's Historic Places) discussed in the lectures
- How the intervention respects/or not the heritage values and the character-defining elements
- New requirements and appropriateness /suitability of the new use and how it contributes to the community
- Damages, causes of decay and alterations
- Sustainability (based on Jean Carroon article)
- Ethical issues

# SCHEDULE OUTLINE

WEEK	DATE	TOPIC
1	Sept. 8	COURSE OVERVIEW
2	Sept. 15	BASIC CONTEMPORARY CONSERVATION CONCEPTS
3	Sept. 22	ASSIGNMENT Due ANTIQUITY to RENAISSANCE
4	Sept. 29	RENAISSANCE to 1800s ANASTYLOSIS
5	Oct. 6	STRUCTURAL CONSERVATION *GUEST SPEAKER: LYNE FONTAINE
6	Oct. 13	CULTURAL LANDSCAPE CONSERVATION *GUEST SPEAKER: JOHN ZVONAR
7	Oct. 20	1800-1880 ARCHAEOLOGICAL RESTORATION – STYLISTIC RESTORATION
	Oct. 24 to	o Oct. 28 FALL BREAK
8	Nov. 3	Late 1800s ANTI-RESTORATION
9	Nov. 10	1880-1930 HISTORICAL & SCIENTIFIC RESTORATION 1880-1940 URBAN RESTORATION
10	Nov. 17	TEST/EXAM – CLOSED-BOOK
11	Nov. 24	1940-1970 POST WORLD WAR II RECONSTRUCTION 1970-1990 MODERN PRESERVATION
12	Dec. 1	ADAPTIVE-REUSE CONSERVATION STANDARDS & GUIDELINES
13	Dec. 8	TERM PAPER Due

Note: Content of a class may be adjusted and some dates may be modified in relation of the guest speakers. Important dates:

- Assignment------ September 22, 2016
- Test/Exam ------ November 17, 2016
- Term paper----- December 8, 2016

LECTURES & CONFERENCES Heritage Ottawa 2016-2017 Lecture Series http://heritageottawa.org/

Azrieli School of Architecture & Urbanism

COURSE TITLE	Recycling Architecture in	Canada and abroad
	Pablo Medina-Villaneueva	(Office Hrs: Tues. 9:30 - 10:30, rm 525 Arch)
Teaching Assistants:	Kathleen Chin	(Office Hrs: Wed. 12:30 - 1:30, rm 404 Arch)
Instructors:	Sheryl Boyle	(Office Hrs: Fri. 11:30 - 12:30, rm 228 Arch)
Day and time of class	Mondays from 8:30am to	11:30am, Rm. 204 Architecture Building
Term and Year	FALL TERM 2016	
Course Number	ARCH 4206	

CU LEARN: This course uses cuLearn, Carleton's learning management system. To access your courses on cuLearn go to <u>carleton.ca/culearn</u>

For help and support, go to <u>carleton.ca/culearnsupport/students</u> Any unresolved questions can be directed to Computing and Communication Services (CCS) by phone at 613-520-3700 or via email at <u>ccs\_service\_desk@carleton.ca</u>

#### INTRODUCTION

Introduction – The Pearl Diver<sup>1</sup>

Full fathom five thy father lies, Of his bones are coral made, These were pearls that were his eyes. Nothing of him that doth fade But does suffer a sea-change Into something rich and strange. The Tempest

Why should we keep elements of the city that no longer function as originally intended or whose function no longer exists? This question asks us to explore why we keep anything at all? Within the context of a technological world driven by progress the role of memory and identity are indeed in a state of crisis.

Humanity has long assembled tactile fragments that form cities, buildings and collections, from large in scale to intricately detailed small things kept in cabinets of curiosity. As material culture, these objects hold physical traces of past practices and ideas beyond the matter from which they are constructed. This course looks at ways of sensing these traces and how others have participated in assembling, adapting and articulating a future built upon these past traces.

<sup>&</sup>lt;sup>1</sup> Hannah Arendt in the introduction of Walter Benjamin's *Illuminations* uses this title (followed by the quote from Shakespere's Tempest) to describe Benjamin during the stage of his life where he confronted the concept of history in his writings.

In his book, *The Architecture of the City*, Aldo Rossi describes the city as an ever-transforming narrative of inhabitation, a story that reveals its layers simultaneously, giving depth to the present and allowing new narratives to come to light. While Rossi's theories are primarily rooted in the Italian context, the notion of revealing the depth of place is vital to all cities.

Canadians have long sought define their identity in art, music and other cultural productions. Architecture provides a voice for cities and cultures to define themselves. While typical developments demand new projects with new materials and new ideas there is a growing awareness in Canada of the potential of recycled urban fabric and adaptive reuse projects to provide a valid contribution to civic and national identity and to answer to the demands of sustainability.

For centuries, architects have recycled buildings and their ideas. These existing ideologies and practices of recycling are well documented although the language that describes them may sit outside our current understanding of "recycling". This course will provide the student with key concepts of recycling architecture at the scale of the city, the individual building and the material detail.

Just as the foot grounds our body to the earth, material memory grounds us in time and place.

Perhaps, today, we need to gather the fragments of our present and clumsily construct with them our 'new churches,' as was done in the fifth century, which used fragments of ancient architecture as a construction material that was partly gifted with a discourse.<sup>2</sup>

#### **COURSE THEME & FORMAT**

A concrete case of fragmentary architecture is the <u>architettura di spoglio</u> (architecture of spoils). This is not an architecture of prefabricated romantic ruins, or of post-modern "instant history", but is a way of producing architecture as the assimilation of prior architectural artifacts. Buildings are cultural texts that are generated by assembling fragments, excerpts, citations, passages and quotations. Every building is then both assimilation and a transformation of other buildings.<sup>3</sup>

With the modernization of industry and the shift of physical work from the center of the city to the periphery, large tracts of built environment, once vital to not only a community's sustenance but also to their sense of identity are now abandoned. The 20th century North American city saw the proliferation of suburban development and decentralization of the urban population. The 21st century is ushering in working concepts of sustainable development from manufacturing concepts and design practice to governmental policy. Issues of density, brownfield development and adaptability provide a framework through which ideas of adaptive re-use and urban revitalization can flourish. The opportunity for a new ways of looking at building our environment is now at hand and we must seize this opportunity.

The course will be delivered in lecture format supported by visual presentations. <u>Students are expected to</u> have completed the course readings before each week that they are presented.

<sup>&</sup>lt;sup>2</sup> V. Gregotti, Inside Architecture, Cambridge MA: MIT Press, 1996, p.30

<sup>&</sup>lt;sup>3</sup> Marco Frascari, *Monsters of Architecture - Anthropomorphism in Architectural Theory* (Savage, MD: Rowman & Littlefield, 1991), p. 22.

#### **COURSE OBJECTIVES, PEDAGOGY and ASSIGNMENTS**

- 1. To become familiar with key architectural reuse strategies and projects in both historical and contemporary realms in Canada and abroad.
- 2. To establish a critical framework for understanding these projects with respect to their implications in theory and practice.
- To bring these projects to bear on an understanding of the issues facing contemporary architectural production and the built environment in the 21st century such as sustainability and the growth/ decay of cities.
- 4. To demonstrate the above through active participation in class discussions and presentations, through research by drawing and research in written form through the assignments.
- 5. To prepare students to work independently and to impart and improve research, writing and critical thinking skills.

Architecture is a kind of corporeal time machine where the past, the present and the future are related architecturally through memory.

#### **Overall Schedule:**

Sept. 12	First class.
Sept. 20	Last day for registration. Last day to change courses for fall term courses.
Sept. 30	Embodied Energy Exercise due <u>at 11:00am</u> via CU Learn (as a PDF)
Oct. 10	Statutory holiday, University closed.
Oct 17-21	Individual meetings to define/refine study drawing and essay topics. (time slots posted on CU Learn)
Oct. 24-28	Fall break – no classes
Nov. 4	Essay outline and Bibliography due <u>at 11:00am</u> via CU Learn (as a PDF)
Nov.11	Last day to submit, to the Paul Menton Centre for Students with Disabilities, Formal Examination Accommodation Forms for December examinations
Nov. 25	Architectural Recycling Study Drawing due <u>at 11:00am</u> in the main office (original)
Nov 28-Dec 1	Final Paper tutorial meetings (individual)
Dec. 9	Last day for academic withdrawl from fall term courses
Dec. 9	Last day of fall-term classes. Last class held on Friday Dec.9th (due to Monday holidays)
Dec.21	Final Papers are due <u>at 11:00am</u> via CU Learn (as a PDF).

\*"Contemporary urban space-making at the water's edge" by Richard Marshall (pp.3-14), and "Waterfronts as catalysts for city renewal" by Martin L. Millspaugh (pp.74-85) in *Waterfronts in Post-Industrial Cities.* 

"Etienne-Louis Boulée visits the Tate Modern" by Adolf Max Vogt in Herzog & De Meuron – Natural History

### 11. Canadian Projects – the road ahead (FRIDAY 12/09) \* Final paper due Dec 21 by 11:00am.

RE-built projects and sites in Canada with particular interest in re-inhabitation of industrial sites

- Pulperie, Chicoutimi by Luc Fortin Architect
- The Ottawa Workshops at Bayview Yards
- Waterloo Regional Children's Museum by Levitt Goodman
- Little Brown Jug Brewery in Winnipeg
- where do we go from here? Canadian firms leading the way

#### **GRADING AND REQUIREMENTS**

Evaluation in the course will be based on class participation, the case study and on the final paper. The outline and bibliography will be returned to students before the last class with comments.

Class participation	10%
Embodied Energy Exercise	20%
Essay outline & bibliography	10%
Recycling Architecture Drawing	20%
Final Paper	40%

\*\*\*All projects and papers are to be submitted via CU Learn by 11:00am. Project 1 and 3 original drawings should be submitted in the main office. Late papers or projects will be penalized with a <u>5% grade</u> reduction per day.

#### **Primary Bibliography**

Cadwell, Michael, Strange Details, Cambridge, MA: MIT Press, 2007. Frascari, Marco, Monsters of Architecture - Anthropomorphism in Architectural Theory, Savage, MD: Rowman & Littlefield, 1991 Gregotti, Vittorio. Inside Architecture. Cambridge, Massachusetts: MIT Press, 1996. Kirkwood, Niall, (ed.), Manufactured Sites, New York: Spon Press, 2001 Leatherbarrow, David, Uncommon Ground – architecture, technology, and topography, Cambridge, MA: MIT Press, 2000. Mostafavi, Mohsen and David Leatherbarrow, On Weathering – the life of buildings in time, Cambridge: MIT Press, 2001. Menin, Sarah, (ed), Constructing Place – Mind and the Matter of Place-Making, Routledge, 2003 Middleton, Robin, (ed), The Idea of the City, Cambridge, Massachusetts: MIT Press, 1996. Kate Nesbitt, (ed.) Theorizing a New Agenda for Architecture: An Anthology of Architectural Theory 1965 – 1995, New York: Princeton Architectural Press, 1996. Petrini, Carlo. Slow Food Nation – a Blueprint for changing the way we eat, New York: Random, 2007. Quntrill, Malcolm and Bruce Webb (ed), Constancy and Change in Architecture, College Station: Texas A&M U. Press, 1991. Rossi, Aldo, The Architecture of the City, Cambridge, Massachusetts: MIT Press, 1985.

# School of Canadian Studies - Carleton University CDNS 2400: Heritage Conservation in Canada



from Newfoundland ... en passant par Montréal... to Vancouver

# Winter 2016

Lectures	Wednesday 11:35-1:25 pm in Tory Building TB 210
Tutorials	Wednesday 1:35-2:25 (A1 in RC212, A2 in PH 234), 2:35-3:25 (A3 in LH 118)
Instructor	Susan Ross, Assistant Professor, School of Canadian Studies
Office Hours	Mondays 1:30-2:30, or by appointment
Office	DT 1218, Email: susan_ross@carleton.ca
TAs	james_arteaga@carleton.ca, tonya.temple@carleton.ca

# **Course Description**

Heritage Conservation in Canada in 2016 is in a very different place than it was twenty years ago when Carleton University first started offering related courses in the School of Canadian Studies. If it began with advocacy, today it includes established multi-disciplinary practices, integrated national and local inventories, internationally recognized charters, evolving heritage legislation, and governments and non-governmental organizations with decades of experience. All this makes it possible for students today to go back to the basic questions: why is heritage important, who does it matter to, why do we conserve it and who is involved? Looking forward, what more could heritage conservation achieve, and how should practice in the field look in the coming decades?

There are also now pan-Canadian tools for practice to start from: the *Canadian Register for Historic Places*, which documents what matters, and the *Standards and Guidelines for the Conservation of Historic Places in Canada*, which provides principles and best practices or the "how to". This course, intended for students in the Arts, Humanities, Architecture and Engineering will build on the lessons we can learn from Canadian and international theories, practices, and tools to continue to move the field ahead in stimulating and critical directions.

# **Learning Objectives**

- Understand the basic concepts, issues and approaches that have evolved over time in the heritage conservation field in Canada and elsewhere.
- Identify and explain the concept of heritage value in relation to a broad range of historic places, including buildings, engineering works, cultural landscapes and urban districts.
- Recognize some of the basic documentation, research and evaluation methodology used in the heritage conservation field; and understand roles and stakeholders in different contexts.
- Develop and exercise judgment when examining conservation issues in the community and understanding the values inherent in those judgments.

# School of Canadian Studies - Carleton University CDNS 2400: Heritage Conservation in Canada

# **Course Schedule Overview**

Class 1 (January 6): Introduction
Class 2 (January 13): Heritage Commemoration, Values and Significance
Class 3 (January 20): Heritage Values in Buildings, Landscapes and Archaeological Sites
Class 4 (January 27): Heritage Conservation in Canada: A Historical Overview
Class 5 (February 3): Conservation Charters, Regulations and Codes of Ethics
Class 6 (February 10): Conservation Decision-making and Treatment Types *Winter Study Break*Class 7 (February 24): Conservation Principles and Guidelines
Class 8 (March 2): Stakeholders, Initiatives and Programmes Across Canada – w Jim Mountain
Class 9 (March 9): Emerging issues and themes
Class 10 (March 16): Local Heritage Conservation Case Studies – w Stuart Lazear
Class 12 (March 30): Federal Heritage Conservation Case Studies – w Chris Ouimet
Class 13 (April 6): World Heritage Conservation Case Studies, and Course Review

## **Overview of Student Assessment**

Assignment 1 "What is heritage value?" – worth 10% of final grade Assignment 2 "Conservation charters" – worth 5% Assignment 3 "Conservation treatments" – worth 5 % Assignment 4 "Conservation stakeholders" – worth 10% Assignment 5 "World Heritage in Canada" – worth 10% Mid-term online quiz – worth 25 % Essay "Emerging Issues in Heritage Conservation" – worth 25% Contribution – worth 10%

Assignment deadlines, requirements, and other details, including on electronic submissions through cuLearn, are provided in the section on Assessment below. In most cases, a paper copy should be brought to class or the tutorial. Note that some assignments will be completed during the tutorials.

## cuLearn

This course uses cuLearn, Carleton's learning management system for document sharing. To access your courses on cuLearn go to carleton.ca/culearn. For help and support, go to carleton.ca/culearnsupport/students. Any unresolved questions can be directed to Computing and Communication Services (CCS) by phone at 613-520-3700 or via email atccs\_service\_desk@carleton.ca.

# Communication

Office hours, location, and emails are indicated on page one. Students are welcome to drop by during office hours, but making an appointment ahead ensures you will be seen.

<u>Email</u>: The instructor will communicate with you via email using your Carleton account. General emails will be sent out using cuLearn. Students should carefully read all emails from the instructor. These may include additional information about assignments, readings or changes to schedule and classroom arrangements. Please acknowledge or answer any email that asks a question. Please notify the instructor promptly of email problems and provide an alternate as back up if needed. Send an email at least two hours before class if it pertains to your expected absence. Emails requesting information about assignments may sometimes be answered on the cuLearn Forum. An email will normally be answered within 24 hours, except possibly on Saturday or Sunday.

# School of Canadian Studies - Carleton University CDNS 2400: Heritage Conservation in Canada

# Course format and classroom protocol

The class includes lectures and discussions of themes and student findings from related assignments. There may also be three or four guest speakers later in the course. Students are expected to read up about the speaker and prepare questions to show interest in their experiences. Students will be encouraged to limit the use of electronic devices to note taking. Presentations by the instructor will be posted after the class in a 6-slide per page format, but since many slides include images that are discussed at length, note taking will be important. If you miss a class, it is your responsibility to ask a classmate about what you missed. This is especially important when new assignments are introduced. You are encouraged to have a couple of class buddies, who notice if you are not there, and take extra copies of handouts, or provide you with updates. The instructor appreciates polite behavior and expects all students to show courtesy and respect for each other.

<u>Tutorials</u>: This course makes active use of the tutorials, led by teaching assistants and/or the instructor, to advance student learning in assignments, discussions of readings and presentation of specific learning aids. Attendance is required, and will count towards your contribution grade.

## References – see also the Readings and Online Resources listed at the end

Two basic Canadian online resources will be used throughout the course:

- The Standards and Guidelines of the Conservation of Historic Places in Canada, 2nd edition, Parks Canada, 2011. http://www.historicplaces.ca/media/18072/81468-parks-s+g-eng-web2.pdf
- Canadian Register of Historic Places. <u>http://www.historicplaces.ca/en/pages/about-apropos.aspx</u>

These two Ontario-based resources will also be used:

- Ministry of Tourism, Culture and Sport, *Ontario Heritage Tool Kit*, <u>http://www.mtc.gov.on.ca/en/heritage/heritage\_toolkit.shtml</u>
- Mark Fram, Well-Preserved: The Ontario Heritage Foundation's Manual of Principles and Practices for Architectural Conservation, Boston Mills Press, 2003, http://www.heritagetrust.on.ca/Resources-and-Learning/Free-publications/Well-Preserved.aspx

The instructor will from time to time make available additional references to follow up on class lectures, or provide references to current news items and sources of information. The remaining readings will also be available online or through the university library. Students are encouraged to become familiar with the main journals and popular publications on heritage conservation.

A session with librarian Martha Attridge-Bufton will be organized for one of the tutorials.

CU library subject guides:

- Canadian Studies
   <u>https://library.carleton.ca/research/subject-guides/canadian-studies</u>
- Heritage Sites, Parks and Conservation Areas
   <u>https://library.carleton.ca/research/subject-guides/heritage-sites-parks-and-conservation-areas-public-policy-resources</u>
- Ottawa Resource Room
   <u>https://library.carleton.ca/research/collection/ottawa-resource-room</u>

# ARCC CIVE ENVE

# Technical & Professional Core Courses for Conservation & Sustainability



# CANADIAN MODERN HOUSE ANALYSIS: INTERPRETATION & INTERVENTION



Arthur Erickson, **Smith Residence 2**, West Vancouver, B.C (1964-66)

Robert Hassell, Hemsworth House, N. Vancouver, (1969)

Barton Myers, **Myers house**, Toronto Ontario (1971)
#### List of CANADIAN MODERN HOUSE ANALYSIS:

- 1.- Raymond T. Affleck, Klassen Residence, Mont St-Hilaire, Quebec (1951-53)
- 2.- John di Castri, Dunsmuir Residence, Victoria (1951)
- 3.- Cummings & Campbell, Joey Smallwood Residence, Newfoundland (1958-60)
- 4.- Jack Long, Roenish Residence, Calgary, Alberta (1961-62)
- 5.- Roger d'Astous, Maison de Demain, Boucherville, Montreal (1961-62)
- 6.- James Strutt, Kemper House, Briarcliffe, Ottawa (1962)
- 7.- Arthur Erickson, Smith Residence 2, West Vancouver, British Columbia (1964-66)
- 8.- Gustavo da Roza, **Sokolov House**, Winnipeg (1964)
- 9.- Ronald J. Thom, Fraser Residence, Toronto, Ontario (1968)
- 10.- Robert Hassell, Hemsworth Residence, North Vancouver, British Columbia (1969)
- 11.- Barton Myers, Myers house, Toronto Ontario (1971)
- 12.- Jim Strasman, Wandiche House, Peterborough, Ontario (1979)
- 13 .- Alfred J. Hennessey, Alfred Hennessey Residence, Charlottetown, PE (1980)

#### **COURSE TITLE: Conservation in Practice I**

- Course Number: ARCC 3301
- Term and Year: Fall 2016
- Days and times of meetings: Mondays and Wednesdays. 1.30 to 5.30
- Room: 517
- Professor: Mariana Esponda (Mariana\_esponda@carleton.ca)

#### INTRODUCTION

The **13 distinctly modern houses** chosen designed between the 1950s to 1980s represent several diverse regions of Canada. Some of the architects are the most prolific and best known in Canada and elsewhere, but others architects have a more regional reputation. Canadian modern houses were designed with an intimate awareness of international developments. Most of the architects were looking for innovation, design according to modular structural system and in the interest to adapt new forms of technology and new materials. Another characteristic of this period is the relationship between the site and the human body.

How each house reflects the intersection of culture, politics, economics, and aesthetics as these forces are played out in distinct social settings and distinct times.

How the houses represent the particular landscape? Maritimes, Quebec, Ontario, Prairies, the Rockies and the West Coast. How the Canadian Modern Architects interrelates?

Each house will be an exercise of interpretation, beginning with the examination of the forces that impact on the site (topography, orientation, views, winds, vegetation, structure, etc.) and the requirements of the clients. **Part I** is a creative investigation on the architect's imaginative response to a given house, looking how the modern architectural principles were applied: textures, sounds, shapes of a specific landscape and the functional requirements. Specific research the conceptual themes on the house. **Part II** will be the construction of a model (could be your house, site or a particular feature inside your house (ceiling, wall, furniture, etc), we will define which element during the research process. **Part III** will be your critical analysis on how you could improve your house, what does the house need? Your proposal could be a conservation, an adaptive reuse or an addition. The decision will come from your house interpretation. The intervention part will be describe after finish Part 1.

## **COURSE OBJECTIVES**

The **main objective** is to bring attention in some of the most significant Canadian modern houses from the period and in doing so increase the interest on this type of architecture and identify the distinctly Modern Architectural Heritage that Canada has.

- Critically examine regional Canadian architecture, in terms of the PROCESS: look for sketches & comparative design solutions.
- Seek to raise awareness and to understand better structures and landscape from the Modern Movement in Canada
- Identify key people (architects, engineers, landscape architects, artists, planners, etc) that developed a unique Canadian modern style
- How the architect respond to the particular landscape?
- Exhibition: The best projects are going to be exhibit in the Strutt House, Gatineau during the celebration of the 150 Anniversary. You will learn how to design the panels for the presentation. Time and date to confirm during winter 2017

Modernist heritage issues. Each student needs to study the following elements in their house.

- History of the architect, most representative projects, influence of other modern architects. Still alive tried to contact.
- Owners & users
- Context: Relationship to older heritage, site analysis
- Concept: Main feature of the house

Azrieli School of Architecture & Urbanism

# **ARCC 3501** FUNDAMENTALS OF CONSERVATION and SUSTAINABILITY



St. Pere de Corbera, Spain (2005)

#### **COURSE DESCRIPTION**

Course Number: ARCC 3501

Term and Year: FALL 2016

Days and times of meetings: Thursdays 2.35 to 5.25

Professor: Mariana Esponda (Mariana\_Esponda@Carleton.ca)

**Office Hours: Thursday** 1:30 – 2:30. All appointments to be organised by e-mail.

**CREDITS:** 0.5

LOCATION: Room 209

Heritage conservation means **STEWARDSHIP**, defining methods of extending the life of buildings, understanding the value of maintenance and repair and by applying appropriate adaptive reuse.

There are different approaches to the concept of conservation, but I propose that recognizing architectural strategies which were used in the past and which ensured that the buildings are still today could be one way **to renew the value of traditional knowledge** and to **incorporate it into contemporary buildings**. Through readings, discussions and projects, students will learn basic concepts, guidelines, and methods currently being used to preserve and to make adaptive reuse compatible with the existing buildings. The course addresses questions like: why to conserve (values & statements of significance); how to conserve (minimal intervention, tangible and intangible heritage, cultural landscapes); historic research methods (sources: oral and documentary research) and the stages of a conservation project.

It will also analyze some solutions for an energy retrofit of historic building, understanding concepts such as embody energy, life cycle, durability, indigenous materials, passive measures, daylight and natural ventilation. An abandoned structure can be transformed into a building the local community can feel proud, enhancing the quality of the environment and the interest of the area, and often, providing employment possibilities and sense of place. **The most sustainable building is the one that already exist.** 

This course introduces key discipline-specific content early in the curriculum to raise awareness of the **VALUES** for historic buildings and introduces preliminary design exercises on energy efficiency solutions for historic buildings. By several field sessions and case studies, students will debate the potentials and limitations of the heritage conservation field.

# FUNDAMENTALS OF CONSERVATION & SUSTAINABILITY **ARCC 3501** Fall 2016 MARIANA ESPONDA



**COURSE OBJECTIVES** Upon completion of this course students will:

1. Identify **key precedents and terminology** associated with conservation, minimal intervention, energy efficiency, cultural heritage impact statement and adaptive reuse.

2. Understand the **values of the site** (heritage, socio-cultural, urban, spatial and environmental).

3. Demonstrate competency in **visual representation** with an emphasis of **heritage conservation strategies** and decision making on architectural concepts.

4. Understand the **three scales: site, building and detail** in a conservation project.

5. Be aware of the concept of sustainability in architecture by analyzing four different aspects that cannot be separated: the **natural**, the **socio-cultural**, the **economic**, and the **technical practices**.

6. Students are expected to explore a variety of approaches to conserve the built and natural environment and how to assess sustainability.

#### METHOD OF INSTRUCTION:

- This course is taught as a discussion seminar in weekly lectures. Students are expected to come to class prepared to discuss mandatory readings or assignments.
- Heritage case studies are used as a way to explore issues in-depth and integrate different approaches of architectural conservation and sustainability.
- During the course, two guest speakers will come to share their knowledge on the practice of architectural conservation. Dates to be confirmed

#### **METHOD OF EVALUATION:**

Assignment 1-	September 14 drawing @ 2pm	(5%)
Directors' Project: "THE NEXT 150"	September 15 essay @ 2.30	(5%)
Assignment 2- Case Study in Ottawa	October 13 @ 2.30	(25%)
Adaptive reuse, restoration & addition		
Assignment 3- power point presentation	November 10 @ 3.30	(20%)
Energy efficiency Sustainability		
Term paper	December 1 @2.30	(40%)
Participation & Assistance in class		(5%)

#### Assignment 1.- "The next 150" (5+5= 10%)

- The drawing will represent a vision of how Ottawa might reflect the CHALLENGES and opportunities of the next 150 years. "You will make a single drawing, looking out through one of the windows of your building, one hundred fifty years into the future. If your building was constructed in 1868, you are presenting a view situated in 2018; if your building was constructed in 1990, you are looking into the year 2140, etc. Your vision may indicate your intuitions and/or desires about ecological, technical, spatial, urban, and political developments, the foreground should include or allude to 'window.' You will write a two-sentence caption for your drawing.
- The essay: Analyze in detail your SPECIFIC SITE identifying the character defining elements: urban, circulation (pathways, roads), landscape, buildings (scale, massing materials) and the relationship to surrounding elements. Specify which values have been or haven't been respected on the 150 years. The essay format will be no more than 1000 words (3 pages); add photos and/or images after.

#### Assignment 2.- Cases Study in Ottawa. Category: Adaptive reuse, restoration & addition (25%)

**Part 1**-By several sketches the students will identify the character defining elements, which are the heritage values of each building: urban, socio cultural, design and landscape, and the main heritage strategy and use. As well as they will measure one detail of the building. They will perform the heritage impact statement of each building. **Part 2**- Develop a DESIGN CONCEPT for a new intervention (i.e. building & landscape) and demonstrate how your design <u>respects, enhances, adds value</u> to your specific site character defining elements and to the overall context. The drawing will be 11x17.

#### Assignment 3.- Heritage & Sustainability (20%)

Students have to research **what & how** can heritage buildings teach us about modern energy efficiency, analyzing the criteria, materials & strategies. One Case Study. Power Point Presentation no more than 10 minutes, on November 10.

#### Term paper.- (40%). Students are welcome to discuss their in progress papers with the Instructor

The essay can't be more than 6 pages (1500 words) and will focus in one case study. One detail drawing & images should be placed after the written part with the bibliography. Students have to investigate several questions on an adaptive **re-use** case study and their relationship with sustainability. Done in the last 10 years. They will analyze the criteria of the restoration and the heritage values of the place, requirements of the new building & place, studying the methodology of the intervention, criteria for the selective materials, sustainability issues. It has to be submitted on the last day of class (December 1st). Essays submitted late will receive a 5% deduction per day.

#### Plagiarism is grounds for automatically failure the course and will be reported to the University.

\*\*If any students miss more than 3 classes, without a medical report, they can fail the course. Please, send me an email if you cannot assist to the class.

\*\*The content of the course could be modified if the students and the professor agreed to study another topic that will be related to the general objectives.

#### CuLEARN

This courses use cuLearn, Carleton's learning management system for document sharing.

# ARCC 4909: HONOURS PROJECT (4<sup>th</sup> year C&S)

Term: Winter 2014 Instructors: Mariana Esponda, Professor, B. Arch, Ph.D. <u>Mariana Esponda@carleton.ca</u> Timetable: Monday & Wednesday 1:30 to 5.30pm Credits: 1.0 Location: Fishbowl room

# COURSE OUTLINE

This course aims primarily to **develop the student's critical thinking** regarding design in the context of heritage buildings. The students are going to work in two projects.

**<u>First</u>** in the International Student Design Competition organized by ACSA title Preservation as Provocation, with the project **FARNSWORTH HOUSE: NEW** 



**VISITOR EXPERIENCE**. This competition challenges students and multi-disciplinary teams in architecture, preservation, landscape architecture, planning, engineering, sustainable design and other cross-disciplines, to create a new Visitor Center and approach experience for the iconic Farnsworth House by Mies van der Rohe in Plano, Illinois.

The second project will be the adaptive reuse of the Deschâtelets Building as the Old Ottawa East Community Center. In 1885, the Missionary Oblates of Mary Immaculate built Saint Joseph Scholasticate in Ottawa East. It is a vast structure that faces Main Street and stretches along the Rideau River. The Scholasticate housed young Oblates who studied philosophy and theology with a view to becoming priests. The Deschâtelets Building, which included a small infirmary and provided health care services to Oblate priests and brothers, offered rooms for priests, brothers, fathers, sisters and laymen who were studying at Saint Paul University.

# GENERAL COURSE OBJECTIVES: (They could modify between the 2 projects)

The goal is to learn how we can merge new uses and contemporary sustainable design respecting existing historical structures. Elements of architectural design will be introduced together with a discussion of the added complexity created by historic buildings and best practice to respect historical values.

- 1. Understand the values of the site: heritage, spatial and environmental
- 2. Identify the conservation/ architectural concept and demonstrate how it protects and enhances the site's values.
- 3. Demonstrate how their design successfully addresses the client's program requirements and meets their needs.
- 4. Have honed their presentation skills, especially in the area of graphic communication (hand drawings will be required)

# STRUCTURE OF THE COURSE

The course will run in the manner of a studio, with class time on **Mondays and Wednesdays** devoted to "desk crits", lectures, site visits and design work. For the first project –**Farsnworth House**- students could work as a group (max. 2). In the second project –**The Oblate**- each student will develop their own concept design. During some parts of the projects students are going to work in teams (site model, building code analysis, heritage impact assessment, etc). Presentation requirements will include

standard orthographic projections (plans, sections & elevations) as well as 3 dimensional representations (axonometric, sketches and models)

The designs will be developed incrementally with the following criteria for each phase.

- Site analysis and values (landscape, heritage and spatial)
- General disposition of the programmatic elements
- Conceptual approach: heritage strategy
- Floor plans (including aerial views), Section, Elevation, Sketches, Axo., etc.
- Explanation of how the design embodies their concept (500 words)
- Construction materials and finishes.
- Possible Cost estimates (Oblate project only)

# ATTENDANCE

Full participation in the course is mandatory. 4 or more unexcused absences may be ground for failure.

#### PROJECT 1:

# FARNSWORTH HOUSE: NEW VISITOR EXPERIENCE Introduction (from the competition brief)

Solutions are encouraged to respect the Farnsworth House and site while creating an appropriate orientation and visitor services building(s) that prepares the guest for the Farnsworth experience. Solutions are encouraged to explore the relationship between historic preservation and contemporary design, landscape design, the changing climate and development patterns that result in the worsening flooding conditions, off-grid energy consumption, land use and habitat protection, heritage tourism and the design of public space. The goal of this competition is to explore how the collaboration between existing historic buildings and new design can produce uniquely thoughtful new places that negotiate the relationship between the past and the present. The solution should celebrate the past while optimistically addressing the aesthetic, cultural, spiritual, economic, practical and climactic challenges of our times.

#### Schedule

March 30, 2016Registration DeadlineMay 11, 2016Submission DeadlineJuly 2016Prize winners chosen by the design jurySummer 2016Announcement of competition winners

#### Awards

The design jury will convene in July 2016 to select winning projects and honorable mentions. Winning students, their faculty sponsors, and schools will receive cash prizes totaling \$10,000, with distribution as follows:

First Prize Student/Team \$3,500 Faculty Sponsor \$1,500 Second Prize Student/Team \$2,250 Faculty Sponsor \$750 Third Prize Student/Team \$1,500 Faculty Sponsor \$500

#### GRADING

Project 1: 45% Project 2: 45% (final presentation) Participation and improvement: 10%

ACCREDITATION AND PROFESSIONAL EXPERIENCE PROGRAM ACCREDITATION Specifically, this course meets the following criteria for: A1- A6,A7-A9, B1-B5, B9, C4 and D2

#### CARLETON UNIVERSITY DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING

## COURSE OUTLINE CIVE 2200 - Mechanics of Solids I (Summer 2016)

The objective of this course is to introduce students to the basic theories in mechanics of materials of solid bodies that are relevant to structural analysis and design.

Instructor: Jack van den Berg M.Eng., P.Eng. Office: 3054 MC. Phone: 613-520-2600 ext. 3896. Jack Vandenberg@Carleton.ca Office hours: Mondays and Wednesdays 5:00 pm – 6:00 pm

## Lectures

Mondays and Wednesdays 6:00 pm - 9:00 pm.

Teaching Assistants Contact Information and Office Hours: When finalized will be posted on CuLearn.

## Textbook

Russell C. Hibbeler, Mechanics of Materials, 10'th edition, Prentice Hall, 2014, ISBN 10: 0-13-325442-9, ISBN 13: 978-0-13-325442-6

## Course Format (lectures + 3 lab sessions and 8 PA sessions)

- Lectures are structured to go over the theory first, and then solve a number of relevant problems.
- There will be either a lab or a PA session during each 3 hour session.
- The Lab is located in room 1084MC (inside room 1060MC in the basement). The labs will be completed in pairs with one lab report per pair. Lab reports are due one week after your lab at the beginning of your PA session. **NOTE: There are no formal lab reports required.**
- Recommended textbook problems to solve will be provided on cuLearn.
- The PA sessions are mandatory and there will be six quizzes during the sessions (ie, every PA session except the first and last). Students are encouraged to ask any questions to the TA before the quizzes. Students can work in groups of two or three people.
- Mid-term examination Saturday May 28/16: 9:00-11:00 am. Once the midterms are handed back, students have a maximum of one week to resolve any issues on their exam.

10%

• Final Examination – to be scheduled.

#### Grading

- 5 Laboratory reports:
- Mid-Term Exam: 25%
  6 Quizzes in PA sessions: 15%
- Final Examination: 50% TOTAL: 100%

#### How to be successful in this Course:

- 1. Check cuLearn frequently, including your marks.
- 2. Purchase a textbook.
- 3. Print the lecture notes and bring them to the lectures.
- 4. Attend all lectures and tutorials. Attempt the recommended problems in advance of each PA session.
- 5. Do the recommended problems weekly so you don't get behind.
- 6. Attend the labs and hand them in on time.
- 7. Prepare well for the mid-term and final examination.

Lab	Laboratory Topic (Note: there are lab handouts and short video links that describe each lab – check cuLearn)
1	Behaviour of engineering materials: Ultimate strength and Load-deformation characteristics
2	Estimation of the elastic properties of materials using strain measurement techniques (strain gages)
3	Load-deformation behaviour of beams (Flexure)
4	Stress-strain relationship of thin-walled cylindrical pressure vessels

5 Behaviour of axially loaded compression members

Lecture #	Tentative Lecture Topic
1	Introduction; Stress; average normal and shear stress; allowable stress; Strain; normal and shear strain
	Mechanical properties; stress-strain relationship; Hooke's Law.
2	Poisson's ratio; shear stress-strain relationship, other behaviours; Axially loaded member- statically determinate
	and indeterminate; St. Venant's Principle; Principle of Superposition; thermal stress; stress concentration.
3	Bending; beam static – beam reactions; axial, shear and moment diagram – direct and graphical method.
4	Beams in bending; flexure formula; moment of inertia; unsymmetrical bending.
5	Unsymmetrical bending - continue; inelastic bending; shear stresses in beams: Transverse shear; Shear formula.
6	Shear flow in built-up and thin-walled members; Beam deflection; elastic curve.
7	Deflection by integration; Deflection by moment-area method; Principle of superposition.
8	Thin-walled pressure vessel - Generalized Hooke's Law.
9	Torsion of circular members; torsion formula; power; angle of twist; statically determinate and indeterminate; thin-
	walled tubes; Combined loading.
10	Columns; elastic buckling - Inelastic buckling - Design of columns.
11	Stress transformation; principal stresses; maximum in-plane shear stress; Mohr's circle.
12	Strain transformation; Mohr's circle; Strain rosettes; Theories of failure.

Notes:

- 1. Attendance to all tutorials and labs (including submitting lab reports) is mandatory and a requirement for a passing grade. Absence must be accompanied by a formal explanation or special permission from the instructor. If you are sick, a doctor's note is required. Print the following form from the registrar's website and have it completed by your physician: <a href="http://www1.carleton.ca/registrar/ccms/wp-content/ccms-files/med\_cert1.pdf">http://www1.carleton.ca/registrar/ccms/wp-content/ccms-files/med\_cert1.pdf</a>
- 2. Switching between labs or between PA sessions is not permitted, as there is limited space.
- 3. All grades for the labs, quizzes and midterm must be resolved within one week from their return.
- Students who perform poorly during the term (term work less than 33%) will be assigned the grade FND (Failure No Deferral). To pass the course, a minimum mark of 33% in the final exam is required <u>and</u> a minimum of 50% of both term work and final exam combined. The final examination is for evaluation purposes only, and the paper will not be returned.

#### Academic Accommodations for Students with Disabilities

The **Paul Menton Centre** for Students with Disabilities (PMC) provides services to students with Learning Disabilities (LD), psychiatric/mental health disabilities, Attention Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorders (ASD), chronic medical conditions, and impairments in mobility, hearing, and vision. If you have a disability requiring academic accommodations in this course, please contact PMC at 613-520-6608 or <u>pmc@carleton.ca</u> for a formal evaluation. If you are already registered with the PMC, contact your PMC coordinator to send me your *Letter of Accommodation* at the beginning of the term, and no later than two weeks before the first mid-term exam. After requesting accommodation from PMC, meet with me to ensure accommodation arrangements are made. Please consult the PMC website for the deadline to request accommodations for the formally-scheduled exam at <a href="http://www2.carleton.ca/pmc/new-and-current-students/dates-and-deadlines/">http://www2.carleton.ca/pmc/new-and-current-students/dates-and-deadlines/</a>

You may need special arrangements to meet your academic obligations during the term. For an accommodation request the processes are as follows:

**Pregnancy obligation**: write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details visit the Equity Services website: <a href="http://www2.carleton.ca/equity/">http://www2.carleton.ca/equity/</a>

**Religious obligation**: write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details visit the Equity Services website: <a href="http://www2.carleton.ca/equity/">http://www2.carleton.ca/equity/</a>

You can visit the Equity Services website to view the policies and to obtain more detailed information on academic accommodation at <a href="http://www2.carleton.ca/equity/">http://www2.carleton.ca/equity/</a>

Instructional Offences: Please consult the university undergraduate calendar for definitions and penalties.

# **Civil and Environmental Engineering**

### **CIVE 2700 Civil Engineering Materials A**

## Course Outline Fall 2015

Hours per week

Lecture./Lab/ Tutorial. 3 1.5 1.5

The main learning objectives of this course are the following: introduce students to material science (atom structure, crystallography, imperfections); and to discuss the characteristics, properties, behaviour, and use of Civil Engineering materials (steel, concrete, asphalt, wood, polymers and composites). The course will consider their specifications, physical, chemical, thermal and mechanical properties. The students will also learn about fatigue and corrosion of metals.

### **Instructor:**

Dr. John Gales Office: 4206 Canal Building Office hours: open door policy (or by appointment). Email: john.gales@carleton.ca

When emailing the instructor/teaching assistants please type "CIVE2700-Course query" as your subject header and use your Carleton university account. Course feedback at any time is welcomed.

#### Section A;

Lectures: Monday (10:05am-11:25am); and Wednesday (10:05am-11:25am) Lectures room: Tory 340

#### **Teaching Assistants:**

There are six Teaching Assistants for this course. They will be announced in lecture.

#### **Textbook:**

• Materials for Civil and Construction Engineers, Michael S. Mamlouk and John P. Zaniewski. Pearson Prentice Hall, 2011.

#### **References**:

- Material Science and Engineering, W.D. Callister, 9<sup>th</sup> Edition, Wiley, 2014 (available online at <u>http://www.campusebookstore.com/wiley/carleton/</u>)
- Somayajji, S. Civil Engineering materials, Prentice Hall, New Jersey, 2002.

#### Website:

• Lecture notes, laboratory notes, assignments and solutions will be available on-line at CULearn.

# **Evaluation:**

- Lab reports: 20%
- Assignments: 10%
- One midterm: 20%
- Final Exam: 50%

# **Important notes:**

- Attend the Section (A or B) in which you are registered. Switching between sections is not permitted as midterms and assignments will be different.
- The notes supplied on the website are intended to serve as complement and not replacement to regular class attendance.
- The schedule of the topics covered may not be exactly as shown in the course weekly calendar. The instructor may alter the course weekly calendar and schedule slightly during the term. The up to date outline will be posted on CULearn.
- Attendance to all labs (including submitting lab reports) is mandatory and a requirement for a passing grade. Absence to labs must be accompanied by a formal explanation (doctor's note for example).
- Switching between labs or between tutorial sessions is not permitted, as there is limited space.
- To pass the course, a minimum mark of 50% in the final exam is required.
- The midterm is tentatively scheduled during week 7. The date and location will be announced in class. There will be no alternate make-up date for the mid-term examination.
- If you miss the mid-term examination (or leave the examination), due to documented illness, the 20% will be added to the weight of your final exam. Otherwise, your mark will be zero.
- If you miss the mid-term examination due to prior arrangement as documented with approval as legitimate from me, the 20% will be added to the weight of your final exam. Otherwise, your mark will be zero.
- The date for the final exam will be announced by the university.
- Marked course work will be returned during the tutorials.
- The final examination is for evaluation purposes only, and the paper will not be returned or made available to students after it is marked.

# Late policy

All students are expected to complete their assignments and labs in a timely fashion. All late assignments and lab reports should be given to the instructor. Late assignments and lab reports will be subject to a reduced grade of 10% of the maximum grade per day late (where weekends count as two days). A mark of zero will be applied if the assignment or lab is submitted after the solutions have been posted.

# **Carleton University Department of Civil and Environmental Engineering**

# CIVE 3204 Introduction to Structural Design 2015 Fall

Hours per Week Lecture Lab/P.A. 3 3/2

Week	Торіс			
1-2	Building Systems and Structural Form			
	<ul><li>Structural form, linear members, planar systems, shell structures, tension structures.</li><li>Types of buildings</li></ul>			
	<ul> <li>Structural framing for buildings, industrial buildings, multistorey buildings</li> </ul>			
3-4	Design Philosophy and Design Process			
	<ul> <li>limit states design</li> </ul>			
	<ul> <li>codes and standards</li> </ul>			
	design process			
	<ul> <li>loads, load combinations and load factors</li> </ul>			
5-6	Dead and Live Loads			
	• use and occupancy			
	• tributary area			
	<ul> <li>live load reduction factor</li> </ul>			
7-8	Snow, Ice and Rain Loads			
	• basic snow load, accumulation, drift			
	<ul> <li>load distribution and combinations</li> </ul>			
	• ponding			
9-10	Wind Loads			
	reference velocity pressure			
	<ul> <li>load distribution and statically equivalent forces</li> </ul>			
11-12	Earthquake Loads			
	<ul><li>objectives of earthquake-resistant design</li><li>seismic regionalization</li></ul>			

• evaluation and distribution of lateral seismic forces.

# **Required Texts**

- 1. National Building Code of Canada, 2010, National Research Council of Canada, 2010.
- 2. (Supplement to the National Building Code of Canada, 2010) *User's Guide NBC 2010 Structural Commentaries (Part 4 of Division B)*, National Research Council of Canada, 2010.

# **Reference Texts**

- 1. Handbook of Steel Construction, 2010. Canadian Institute of Steel Construction, 10<sup>th</sup> Edition.
- 2. Kulak and Grondin, 2010. Limit States Design in Structural Steel, 9<sup>th</sup> Ed., CISC.
- 3. CSA Standard S16-14. Design of Steel Structures.
- 4. CSA Standard CAN-A23.3-14. Design of Concrete Structures.

# **Marking Scheme**

Total	100%
Final Examination	50%
Mid-Term examination, <b>3 November 2015</b>	25%
Assignments	25%

# Instructor

Professor D.T. Lau, 3436ME Office hour : Tuesday 10:15 – 11:15 hr. Thursday 13:00 – 14:15 hr.

# **Teaching Assistant**

I. Shaheen A. Abdelkarim H. Keelson P. Liyanage

D.T. Lau, 3 September 2015

# Building/Room: Architecture Building 204

Date: Thursdays @ 8:35-11:25 AM (3 hours), January 7<sup>th</sup> – March 31<sup>st</sup>, 2016

### **Course Description (from the Calendar):**

The course centers around the impacts of the environment on architecture as well as the reverse impacts of architecture on the environment. This includes topics such as, ecologic footprint, energy consumption/efficiency, water conservation, air quality, waste divergence and generation, designing with the environment, renewable energy, effective siting and landscape, passive solar energy, natural lighting - all related to the built environment, with a focus on building reuse, heritage and conservation.

The following is an outline of the Architecture and the Environment course. The course is intended as a broad introduction to field of green buildings and sustainability. The course is based on a 12 week schedule, with one three hour class per week. Most classes will be separated into two parts; a lecture and a workshop. Some classes will include guest lecturers. Students leaving this course will have an understanding of the principles of sustainability, as they apply to buildings. The course will also serve as an introduction to other more intensive courses offered at Carleton.

## Textbook (Optional):

1. Sustainable Construction: Green Building Design and Delivery, 3<sup>rd</sup> Edition by Charles J. Kibert

Week	Topics	Comments
1. (Jan. 7)	Introductions Overview of course	
2. (Jan. 14)	Climate Change & Watersheds, communities and Ecology	
3. (Jan. 21)	Green Building Rating Systems	Greg Ross (Windmill)
4. (Jan. 28)	Sustainable Sites	
5. (Feb. 4)	Hydrology & Water use in bldgs	
6. (Feb. 11)	Energy and sustainability	Liam O'Brien tbd Midterm review
7. (Feb. 18)	Reading Break	

## Course schedule:

Contract Instructor: Jamie McKay, P.Eng., LEED Fellow

8. (Feb. 25)	Mid term test lecture	Midterm test (1 hr) lecture
9. (Mar. 3)	Charrette (the Pit)	
10. (Mar. 10)	Building Materials	
11. (Mar. 17)	Indoor Environments	Gary Martin (ISG)
12. (Mar. 24)	Innovation in Green Design	Final review
13. (Mar. 31)	Final Exam	Final Assignment Final Test (2 hours)

# Basic Outline of each Class:

90 minutes: lecture 90 minute: lab work (exercise, charrette, etc.)

# Course Marking Overview:

Test/Assignments	Marks	Brief Description
Workshops	10%	<ul> <li>In class exercises in groups (approximately 5)</li> </ul>
Assignment 1	20%	<ul><li>Similar to exercises in class</li><li>Due at midterm</li></ul>
Charrette	5%	• In class exercise in groups
Midterm test	20%	• Test in class (60 minutes)
Final Assignment	20%	<ul><li>Similar to exercises in class</li><li>Due at final exam</li></ul>
Final test	25%	• Test in class (60 minutes)

# **Green Building Design (GBD) – ENVE 4105**

# "Sustainable building design from back-of-the-envelope calculations to dynamic simulation"

Winter 2016, Lectures: Thursdays, 11:35-14:25

Tutorials and Labs: CB5301; various times (see your schedule)

Instructor: Prof. Liam O'Brien, PhD, <u>Liam\_OBrien@carleton.ca</u>, CB 5208; office hours: Mondays 12-2 or by appointment <u>only</u>. TAs: Aly Abdelalim (<u>alyabdelalim@cmail.carleton.ca</u>; CB 4207; office hours Wednesdays 12-2pm or by appointment <u>only</u>.) Shawn Shi (<u>ZixiaoShi@cmail.carleton.ca</u>; CB4207; office hours Tuesdays 1-2pm or by appointment <u>only</u>.)

# **Course description**

The course provides an overview of green buildings and their systems and technologies. The concepts will be supported with both theory and case studies. Emphasis will be placed on good design practice, the integrated design process, and quantitative design. A major objective of the course is to provide engineering students and architecture students an appreciation of their counterparts' roles in the building design process. The tutorial component will involve a lesson on using a different software tools and/or example problems. Several guest lectures and a possible tour will supplement the regular lectures.

All evaluation (assignments, exams) will be in SI units. However, it would be beneficial for students to be comfortable with basic conversions to IP units (e.g., inches and °F).

# Required background knowledge

All students should be familiar with basic heat and mass transfer, trigonometry, basic calculus and algebra, and use of Excel or similar spreadsheets.

# Learning objectives

After taking the course, students should be familiar with and be able to apply concepts related to:

- Calculations and analysis for design of buildings and their subsystems at a wide range of details, from back-of-the-envelope to detailed simulations.
- Climate, weather, and site selection
- Building information modelling (BIM) and building performance simulation (BPS)
- Solar geometry and energy
- Lighting and daylighting
- Building envelopes, fenestration, and shading
- Passive techniques
- HVAC systems and Building controls
- Occupant comfort (thermal, visual, acoustic)
- Indoor air quality and natural ventilation
- Occupant behaviour
- Building-integrated renewable energy systems
- Embodied energy
- The integrated design process (IDP)

By the end of the course, students should be able to bring any green building-related aspects to conceptual design.

# Evaluation

Assignments	25%
Design project	25%
Mid-term exam	20%
Final Exam	30%

# **Course Materials**

The primary reference material will be posted to cuLearn. Course notes (slides and hand-written on the blackboard) will supplement these. Blackboard notes will not be posted on cuLearn.

Additional reference texts include:

- The ASHRAE Fundamentals Handbook. The SI-unit version is highly favourable. 2013 edition is available from the library website (can save PDFs and print them).
- ASHRAE Stds. 55, 62.1, and 90.1

# Readings

1-2 readings will be assigned to be read <u>before</u> the weekly lectures. These will be discussed in class and are included in the examinable scope.

# Assignments

They are due at the beginning of the lecture. Late assignments will be accepted but at a reduced mark, at a rate of 1 percentage (of final grade) point per weekday. <u>Assignments are to be completed individually (unless express permission is given otherwise)</u>; evidence of direct copying or plagiarism will be treated as cheating and will be handled according to <u>university policy</u>.

# **Design project**

Students will be assigned to groups formed by the professor to ensure distribution of all disciplines. The project shall be structured such that students apply the concepts taught to a real building design (specification in a separate document). The project will contain written and oral components. Oral presentations will occur in the last few lectures.

# Exams

The mid-term exam will occur after reading week and will cover all material taught up until the exam. The final exam covers all material of the course and will take place during the formal exam period. For both exams, students must bring a calculator, pen, pencil, eraser, and a single-sided 8.5 by 11-inch formula sheet. Formula sheets may not contain examples, and theory other than formulas.

# Building Design/Analysis Software (freely available and installed on lab computers for tutorials)

A major component of the course will be to learn and use a number of freely-available tools (mostly Window-based). Students are also encouraged to install them on their personal computers if possible.

# Academic integrity

Students should familiarize themselves with Carleton's Academic Integrity Policy (available here: <a href="http://www1.carleton.ca/studentaffairs/academic-integrity/">http://www1.carleton.ca/studentaffairs/academic-integrity/</a>). The professor has a zero-tolerance policy.

# ARCN

Representational Documentation & Techniques Core Courses for Conservation & Sustainability

Department of Civil and Environmental Engineering / Azrieli School of Architecture Carleton University

# **Historic Site Recording and Assessment**

# CIVE 3207 / ARCN 4100

#### 2016 - 2017 Winter Session

#### Instructor:

Mario Santana Quintero, e-mail: <u>Mario.santana@carleton.ca</u> ph. +1 (613) 520-2600 x 3093, Canal Building, Office 5207 (5th floor) Teaching Assistants:

Class Lectures: Tuesdays and Thursdays 11:35 am-12:55 pm - Classroom: SA 417

#### Practicum and Fieldwork (at campus or onsite: 2 hours):

Tutorials	Day	Times	Field	Indoor
CIVE 3207 A2 / ARCN 4002 A2	FRI	8:35 am-11:25 am	SITE	CB 5301
CIVE 3207 A1 / ARCN 4001 A1	WED	8:35 am-11:25 am	SITE	CB 5301

# **Course Description:**

Recording the physical characteristics of historic structures and landscapes is a cornerstone of preventive maintenance, monitoring and conservation. The information produced by such work guides decisionmaking by property owners, site managers, public officials, and conservators. Rigorous documentation may also serve a broader purpose: over time, it becomes the primary means by which scholars and the public apprehend a site that has since changed radically or disappeared.

Our team-taught course has two aims: to acquaint students with a wide range of recording techniques and to help students decide which techniques are best suited to which sites and objectives. Led by experts in the field, our classes will benefit from guest instruction by experts in various branches of the documentation field. Students, too, will work in teams, weighing the strengths of various methods before applying them. While tools from the simple measuring tape to laser survey devices will be at your disposal, you will need to think through and justify your use of them. Some tools will be used at all sites. Others are highly specialized.

ARCN 4100 / CIVE 3207 will be an introduction of condition assessments, and will be further examined in the ARCN 4200/ CIVE 4601 – Building Pathology & Rehabilitation course (Winter 2018).

Our students will be expected to:

- Come to understand the role of visual information gathering in historic conservation, with an eye to national and international standards for such work.
- Review the strengths and limitations of particular recording techniques.
- Approach some of these techniques as a documentation provider and others as an informed user.
- Analyze sites using these techniques.
- Understand the relationship between recording and good conservation decision-making.
- Learn how to integrate information gathered through these techniques into coherent presentations.
- Work in teams throughout the semester, ultimately completing a graphic and historical record of a <u>chosen site in</u> <u>coordination/collaboration with site custodians</u>.

Because of its proximity and rich cultural landscape, Ottawa will serve as our study area. Each week, we will learn about a given recording technique during our Tuesday lecture and apply it during lab sessions (dates and times to be scheduled based on team members' availability). The Practicum's will take place at the school of architecture or at the sites, depending on the objectives of the practicum.

# Heritage Places

The following places will be analysed this fall, groups of five students are invited to select a site:

- 1. **The Moore Farm**, 670 Boul Alexandre-Taché, Gatineau, QC J9A 3G5. Site custodian: Geoff Frigon, Chief, Agricultural and Residential Property Management: Geoffrey.Frigon@ncc-ccn.ca
- Visitor's Center, The Log Farm, 670 Cedarview, Nepean, ON. Site custodian: Ryan Orr (<u>ryanorr@rogers.com</u>) and Geoff Frigon, Chief, Agricultural and Residential Property Management: <u>Geoffrey.Frigon@nccccn.ca</u>
- Farm House, The Log Farm, 670 Cedarview, Nepean, ON. Site custodian: Ryan Orr (<u>ryanorr@rogers.com</u>) and Geoff Frigon, Chief, Agricultural and Residential Property Management: Geoffrey.Frigon@nccccn.ca

- Bytown Museum, assessment of the third floor. 1 Canal Ln, Ottawa, ON K1P 5P6. Site custodian: Jonathan Morel, email: jonathanmorel@bytownmuseum.ca
- 5. **St Luke's Anglican Church**, 760 Somerset, St. West, Ottawa, ON K1R 6P9. Site custodian: Bonnie Kettel, email: <u>bkettel@rogers.com</u>.
- 6. **St Matthew's Anglican Church**, 217 First Ave, Ottawa, ON, site custodian: Joan Lawrence, email: <u>stmatthewanglicanchurch@bellnet.ca</u>.
- 7. **185 Strathcona Ave House**. Site Custodian: Erinn Nowiski, email: nowiski@live.ca.
- 8. **Tabaret Hall, entrance at 75 Laurier**, ON K1N 7K3. Site Custodian: Sylvio Miron email: Sylvio.Miron@uOttawa.ca

# Technical Prerequisites

Students are expected to know the two-dimensional drawing features of Computer-Aided Design (CAD) application. For tutorials, visit <u>http://www.cadtutor.net/</u>, also the Ottawa Library provides accessibility to Lynda.com: <u>https://biblioottawalibrary.ca/en/lynda</u> here you can find CAD and other digital tools tutorials. Limited classroom instruction in the elements of CAD may be offered, depending on demand, but will not occur during course time.

AutoCAD 2015 through 2017 should be installed on students' laptops prior to week 2 of the CAD survey. Free copies of AutoCAD release are available for download by registering at the Autodesk Education Community (<u>http://students.autodesk.com</u>). AutoCAD is also available at the computer lab in event that you do not have a laptop computer.

For digital photography, each student is required to have:

- A camera with at least ten-megapixel resolution; (a departmental camera may also be available).
- A tripod may also be available.

Furthermore, to carry out Assignment 1, students are expected to obtain an ArcGIS license from the Carleton University Library, read: https://library.carleton.ca/services/arcgis-student-edition. Alternatively, students can use Quantum GIS, which is an open source and free GIS package available at http://www.qgis.org.

To be provided by the School:

• Hand recording kits (measuring tape, Disto (electronic distance meter (EDM), plumb bob and string)

SANTANA I Page 3 of 17

We will be working with architecturally and historically significant sites in Ottawa. The sites will be presented to the students on the first day of class.

Students will analyze and document their sites throughout the semester, ultimately preparing a critical compendium of their work known as an Integrated Project Dossier (IPD). The goal of this document is not only to demonstrate proficiency with recording techniques taught in class but also to organize the resulting information in a clear and accessible manner. Your materials should be presented with an eye to likely audiences: owners, decision-makers, researchers, and conservation professionals. Think of this as a semi-public document, analogous to the graphic component of a historic structure report.

The report will contain an introduction summarizing the site's significance (indicating character defining elements), lay out its chronology, condition, and explain students' logic in emphasizing some recording methods over others.

Furthermore, the IPD will contain the measured drawings and site photographs resulting from different assignments that illustrate its significance and condition.

# Grading

Participation and technical compliance	10%	of final grade
	1070	
Assignment 1	5%	
Assignment 2	5%	
Assignment 3	5%	
Assignment 4 (including tutorial workflow completion)	5%	
Assignment 5 (including tutorial workflow completion)	5%	
Assignment 6 (including tutorial workflow completion)	5%	
Midterm Review*	10%	
IPD dossier*	30%	
Finals presentation (IPD)	20%	
	100%	_

Final letter grades will be figured on the basis of these assignments.

\* Individual and Group evaluations will be conducted



Instructor: Lecture class: Labs:	<b>Dr. Mario Sant</b> e-mail: <u>Mario sa</u> ph. +1 (613) 520-7 Tuesday 8:35 an	ana Qu antana@ 2600 x 30 n to 11:2	<b>intero</b> <u>ecarleton.ca</u> 093, Canal Building, Off 25 am. Room AA 204.	ice 5207 (5th fl	oor)
	Sctn	Day	Times	Field	Indoor
	OUVE ACO1 A 2	14	0.25	OTTE	5201 OD

Sctn	Day	Times	Field	Indoor
CIVE 4601 - A3	Mon	8:35 am - 11:25 am	SITE	5301 CB
ARCN 4200 &	Thu	8:35 am - 11:25 am	SITE	5301 CB
CIVE 4601 – A1				
CIVE 4601 - A2	Fri	2:35 pm - 5:25 pm	SITE	5301 CB

Teaching Assistants: Carly Farmer, email: CarlyFarmer@cmail.carleton.ca

Definitions: **Building Pathology** is a term "used to define a holistic approach to understanding buildings. Such an approach requires a detailed knowledge of how buildings are constructed, used, occupied, and maintained, and the various mechanisms by which their structural, material and environmental conditions can be affected. It is, by necessity, an interdisciplinary approach and requires a wider recognition of the ways in which buildings and people respond and react to each other." David Watt, *Building Pathology, Principles and Practice*, 1999

**Rehabilitation** is the "action or process of making possible a continuing or compatible contemporary use of an historic place, or an individual component, while protecting its heritage value." Parks Canada, *The Standards and Guidelines for the Conservation of Historic Places in Canada*, 2011.

Description: **Building Pathology and Rehabilitation** is a core course of the Bachelor of Engineering (BEng) and Architectural Studies (BAS) with a Major in Architectural Conservation and Sustainability. It is taught in the 4<sup>th</sup> year of the programme, after students have been introduced to basic conservation and sustainability principles and fundamentals of building materials, assemblies and structures. Building on the Architectural Technology courses taught throughout the BAS and BEng, and making use of basic documentation techniques learned in the Historic Sites Recording course, students will become familiar with the skills required to investigate and address the conservation and sustainability issues of historic and modern buildings. While focused on the building technologies of Eastern Canada's existing building stock, the discussion and analysis will include examples of buildings from all types, sizes and locations.

Objectives: Working individually and in teams, students will acquire and apply:

- Understanding of historic and modern building envelope and structural systems, assemblies and materials and their patterns and causes of decay and deterioration.
- Methodology for the assessment of the physical condition and performance of buildings and the preparation of condition assessment and performance evaluation reports.
- Identification, analysis and diagnosis of materials, assemblies and structures;
- The roles of architects, engineers, materials conservation specialists, building scientists, architectural/ building historians, traditional building trades and other disciplines.
- Development of rehabilitation treatment options based on analysis of physical conditions, conservation principles and other criteria (health and safety, cost, accessibility, etc.)
- Specific issues of historic and modern building rehabilitation, including preserving patina, addressing inherent vice, locating substitute materials, using modern technologies and identifying appropriate skilled labour.

One of the underlying objectives is to help build an understanding of the connections between conservation and sustainability, and sustainable conservation strategies: Critical to the development of an integrated sustainable conservation project is the understanding of the history of the building's construction and use, its inherent environmental features, past and current performance patterns, and the types and causes of deterioration of its specific materials, assemblies and structures. Effective affordable and respectful means of maintaining and repairing important and well-crafted built features should continue to offer years of use – thus sustaining our built heritage, and reducing the impact of new construction on the environment.

References: Through the use of a diverse range of paper and web-based references, students will also become familiar with the extent of Canadian and international resources available for working on historic/ existing buildings. There is no required textbook, but a wide range of critical texts are on reserve at the library.

A list of books on reserve and Internet resources is provided below. In addition, a list of weekly readings on specific topics will be provided at the first class.

Format: The course format will include lectures, site investigation and documentation, discussion of case studies, readings and research, essay and report writing and presentations by the students. The first ten weeks include a 3-hour lecture period and 2-hour lab led by the instructor. The lecture period will include teaching modules, discussion of assigned readings and presentation or review of assignments. Lab time will be used for fieldwork, to work on the four assignments described at the end of the outline and or to meet the instructor. Lectures/ field visits may include guest speakers. Students are encouraged to participate in analytical discussions and make links with other courses, projects and experiences. Grading: There are 2 class quizzes (10%) and a final exam (20%) dealing with in class readings about building pathology and rehabilitation, topics will be discuss during class. There will be four assignments, worth 60%. The description of each assessment follows the detailed course description below. The grading of the four assignments will be as follows:

Assignment 1	10%
Assignment 2	10%
Class Quizzes	10%
Assignment 3	20%
Assignment 4	20%
Final Exam	20%

The remaining 10% of the final mark is discretionary based on attendance, including punctuality, and participation in the weekly discussions of readings. Please show respect for all by allowing enough time to arrive before class begins, only leaving early following a prior explanation. Students will be asked to close laptops or other electronic devices during class discussions, exercises and presentations. There will be a bonus assignment worth 6% in total of additional grades.

Attendance in the first class is required, and there will be no make up time for students who join after the term has begun. There is no lab on the week January 5 to 9, 2015. Attendance at labs is also obligatory unless the instructor designates it otherwise at the time.

A skills assessment questionnaire, which is not graded, will be completed during the first class, in order to help identify the level of understanding of basic building technology and history, conservation and sustainable design principles, and the content and assignments may be adjusted accordingly.

Concise and accurate technical writing is important in professional work; student written and verbal work will be assessed on language (grammar, spelling, structure, style) as well as content.

# See also below for more general information.

**Emails:** Emails will be answered within 24 hours. Except for during the 30 minutes after class, meetings outside class hours will be by appointment only.

# **OVERVIEW OF COURSE CONTENT**

- Introduction
- Characterization of buildings
- Building pathology
- Materials, assemblies and structures:
  - Building Envelope & Introduction
    - $\circ$  Wood
    - Masonry
    - Metals
    - Concrete

# Tentative schedule

Week	Lab	Class	Lecture
2		Jan 12	L01: Introduction to Building Pathology & Rehabilitation
		I 10	A01: Introduce Assignment 1
3		Jan 19	L02: Characterization of buildings; construction types;
			functional types; inherent environmental features
	Lag 19 22		Tot. Deserving Site Deservices and decay
4	Jan 18 - 22	Lan 26	101: Preparing Site Reconnaissance
4		Jan 20	L04: Investigation: Condition & Performance Assessment
	Ion 25 20		TO2: Introduction to readings and library material at Carlaton
	Jan 23 – 29		Library
5		Feh 2	Llotary
5		1002	Oscar Carly Farmer
	Feb 1 – 5		T03: Site visits
	1001 5		Sheets (On Site)
6		Feb 9	L06: Guest lecture by Brian Hierlih
-			L07: Case Study
			L08: Repairs: Planning the conservation approach
	Feb 8-12		R01: Review of Building Characterization Sheets with TA
			A02: Introduce Assignment 2
			Assignment 1 due Feb 12
7		Feb 23	L09: Masonry materials, assemblies, and structures
			L10: Metal materials, assemblies, and structures
			L11: Earthen architecture conservation architecture
			L12: Case Study: Kasbah of Taourirt, Morocco
			A03: Introduce Assignment 3
	Feb 22 - 26		T04: Assignment 3
8		Mar 1	L11: Concrete materials, assemblies, and structures
			L12: Upgrades: addressing performance issues
			Guest Lecture: John Cooke on Assessing Building Conditions
0	Feb 9- Mar 4	Mang	Working session on Assignment 3
9		Mar 8	L13 wood materials, assemblies, and structure (S. Ross)
	Mor 7 11		Working sassion on Distogrammatry for Assignment 2
10	Wiai / - 11	Mor 14	L 15: Heritage professionals in Canada (L. Smith)
10		Ivial 14	L15. Heritage professionals in Canada (L. Siniti)
			Barbacci)
			Assignment 2 is due
	Mar 14 - 18		T05: Assignment 4 and review Assignment 3
11	111111111	Mar 22	L17: James Maddigan, Robertson Martin Architects
			L18: Erica Mitchell, Barry Padolsky Associates Inc
			L19: Key messages
	Mar 21 - 25		L10: Working session on Assignment 4
11		Mar 29	Visit to the The Delegation of the Ismaili Imamat Building at
			Sussex street, appointment at 9am
	Mar 28 –		Group presentations on Assignment 4
	Apr 1		
12		Apr 5	Final Exam
			Submission of Assignment 3 and 4, but late submissions until
			April 12 will not be penalized
		Apr 7	Submission of Bonus Assignment

# ARCC ARCN

Technology Techniques

**Elective Courses** 





Azrieli School of Architecture & Urbanism

1125 Colonel By Drive Ottawa, ON K15 5B6 Canada Tel: (613) 520-2855 Fax: (613) 520-2849

### **ARCN 4103 COURSE OUTLINE**

Digital Fabrication & Theory Fall 2015 Instructor: Johan Voordouw

# LAB: MONDAY, 8:35 – 11:25am LECTURE: TUESDAY 2:35 – 5:25pm Attendance to all labs and lectures is mandatory

# LEARNING OUTCOMES

This course will place into context the increased predominance of digital technology into emerging architectural pedagogy. It will connect issues of theory, digital practice with fabrication and assembly. These skills will be developed through discursive lectures, practical seminars and through intensive group projects that promote collaborative peer learning.

Please find below a list of the CACB Student Performance Criteria for this course:

A1 Critical Thinking – Through lectures and discussions in seminars

A2 Research Skills – Through learning and application of computational software

A3 Graphic Skills – Through the final documentation

A4 Verbal and Writing Skills – Discussion and documentation

A9 Precedents – As shown in lectures and used in the design development

B1 Design Skills – Throughout the course in design development and final project articulation

**C1 Detailed Design Development** – Through the technical drawings required to fabricate the final build and assemble the construction on site

# OBJECTIVES

The course aims to teach a critical approach to technology and digital practice through theory and practice. The lectures will give broad theoretical/philosophical background to the emergence of digital technology in relation to culture and architecture, its current use and future speculations. The workshop seminars aim to develop skills in digital software and fabrication techniques available at Carleton.

#### SCHEDULE

Critical DatesWed. Sept. 2<sup>nd</sup>Beginning of Fall TermMon. Oct. 5<sup>th</sup>, 2:00 CSTAssignment 1 DueFri. Nov. 20<sup>th</sup>Assignment 2 DueMon. Nov. 23<sup>th</sup>Assignment 3

#### ASSIGNMENTS

Lecture Participation – Discursive Group (5 x 3%)(15% of total grade)Each student will be part of a three-person 'debate' team. I will periodically ask these groups to<br/>participate in the lectures through debate/discussion on particular topics relevant to the lectures.Lab Tutorial(10% of total grade)Each team will be responsible for teaching one of the last 5 computer labs

#### Assignment 1 – Winnipeg Warming Huts Competition (20% of total grade)

Build a schematic 1:5 model of the Assembly project. This will be the starting point to generate a dialogue about how to develop the project as the term progresses

Assignment 2 – Assembly Construction (30% of total grade)

Fabricate and assemble the project at 1:2 scale within the School of Architecture

# Assignment 3 – Documentation

(15% of total grade)

Each individual is responsible for a pamphlet documenting the Assembly project, its process and construction

#### Discretionary

### (10% of total grade)

Participation in lecture discussions, engagement in the labs learning the various software packages and group participation for the completion of course assignments

- For more information regarding each project please refer to the Project Brief posted on CULearn in due course

#### **EVALUATION**

"Workshop projects will be evaluated on the (1) strength of design concept/concepts, (2) development and articulation of the concept according to the objectives set forth in the project assignment, and (3) the clarity, craft and completeness of the work submitted at the hand-in deadline."

CARLETON UNIVER	SITY	COURSE OUTLINE
SCHOOL OF ARCHIT	ECTURE	2015-16 Academic Year
COURSE TITLE:	Color W/S	COURSE#: ARCN 4808B
TERM:	Winter	Office: 523 AA, ext. 2868
INSTRUCTOR:	Greg Andonian	Greg.Andonian@carleton.ca
HOURS PER WEEK:	6	ROOM #: 515 Arch Bldg
TIMETABLE:	Tuesdays, 6:009:00 pm: Group Seminars	-
	Thursdays, 6:009:00 pm: Hands-on Explorat	ions
CREDIT VALUE:	.5	

# COURSE DESCRIPTION

This course is an introduction to the broad field of color, texture and materiality that defines the human environment in general, and focuses on human response to space inhabitation in particular – as these manifest in various cultures pertaining to the realm of artifact design. The course is given in seminar and hands-on application modes and will promote debate on issues of real and virtual environments in designing within the physical and cyber space. Topics discussed will be adhering to social, cultural, economic and political aspects of human dwelling, and will be advancing sensitive developments of content, concept, context and comprehension in architectural design. Students will be encourage voicing their independent judgment, and will be invited to articulate plausible positions as they become more familiar with the challenges poised by contemporary mind-set in the post-modern age.

# COURSE OBJECTIVES

- 1) Help students to gain critical insights on WHY challenges poised by the incorporation in design of color, texture and materiality for dwelling environments affect the profession of architecture and society as a whole;
- 2) Advance understanding on HOW the 3-D modeling, interactivity and hybridity that work together change the way we engage in current design of artifacts;
- 3) Promote awareness on WHAT opportunities the global village advances for promoting a novel architecture;
- 4) Expose students to relevant and important texts on the W/S issues and challenges.

# **REQUIRED READINGS**

The W/S sessions will be having required readings from references listed below, but will not be limited to the list content; selected articles from journals and papers from conference proceedings will be augmenting the references.

# CLASS SCHEDULE

Group seminars and hands-on explorations will be held on Tuesdays 6:00 pm - 9:00 pm in Room # 515 and individual color, texture and materiality based assignments will be carried out in school's various labs.

All students are required to actively participate in Group Seminars and Hands-on Exploration sessions.

## **SCHEDULE**

Wk 1	Jen	07	Introduction to W/S Assignment #1: Idea Modeling via Light de-Materialization of the Artifact Vision as Content / Why? / art as de-Light Dev't: (Box as Light Fixture PAINTED)
Wk 2		12	Light-ness + Dark-ness re: Shades, Shadows & Depth Perception Assignment #2: Carving out 2D Surface Material into 3D Dynamics Mission as Concept / How? /Parti-Marqui Dev't: (Rotation/Revolution of Colored Rings)
Wk 3		19	Light, Color & Perspectivity in Contextualizing the Experiential <b>Assignment #3: Transforming Space by Color &amp; Material Texturing</b> Action as Context/What?/Opportunities Dev't: (4 Architects Offices: Challenge Realities)
Wk 4		26	Material Expression in Cultural Manifestation Appreciating "Otherness" – Universal Value Development Review of the Collage of Assignments #1-2-3 (Grade Value: 30% of Term Mark)
Wk 5	Feb	02	Historic Architecture Critical-Analysis: Form, Geometry & Plaza Space Assignment #4: Sketch bldg details to narrate the story of the place (Use B&W pen & pencil, on white paper, highlight shades and shadows)
 Wk 6		09	Modern Architecture – Site Visit: Reflective-Projectivity <b>Assignment #5: Draw wall-surface to various lighting-shading conditions</b> Reveal transient color, texture & materiality, project emotive expression (Use prisma-color & pastel, on white paper)
Wk 7		16	Winter Break
Wk 8		23	Contemporary/Post-Modern Arch Site Visit: Contradiction & Complexity Assignment #6: Documentation of Exteriority-Interiority landscaping (Use mixed media in studying Contemporary Materiality)
Wk 9	Mar	01	Light, Color, Texture & Materiality revisited in Architecture Review of the Collage of Assignments #6-7-8 (Grade Value: 30% of Term Mark)
Wk 10		08	<b>Trans-Modern Architecture: Doors/Walls/Ceiling/Floors as LS</b> Color Presencing Assignment #7: Study of an Architectural Typology – New Content?
Wk 11		15	Trans-Human Architecture: Dresses / Furniture as LS – Color Presencing Assignment #8: Study of an Architectural Morphology – New Concept?
Wk 12		22	<b>Post-Human Architecture:</b> Anti-Matter, Gravity Free Color, Human Body as LS Assignment #9: Study of an Architectural Monument – New Context?
Wk 13		29	The Perspectives of Color, Texture, Materiality in Dwelling <b>Review of the Collage of Assignments #7-8-9 (Grade Value: 30% of Term Mark)</b> Attendance & Active Participation in Reviews: <b>10% of Term Mark</b>

Wk 14 Apr 05 Course Discussion & Evaluation

# W/S COURSE ASSIGNMENTS & EVALUATION

Collage #1: SYNOPSIS of Assignments #1-2-3 (Grade Value: 30% of Term Mark) Collage #2: SYNOPSIS of Assignments #4-5-6 (Grade Value: 30% of Term Mark) Collage #3: SYNOPSIS of Assignments #7-8-9 (Grade Value: 30% of Term Mark) W/S Class Attendance and Active Participation (Grade Value: 10% of Term Mark)

# ARCN

Techniques Elective Courses – M.Arch
Carleton University Fall 2015 Tuesday 2:30 - 5:30 pm Stephen Fai Azrieli School of Architecture and Urbanism Room 306 Architecture

sfai@cims.carleton.ca

DAEDALIC EXERCISES | ARCN6001/ARCN5301



Giulio Romano Daedalus and Pasiphae

In Daedalic Exercises 1, we will undertake a close reading of Richard Sennett's *The Craftsman* and examine his characterizations of 'craftsmen', 'craft', and 'craftsmenship' in the context of contemporary architectural practice. We will discuss the epistemological foundations of the text through weekly readings, a short essay and a project.

# SCHEDULE

Session 01 / 08.09	INTRODUCTION
Session 02 / 15.09	Sennett, Richard. 2008. The Craftsman
Session 03 / 22.09	Hesiod. 1988. (trans. M.L. West) Theogeny
Session 04 / 29.09	Project Review.
Session 05 / 06.10	Craft. Arendt, Hannah. 1958. The Human Condition. (pp. 79-174).
Session 06 / 13.10	Craftsmen. Polanyi, Michael. 1966. The tacit dimension.
Session 07 / 20.10	Craftsmanship. Joas, Hans. The Creativity of Action. (pp.70-126)
Reading Week 27.10	

Session 08 / 03.11	Agamben, Giorgio. 2009. <i>What is an apparatus?: and other essays</i> . (pp.1-24)
	Benjamin, Walter. 1969. "The Work of Art in the Age of Mechanical
	Reproduction." Illuminations. Ed. Hannah Arendt. Tran. Harry
	Zohn. New York: Schocken Books. 217-252.
	McEwen, Indra. 1993. Socrates' Ancestor: An Essay on Architectural
	Beginnings.
Session 09 / 10.11	Project Review
Session 10 / 17.11	Carruthers, Mary. 2000. The Craft of Thought.
Session 11 / 24.11	Pye, David. 1968. The Nature and Art of Workmanship.
Session 12 / 01.12	Final project review and discussion.

#### 18.12 Final paper (pdf by email and hard copy to Main Office)

# DELIVERABLES

Project	A finely crafted thing.
Essay (5000 words)	<ol> <li>Outline Sennett's understanding of craft, craftsmen, and craftsmanship.</li> <li>How do <u>you</u> understand these terms in the context of contemporary architectural practice?</li> <li>How does you project exemplify / engage with these terms?</li> </ol>

#### **EVALUATION**

Essay	30%
Project:	50%
Weekly readings:	20%

#### ACADEMIC ACCOMMODATION

You may need special arrangements to meet your academic obligations during the term because of disability, pregnancy or religious obligations. Please review the course outline promptly and write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist.

It takes time to review and consider each request individually, and to arrange for accommodations where appropriate. Please make sure you respect these timelines particularly for in-class tests, mid-terms and final exams, as well as any change in due dates for papers.

You can visit the Equity Service website to view the policies and to obtain more detailed information on academic accommodation at <a href="http://carleton.ca/equity/accommodation">http://carleton.ca/equity/accommodation</a>

#### ACCESSIBILITY

Students with disabilities requiring academic accommodation in this course must register with the Paul Menton Centre for Students with Disabilities (PMC) for a formal evaluation of disability-related needs. Documented disabilities could include but are not limited to mobility/physical impairments, specific Learning Disabilities (LD), psychiatric/psychological disabilities, sensory disabilities, Attention Deficit Hyperactivity Disorder (ADHD), and chronic medical conditions. Registered PMC students are required to contact the PMC, 613-520-6608, every term to ensure that I receive your Letter of Accommodation, no later than two weeks before the first assignment is due or the first in-class test/midterm requiring accommodations. If you only require accommodations for your formally scheduled exam(s) in this course, please submit your request for accommodations to PMC by the deadlines published on the PMC website: http://www2.carleton.ca/pmc/new-and-current-students/dates-and-deadlines/

# 4.3 Current Faculty Resumes

Carleton University Azrieli School of Architecture and Urbanism Accreditation Program Report September 2016

**Faculty CVs** 

Andonian Krikor Baez Manuel Bonier Catherine Boyle Sheryl Bucking Scott Cazabon Yvan-pier Connah Roger Debanne Janine Esponda Mariana Fai Stephen Fontein Lucie Gianni Benjamin Goffi Federica Kariouk Paul Mangone Giancarlo Riar Inderbir Stoner Jill Voordouw Johan

# CURRICULUM VITAE

	PEG) Professor Tonurod: Momber of the Graduate Faculty
ANDONIAN, K.S. (GI	(EG) Floressor, Tenured, Member of the Graduate Faculty
TEACHING AREA	<ul> <li>4<sup>th</sup> Year Fall &amp; Winter Undergraduate Design Studios</li> <li>Graduate Thesis Supervision</li> <li>4<sup>th</sup> Year Special Topics: Theory of Info Tech &amp; Architecture</li> <li>Theory of Urbanism 4<sup>th</sup> Year Core Course</li> <li>Color in Architecture 3<sup>rd</sup> &amp; 4<sup>th</sup> Year Workshop</li> </ul>
EDUCATION	
1978 1973 1968 1963	<ul><li>Ph.D., Systems Design, University of Waterloo, Ontario, Canada</li><li>M.A.Sc., Systems Design, University of Waterloo, Ontario, Canada</li><li>M. Arch., Yerevan Polytechnic, Armenia, USSR</li><li>B. Sc., Aleppo, Syria</li></ul>
HONORARY DEGREE	
2014 2013 1996	Certificate of Membership, IIAS HALL OF FAME, Systems Research & Cybernetics Member, The Int'l Academy of Arts, Sciences & Engineering, IIAS, Germany Dr. H.C <i>Doctor Honoris Causa</i> International Institute for Advanced Studies in Systems Research & Cybernetics, Baden-Baden, Germany
SHORT LISTED	
1986	Vice-President (Academic), Cal Poly, San Luis Obispo, CA, USA
SPECIAL APPOINTME	NT
1984	Head, Federal Centre of Excellence for Architecture, Vancouver, B.C. Appointed by the Canadian Federal Cabinet (PWC Minister Andrei Oullette) As part of the Federal Liberal Government's re-election platform
ADMINISTRATIVE EXP	PERIENCE (Selected)
2004- 2004	ACTA SYSTEMICA IIAS International Journal, Member of Editorial Board
2004	UNESCO Canadian Commission – Member, Sectoral Commission of Science
2003	UNESCO Rep on Jury for the IFLA International Competition, Calgary, AB
2002-	Panel Member, PEQAB (Post-secondary Education Quality Assessment Board), Ministry of Education, Province of Ontario, Canada
1998- 2001	Member, Board of Governors (BOG), Carleton University, Ottawa, Canada
1998- 2001	Member, BOG Building Program, CU
1998-2001	Member, BOG Personnel/Human Resources Committee, CU
1996-2001	Member, Senate Executive, CU
1996-2001	Member, University Senate, CU
	CE (Selected)
	Distinguished Professor International Institute for Advanced Studies, Germany
1991-	Professor School of Architecture CU
1991-1996	Director, Apple Design & Modeling Centre, CU
MEMBERSHIP	,
1999	American Institute of Architects (Associate) U.S.A.
1999	Ottawa Regional Society of Architects
1996	Royal Architectural Institute of Canada, Ottawa
AWARDS	
2016	Le Corbusier Award of Excellence in Architectural Design, Research and Teaching, IIAS, Germany
2015	GOLDEN AWARD of Distinguished Leadership in Research & Education, IIAS

2012	PLATINUM AWARD in recognition of Outstanding Scholarly Work, Exemplary
	Leadership & Distinguished Contribution to the Development of the International
	Institute for Advanced Studied in Systems Research & Cybernetics, Germany

# **PUBLICATIONS (Recent)**

2016	Advances in ARCHITECTURE, URBANITY and SOCIAL SUSTAINABILITY"
	Eds. Greg Andonian, et al. IIAS Publication. Vol. VII, ISBN 9781897233
2016	"Architecture of Armageddon"
	Keynote Address at the Opening Plenary Session, InterSymp 2016 28th
	International Conference on Systems Research, Informatics & Cybernetics,
	Baden-Baden, Germany
2016	"Thesis of Architecture vs. Architecture of Thesis"
	9th International Symposium on Architecture of 21st Century: In Search of New
	Paradigms InterSymp 2016 in Baden-Baden, Germany
2015	"Advances in ARCHITECTURE, URBANITY and SOCIAL SUSTAINABILITY"
	Eds. Greg Andonian, et al. IIAS Publication. Vol. VII, ISBN 9781897233597
2015	"Orwellian Psyche on Global Education"
	Keynote Address at the Opening Plenary Session, InterSymp 2015 27th
	International Conference on Systems Research, Informatics & Cybernetics,
	Baden-Baden, Germany
2015	"Superseding Paradigmatic Metaphors of Trans-modern Architecture in Design
	Education", 8th International Symposium on Architecture of 21st Century: In
2015	"Arabitacture of Delight in Dect 0/44 Clabel Condition"
2015	Architecture of Delight in Post-9/11 Global Condition
2014	"Advances in ARCHITECTURE LIRBANITY and SOCIAL SUSTAINABILITY"
2014	Edg. Cross Andenian, et al. UAS Dublication, Vol. V/LISDN 0701907222426
2014	Eds. Greg Andonian, et al. IIAS Publication. Vol. VI, ISBN 9781897233436
2014	7 <sup>th</sup> Int'l Symposium on Architecture of 21 <sup>st</sup> C : In Search of New Paradiams
	Procoordings of InterSymp 2014 – 26th International Conference on Systems
	Research Informatics & Cybernetics, Baden-Baden, Germany
2014	"Deconstructing Orwellian Architecture of New World Order"
2014	Proceedings of the 4th Orwellian Symposium 2014 – 26th Int'l Conf IIAS
2014	"Multi-Dimensionality and Multi-Directionality in Architecture and Physics".
	Delivered at the 7 <sup>th</sup> Int'l Symposium on Architecture of 21 <sup>st</sup> C.
2013	"Advances in ARCHITECTURE, URBANITY and SOCIAL SUSTAINABILITY"
	Eds. Greg Andonian, et al. IIAS Publication, Vol. V. ISBN 9781897233375
2013	"Phenomenology of Architecture in Trans-modern Age"
	6 <sup>th</sup> Int'l Symposium on Architecture of 21 <sup>st</sup> C.: In Search of New Paradigms
	Proceedings of InterSymp 2013 – 25th International Conference on Systems
	Research, Informatics & Cybernetics, Baden-Baden, Germany
2013	"Architecture Education Integral to Sentient Dwelling as Manifestation of Societal
	Issues-Oriented Empathic Design" Symposium on "Life-long Integral Education
	for a Viable Human Future" Proceedings of InterSymp 2013 – 25th Int'l Conf.
	on Systems Research, Informatics & Cybernetics, Baden-Baden, Germany
RESEARCH INTEREST	ΓS
	Systems Design & DWELLING SUSTAINABILITY; Architectural & Universal
	EDUCATION for CULTURAL GLOBAL SURVIVALISM; Architecture, Technology
	& QUALITY OF LIFE; Into-Tech, Design & Peaceful Co-existence; Virtual Reality,
	Architecture & Ethnicity; Tradition, Innovation and Invention in Philosophical
	mannestations of Architecture & Orbanity. Digital Home-Office Building

Complexes; Design Centre for Immigrants' Re-training. Housing for Nurturing.

RESEARCH FUNDING -- CAREER TOTAL TO DATE

\$1,150,000

#### CURRICULUM VITAE

BÁEZ, Manuel Antonio	Associate Professor of Architecture,	Tenured (2006)	); Member of the Graduate Fac	culty
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#### DEGREES:

1993	Master of Architecture, Cranbrook Academy of Art
1979	Bachelor of Architecture, The Cooper Union - The Irwin S. Chanin School of Architecture

#### HONOURS and AWARDS:

2016	DOORS OPEN OTTAWA 2016, Carleton Aboriginal Centre (Ojigkwanong) "Light Keeper"
2014 - 2016	DOORS OPEN OTTAWA 2014, 2015, 2016, HUB Ottawa "Resonant Currents"
2012	CREATIVE MORNINGS™ Ottawa, Inaugural Lecture Presenter
2010	TEDxCarletonU, Invited Presenter, TEDx

#### **PROFESSIONAL AFFILIATIONS:**

Member of the Royal Architectural Institute of Canada (RAIC)

Registered Architect, New York State: Independent practice, consultation, research and teaching

# **EMPLOYMENT HISTORY:**

#### **Teaching Positions**

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2006-Present	Associate Professor (Tenured), Carleton University, Azrieli School of Architecture and Urbanism.
2001-2006	Assistant Professor, Carleton University, School of Architecture

#### **Professional Activity**

1993-PRESENT Independent practice, consultation, research and teaching

#### SCHOLARLY AND PROFESSIONAL ACTIVITIES:

2001-Present	Crossings: De-Formation Research Director, Azrieli School of Architecture and Urbanism.
2009-Present	Advisory Committee member of SCIENAR, exploring Science and Art. SCIENAR is an Educational,
	Audiovisual and Culture Executive Agency (EACEA) CULTURE project, Europe.
2008-Present	Symmetry Research Network member, Mechanical Engineering Dept., McGill University, Montreal.
2004-Present	International Scientific Advisory Committee member, Design & Nature 04-16. Conferences organized by
	the Wessex Institute of Technology, Ashurst, Southampton, UK.

#### **GRADUATE SUPERVISION:**

Completed:	11	M. Arch Graduate Thesis (professional)
In Progress:	1	M. Arch Graduate Thesis (professional)

#### **TEACHING ACTIVITY**

Fall 2016	Sabbatical	
2009-2016	ARCS 1105	Studio 1
	ARCS 2105	Studio 2
	ARCH 4801	Workshop
2013-2016	ARCC 1202	History of Structures
2009-2013	ARCC 2200	Technology I

Independent Studies: Cole Peters (2015); Sam Smallwood (2015); Josh Eckert (2015); David King (2014).

## SCHOLARLY AND PROFESSIONAL ACTIVITY

# Guest lecturer, researcher, and/or Critic

2015	Guest critic, Polytechnic University of Valencia, School of Architecture, Valencia, Spain.
2015	Research presentation: University of Granada, School of Civil Engineering, Channels and Ports, Granada, Spain;
	The Alhambra resident architect, Granada, Spain; Emilio Perez Piñero Foundation, Murcia, Spain.
2013	Canadian Mathematical Society, Invited Keynote Lecturer, Dec. 6-9, 2013. Ottawa. Crossings
	Workshop projects exhibited. Lecture titled: <i>Pattern Resonance: The Morphology of the Amorphous.</i>
2012	Creative Mornings <sup>™</sup> Ottawa, Key Invited Presenter, June 27 <sup>In</sup> . Lecture titled: <i>Metaphoric Inter-</i>
	Weavings: Arts and Technology.
2011	Lehigh University, Department of Art, Architecture and Design, Bethlehem, PA. Guest lecturer, Spring
	2011 Lecture Series, Lecture title: The Morphology of the Amorphous.
2010	TEDxCarletonU, Invited public lecture, Gladstone Theatre, Ottawa
	Carleton University Alumni Weekend, Invited Faculty Research Presentation
	Research Presentation: ProductionsArtefact, Montreal, QC; Realisations.net, Montreal, QC

#### **University Administration**

2001 – 2016	Undergraduate Admissions/Recruitment Committee
2001 – Present	Technical Curriculum Committee
2002 – Present	Awards Committee
2012 – 2016	Associate Director, Undergraduate Program
2010 – 2016	Design Mayor Coordinator, Faculty Search Committee, Awards Committee, Architecture School Library Representative, Accreditation Task Force, Curriculum & Accreditation Committee.
2013 – 2014	Director's Search Committee, Faculty Search Committee
2009 – 2013	University Senate
2009 – 2010	Design Mayor Coordinator, Faculty of Engineering and Design Dept. Rep., Library Representative,

#### **RESEARCH AND FUNDING:**

External				
Year	Source	Туре	Amount/yr	Purpose
2016	pHacktory Lab	Crowdfunding	\$ 2,500.00	Project funding
2013-14	HUB Ottawa	Crowdfunding	\$ 4,100.00	Project funding
Informal				

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Year	Source	Туре	Amount/yr	Purpose
2014-16	Carleton Univ.	Aboriginal Center Support	\$15,000.00	Project funding
2009-13 SSHRC		Institutional Grant	\$ 2,000.00	Research funding

#### PUBLICATIONS

1)	Life-time summary:	
-	Chapters in a Book	2
	Papers in Refereed Journal	2
	Abstracts and/or Papers Read	2
	Others (workshops presented)	1

2) Details:

Papers in Refereed Journal

2013 (i2) Research and Innovation in Architecture and Territory magazine (#1), University of Alicante, Spain. Research paper: Resonant Matter: Pattern Correlates of Process-In-Formation.

Others (Workshops presented)

2015 Alicante Univ. (Spain) School of Arch., Crossings Workshop/Lecture, Resonant Currents installation.

#### **CONFERENCES, SYMPOSIA and SEMINARS:**

2016	The 19th International Conference on Generative Art, GA2016, Dec. 15-17, Florence, Italy.
2015	Alicante University (Spain) - Architecture, Crossings Workshop/Lecture, Resonant Currents installation.
2013	Canadian Mathematical Society, Invited Keynote Lecturer, Dec. 6-9, 2013. Ottawa. Crossings Workshop
2012	Creative Mornings™ Ottawa, Key Invited Presenter, June 27 <sup>th</sup> . Lecture titled: Metaphoric Inter-Weavings

#### **REVIEW, ORGANIZING and ADVISORY COMMITTEES:**

Advisory Committee member of SCIENAR, Europe: "Exploring the connections between Science and Art. 2009-Present 2008-Present Member of the Symmetry Research Network, Mechanical Eng. Department, McGill Univ., Montreal.

#### **EXHIBITIONS:**

**Group Exhibitions** 

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2013
                Canadian Mathematical Society Meeting, Ottawa, Research models exhibited.
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#### **PROFESSIONAL PROJECTS, INSTALLATIONS, and RESIDENSIES:**

2016-2017	Architect/Artist Residency at the Pelling Lab for Biological Manipulation, University of Ottawa.
2016	"Starling's One", Byward Market, Ottawa. As a member of the pHacktory research lab and initiative.
2015	"Suspended Animation: Reflection on Gaudi"; Azrieli School of Architecture and Urbanism.
2014-16	"Light Keeper" Installation, Center for Aboriginal Culture and Education (CACE), Carleton University,
2015	"Resonant Currents" Univ. of Alicante School of Architecture Calasparra (Murcia), Spain
2013-14	"Resonant Currents" Installation, HUB Ottawa, permanent installation.
COMPETITIONS:	
2015	"Estrella Del Mar (Star of the Sea)", Architecture Workshop in Rome.
2015	The Foguera Pla de el Bon Repòs - the Goteta of Alicante, Alicante, Spain.
2014	"Organic Plasticity," International Digital Design to Fabrication Competition, Organized by the Tech-
	Fab digital fabrication alliance.
2013	Ottawa Confederation Line Art Program, call for artists. Short-listed for the Lebreton Flats Station
	proposals, in collaborative/consultation with Douglas Cardinal.
2012	"A Folly in Re-Leaf," proposal submission for the Socrates Park Folly competition. Organized by
	Socrates Sculpture Park and the Architectural League of New York.

# CURRICULUM VITAE

BONIER, Catherine Assistant professor, Tenure-track; Member of the Graduate Faculty

#### DEGREES:

2015	Ph.D. Architecture, University of Pennsylvania, Philadelphia, PA, USA
2007	M. Arch., University of Pennsylvania, Philadelphia, PA, USA
1994	B.A., Harvard College, Cambridge, MA, USA

#### HONOURS:

2012 AIAS Annual Outstanding Faculty Award - LSU American Institute of Architecture Students

## **EMPLOYMENT HISTORY:**

#### Teaching Positions

2016-	Assistant Professor, Azrieli School of Architecture, Carleton University
2013-16	Assistant Professor, College of Art and Design, Louisiana State University
2012-13	Lecturer, Design Instructor, Department of Architecture, University of Pennsylvania

#### **TEACHING ACTIVITY:** past 7 years, by year

Studios, Lec	ture Courses, Workshops and Seminars:
2016-2017	ARCU 3304 - Studio 2 (Urbanism 3 <sup>rd</sup> year) / ARCS 5102- Studio 1 (MArch 1 <sup>st</sup> year)
	ARCU 4408 - Selected Topics in Urbanism, Seminar
2015-16	ARCH 4007 - History and Theory 3 / ARCH 7008 - History and Theory 2 / ARCH 4221 - Seminar
	ARCH 7004 - Studio 4 / ARCH 5002 - Studio 9
2014-15	ARCH 3002 - Studio 6 / ARCH 4001 - Studio 7
	ARCH 7008 - History and Theory 2 / ARCH 7007 - History and Theory 1
2013-2014	ARCH 2002 - Studio 4 / ARCH 5002 - Studio 9
	ARCH 3005 - History and Theory 1
2012-2013	ARCH 5002 - Studio 2

#### SCHOLARLY AND PROFESSIONAL ACTIVITY

Guest Design Critic

2009-2016	Tulane School of Architecture,	Mississippi State,	PennDesign,	Temple University,

- UNC Charlotte (thesis), Auburn University, Boston Architectural College
- 2010 Schenk Woodman Competition, University of Pennsylvania School of Design, Juror.
- University Administration
- 2016- Undergraduate Committee, Azrieli School
  - Lectures and Exhibits Committee, Azrieli School
- 2013-2016 School Diversity Committee (Chair and Founder), LSU
- 2014-2016 College of Art + Design Curriculum Committee, LSU School of Architecture Curriculum Committee, LSU College Committee on New DDes/ PhD Programs, LSU College Communication Across the Curriculum Advisory Committee, LSU
- 2013-2014 School Mission Statement Committee (Chair), LSU University Committee on Climate Change Certificate, LSU
- 2010-2013 Chair Search Committee, University of Pennsylvania School of Design

### **RESEARCH AND FUNDING - Overview**

Year	Source	Type*	<u>Amount</u>	per year	<u>-</u>	Purpose**
2016, PI 2012-13, PI 2010, PI	Coastal Sustainability Studio Philadelphia Area Center for the H TD Bank Group - CCA Collection Centre Canadien d'Architecture	O History of Science Research Grant	\$5,000 F	F \$2,000	\$2,000	Travel, Publication Research Research

# PUBLICATIONS:

1) Life-time summary:

- Papers in refereed conference proceedings
  Editor of refereed conference proceedings
  Paper in refereed conference (unpublished)
  Invited lecture or panelist
- Invited lecture or panelist
   Abstracts and/or papers read
- Conference organizer or conference chair

## 2) Details:

Papers in Refereed Conference Proceedings

1. Bonier, C., "Transitional States: Hydraulic history and architectural activism," *Shaping New Knowledges*, Association of Collegiate Schools of Architecture, Seattle, 17-19 March, 2016

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2. Bonier, C., "Future Theories, Graphic Arguments: Activating history and theory," *National Conference on the Beginning Design Student*, San Luis Obispo, 25-27 Feb, 2016

# Editor of Refereed Conference Proceedings

1. Bonier, C. (Associate Editor) *EDRA* 45 Building with Change: Proceedings of the 45th Annual Conference of the Environmental Design Research Association, New Orleans, 28-31 May 2014

# Paper in Refereed Conference (unpublished)

- Bonier, C., "Transitional States: Hydraulic history and architectural activism" Shaping New Knowledges, Association of Collegiate Schools of Architecture Annual Meeting, Seattle, March, 2016
- 2. Bonier, C., "Future Theories, Graphic Arguments: Activating history and theory" *National Conference on the Beginning Design Student*, San Luis Obispo, Feb, 2016
- Bonier, C., "American Infrastructure Gardens: 19th century exhibitions as sites for the cultivation of new urban technologies," *Urbanism and Urbanity*, Nineteenth Century Studies Association 35th Annual Conference, Chicago, IL, March, 2014
- **4.** Bonier, C., "Equilibrium as Improvement," *Society of Architectural Historians 66th Annual Conference*, Buffalo, NY, April, 2013

Invited Lecture or Invited Panel Discussant

- 1. Bonier, C., Invited public remarks, "On Mentoring," *PennDesign 256th Commencement Ceremony*, an introduction of David Leatherbarrow, recipient of Provost Award for PhD Teaching and Mentoring, May, 2012
- 2. Bonier, C., Invited discussant, *In the Terrain of Water 2,* University of Pennsylvania School of Design, Philadelphia, PA, April, 2012
- 3. Bonier, C., Invited panelist, *Global Cities: Sustainability, Penn and Philadelphia,* Institute for Urban Research, Philadelphia, PA, April, 2011
- 4. Bonier, C., Paper, "Revolutionary Civic Ecology," *In the Terrain of Water*, University of Pennsylvania School of Design, Philadelphia, PA, April, 2011 http://vimeo.com/24538816

# Reviewer for Refereed Book or Journal

- 1. Routledge Referee for modern architectural history book proposal. (2015)
- 2. Association of Collegiate Schools of Architecture (ACSA) Manuscript referee, water and design. (2015)
- 3. Journal of Architectural Education (JAE) Manuscript referee for peer-reviewed article. (2015)

# Conference Organizer or Chair

- 1. Conference theme chair, "Sacrifice and Resilience: Designing for Loss," also Moderator for 5 peer-review panels, *Designing for Change: Environmental Design Research Association 45th Annual Conference*, May, 2014
- 2. Co-director and conference organizer, *In the Terrain of Water*, University of Pennsylvania School of Design, Philadelphia, PA, 1-2 April, 2011 <u>http://terrain.design.upenn.edu/</u>
- 3. Conference organizer, *The Engineering of Architecture: International festschrift in honor of Professor Peter McCleary*, UPenn School of Design, Philadelphia, PA, 11 Oct, 2011, speakers include Peter Land, Antoine Picon, Claudine Lorenz, and Stanford Anderson.

# CURRICULUM VITAE

BOYLE, Sheryl	Associate Professor, tenured (2008)	
_	Associate Director – Research; Member of the Graduate Faculty	

# DEGREES:

2011 - present	in progress Ph.D. Humanities (Sensory Studies), Concordia University
1999	M.Arch (Post-Professional), History & Theory of Arch., McGill University.
1990	B. Arch (Professional), Carleton University

# **EMPLOYMENT HISTORY:**

# **Teaching Positions**

0	
2004- present	Professor, Azrieli School of Architecture & Urbanism, Carleton University
1997-2004	Sessional Lecturer, Carleton University School of Architecture.
1997-1998	Teaching Assistant, McGill University, School of Architecture

**Professional Employment** (self-employed design-build projects)2008-presentSelf-employed design-build projects

# GRADUATE SUPERVISION: (last 7 years)

Completed: 8 M.Arch (professional) In progress: 1 M.Arch (professional)

#### **TEACHING ACTIVITY:**

Studios, Lecture Courses, Workshops and Seminars:

Adaptability (DfD/A).

2016/17	ARCS 5105 - Gateway Studio (M.Arch)			
	ARCH 4206 - Recycling Architecture in Canada and abroad (4000 level & Masters)			
	ARCN 5302/ARCN 6002 - Daedalic Exercises (PhD and M.Arch)			
	ARCS 4107 - Studio (4th Year)			
2014/15	ARCH 4206 - Recycling Architecture in Canada and abroad (4000 level & Masters)			
	ARCC 3301/ARCC 4909 - Conservation DSA elective			
2013/14	ARCH 4206 - Recycling Architecture in Canada and abroad (4000 level & Masters)			
2012/13	ARCH 4206 - Recycling Architecture in Canada and abroad (4000 level & Masters)			
	ARCS 3105 - Coordinator only (3rd year studio)			
	ARCN 3999 - Coop Studies (2000 to 4000 level)			
2010/11	ARCH 4206 - Recycling Architecture in Canada and abroad (4000 level & Masters)			
SCHOLAR	LY AND PROFESSIONAL ACTIVITY			
<u>Guest Des</u>	i <u>gn Critic</u>			
2014 - Sch	2014 - School of Architecture, McGill University, Graduate thesis reviews.			
2011 - Dep	partment of Engineering, Carleton University, 4th Year Project Reviews.			
<u>ORUs (Or</u>	ganized Research Units)			
2011-present Member, Centre for Sensory Studies, Concordia University				
2006-pres	ent Member, Carleton Immersive Media Studio			
University	Administration			
2016	Member, Advisory Committee, Azrieli School of Architecture & Urbanism			
2009-15*	Director, Azrieli School of Architecture & Urbanism, Carleton University			
2012-14	Member, Carleton University Quality Assurance Committee			
Profession	al Activity			
2008	Grant Reviewer for Accelerate Canada Internship project proposals. MITACS.			
2008	Industry Reviewer for CSA Standards Document Z782: Design for Disassembly/			

## RESEARCH AND FUNDING

1. External	Research Fundi	ng:		
Year	Source	Type*	Amount per year	Purpose
2012-15	CFI	С	\$582,242	Solar House construction on CU campus
2012-15	Insustry	0	\$291,220	Solar House construction on CU campus
2012-15	ORF	G	\$582,242	Solar House construction on CU campus
2010-11	SSHRC-RDI	С	\$79,250	Publication
2. Internal F	Research Fundir	ng:		
Year	<u>Source</u>	Type*	Amount per year	Purpose**
2013	I-CUREUS	0	\$720	Solar House research assistant

# **PUBLICATIONS:**

1) Life-time summary (count) according to the following categories:

- Papers in refereed journals	2
- Papers in refereed conference proceedings	1
- Technical reports	14
- Abstracts and/or papers read	3
- Others (workshops presented)	4
- Referee/Peer review of books for publishers	2

# 2) Details:

- Papers in refereed Journals:
- 1. 2009 Paper (co-authored with Marco Frascari): Architectural amnesia and the synesthetic inmateriality of architectural smell (4000 words). Architecture & Ideas. Ai (Toronto, ON)

# Technical Reports/Papers Published for Research Centres online

- 2014 Author: Sheryl Boyle, "What is the Sixth Sense? Phantasia (Imagination)" in <u>The Sixth</u> sense ABCDerium (the online version of the final chapter of *The Sixth Sense Reader* (ed. David Howes, Berg: 2009) by at <u>http://sixthsensereader.org/</u>
- 2. 2013 Author: Sheryl Boyle Blancmange. Concordia- Centre for Sensory Studies website
- 3. 2012 Author: Sheryl Boyle, Sensory Readings in Architectural Theory, Concordia ibid.
- 4. 2012 Author: Sheryl Boyle. Hypnerotomachia Polyphili: the Five Senses and Aristotle's
- Philosophy of Phantasia. Concordia University Centre for Sensory Studies website. Other
- 1. 2010 U.S. Department of Energy, Solar Decathlon proposal co-applicant 2011 (Queens/CU)
- 2. 2010 Conference Co-Chair. Retrofit: sustainability for the future, Carleton & CaGBC, Ottawa
- 3. 2009 ACSA Portland. Conference Session co-Chair (with Professor Federica Goffi), Portland

# Referee/Peer Review of Books for Publishers:

- 1. 2015. Routledge, (book on architectural design Processes)
- 2. 2009. University of Alberta Press, (book on wood design)

# **EXHIBITIONS:**

- 1. 2016 Verum Ipsum Factum, Concordia University; Exhibition for comprehensive exam.
- 2. 2017 Durer's Nose exhibition/lecture March 2017 @ Open Forum Carleton (upcoming)

#### **PROFESSIONAL PROJECT LIST**

- Air Shed Ventilated *gunwhale* Rainscreen prefabrication prototype for Westmeath, ON
   Hybrid Rainscreen Solar house, Carleton
- 2013/14 Tiny House hinged building in Westmeath, ON.
- 2013 Solar Thermal House unique rain-screen Carleton campus, Ottawa, ON.
- 2013 Inside-Out Shed cavity wall exploration for rain screen in Chinatown, Ottawa, ON

#### CURRICULUM VITAE

BUCKING, Scott,	Assistant Professor, Tenure track
	Member of the Graduate Faculty

## DEGREES:

2013	Ph.D. Building Engineering, Concordia University, Montreal
2008	MEng. Building Engineering, Concordia University, Montreal

2004 BEng. Microelectronics, Carleton University, Ottawa

# EMPLOYMENT HISTORY

#### **Teaching Positions**

2015 – present Assistant Professor, Carleton University, Ottawa Cross-appointment Engineering & Architecture

#### **Professional Employment**

2013 – 14	Building Engineering Team Lead – S2E Technology
2008 – present	Energy Auditor, Owner Numbered Federal Co., Ottawa ON
2007 – 08	Member of Software Development Group/ MRI Technical Expert;
	NeuroRx Research Montreal, QC June 2007 – November 2008
2003	Junior Engineer - Detector Operator, Sudbury Neutrino Observatory

#### **TEACHING ACTIVITY:**

2015 – 16 ARCC 2202 & ARCC 5096 – Architectural Technology 1 (BAS, M.Arch1) 2002 – 04 Physics/Math Teaching Assistant

#### **PUBLICATIONS:**

1) Life-time summary:	
- Chapters in books	.1
- Papers in refereed journal	. 4
- Papers in refereed conference proceedings	4
- Abstracts and/or papers read	7

#### 2) Details:

#### JOURNAL PUBLICATIONS

- Bucking, S., Zmeureanu, R., Athienitis, A. An information driven hybrid evolutionary algorithm for optimal design of a Net Zero Energy House. Solar Energy, Vol. 96 (0), October 2013, pp. 128-139
- Bucking, S., Athienitis, A., Zmeureanu, R. Multi-objective optimal design of a near net-zero energy solar house. ASHRAE Transactions. Vol. 120 (1), January 2014
- Bucking, S., Zmeureanu, R., Athienitis, A. A methodology for identifying the influence of design variations on building energy performance. Journal of Building Performance Simulation. Vol. 7 (6), 2014, pp. 411- 426.
- Bucking, S., Cotton, J.. Methodology for energy and economic modelling of net-zero energy communities. ASHRAE Transactions. 2015 [submitted]

#### REFEREED CONFERENCE PUBLICATIONS

- O'Brien, W., Athienitis, A., Zmeureanu, R., Bucking, S., Doiron, M., Applying a design methodology for a net-zero energy house to evaluate design processes and tools. In: Proceedings of EuroSun International Conference on Solar Heating, Cooling and Buildings, 2010, Graz, Austria.
- Bucking, S., Athienitis, A., Zmeureanu, R., O'Brien, W., Doiron, M., Design optimization methodology for a near net zero energy demonstration home. In: Proceedings of EuroSun

International Conference on Solar Heating, Cooling and Buildings, 2010, Graz, Austria.

- Bucking, S., Zmeureanu, R., Athienitis, A. An optimization methodology to evaluate the effect size of incentives on energy-cost optimal curves. In: Proceedings of 13th International Conference of the International Building Performance Simulation Association. 2013, Chambery, France
- Bucking, S., Cotton, J. Simulation approaches for smart communities. In: Proceedings of 8th Canadian Conference of the International Building Performance Simulation Association. 2014, Ottawa, ON.

# NON-REFEREED CONFERENCE PUBLICATIONS

- Bucking, S., Athienitis, A., Zmeureanu, R. Optimization of net-zero energy solar communities: effect of uncertainty due to occupant factors. In: Proceedings of ISES World Conference, Kassel, Germany.
- Candanedo, J., Bucking, S., Allard, A., Athienitis, A. Model-Based Predictive Control Applications for Solar Homes and Communities. Presented at: Model Predictive Control in Buildings Workshop, June 24- 25, 2011, Montreal, QC.
- Bucking, S., Athienitis, A., Zmeureanu, R. Effect of a time-of-use feed-in tariff on optimal net-zero energy home design. Presented at: NextGenerationSolar Photovoltaics Canada: 2013 National Scientific Conference, McMaster, ON

# BOOK CHAPTER

• Attia, S., Hamdy, M., Carlucci, S., Pagliano, L. Bucking, S. and Hasan, A. Building Performance Optimisation of Net Zero-Energy. In: Athienitis, A., O'Brien, W. (eds.) Net Zero Energy Buildings. Ernst and Sohn. Chapter 6. To be published in 2014.

# SELECTED TALKS AND LECTURES

- NSERC Smart Net-zero Energy Buildings strategic Research Network (SNEBRN): Research and Demonstration Projects. 2nd Building Integrated PV Symposium Toronto, ON. April 24, 2014. Organized by Canadian German Chamber of Industry and Commerce
- *Green Building Programs and Policies: Communicating the Benefits*. Green Profit Symposium Kingston, ON. March 24-25, 2014. Organized by SWITCH and SEARC
- Effect of a Time-of-Use Feed-in Tariff on Optimal Net-Zero Energy Home Design. Next Generation Solar Photovoltaics National Conference, May 2013. First place in PhD/Post-doc research talk competition

#### (http://www.nextgenerationsolar.ca/docs/Research\_Talk\_Award\_Winners-May\_2013.pdf).

- Building Energy Optimization (BEOpt) Training Session, IEA SHC Task 40/ECBCS Annex 52 PhD Workshop, July 2011
- Optimization strategies for Building Simulation: Evolutionary Algorithms and Sequential Searches, Undergraduate Lecture for BLDG 341, November 2011
- Practical Building Science, Graduate Lecture for BLDG 6661 (Hygrothermal Performance), March 2012 Modelling Net-Zero Energy Homes using BEOpt, Industry webinar for the Net-Zero Energy Home Coalition, July 2012 (http://www.netzeroenergyhome.ca/2012)

# VOLUNTEER WORK EXPERIENCE

• Participated in an eight-person engineering and architectural team to design a mixed-use lowenergy office and residence for the Concordia Volunteer Abroad Program. Project was built in July 2011. Focus of a CBC Daybreak interview: *Design process of Uganda building and facility design,* aired in mid-2011.

# MEMBERSHIPS AND CERTIFICATES

- Eligible for PEng accreditation in Ontario
- LEED-AP Building Design and Construction, certified since October 2008
- Natural Resources Canada Certified Energy Advisor (ecoENERGY homes), certified '09

#### **CURRICULUM VITAE**

CAZABON, Yvan-pièr,	Associate Professor – Tenured (2002)
	Associate Director – Professional Programs

Member of the Graduate Faculty

#### **DEGREES AND DIPLOMAS**

1995	M. Arch., with distinction, McGill University, Montréal, Québec
1988	B. Arch., with distinction – University Senate Medal, Carleton University, Ottawa, Ontario
1980	Dipl. A.T., Algonquin College, Ottawa, Ontario

#### **PROFESSIONAL AFFILIATIONS**

Member of the Royal Architectural Institute of Canada (RAIC)

#### EMPLOYMENT HISTORY

#### Teaching Positions

2005 - present	Associate Professor, Architecture, Carleton University.
2003 - 2005	Assistant Professor – Tenured (July 2002), Architecture, Carleton U.
1998 – 2002	Assistant Professor - Tenure Track, Architecture, Carleton University
1993	Teaching Assistant, McGill University, Graduate Studio

#### **Professional Employment**

2003 – present	Principal of Dwell-O; Residential Project Designer and Administrator
1994 – present	Designer, technical consultant with Martin Conboy Lighting Design

#### SCHOLARLY AND PROFESSIONAL ACTIVITIES

External

1995 to 2011 Member of the Board of Directors – Arts Court Foundation

#### **Guest Design Critic**

2010-present Univ. of Minnesota, Minneapolis, McGill University Undergraduate and Graduate Programs, Carleton Univ. English Dept.: Theatre Studies.

## **Program Administration & Accreditation Supervisor**

Preparation of APR for 2016 Accreditation
Associate Director of Professional Programs
Preparation of Focused Report for Accreditation of the M.Arch (13.0 cr.) Program
Graduate Calendar Review for changes and implementation of M.Arch (13.0 cr.) Program
Coordinator of Professional Programs - BAS & M.Arch
Preparation of APR for 2010-11 Accreditation
Preparation of 7-term M.Arch (13.0 cr.) Graduate Program Proposal
Preparation of BAS Program Report
Proposal of New BAS Program Majors in Urbanism and Conservation & Sustainability
Associate Director – Undergraduate BAS

#### Committee Membership

2015 - present Chair: Committee on Standing & Promotion; Chair: Curriculum Committee Graduate Committee, Undergraduate Committee Member & Liaison Co-operative Work-term Faculty Advisor

- 2014 present Member of Thesis Review Committee
- 2013-14 Faculty Search Committee

# Research

Theatre and Performance: set-design and construction; lighting design; artistic direction. History/theory of architectural technology; critical review of building practice and material application. Recording of Historical architecture and urban districts (Trinidad & Tobago). International development; high-density housing in urban squatter neighbourhoods; affordable house prototypes; and international aid relating to architecture, housing and community infrastructure.

## Graduate Supervision (M.Arch Professional)

History 35 Current 1

# Career Total Research Funding

#### \$ 128,000

# **Research Details**

2016	Production of Stage Design for "Soliloquies, Sonnets & Selfies - Part 1: Water into Wine"
2015-16	Set Design – Associate Designer for "Red". Theatre Aquarius. Hamilton ON.
2015	Production of Stage Design for "You Will Be Mine" - Carleton University
2014	Production of Stage Design for "A Midsummer Night's Dream" - Carleton University
2014	Set Design – Associate Designer for "Burden" (GCTC)
2013	Design Charette contributor for "The World Remembers" an international presentation of
	Canada's contributions in World Wars, in partnership with the NAC and Veterans Affairs
2013	Production of Stage Design for "As You Like It" - Carleton University
2012	Extant recording of Civic Architecture - National Library - Trinidad & Tobago
2011	Extant recording of historical domestic residences; Trinidad & Tobago
2010	GCTC Set Design – Associate Designer for "Facts" (GCTC).

# Awards, Honours and Recognition

#### **Academic and Professional Honours**

2013 Guest Lecturer for the Book Launch of "A Tale from the Old Library" at a presentation to the National Library, Ministries of Education and Culture, Trinidad & Tobago
 2011 Guest Lecturer for the Book Launch of "A Tale of Two Houses" at a presentation to Citizens For Conservation, Ministry of Culture, Trinidad & Tobago

# PUBLICATIONS

# Papers in Professional and Other Journals

Project reference for "Icebreaker", in collaboration with Prof. Owen Chapman. Publications: R•
 "The Icebreaker: Soundscape works as everyday sound art." Organised Sound, Vol. 14, #1 (2009), Dr. Owen Chapman author.

#### Research and Technical Reports

- 2012 "A Tale from the Old Library" Vol 2: An Historical Record of the Public Library on Knox Street". Carleton University, 2012.
- 2011 "A Tale of Two Houses Vol 1: An Historical Record of the Boissiere & Piccadilly Houses, Port of Spain, Trinidad & Tobago", Carleton University, 2011

#### In the News

- 2011 "Rich Architectural and Cultural Heritage"; Newsday, Trinidad, March 14, 2011.
- 2009 "Why does my house make loud cracking sounds in very cold weather"; All in a Day, CBC Radio

#### **Personal Interests**

- 2015-16 Associate Designer (Sets) for Theatre Aquarius' production of "Red". Hamilton ON. Directed by Bradley Moss
- 2014 Associate Designer (Sets) for GCTC production of "Burden" Directed by A. Milner
- 2010 Associate Designer (Sets) for GCTC premier production of "Facts" by A. Milner

# **CURRICULUM VITAE**

CONNAH, Roger William, Associate Professor, Tenured

DEGREES: BA (Hons) Architecture, First Class Bristol, UK 1971. Dip.Ed. Engl.Lit. Jesus College, Cambridge, UK 1973.

#### Honours/Awards

- 2016 Ottawa You're So Vanier Studio-Education Award ARCHITECT Journal Washington US
- 2015 Honorary Mention Fairy Tale International Competition, Blank Space New York How to Rhino the Jingo out of Everything and Architecture gets a New Skin.

#### SCHOLARLY AND PROFESSIONAL ACTIVITY

#### **Guest Lecturer/Critic:**

- 2016 Invited Lecture Academy of Arts & Architecture, Vienna
- 2014 Studio Reviews Academy of Arts & Architecture, Vienna
- 2014 Invited Lecture - Readings from the Anti-Library, Idaho school of Architecture
- 2013 Visiting Workshop - Strelka Institute Moscow - Change Communication Change Architecture Lecture/Performance : Aalto Ego
- 2013 Visiting Rapid Workshop - The Gonzo Studio, Alicante School of Architecture, Spain Invited Lecture, Alicante
- 2013 ICERI (International Conference of Education, Research and Innovation) Seville, The Closing of the Architectural Mind, and Session Chair
- Gonzo Theory, (The Place of Theory, Conference) Bangkok Thailand, Silkakorn University 2013
- 2013 Nuance Galore (Text), catalogue AWP Exhibition Cornell University
- 2013 Curator - Steel-Lives, Still Life (Photographs of N Kasper) Venice Biennale of Art
- 2011 Filming Architecture, Lecture/Workshop - Film and Architecture, LAU Lebanon American University
- 2010 Don't go So Fast You'll Crash into Roland Barthes, (Sydney University of New South Wales) Education Conference on Design Strategies

#### **TEACHING ACTIVITY:**

- 2008 15 Carleton University, Azrieli School of Architecture & Urbanism
- 2013 Coordination, Organisation, Moderator: (inaugural) Frascari Symposium
- 2009 12 Introduction to Architecture & Urbanism
- 2010 -- 12 Development of the Azrieli Visiting International Critic program.
- 2009 -- 11 Development of the Master Research Cell: Architecture Agency & Activism Development of Book/Pamphlet Publications of thesis studio and students' work
- 2009 The Azrieli School of Architecture & Urbanism Graduate Symposium : War & Architecture (2009); Shadowlands – The Arctic Issue (2010); Music & Architecture (2011); Spaces Speak (2012),
- 2011 The Azrieli Graduate Show; the inaugural graduate event. Expansion of the Directed Studio Abroad program (10-12 students)
- 2011 -- 2012 Coordinator/Event Moderator of the Forum Lecture Series
- 2010 -- 12 Design & Research Studios (Graduate): The Greenbelt Studio (2008); The OperRatics Studio (2009); The Aids Studio (2009; Architecture Post-Conflict Studio (2010); The Unspace Studio (2010)
- 2011 -- 14 The Directed Research Studio
- Third City (Urbanism Studio) Dirty Realism 4<sup>th</sup> Yr Housing Studio Ottawa; 2014 -- 16 You're So Vanier(Hyperbolic Urbanism Studio) - Psycho Urbanism Studio
- Architecture Degree Zero Carleton 40<sup>th</sup> Anniversary Lecture (invited) 2008 Azrieli School of Architecture & Urbanism, Carleton University

## SCHOLARLY AND PROFESSIONAL ACTIVITY

#### 2010-2016 Heron-Mazy Studio: Alternative Practice in Architecture

(with John Maruszczak) established in Fort Worth, Texas 2002.

#### Projects:

- 2016 Secret Life of Buildings
- 2015 Fairy Tale 3
- 2013 Fairy Tale 2 (Story telling in Architecture) Honorary Mention
- 2012 The McArctic, Fairy Tale 1 (Blank Space New York)
- 2012 Concordia Competition, Italy
- 2011 Pruitt Igloo, Pruitt Ego, Pruitt Igoe, US.
- 2011 The Black Walrus, Tromso (Norway)
- 2010 Dutch Mirror, Amsterdam Bridge Competition

The Cuban Island of the Mind, Miami. Published: Fairy Tales 1, 2 & 3 (New York, 2014, 2015, 2016); *Sick City* in Imaging the City (Intellect London, 2016)

# **PUBLICATIONS:**

- 2017 I TAKE BACK EVERYTHING I'VE WRITTEN Scriptomania & Thomas Merton (Forthcoming)
- 2016 WHAT'S WRONG WITH THIS PICTURE, Life or Architecture an anti-memoir (forthcoming)
- 2015 THE SCHOOL OF EXILE Timo Penttila- For or Against Architectural Theory, Datutop, Tampere.
- 2013 BEING: AN ARCHITECT (Vol 1 Practice/Vol 2 Theory) Ian Ritchie: Commentary Roger Connah (Royal Academy, London).
- 2013 A Carefully Folded Ham Sandwich: Towards a Critical Phenomenology. FadDesignhouse, Montreal
- 2013 An Evening with Mister F Towards a Resistant Form of Practice, FadDesignHouse Montreal.
- 2011 THE REST IS SILENCE ZAHOOR UL AKHLAQ art & society in Pakistan; OXFORD Univ Press
- 2010 16 THE ANTI-LIBRARY (Pamphlets & Pedagogy Vertigo Press, Ottawa)
  - 2010 Aalto Ego
  - 2010 The Irresponsible Self
  - 2010 The Brautigan
  - 2011 Life After Architecture
  - 2011 Deschooling Architecture
  - 2012 Headless
  - 2012 **-** iDeath
  - 2012 The Phoney Island of the Mind vol 1/vol 2/vol 3 (2013/2014/2016)

#### <u>Editor</u>

- 2015 LEONID PAVLOV Collected Works Project Meganom Moscow & Eelcta Milan, (English editor)
- 2014 ARCHEOLOGY OF THE PERIPHERY (English editor) Project Meganom, Moscow

Roger Connah © 2016

#### **CURRICULUM VITAE**

DEBANNÉ, Janine Marie, Associate Professor, tenured

Associate Director - Undergrad; Member of the Graduate Faculty

#### **DEGREES:**

M Arch, McGILL UNIVERSITY, Montreal, 1996 B Arch, CARLETON UNIVERSITY, Ottawa, 1988

#### HONOURS:

Maureen Anderson Prize for Writing, McGill University, 1995 Lieutenant Governor's Medal for Architecture, Province of Ontario, 1988

# **EMPLOYMENT HISTORY:**

#### **Teaching Postions**

2001 to present:	Associate Professor, Azrieli School of Architecture and Urbanism, Carleton U
1999 - 2000	Associate Professor, School of Architecture, University of Detroit Mercy.
1995 - 1998	Assistant Professor, School of Architecture, University of Detroit Mercy.

#### **Professional Employment**

2008 – 2011 Private Practice, Debanné Shemiot Design, Ottawa ON 2001 - 2008 Private Practice, Debanné Design, Ottawa ON

#### SCHOLARLY AND PROFESSIONAL ACTIVITIES:

01/2016	Associate Director Undergraduate, Azrieli School of Architecture and Urbanism
01/2015	"External expert" – grant evaluator – for the SSHRC – CRSH, Canada.
10/2014	Panel Discussion Moderator, "Urbanization in China – A Panel Discussion," Carleton I

#### Panel Discussion Moderator, "Urbanization in China – A Panel Discussion," Carleton Univ. 10/2014

#### **GRADUATE SUPERVISIONS:**

Completed: 27 M.Arch (professional) In Progress: 3 M.Arch (professional)

#### **TEACHING ACTIVITY:**

- 2016-17 Studio 2 (ARCS 2105); Studio 3 (ARCS 2106)
- 2015-16 Studio 5 (ARCS 3105); MArch 1 Drawing (ARCS 5005); DRS Thesis ARCS 5909; Canadian Architecture (ARCH 4002 ARTH 3002)
- 2014-15 Studio 4 (ARCS 3105); Studio 3 (ARCS 2106); Graduate Seminar (ARCH 5200); Canadian Architecture ARCH 4002 and ARTH 3002
- 2013-14 Studio 6 (ARCS 4105 Housing Studio); Studio 5 (ARCS 3106 DSA China); History Theory (Architecture of the Postwar Period ARCH 4301)
- 2011-12 Architectural History (History of Modern Architecture ARCH 2300, BAS 2d year core course); Studio Studio 5 (ARCS 3106 DSA Cuba); History Theory (Architecture of the Postwar Period ARCH 4301)
- Architectural History (ARCH 2300, BAS 2d year core course); Studio 3 (ARCS 2106, BAS 2d year); 2010-11 Architectural History and Theory (ARCH 4301, BAS 3<sup>rd</sup> & 4<sup>th</sup> year elective)

#### SCHOLARLY AND PROFESSIONAL ACTIVITY

- 2013-2015 Guest Lecturer PhD Seminar, on Guarino Guarini. Invited by Dr. Alberto Pérez-Gómez, Saidye Rosner Bronfman Professor of the History of Architecture, McGill
- 10/2014 Moderator, "Urbanization in China – A Panel Discussion," Carleton Univ. (Ben Gianni, co-organizer).
- 10/2013 Guest Lecturer: "Drawing the Curtain: the curtain wall as technique and idea," Carleton U Art Gallery.
- Keynote Lecture: "Residential Modernism in the Canadian Capital." RAIC College of Fellows. 11/2011
- 02/2011 "The Renovation of the Victoria Memorial Museum, and other contemporary architectural works in Canada," Embassy of Canada in Havana, Cuba.
- 2011 Invited Guest Critic, Atelier Maîtrise I, Faculté d'Amémagement de l'Université de Montréal. QC

#### **University Administration**

- 2016-17 Associate Director Undergraduate
- **Curriculum Committee**
- 2013 2017 University Senate

- 2015 2017 Senate Executive Committee
- 2010 2016 Undergraduate Admissions / Recruitment Committee
- 2010 2016 ORSA Liaison (Ottawa Regional Society of Architects)
- 2013, 2016 Faculty Search Committee
  - Coordinator, Student Affairs (Y. Cazabon / J. Debanné)
- 2013 2015 Charles Gordon Lecture Committee
- 2013 2015 Tenure and Promotions
- 2013-14 Coordinator, Urbanism (B. Gianni / J. Debanné); ACSA Representative
- 2011 2012 Acting Director (November 2011 July 1, 2012); Executive Committee -- Associate Director Undergraduate Curriculum And Accreditation Committee; CUCQA Carleton University Committee on Quality Assurance School Renewal Task Force; Tenure & Promotion Committee
- 2010 2011 Associate Director Undergraduate Member ex oficio: Curriculum and Accreditation Committee, Executive Committee,

# RESEARCH AND FUNDING – Overview

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Career Total Research Funding $37,000.00
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# PUBLICATIONS:

1) Life-time summary (count) according to the following categories:

- Books edited	1
- Chapters in books	2
- Papers in refereed journal	2
- Papers in refereed conference proceedings	6
- Technical reports	2
- Abstracts and/or papers read	20
- Others (workshops presented, newspapers, etc.)	11

# **Technical Reports – Articles in Professional Journals**

- 1. Debanné, J. "Hintonburg Heroes," on an increased density residential development in Ottawa, by Colizza Bruni Architects, *Canadian Architect*, Vol. 59 No. 1, January 2014, pp. 18 22.
- 2. Debanné, J. "Glass Menagerie" an article on the renovation and siesmic upgrades to the VMMB (Victoria Memorial Museum Building), *Canadian Architect*, Sep 2011

#### **Other: Publications In Non-Refereed Journals**

- 1. Debanné, J. "Modern Vintage, Featured Home: Rothwell Heights," Ottawa Magazine, Interiors 2015 (p. 82-87).
- Debanné, J. "Remembered Dimensions Mental Mapping Mies van der Rohe dwellings at Lafayette Park, Detroit" POST Magazine (Melbourne AU), Issue 02, Volume 01, 2012 p. 20 – 24.

#### Other: Book Reviews

2013 Shannon Ricketts: Werner Ernst Noffke; Ottawa's Architect. (OSCAR newspaper, Ottawa, June 2013).

#### Other: Newspaper articles

- 2015 "An Example of Sensitive Infill," The Oscar, July 2015
- 2015 "In My Backyard: To Addition or Not To Addition?" The Oscar, June 2015
- 2014 "House Conversions, Planning and the Meaning of the City: An Interview with City of Ottawa Planner Tim J. Moerman," The Oscar, January 2013.
- 2013 "Infill in Mature Neighborhoods: An Interview with Alain Miguelez," The Oscar, December 2013.
- 2013 "Urban Affections: Local Business and Urbanity in Old Ottawa South," The Oscar, October 2013.

#### PROFESSIONAL PROJECT LIST

2010 Residential, 1998 Alta Vista Drive, Ottawa, On; Debanné Shemiot Design.

## SERVICE

2011 – 2012	Advisory Counsel for OsWatch – planning committee for the Ottawa South Community Association
2012 - present	Community education on urban and architectural issues: zoning and infill dossiers, City of Ottawa.
2013	Workshop organizer on the topic of densification policy: with City of Ottawa planner Steve Gauthier, City
	Councilor for Capital Ward David Chernushenko, and architects and planners (May 27 <sup>th</sup> , 2013).
2012	Scholarly contribution to the dossier for the Briarcliffe Heritage Conservation District, Ottawa: the first
	modernist neighbourhood in Canada to receive a heritage designation.

#### INTERVIEWS – public understanding of architecture

2014 Art TéVé: "Maisons Extraordinaires" (in preparation).

#### CURRICULUM VITAE

#### **ESPONDA, Mariana** Associate Professor, Tenured (2013)

Coordinator of the Conservation & Sustainability Program; Member of Graduate Faculty

#### DEGREES:

- 2004 Ph.D. in Architectural Construction & Rehabilitation.Universidad Politécnica de Cataluña, Spain
- 1999 Professional degree as an architect. Mexico
- 1998 UNAM, School of Architecture. Mexico City, Mexico

#### HONOURS:

2013 Finalist, Capital Educators Award for excellence in teaching and mentorship. Ontario, Canada

#### **EMPLOYMENT HISTORY:**

#### **Teaching Positions**

2013 –present	Associate Professor, Azrieli School of Architecture & Urbanism, Carleton University
2008-13	Assistant Professor, Azrieli School of Architecture & Urbanism
2010, 2013	Visiting Professor: Advanced Masters in Structural Analysis of Monuments and Historical
	Constructions (SAHC), University of Minho, Portugal & Technical University of Catalonia, Spain.
2005-2006	Visiting Professor: Master of Architectonic Restoration. Universidad Politecnica de Cataluna.
	Barcelona, Spain

#### **TEACHING ACTIVITY:**

2008-16 Undergraduate studios including: ARCS 2105, ARCS 2106, ARCC 3301, ARCC 4909 Lecture course in the technology stream: philosophy, ethics & tectonics in conservation and adaptive reuse projects (ARCH 3100, ARCH 4200, ARCC 4801A & ARCC 3501) Workshops in the technical, architectural, ecological properties & aging of materials: ARCC 1305; ARCC 4300. Directed Study Abroad to Barcelona and Myanmar (ARCC 5401)

#### **GRADUATE SUPERVISION:**

Completed: 19 M.Arch (professional) In progress: 4 M.Arch (professional); 2 PhD

#### SCHOLARLY AND PROFESSIONAL ACTIVITY Memberships In Professional Societies:

- Member of Scientific Committee of the Latin American Congress of Historical Construction.
- ICOMOS Canada Sustainability Scientific Committee & ICOMOS Canada ISCARSAH Scientific Committee
- SAH (Society of Architectural Historians)
- APT (Association for Preservation Technology International)
- DO.CO.MO.MO (Documentation Conservation Modern Movement)

#### **Guest Design Critic**

- 2016 Carleton University HODI Award Built Heritage Conservation- Competition reviews.
- 2015 Universidad Nacional Autónoma de México, School of Architecture. Undergraduate final reviews.
- 2014 Delft University, Graduate reviews.
- 2013 University of Minho, Portugal & Technical University of Catalonia, Spain. Graduate thesis reviews

#### UNIVERSITY ADMINISTRATION

- 2008 16 Coordinator, Conservation & Sustainability
- 2012 16 Member, PhD Committee
- 2012 13 Director Search Committee
- 2009, 2013 Faculty Search Committee
- 2009, '13, '15 Undergraduate Admissions/Recruitment Committee
- 2012 13 Curriculum and Accreditation Committee (2010 09).
- 2008 10 Chair, Facilities/Health & Safety
- 2010, 2015 ACSA Representative
- 2008 Graduate Admissions/Recruitment

#### **RESEARCH AND FUNDING**

<u>1.</u> External Research Funding:

Year	Source	Type*	Amount per year	Purpose
2015-21	NSERC C	\$1,500,0	000 (tot)	CREATE Program; M.Santana (Principle)
2015-22	SSHRC	С	\$2,500,000 (tot)	New Paradigm, New Tools; S Fai (Principle)
2015	MITACSC	n/a		Student travel & Accommodation

2. Internal Research Funding:

Year	Source	Type*	Amount Purpose**
2008	Carleton Univ.	0	\$25,000 Start-up Research Grant
*Type: C	C-Granting councils;	G-Gover	nment; F-Foundations; O-Other

#### PUBLICATIONS:

#### Books authored:

1. Sant Rafael Pavilion. Architectural Survey and Adaptive Reuse. Hospital St. Pau, Barcelona. **M. Esponda.** Lulu.com (2014) ISBN: 978-1-329-00940-0, 132 pp.

#### Chapters in Books:

1. *Material culture: Square log cabins in the village of Mont Tremblant* in Community Built: Art, Construction and Preservation. **Esponda, M.** Routledge. Expected publication Winter 2017

2. La Sauvegarde de l'architecture moderne. in France Vanlaethem and Marie-Josée Therrien. (2013) "Défis de la préservation de l'architecture de Josep Lluis Sert". **Esponda**, **M**. Presses du L'Université du Québec. Canada. ISBN:978-2-7605-3467-4

3. *"Il Vasto a Napoli y el Ensanche de Barcelona, due realita a confronto".* In: De Sivo, B. and Díaz, C. *"Schede di rilevamento dell'isolato n.1" (Uplifting of the square no. 1)* and *"Schede di rilevamento degli edifici degli isolati n.1 e 2". (Uplifting of the building no. 1&2).* Cunha, P., **Esponda, M**., CITTAM. Universita degli Studi di Napoli Federico II, (2001) pg. 113-146. and 331-358.

#### Papers in refereed Journals:

1. **Esponda**, **M.** "Time proof: Reinforced concrete as a restoration technique". Journal of Architectural Conservation. Accepted but not yet published

**2. Esponda, M.** (2014) "Adaptation & Transformation: Mediterranean Architecture in North America". RISCat (Rivista Italiana di Studi Catalani) Associazione Italiana di Studi Catalani AISC, Italy, No. 3

3. Esponda, M. (2013) "Memory and new use for an historic ruin: revitalization" Int/AR Journal. Vol. 04 Difficult memories: reconciling a meaning. Department of Interior Architecture. Rhode Island School of Design. Pp.98-107 *ISBN:* 978-0-98327232-2-8

4. **Esponda, M.** (2012) "La Fundación Miró en Barcelona: proceso constructivo, valoración de daños y criterios de intervención" ("*La Fundación Miró: constructive process, damage & criteria for restoration*"). ACADEMIA XXII, Centro de Investigaciones y Estudios de Posgrado, Facultad de Arquitectura, Universidad Nacional Autónoma de México. UNAM. Año 3. No. 4. February 2012. pp. 11-27 ISSN: 2007-252X.

#### Papers in Refereed Conference Proceedings

1. **Esponda M.** & Gil Crespo, I. (2015) *"Tecnología constructiva de las log-houses en las Laurentides, Quebec'.* Congreso Hispanoamericano de Construcción, Segovia, España. Oct.

2.Ureche C. & Esponda M. (2014) "Water Management Systems and Historic Buildings". Association of Preservation and Technology (APT) Métissage. CS02 Session- Gun Powder and Stones. Quebec City. October

**3. Esponda, M.** (2012). *"Conservation of a Modernist House in a Natural Park"* 12<sup>th</sup> International Do.co.mo.mo. "The Survival of Modern" Espoo, Finland.

#### **Editorship**

- International Journal of Architectural Heritage.
- Journal of Society of Architectural Historian, Australia and New Zealand
- INT/AR Vol 5
- Journal of Cultural Heritage Management & Sustainable Development

#### **Newspapers**

**1.Esponda, M** (2015) Nov. *"La durabilité por la savoir traditionale"*. Mont Tremblant Express.

# Other Evidence of Impact and Contribution PUBLIC LECTURE

**2016** Jan. "Sustainability through traditional knowledge". Carleton University

**2015** Feb. *"The power of heritage: Design + technology + cultural value".* Historic Preservation and Community Planning. Charleston College. USA

## Conference as a speaker

**2015** Oct 1er Congreso Internacional Hispanoamericano de Historia de la Construcción, Segovia, España. *"Tecnología constructiva de las log-houses en las Laurentides, Quebec'*, Oct.

**2015** March XII Jornadas Técnicas de Arquitectura Vernácula. Cátedra Gonzalo de Cárdenas, Cuba. "Naturaleza, sociedad y técnica: Saber construir". Keynote speaker.

**2014** Nov ICOMOS18<sup>th</sup> Conference, Florence, Italy "Natural, social and technical: "savoir-faire" in the Laurentians" **2014** Oct Association Preservation of Technology APT, Quebec City. "Misconception: Traditional Materials vs New Materials"

2014 March Round table "Exploring the Culture value of Nature in World Heritage context"

**2013** May. "Adaptation & Transformation: Mediterranean Architecture in Guelph & Boston" North America Catalan Society, University of Toronto.

**2013** March. Heritage & Technology Canadian Studies Symposium. Carleton University. "Moving a Heritage House" **2012** Oct. Heritage Canada Foundation National Summit 2012, Montreal, Quebec "The effect of diversity: a multidisciplinary group in heritage education"

**2012.** Aug. 12<sup>th</sup> International Do.Co.Mo.Mo Conference "The Survival of Modern" Espoo, Finland. Conference: "Conservation of a Modernist House in a Natural Park".

# Organizing Conference

**2014** Session Chair in the conference Association of Preservation and Technology (APT) Métissage. CS06 Session-Earth, Stone & Water. Quebec City. Oct

2014. Martin Weaver Memorial Lecture. By Town Museum, Ottawa. May

**2013** Heritage Canada Foundation (HCF) 40 years: "Regeneration Heritage Leads the Way". Chateau Laurier, Ottawa. Nov.

# **Organizing Student Charrette**

**2013** Heritage & Technology. Student Charrette: Rethinking Victoria Island on Chaudière Falls. Carleton Univ.

# Organizing Workshop

**2016** Canadian Mortar Group, Carleton University. CREATE Heritage Engineering. 55 people. Jan 21 **2014** Canadian Mortar Group, APT Conference. 45 people. Quebec City. October 30 **2013** Canadian Mortar Group, Carleton University. Aug 29

#### **EXHIBITIONS:**

2013 – (May) Young Architects of Spain, Azrieli School of Architecture, Carleton University, Ottawa; Jesus Aparicio Curator. Spanish Embassy

2013 – (July) Student Charrete in Heritage & Sustainability, City Hall of Ottawa, ON.

# **EXTRA-UNIVERSITY ACTIVITIES**

2016-2015 Ontario Association of Architects, Sustainability Building Environment Committee (SBEC)

2016-2013 APT Education and Research focus group, North America

2016-2010 Martin Weaver Memorial Fund, ICOMOS Canada.

2016-12 External Reviewer. PTAH Consultants Inc. Architects: Condition Review of the James W. Strutt House Foundation. National Capital Commission (NCC).

2016 - 2010 National Roundtables on Heritage Education, Canada.

2015 Conserving the Modern- Urban Lab event NCC. May 7

2012 Coordinator for the "Conditional Assessment and Renovation for the Historical Building Alliance Francaise", In Ottawa. Honours Project 4<sup>th</sup> year C&S students.

2012 Training Course Wood in the 21<sup>st</sup> century: Design and Preservation of Contemporary and Historic Architecture. Cambridge, Massachussetts. MIT Department of Architecture & the Boston Society of Architecture.

#### **CURRICULUM VITAE**

## **FAI, Stephen,** Associate Professor, Tenured (2002)

Director - Carleton Immersive Media Studio (CIMS), Member of the Graduate Faculty

# DEGREES:

2006	Ph.D. Religious Studies, University of Ottawa.
1996	M.A. Religious Studies, University of Ottawa
1000	R Arch (with distinction) Carloton University (professions

1990 B.Arch. (with distinction), Carleton University (professional degree)

#### HONOURS: Cross appointments (current)

- 2015 Civil and Environmental Engineering (Carleton).
- 2014 Ottawa Institute of Systems Biology Associate Member (Ottawa)
- 2011 Human-Computer Interaction Graduate Program (Carleton)
- 2011 Institute for Comparative Studies in Literature, Art, and Culture (Carleton).

#### **EMPLOYMENT HISTORY:**

#### **Teaching Positions**

2001–16 Associate Professor, Azrieli School of Architecture and Urbanism 2007–16 Director, Carleton Immersive Media Studio (CIMS)

#### SCHOLARLY AND PROFESSIONAL ACTIVITIES:

Scientific Committee, ARQUEOLÓGICA 2.0 - 8th International Congress
on Archaeology, Computer Graphics, Cultural Heritage and Innovation (Valencia)
Conference Organizing Committee, CIPA International Conference (Ottawa).
Editorial Board, Virtual Archaeology Review
Program Committee, Digital Heritage (Granada)
Scientific Committee, CIP A International Conference (Taipai)
Awards Committee, Allied Arts Award, Royal Architectural Institute of Canada.
Program Committee, Digital Heritage (Marseille).
Scientific Committee, CIP A International Conference (Strasbourg).
Scientific Committee, Ornament, Université de Montréal
Chair, Senate Library Committee, Carleton University.
Steering Committee, National Round Table on Heritage Education, National Trust.

#### **GRADUATE SUPERVISIONS:**

Completed: 61 M.Arch. (professional); 11 M.Arch. (post-professional); 2 MAS; 2 M.A.; In progress: 3 M.Arch. (professional); 2 MAS (post-professional); 10 PhD (Architecture)

# **TEACHING ACTIVITY**

2012-2016	ARCH 6001 Vitruvian Exercises 1 (PhD core)
	ARCN 6001 Daedalic Exercises 1 (PhD core)
2016	ARCC 3301 Conservation in Practice 1 (Conservation/Sustainability)
2016	ARCH 5102 Colloquium (MAS core)
	ARCH 6102 Colloquium (PhD core)
2015	ARCH 5105 Gateway Studio (MArch)
2012, 2015	ARCH 4909 Honours Project (Conservation/Sustainability)
2015	ARCH 5402 Evaluating Heritage Properties
2012-2014	ARCH 3105 Studio 4 (BAS)
2009-2011	ARCS 1005 Drawing (BAS)
2011	ARCH 5002 Graduate Seminar 2 (MArch)
	ARCC 4801 Design Build Workshop (elective)
2011-2012	ARCN 5909 Directed Research Studio (MArch)

# **RESEARCH AND FUNDING - Overview**

<b>NEOLANON</b>				
1. External F	Research Funding (cur	rent):		
Principal i	investigator			
Year	Source	Type*	Amount per year	Purpose
2015–18	PSPC/PPB B	G	\$600,000	research
2015–17	PSPC/PPB	G	\$130,000	research
2015–22	SSHRC	С	\$360,000	training
2015–16	Mitacs	0	\$45,000	research
Co-applicant	. Principal investigator	: Mario Santana		
2015–21	NSERC	С	\$275,000	training
2. Internal R	esearch Funding (curr	<u>ent):</u>		
2013–16	Carleton Univ.	С	\$20,000	research
PUBLICATIO	JNS:			
1) Life-time s	summary:			
- Chapters in books			01	
- Papers in refereed journal				
- Papers in re	efereed conference pro	oceedings		
- Technical reports				
- Abstracts and/or papers read				
- Others (workshops presented)				

#### 2) Details:

Papers in refereed Journals:

#### **Refereed Papers**

Fai S\*, Graham K, Syrett AJ, Trickey B, Valenzuela N, Bennett SAL\* (2014) Multi- dimensional anatomical representation: A volumetric comparison of the C57BL/6 and N3 C57BL/6 x 129- SV mouse brain modeled from serial section using Autodesk Maya, Proceedings IWBBIO 2014: International Work-Conference on Bioinformatics and Biomedical Engineering. Granada, Spain, 642-659.\* joint corresponding authors
McDowell GSV\*, Blanchard AP, Figeys D, Fai S, Bennett SAL\* (2014) Advancing Lipidomic Bioinformatic Technologies: Visualization and Phospholipid Identification (VaLID) version 3.0, Proceedings IWBBIO 2014: International Work-Conference on Bioinformatics and Biomedical Engineering. Granada, Spain, 642-659.
McDowell GSV\*, Blanchard AP\*, Taylor GP, Figeys D, Fai S, Bennett SAL. (2014) Predicting glycerophosphoinositol identities in lipidomic datasets using VaLID (Visualization and Phospholipid Identification) – an online bioinformatic search engine, Biomed Res Int (Bioinformatics, Special Issue Computational Systems Biology Methods in Molecular Biology, Chemistry Biology, Molecular Biomedicine, and Biopharmacy), Article ID 2014; 2014;818670. doi:10.1155/2014/818670

• McDowell GSV\*, Blanchard AP, Figeys D, Fai S, Bennett SAL\* (2014) Advancing Lipidomic Bioinformatic Technologies: Visualization and Phospholipid Identification (VaLID) version 3.0, Proceedings IWBBIO 2014: International Work-Conference on Bioinformatics and Biomedical Engineering. Granada, Spain, 642-659. \* Joint corresponding authors.

•Xu H\*, Valenzuela N, Fai S, Figeys D\*, Bennett SAL\* (2013) Targeted Lipidomics: Advances in profiling lysophosphocholine and platelet activating factor second messengers FEBS J, 280:5652-5667. doi: 10.1111/febs.12423. • Bennett SAL, Valenzuela N, Xu H, Franko B, Fai S, Figeys D (2013) Using neurolipidomics to identify phospholipid mediators of synaptic (dys)function in Alzheimer's Disease. Front. Physiol. 4:168. doi: 10.3389/fphys.2013.00168.

• Blanchard AP, McDowell GSV, Valenzuela N, Xu H, Gelbard S, Bertrand M, Slater GW, Figeys D\*, Fai S\*, Bennett SAL\* (2013) Visualization and Phospholipid Identification (VaLID): An online integrated search engine capable of identifying and visualizing glycerophospholipids with given mass. Bioinformatics, 29: 284-285. doi: 10.1093/bioinformatics/bts662

• Bennett SAL, Valenzuela N, Xu H, Franko B, Figeys D, Fai S (2013) Phospholipid mediators of synaptic (dys)function in Alzheimer's Disease – A neurolipidomic approach. Frontiers in Membrane Physiology and Biophysics, in press (accepted June 18 2013) • Mazereeuw G, Herrmann N, Bennett SAL, Swardfager W, Xu H, Valenzuela N, Fai S, Lanctôt K.L, 2012. Platelet activating factors in depression and coronary artery disease: a potential biomarker related to inflammatory mechanisms and neurodegeneration. Neurosci Biobeh Rev, in press (accepted June 13 2013)

• Imbeault S\*, Valenzuela N\*, Fai S†, Bennett SAL† (2010) Localizing protein in 3D neural stem cell culture: A hybrid visualization methodology. J Vis Exp, 46. http://www.jove.com/index/details.stp?id=2483, doi: 10.3791/2483. (CIHR MOP 62826 (operating), CIHR TGF 96121 (HQP stipends)) \*Authors contributed equally. †Joint corresponding authors

## Papers in Refereed Conference Proceedings

• Hayes, J., Fai, S., Kretz, S., Ouimet, C., White, P. (2015) "Digitally-Assisted Stone Carving of a Relief Sculpture for the Parliament Buildings National Historic Site of Canada", *ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, Volume II- 5/W3, 2015 25th International CIPA Symposium 2015, 31 August – 04 September 2015, Taipei, Taiwan.

• Hayes, J., Fai, S., White, P. (2014) Digitally-Assisted Stone Carving on Canada's Parliament Hill, Thompson, Emine Mine (ed.), *Fusion - Proceedings of the 32nd eCAADe Conference - Volume 1*, Department of Architecture and Built Environment, Faculty of Engineering and Environment, Newcastle upon Tyne, England, UK, 10-12 September 2014, pp. 643-651.

Zixiao Shi, Aly Abdelalim, William O'Brien, Ramtin Attar, Peter Akiki, Katie Graham, Barbara Van Waarden, Stephen Fai, Alex Tessier & Azam Khan. (2015) "Digital Campus Innovation Project: Integration of Building Information Modelling with Building Performance Simulation and Building Diagnostics." *SimAUD 2015 Conference Proceedings: Symposium on Simulation for Architecture and Urban Design*, Washington.
Fai, S., Rafeiro, J. (June 2014) "Establishing an Appropriate Level of Detail (LOD) for a Building Information Model (BIM) — West Block, Parliament Hill, Ottawa, Canada." *ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, Volume II- 5, 2014 ISPRS Technical Commission V Symposium, 23–25 June 2014, Riva del Garda, Italy. (Awarded Best Paper)

Fai,S., Bolduc, S., Conty, K., Kelly, P., Gallant, P. (May, 2014) "Kitigan Zibi Anishinabeg: BIM and GIS for First Nations' Infrastructure Management." Preventive and Planned Conservation Conference 2014, Manuta, Italy.
Fai, S., Sydor, M. (October 2013) "Building Information Modelling and the Documentation of Architectural Heritage: Between the 'Typical' and the 'Specific." Digital Heritage International Congress (DigitalHeritage) Marseilles, France. 731 - 734. IEEE Conference Publications

• Fai, S, Filippi, M., Paliaga, S. (September, 2013) "Parametric Modelling (BIM) for the Documentation of Vernacular Construction Methods: a BIM for the Commissariat Building, Ottawa, Canada." XXIV CIPA International Symposium, Strasbourg France. • Ekim, Z., Santana Quintero, M., Percy, K., Ward, S., Fai, S., Ouimet, C., Cancino, C., Boussalh, M. (September, 2013) "Documentation for Emergency Stabilization and the Integrated Conservation Planning of Earthern Architecture Settlements: the Kasbah of Taourirt (Morocco)." XXIV CIPA International Symposium, Strasbourg France.

• Fai, S, Todd Duckworth, Katie Graham, Nevil Wood (September 2011) "Building Information Modelling and the Conservation of Modern Heritage," *The 24the World Congress of Architecture,* Union International des Architects (UIA). Tokyo, Japan.

• Fai, S, Katie Graham, Todd Duckworth, Nevil Wood, Ramtin Attar (September 2011) "Building Information Modelling and Heritage Documentation," *23rd International Symposium*, International Scientific Committee for Documentation of Cultural Heritage (CIPA). Prague, Czech Republic.

#### CURRICULUM VITAE

FONTEIN Lucie,	Associate Professor, Tenured (2000)
	Member of the Graduate Faculty

#### DEGREES:

- 1979 M. Arch. (History and Theory), McGill University, Montreal, Canada
- 1991 B. Arch. (Professional), University of Toronto, Canada.

#### **PROFESSIONAL REGISTRATION:**

Order of Architects of Quebec NCARB Certified

#### **EMPLOYMENT HISTORY:**

#### **Teaching Positions**

2001- Associate Professor, Azrieli School of Architecture and Urban Planning, Carleton University 1996-2001 Assistant Professor, Azrieli School of Architecture and Urban Planning, Carleton Univ. 2009- Associate Adjunct Professor, School of Architecture and Interior Design, Univ. of Cincinnati

#### **Professional Employment**

1986- Private Practice, Lucie FONTEIN, Architect, Ottawa, ON

#### **GRADUATE SUPERVISIONS:**

Completed: 12 M.Arch (professional)

#### **TEACHING ACTIVITY:**

Studios, Lecture Courses, Workshops and Seminars:

2016-17 ARCS 5105 – Gateway Studio, ARCC 5200 – Professional Practice

- 2015-16 Sabbatical leave
- 2014-15 ARCS 5104 M Arch 1 Studio 3, ARCC 2202 Architectural Technology 1
- 2013-14 ARCS 5104 M Arch 1 Studio 3, ARCC 2202 Architectural Technology 1 ARCC 5200 – Professional Practice (VOD)
- 2012-13 ARCS 5104 M Arch 1 Studio 3, ARCC 5200 Professional Practice
- 2011-12 ARCC 3105 Studio 4 (Undergrad), ARCC 5200 Professional Practice
- 2010-11 ARCC 3105 Studio 4 (Undergrad), ARCC 5200 Professional Practice
- 2009-10 ARCC 3105 Studio 4 (Undergrad), ARCC 5200 Professional Practice

Teaching at the University of Cincinnati:

- 2015-16 ARCH 7002 M Arch 1 Studio 2, ARCH 4002 Capstone Studio (4<sup>th</sup> Year UG)
- 2014-15 ARCH 7002 M Arch 1 Studio 2, ARCH 7036 Elective Theory Seminar: Designing with Light, INTD 4081 Interior Lighting
- 2013-14 ARCH 7002 M Arch 1 Studio 2
- 2012-13 ARCH 4002 Capstone Studio (4<sup>th</sup> Year Undergrad)
- 2011-12 ARCH 713-001 Graduate Elective Studio
- 2010-11 ARCH 713-001 Graduate Elective Studio
- 2009-10 ARCH 601 Structures Environment Construction Studio (4<sup>th</sup>Year Undergrad)

#### SCHOLARLY AND PROFESSIONAL ACTIVITY

#### Guest Design Critic

- 2016 Ext. Thesis Critic, School of Architecture, University of Manitoba
- 2010-15 Thesis Critic, SAID, University of Cincinnati

#### University Administration

2014	Azrieli School of Architecture representative at CACB symposium 2001-02
2010-15	Co-Op/Professional Coordinator, ORSA representative
2009	Chair, Tenure and Promotions Committee, Co-Op/Professional Coordinator

#### PUBLICATIONS:

Life-time summary (count) according to the following categories:

Books edited	.1
Papers in refereed iournal	.1
Papers in refereed conference proceedings	12
Abstracts and/or papers read	2

#### Details:

Books edited:

1. <u>ARCC/EAAE Montreal Conference on Architectural Research Proceedings</u> ed. by Lucie Fontein and Herman Neuckermans, EAAE, Leuven, Belgium, 2004, 567 pp.

Papers in refereed Journals:

1. **Fontein, L.,** Reading Structure through the Frame. Perspecta 31 Reading Structures, The Yale Architectural Journal. pp. 50-59, 2000.

#### Papers in Refereed Conference Proceedings

- 1. **Fontein, L.**, *A Tale of Two Schools.* ACSA Annual Meeting Proceedings, Montreal, 2011
- Fontein, L., Light as an architectural matter: Student work from 5 years of Lighting Design Workshops, Designing Designers 2007 International Convention of University Courses in Design, Milan, Italy, 2007

#### **PROFESSIONAL PROJECT LIST** - Details (last 7 years)

- 2015 Bain Guest House, Biddeford Pool, ME; Project Cost: \$420,000
- 2014 Freedman/Ohayon Kitchen Renovation, Montreal, QC; Project Cost: \$80,000
- 2013 Williams House, Biddeford Pool, ME; (on hold) Est. Project Cost: \$1,000,000
- 2012 Bouthillette House, Saint Irenée, QC; Project Cost: \$1,300,000
- 2012 Honeywell House, Indian Lake, ON; Project Cost: \$700,000
- 2011 Fontein House, Biddeford Pool, ME; Project Cost: \$550,000
- 2008 Livingood House, La Malbaie, QC; Project Cost: \$980,000

#### **CURRICULUM VITAE**

GIANNI, Benjamin, Associate Professor, Tenured

#### EDUCATION

- 1984 M. Arch., Yale University School of Architecture, New Haven, CT
- 1980 B.A., University of Pennsylvania, Philadelphia, P.A.
- 1979 Columbia University, Reid Hall Program in Paris

#### **TEACHING AND ADMINISTRATIVE EXPERIENCE**

Teaching Area: Housing, Urbanism, Design

- 2006-pres. Associate Professor, School of Architecture, Carleton University
- 2002-2006 School of Information Technology, Carleton University
- 1992-pres. Associate Professor, School of Architecture, Carleton University
- 1991-1992 Associate Professor, Department of Architecture, Ohio State University, Columbus, OH
- 1985-1991 Assistant Professor, Department of Architecture, Ohio State University, Columbus, OH

#### Administrative

2009-pres.	Coordinator, Urbanism Major, Azrieli School of Arch. & Urbanism, Carleton University
2003-2005	Director, School of Information Technology, Carleton University
1992-2000	Director, School of Architecture, Carleton University

#### ACADEMIC AND PROFESSIONAL HONORS

1998	Skidmore, Owings and Merrill Foundation Scholarship/Residency
1990	Young Architects Award, Architectural League of New York City
1990	ACSA Design Award for Theoretically Based Work, ACSA
1988	Excellence in Teaching Award, Architects Society of Ohio

#### TEACHING ACTIVITY (last 6 years)

2010-16:

- **ARCS 4105**, 4<sup>th-</sup>Year Studio (Comprehensive Studio, Housing)
- **ARCS 3106,** 3<sup>rd</sup> Year Studio
- ARCU 3100, Morphology of the City
- **ARCH 1000**, Introduction to Architecture
- **ARCH 4201R**, History of Modern Housing

#### 2014-15:

• **ARCH 1000**, Introduction to Architecture

#### 2010-15:

- ARCU 4600, Post-WWII Urbanism
- ARCU 3303-4909, Urbanism in Practice (Oblate Lands)

#### 2010-13:

• ARCU 3405, Introduction to Urbanism

#### **GRADUATE SUPERVISIONS**

Completed: 18 M.Arch (professional) In progress: 2 M.Arch (professional)
## RECENT RESEARCH, SCHOLARSHIP, AND CREATIVE ACTIVITY

Publication, Pa 2016	<b>pers Accepted/Presented, Conferences organized</b> Dekraker, J and <b>Gianni, B</b> , <i>Resilient Transitional Housing: a modified approach to the</i> <i>growth and transformation of Chinese cities</i> , Global Studies Conference, Los Angeles, CA, Jun. 30, 2016
2015	Co-organizer, International Conference on Chinese and African Sustainable Urbanization, Ottawa, October 24-25, 2015
2015	Gajer, S. and <b>Gianni, B</b> . <i>The Superblock as Chinese Vernacular,</i> Vernacular Architecture Forum 2015, Chicago, IL, June, 2015
2015	Hormann, S and <b>Gianni, B</b> ., <i>The Vernacular of Migration, the Shanghai Lilong</i> , Vernacular Architecture Forum 2015, Chicago, IL, June, 2015
2014	Co-organizer, 2nd annual Confucius Forum on China Studies at Carleton, October 1-2, 2014
2014	Back to the Future? Reform-Era Urban Housing in China (v. 2), 5 <sup>th</sup> Annual Conference on the Constructed Environment, Philadelphia, PA, October, 2014
2014	Urban Planning and the Challenge of Sustainable Cities in China, Canada-China Friendship Society, National Library and Archives, Ottawa, March 2014
2014	Presenter and panelist, DEEP GREEN FORUM Options for Sustainable Development in the Old Ottawa East Neighborhood, Carleton University, March 14, 2014
2014	Presenter and panelist, <i>Affordable Housing: A Federal Role</i> , Carleton Initiative for Parliamentary and Diplomatic Engagement, Conference Centre, Ottawa, ON, February, 2014
2013	Back to the Future? Reform-Era Urban Housing in China, 2013 Beijing International Forum on People to People Friendship, Beijing, November, 2013
2013	Interview on the Use of Computers in the Frankfurt Biozentrum Project, in Lynn, G., ed., <i>Archeology of the Digital</i> , Montreal: Canadian Centre for Architecture, 2013, pp. 57-64
2012	Architectural Photography at the Margins: the Work of Lynne Cohen Still Architecture: Photography, Vision and Cultural Transmission, Cambridge University, Cambridge, UK, May 2012

## Additional Creative Activity

Ongoing work on a book on entitled *Settlement and Subdivision* that traces patterns of subdivisions in Pittsburgh's South Hills from 1870 to 1945. Sabbatial project, 2009-10.

#### **RECENT PUBLICATIONS**

- 2013 Lynn, G., ed , "The Use of Computers in the Frankfurt Biozentrum Project," *Archeology of the Digital*, Montreal: Canadian Centre for Architecture, 2013, pp. 57-64
- 2009 Moon, M, Kosofsky-Sedgwick, E., Gianni, B., Weir, S. "Queers in (Single Family) Space," in Highmore, B., *Design Culture Reader*, Routledge, pp. 40-50

#### CURRICULUM VITAE

**GOFFI, Federica,** Associate professor, tenured (2011)

Associate Director – Graduate Programs Member of the Graduate Faculty (July 2013- present)

#### DEGREES:

2010 Ph.D. Architecture, Virginia Polytechnic Institute and State University, U.S.

1996 Architectural License (Italy) 1995 Dottore in Architettura (cum laude), University of Genoa, Italy

#### HONOURS:

2016 Alice Hitchkock Award (Soc. of Architectural historians - Nomination for *Time Matters*, Ashgate 2013)

#### **EMPLOYMENT HISTORY:**

#### Teaching Positions

-	
2007-present	Associate Professor, Azrieli School of Architecture and Urbanism, Carleton
2005-2007	Assistant Professor, Interior Architecture Department, Rhode Island School of Design
2004	Lecturer, Architecture School, Catholic University
2001-02	Instructor, Graduate History and Theory Courses, Virginia Polytechnic Institute

#### SCHOLARLY AND PROFESSIONAL ACTIVITIES:

2016	Assessor for a Canada Research Chair position in Architecture
2016	Assessor for the Italian Government, Evaluating the Research Work in Italian Universities in the field of architectural (Academic Years 2011-2015)
2016-2013	Peer Reviewer for Ashgate (3), Routledge (2) and McGill University Press (1) on forth coming books on architectural representation and imagination, and architectural theory.
2015	Book reviews for the Journal of Architectural Education:
	Review of Hawley, Christine. <i>Transitions: Concepts</i> + <i>Drawings</i> + <i>Buildings</i> . Ashgate 2013. JAE Vol 69, April 2015
	Review of Jenkins, Erik. Drawn to Design. Birkhouser 2012, JAE Vol 69, April 2015
May 2013	Peer review for the Atmosphere Symposium, University of Manitoba
May 2010	Peer Reviewer & Session Chair. Green Building Ottawa Conference.
2010	Peer Reviewer for INT.Ar (Intervention in Adaptive Reuse Journal).

#### **GRADUATE SUPERVISIONS:**

Completed: 40 M.Arch (professional), 1 M.A.S. (post-professional) 3 PhD In progress: 5 M.Arch (professional), 1 M.A.S. (post-professional) 8 PhD

## **TEACHING ACTIVITY:**

2011 – 16	ARCS 1005 - Drawing Course
2015	ARCH 6101 Colloquium (PhD)
	ARCS 2105 Studio
2013 – 14	ARCN 5909 Directed Thesis Studio (MArch)
2014	ARCH 6002 Vitruvian Exercises (PhD)
	ARCH 6002 Daedalic Exercises (PhD)
2009 – 13	ARCC 1202 History of Structures
2010 – 13	ARCS 5103 Studio (MArch)
	ARCS 5105 Studio (MArch)
2009 – 10	ARCC 5100 Advanced Building System (MArch)
2009 – 10	ARCS 4106 Studio
	ARCS 4105 Studio
	ARCS 2106 Studio

## SCHOLARLY AND PROFESSIONAL ACTIVITY

Guest Design Critic

2015 RISD, INTAR. Master Program, Studio Critic (Adaptive Reuse)

2013 McGill, Architecture, Master Program, Studio Reviews; Univ. of Manitoba. External Thesis Reviewer

## University Administration

2013- present	Associate Director Graduate Programs
2013-present	Graduate Admissions and Recruitment Committee, Chair
2013-2015	Chair, Directorship Search Committee; Faculty Search Committee
2011-2013	Associate Director of Professional Graduate Studies; Graduate Admissions and recruitment
2007-2012	Co-organizer/Coordinator Forum Lecture Series
2010-2015	Member University Senate
2010-2011	Graduate Supervisor
2009-2011	Member, Facilities/H&S/Events & LPR
2008-2015	Faculty Representative, Association of Collegiate Schools of Architecture

## **RESEARCH AND FUNDING – Overview**

1.	Internal	Research	Funding
1.	memai	Research	runuing

<u>Year</u> 2009	<u>Source</u> Carleton Univ.	<u>Type</u> Start-up	<u>Amount per year</u> \$25,000	<u>Purpose</u> research
PUBLIC	CATIONS			
1) Life-t	time summary:			
- Bo	oks authored			1

- Books edited	1
- Chapters in books	5
- Papers in refereed journal	5
- Papers in refereed conference proceedings	7
- Technical reports	6
- Papers read	25
- Others (workshops presented)	1

2) Details - 7 years:

Books authored:

Time Matter(s): Invention and Re-Imagination in Built Conservation: The Unfinished Drawing and Building of St. Peter's in the Vatican, by **Federica Goffi** (Ashgate, 2013), 300 pp.

Books edited:

1. *Marco Frascari's Dream House: A Theory of Imagination* ed. by **Federica Goffi**, Routledge (Forthcoming, January 2017), 300 pp.

Chapters in Books:

- 1. "Galileo's Limit: Mechanical Sciences' Technologies of Sight and the Transformation from Analogical to Graphic Representations", in G. Cairns (ed.), *Visioning Technologies the Architectures of Sight* (Routledge, Forthcoming Jan 2017).
- 2. "Suspended Ceiling Stories. Navigating the Contemporary Cosmo-technologies of Hospital Ceilings", in Paul Emmons, Marcia Feuerstein, Carolina Dyer (eds.), *Confabulations: Storytelling in Architecture* (Routledge, Forthcoming Jan 2017).

Papers in refereed Journals:

- 1. **Goffi, F.,** An Untimely Apologia: Contemporary Stories of an Undisciplined Handrail. Scroope, The Cambridge Architectural Journal. Forthcoming Spring 2017.
- 2. **Goffi, F.,** Built Conservation and the Unfinished Fabrics of Time. *AD* vol. 86 (Architectural Design: 'Architecture Timed: Designing with Time in Mind'), Guest Edited by Karen Franck. 86: 24-33, 2016

Papers in Refereed Conference Proceedings:

- 1. *Drawing Thinking: A Lost Currency?* (paper co-authored with David Lepage) Published online by the Association of Architectural Educators Conference, Nottingham, England, April 3-5 2013.
- 2. In Place and Time. ACSA, Montreal. 2011 March.
- 3. *Re-Making the Exquisite Corpse Studio.* 2009 ACSA Portland Oregon. Session Topic: Collage, an Open Aesthetic for Art and Architecture. Conference Theme: The Value of Design.

Papers Presented to learned societies:

- 1. Paper titled: 'A Concrete Theory of Architecture: Container/Contained relations between Drawings, Models and Building at St. Peter's in the Vatican'. AHRA conference: '*This Thing Called Theory*' to be held at Leeds Beckett University, England on November 19<sup>th</sup> -21<sup>st</sup>, 2015.
- 2. Invited School Wide Lecture: RISD (Interior Architecture School). Lecture title: '*Telling the Tale: Marco Frascari's Imaginative Factures through Details'*. April 21, 2015.

- 3. Invited primary speaker presentation: Frascari Symposium II, Washington- Alexandria Architecture Center, Virginia Tech. Presentation title: 'Tell-the-Tale Reflections on the Ceiling'. March 28-29, 2014.
- 4. Paper: Drawing Thinking: A Lost Currency? Presented at the Association of Architectural Educators Conference, Nottingham, England, April 3-5 2013: (un)common currency: The Status of the Architectural Studios. 2013 April.
- 5. Paper: 'In Place and Time'. Presented to the ACSA, Montreal: Where Do you Stand? 2011 March.
- 6. Paper: 'The Hybrid Phenomena of Architectural-Conservation Technologies'. Presented to 'Fixed', a conference organized by the School of Architecture, University of Plymouth, England. 2011 April.

#### **EXHIBITIONS:**

2010 – Intercollage of Words and Images by Federica Goffi, Exhibited at the Washington-Alexandria Architecture Centre, Washington DC, US Constructing Imagination Drawing Exhibit.

#### PROFESSIONAL PROJECT LIST

2011- Shortlisted by the Australian Canada Council of the Arts for the design of the Australian Pavilion at the Venice Biennale (Design team: Bud Brannigan, Federica Goffi)

#### **CURRICULUM VITAE**

DuBELLET KARIOUK, Paul Associate Professor, tenured (2005) - Member of the Graduate Faculty

#### **DEGREES**:

1995	M.Arch., Architecture, Columbia University, U.S.A.
1985	B.A., University of Virginia, U.S.A.

#### HONOURS:

2013	National American Institute of Architects, Small Project Awards; "Cemetery Marker"
2013	Architizer A+ Awards; First Place for the Memorial Category "Cemetery Marker"

#### **EMPLOYMENT HISTORY:**

#### Teaching Positions

2001- Present - Associate Professor, Carleton University; (Half Time 2009 - Present) 1997- 2000 - Assistant Professor, University of Florida 1995-1996 - Visiting Assistant Professor, Arizona State University

#### Professional Employment

2003 - Present - Kariouk Associates, Paul Kariouk, Architect, Ottawa, ON

#### **GRADUATE SUPERVISIONS:**

Completed: 8 M.Arch Thesis Supervision (professional)

#### **TEACHING ACTIVITY:**

Studios, Lecture Courses, Workshops and Seminars:2010 - 2015ARCH 4105A - Theories of Landscape Design2014-15ARCS 5103W - Studio 2 (M.Arch 1)2014ARCS 3105D - Studio 4 (BAS 3<sup>rd</sup> year)2010-12ARCS 3106 - Studio 5 (BAS 3<sup>rd</sup> year)

#### SCHOLARLY ACTIVITY

<u>University Administration</u> 2015-16 Graduate Committee 2014 - Director Search Committee – Member 2010 - Faculty Search Committee – Member 2001 - Present - Curriculum Committee – Member

#### **PROFESSIONAL ACTIVITIES**

2014 HGTV; "Stacey-Turley Home" 2014 PioneerTV; "Extreme Homes—Hill-Maheux Cottage" 2011 <u>CasaTV: Spaces and Ideas</u>; "Small Spaces"

#### **PROFESSIONAL SOCIETY**

- 2014 Ontario Association of Architects
- 2014 State of Virginia Board of Architects
- 2010 American Institute of Architects
- 2002 Royal Architectural Institute of Canada

#### PUBLICATIONS

1)	Life-	time	Summary
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-	Chapters in books	6
-	Papers in refereed journal	73
-	Papers in refereed conference proceedings	12
-	Exhibitions	14
-	Radio and television interviews	15

2) Details:

Chapters in Books:

- Maverick Style Residential Appearance and Details Design, "Echo House, Hill-Maheux Cottage, Hurteau-Miller Cottage and Westboro Home", Huazhong Univ. of Sci.&Tech Press, 10/14
- Top Office 2, "verval Ltee" Conference Facility, Huazhong Univ. of Sci.&Tech Press, 05/14
- Masonry Material and Structure, "Chelsea Hill House", Tianjin Ifengspace Media Co. 05/13
- 100 Dream Houses, "Echo House, Hill-Maheux Cottage and Hurteau-Miller Cottage", JTart Publishing & Media Group, 01/13
- Houses Designed for Families, "Hurteau-Miller Cottage", Think Publishing, Australia, 2012

Projects in Professional Journals:

- 1. Landscape World, "Cross-Laminated-Timber Cottage", 04/15
- 2. DŮM&ZAHRADA (Czech Republic), "24 Stop", 09/14
- 3. id+c, "Excellent Design, Westboro Home In Ontario, Canada", 05/14
- 4. Globe And Mail, "Thinking Small", 02/14; "Natural' Wonders", 05/13
- 5. DŮM&ZAHRADA (Czech Republic), "Vyzva v Centru Ottawy", 02/14
- 6. City Home, "Full Colour", 01/14
- 7. National Post, "Big Ideas for Small Spaces and Small Budgets", 01/14
- 8. Minimalist Ideas for Your Home, "Chelsea Hill House", Loft Publications 10/13
- Ottawa Citizen, "Taming a Difficult Site: Quietly modern home meets the challenge of a narrow sloping lot", 09/13; "Modern Approach", 03/14; "Tucked in a Pocket", 02/13; "Chewing away the interior", 12/12; "Getting steamy: Building a hammam into a 100-year-old attic...", 05/13; "Changing hands", 02/12
- 10. Style Architecture and Design: "La Maison Echo House", 01/13
- 11. Canadian Interiors: "Off the Wall in Ottawa", 01/13
- 12. Ottawa Style Magazine: 2012 Trendsetters, "The Architect Next Door", 10/12
- 13. Ottawa At Home, "Surprise And Delight", 09/14
- 14. Ottawa Magazine: 2012 Interiors Edition, "Head for the Hills", 02/12

Projects in Professional Digital Media:

- 1. AASArchitecture, "Cross-Laminated-Timber Cottage", 03/15
- 2. The Plus, "Verval", 01/15
- 3. Contemporist, "Cross-Laminated-Timber Cottage", 01/15; "Chelsea Hill House by Kariouk Associates", 09/12; "Hill-Maheux Cottage by Kariouk Associates", 06/12;
- 4. Architizer, "Cross-Laminated-Timber Cottage", 01/15; "Chelsea Hill House", 09/12; "Redeveloper Apartment", 10/11; "Hurteau-Miller Cottage", 08/11;
- 5. HOUZZ, "Cross-Laminated-Timber Cottage", 01/15
- 6. ArchDaily, "Cross-Laminated-Timber Cottage", 12/14; "Chelsea Hill House", 10/12; "Hill-Maheux Cottage", 11/11; "Hurteau-Miller Cottage", 11/11; "Redeveloper Apartment", 11/11
- 7. Casa Vogue (Brazil), "Apartamento é cheio de soluções criativas", 09/13
- 8. Chic Haus, "Urbana Y Moderna: Redeveloper Apartment", 03/13
- 9. Votre Maison, "Hors Norme", 03/13
- 10. Homes and Cottages, "Gatineau Getaway", 12/12
- 11. Dezeen, "Chelsea Hill House by Kariouk Associaes", 09/12
- 12. Casa Viva (Spain), "Panorama Entre Columnas", 08/12
- 13. Domus (Israel), "Family Album", 02/12
- 14. Space (Malaysia), "Home Away from Home", 01/12
- 15. Living&Design (Taiwan), "Building Echoed in the Past and Present", 01/12
- 16. Luxury Home Quarterly, "The Plans: Kariouk Associates", 09/11
- 17. Style, "The House a Party Built", 03/11
- 18. Projetar Casa (Portugal) "Dream House: Part I", 02/11
- 19. Centras (Estonia) "Echo House", 01/11

#### CURRICULUM VITAE

MANGONE, Giancarlo Assistant Professor (Tenure Track); Member of the Graduate Faculty

#### DEGREES:

2015	Ph.D. Architecture, Delft University of Technology, The Netherlands
2009	M. Arch, Architecture, University of Virginia, U.S.

2007 Bachelors, Architecture, University of Virginia, 0.3.

#### **EMPLOYMENT HISTORY:**

#### **Teaching Positions**

2014- Assistant Professor, Azrieli School of Architecture + Urbanism, Carleton University 2011-14 Instructor, Faculty of Architecture, Delft University of Technology 2010 Instructor, Architecture, Florida Atlantic University

#### Professional Employment

2009- Principal, Symbiosis:Sustainble Design+Consulting, West Palm Beach, FL, US
2011 Associate, Except, Rotterdam, The Netherlands
2010 Senior Designer, Sustainable Design Consultant, Fielding Nair International, Tampa Bay, FL,
2003-2012 Project Manager, Mangone Architect, West Palm Beach, FL, US
2009-2010 Research Consultant, William McDonough + Partners Architecture, Charlottesville, VA,

#### SCHOLARLY AND PROFESSIONAL ACTIVITIES:

2016 Scientific Committee Member, Windsor Conference on Thermal Comfort
2015 Scientific Advisory Committee Member, Urban Ecologies 2015
2014 Scientific Committee Member, Windsor Conference on Thermal Comfort
2013 International Technical Committee Member, Sustainable Buildings 2013 Dubai
2012-13 Chair, TU Delft Faculty of Architecture PhD Research Council

#### **GRADUATE SUPERVISIONS:**

Completed: 1 M.Arch (professional) In progress: 1 M.Arch (professional)

#### TEACHING ACTIVITY:

Studios, Lecture Courses, Workshops and Seminars:

- 2011-12 XXL Building Technology Workshop (Delft)
- 2013 Design Studio MsC 4 (Delft)
- 2014-15 ARCS 5105 Gateway Studio 7; ARCS 4106 Studio 4B
- ARCC 5100 Advanced Building Systems
- 2015-17 ARCS 3105 Studio 3A; ARCS 2106 Studio 2B ARCC 5100 – Advanced Building Systems ARCC 3004 - Workshop – Energy & Form

Directed or Independent Studies: Albara Darwish, M. Eng, 2015

#### SCHOLARLY AND PROFESSIONAL ACTIVITY

Guest Design Critic

2013, Umea University, Architecture, Design Studio 2

#### **University Administration**

2016- present Undergraduate Committee – Member

2015- present Technology Committee – Member

2015-16 Curriculum Committee – Member

2015- 16 PhD + MAS Admissions Committee - Member

2014- 15 Health + Safety Committee – Member

## **RESEARCH AND FUNDING - Overview**

1. External Research Funding:

Year	Source	Type*	Amount per year	Purpose**
2012-15	PIT Foundation	F	\$24,000	research
2012	Van Dorp Installaties	0	\$20,000	research
2012	ETH Zurich	0	\$2000	travel
*Type: C-0	Granting councils; G-Gov	rnment	; F-Foundations; O-Ot	her

PUBLICATIONS:

1) Life-time summary (count) according to the following categories:

#### 2) Details:

Books authored:

1. G. Mangone. Performative Microforests: Investigating the potential benefits of integrating spatial vegetation environments into buildings, in regards to the performance of buildings, their occupants + local ecosystems. A+BE | 10. TU Delft, 2015.

## Chapters in Books:

 Giancarlo Mangone, Patrick Teuffel, "Constructing Sensuous Ecologies : Looking beyond the energy + carbon efficiency arguments" in *Aesthetics of Sustainable Architecture*, Edited by Sang Lee, Rotterdam, The Netherlands : 010 Publishers

Papers in refereed Journals:

- 1. Giancarlo Mangone, "Constructing hybrid infrastructure : Exploring the potential ecological, social, and economic benefits of integrating municipal infrastructure into constructed environments", *Cities*, Vol. 55, 2016. P. 165-179
- Giancarlo Mangone, Kees van der Linden, "Forest Microclimates : Investigating the Performance Potential of Vegetation at the Building Space Scale", *Building and Environment*, Vol. 73, 2014. p. 12 – 23
- 3. Giancarlo Mangone, Stanley Kurvers, Peter Luscuere, "Constructing Thermal Comfort : Investigating the Effect of Vegetation on Indoor Thermal Comfort through a Four Season Thermal Comfort Quasi-Experiment", *Building and Environment*, Vol. 81, 2014. p. 410–426

Papers in Refereed Conference Proceedings

- 1. G. Mangone, "*Constructing Urban Habitats: …*" Proceedings of EEAE/ARCC 10<sup>th</sup> International Conference, Lisbon, Portugal, 15 18 June '16
- 2. G. Mangone, "Constructing Hybrid Infrastructure: ..." Proceedings of Urban Ecologies 2015, 18-19 June 2015
- 3. G. Mangone, Henk Staats, Peter Luscuere, "*Constructing Productivity: …*" Proceedings of ARCC 2015, Chicago, United States, 6 9 April 2015
- 4. G. Mangone, Stanley Kurvers, Peter Luscuere, "*Thermal Vegetation : ...*" Proceedings of CLIMA 2013, Prague, Czech Republic, 17 19 June 2013
- 5. G. Mangone, Peter Luscuere, "*Constructing Biodiversity : …* "Proceedings of the World Green Roof Congress 2012, Copenhagen, Denmark, 19 20 September 2012
- 6. G. Mangone, Kees van der Linden, *"Floating Vegetation : ..."* Proceedings of the International Green Technology Symposium 2011, Indore, India, Oct. 31 2 Nov. 2011

## **PROFESSIONAL PROJECT LIST** (last 7 years)

- 2015 Dormitory, Penas Blancas, Nicaragua, SD
- 2014 48 story mixed use tower, Kuala Lumpur, Malaysia, Sustainable Design Consulting
- 2013 Office Renovation, Frankenheerd, NL, Sustainable Design Consulting
- 2013 Elementary Play Space Design, Dordrecht, NL, SD
- 2011 Office, Accra, Ghana, Sustainable Design Consulting

## **CURRICULUM VITAE**

RIAR, Inderbir Singh, Associate Professor (tenured 2016); Member of the Graduate Faculty

## **DEGREES**:

- 2014 Doctor of Philosophy, Columbia University Graduate School of Architecture, Planning and Preservation
- 1996 Master of Architecture, Columbia University Graduate School of Architecture, Planning and Preservation,
- 1993 Bachelor of Arts, First-Class Honours, McGill University Department of English, Program in Film and Communications

#### HONOURS:

2011 Kenneth M. Roemer Innovative Course Design Award. The Society for Utopian Studies Awarded to my Carleton seminar ARCU 4700 Urban Utopias for "the best proposal for an undergraduate or graduate course on utopia, dystopia, utopianism, or a related subject"

## **EMPLOYMENT HISTORY:**

Teaching Positions

2010- present Associate Professor, Architecture, Carleton University

#### SCHOLARLY ACTIVITIES:

2010 - presentMember of Graduate Committee2010 - presentForum Lecture Series Coordinator

#### **GRADUATE SUPERVISIONS:**

Completed: 14 M.Arch (professional) In progress: 3 M.Arch (professional)

#### **TEACHING ACTIVITY:**

ARCS 5106 Graduate Studio 2, winter 2011, 2012, 2013, 2014, 2015, and 2016 ARCS 3105 Studio 4, fall 2012, 2013, 2014, and 2015 ARCS 4105 Studio 6, fall 2011 ARCH 4009/ARCH 5201 History and Theory of the Avant-Garde, winter 2016 ARCH 2300/5010 Introduction to Modern Architecture, fall 2011, 2012, 2013, 2014, and 2015 ARCH 6102 PhD Colloquium, winter 2014 ARCH 4502 Research and Criticism, winter 2012 ARCU 4700 Urban Utopias, winter 2011, 2013, and 2015

#### PUBLICATIONS

#### 

#### 2) Details:

Books authored:

1. *Expo 67, or the Architecture of Late Modernity* (McGill-Queens University Press, 2018). Manuscript preparation and grant writing is scheduled for 2017. Publication by McGill- Queens University Press, with whom I hold a contract, is planned for 2018.

#### Chapters in Books:

1. "Miracles and Ruins, Citizens and Shoppers: Frankfurt 1963", in Janina Gosseye and Tom Avermaete, eds., Shopping Town Europe: *The Architecture of Commercial Collectivity in the Shopping Centre*, 1945-1975 (London: Bloomsbury Publishing, forthcoming 2016).

- 2. "Expo 67, or Megastructure Redux", in Laura Hollengreen, Celia Pearce, Rebecca Rouse, and Bobby Schweizer, eds., *Meet Me At the Fair: A World's Fair Reader* (ETC Press, Carnegie Mellon University, 2014), 255-270.
- 3. "Habitat 67: or, Structuralism Redux", in Tomas Valena et al., eds., *Structuralism Reloaded: Rule-Based Design in Architecture and Urbanism* (Stuttgart: Edition Axel Menges, 2011).
- 4. "On Type, In India", in Irina Davidovici, ed., *Colquhounery: Alan Colquhoun from Bricolage to Myth* (London: Architectural Association Publications, 2015).
- 5. "The Modern Architecture Symposia: An Interview with Robert A.M. Stern", in Robert A.M. Stern, *Tradition and Invention in Architecture* (New Haven and London: Yale University Press, 2012).

## Papers in refereed Journals:

- 1. "Shadrach Woods. The City, the Everyday, the Seventies", Piano Progetto Città 29-30 (Department of Architecture, University G. d'Annunzio Chieti-Pescara, 2015).
- 2. "Utopia: An Interview with Reinhold Martin", Journal of Architectural Education 66:2 (March 2013); special issue on Architecture and Utopia, c. 2016.
- 3. "Ideal Plans and Planning for Ideals", AA Files 63 (2011).

## Articles in Magazines:

1. "Canadian Architect vs. Expo 67", Canadian Architect (August 2015).

## Papers Read at Refereed Academic Conferences:

- "Habitat 67 versus Team 10; or, What Goes Around, Comes Around" Architectural Elective Affinities: Correspondences, Transfers, Inter/Multidisciplinary conference, European Architectural History Network and Faculdade de Arquitetura e Urbanismo da Universidade de São Paulo São Paolo, Brazil, March 2013
- "Notes on 'The Superblock'" Neither "Modernism" Nor "Avant-Garde": A Roundtable Discussion in Honour of the Ninetieth Birthday of Alan Colquhoun, conference session European Architectural History Network Second International Meeting Brussels, Belgium, June 2012

## Invited Lectures and Academic Symposia:

- 1. "Expo 67: Some Notes on Environment, Modernity, and Everyday Life" Department of Art History, Concordia University, March 2016 Invited lecture - Graduate research seminar on world's fairs
- 20<sup>th</sup> Inter-university Charrette Canadian Centre for Architecture, Montreal, November 12, 2015 Keynote lecture launching the Canadian Centre for Architecture Inter-university Charrette, which will include Azrieli School students in this annual competition
- Responses to Reimagining Cinema. Department of Communication Studies, Concordia University, Montreal, October 28, 2015 Invited roundtable in response to the book Reimagining Cinema: Film at Expo 67 (2014), edited by Monika Kin Gagnon and Janine Marchessault
- 4. "The Short, Unhappy Life of Frankfurt-Römerberg, 1963" Double Major lecture series Carleton University Art Gallery, Ottawa, Canada, February 10, 2015
- 5. "Banlieue Revisited" Curation as Risk-Taking symposium Department of Architecture, University of Tokyo, Tokyo, Japan October 22, 2013
- 6. "Going Underground" Identity in Architecture and Urban Design symposium Nagoya University and Nagoya Institute of Technology, Nagoya, Japan October 18, 2013
- 7. "Failure? The Strange Case of Toulouse-Le Mirail" Expert in the Galleries series Canadian Centre for Architecture, Montreal, Canada January 20, 2011

## **Fellowships**

The Japan Foundation Invitation Program for Curators The Japan Foundation, Toronto and Tokyo October 13-27, 2013 Invited to this highly selective program on advancing architectural research through study tours, lectures, symposia, and workshops with Japanese architects, academics, and curators

## CURRICULUM VITAE

STONER, Jill Lahn,	Professor of Architecture
	Director, Azrieli School of Architecture and Urbanism

#### DEGREES

1980 Master of Arts in Architecture, University of Pennsylvania

1975 Bachelor of Arts in Literature, New College

#### UNIVERSITY ADMINISTRATION

Director, Azrieli School of Architecture and Urbanism, Carleton University, July 2015 – present Associate Dean, Graduate Division, UC Berkeley, 2014-15 Chair, Master of Architecture Program, UC Berkeley, 2008 – 2013

Member of the Graduate Faculty

#### TEACHING

Carleton University, Ottawa CA, Professor of Architecture, since July 2015 University of California, Berkeley, Department of Architecture, 1987 – 2015, Promoted to Full Professor July 2010

#### **DESIGN AWARDS**

 Vertical Zoo International Design Competition, 2<sup>nd</sup> PLACE, "Contra Zoo" (with Ibone Santiago and Eduardo Pintos), 2009.

2. Imagining Recovery" International Competition, WINNER, "The Ears and Hands of Recovery" (with Marie Sorensen), 2009.

3. History Channel "City of the Future", 2-stage competition FINALIST, "Wilderness City: San Francisco 2108", 2008.

4. San Francisco AIA, AWARD OF MERIT, East Oakland School of the Arts, 2007

5. San Francisco Public Library Portola Branch: 3-stage Competition WINNER, Commission for design of new building, 2003.

6. Dead Malls" 2-stage national design competition, 1<sup>st</sup> and 2<sup>nd</sup> stage WINNER, Visionary proposal for the mall in Vallejo California, 2002-2003.

7. San Francisco Prize Competition AWARD OF MERIT, Harvey Milk Plaza, 2000.

8. East River International Design Competition, AWARD OF MERIT, "East River Escapes", Van Alen Institute, New York (with Susannah Meek, Margaret Ikeda, Evan Jones), 1998.

9. San Francisco AIA, AWARD OF MERIT, Lowell Alternative High School Addition 1997

10. American Wood Council, MERIT AWARD, 104 Terrace Avenue, Bolinas CA, 1995.

#### ACADEMIC GRANTS AND FELLOWSHIPS

- 1. Townsend Center Strategic Working Group on Critical Prison Studies, Spring 2013.
- 2. Sabbatical Fellowship at US Department of Housing and Urban Design, Fall 2012
- 3. Faculty Research Grant, Committee on Research, UCB. Research on Urban Vacancy 2012 13.
- 4. UC Berkeley Instructional Improvement Grant, Preparation of new course: "The Literature of Space", 2008.
- 5. Graham Foundation for Advanced Studies in the Fine Arts Fellowship, Grant to work on *Toward a Minor Architecture* manuscript. 2008
- 6. Graham Foundation for Advanced Studies in the Fine Arts Fellowship, Exhibition: *Rubashov's House*, University Art Museum, Berkeley, 1990-91.
- 7. Faculty Research Fellowship, UCB 1989-90: Research in Berlin & Warsaw, 1989-90.

#### **TEACHING AWARDS**

ACSA New Faculty Teaching Award, National award in recognition of teaching excellence, 1991.

## PUBLICATIONS

## <u>Books</u>

- 1. Toward a Minor Architecture, MIT Press, 2012.
- 2. *Poems for Architects*, 5 authored essays, 15 original drawings, anthology of 48 poems, William Stout publishers, San Francisco 2001.

## Reviews of Toward a Minor Architecture

Manu Fernandex, *Review of Toward a Minor Architecture, Ciudades a escala Humana*, September 2013 Woodworth, Vernon, Review of *Toward a Minor Architecture*, in *Architecture Boston*, forthcoming June 2013. Hogrefe, Jeffrey, Review of *Toward a Minor Architecture*, in *The Architect's Newspaper*, Apr 2013. Editors, Review of *Toward a Minor Architecture*, L'Architecture d'Aujourd'hui, Feb 2013. Quinnan, J., Review of *Toward a Minor Architecture*, in *Choice*, Oct 2012. Parman, John, Review of *Toward a Minor Architecture* in *Arcade*, September 2012 Till, Jeremy and Lindsay Brenner, "A Cracking Read: *Toward a Minor Architecture* by Jill Stoner," *Architectural Review* 

Jun 2012.

Editor's Selection, RIBA Journal, Summer 2012.

## Peer Reviewed Publications

- 1. "The Wicked City" in Design Ecologies, ed. Shaun Murray, (forthcoming fall 2016)
- 2. "The Nine Lives of Buildings" in AD Journal, ed. Karen Franck, winter 2016
- 3. "Rain in the City", Chapter 12, in *Visualizing the City*, ed. Alan Marcus and Deitrich Neumann, Routledge Press 2007.

## Non-Peer Reviewed Publications

- 1. "Man, Dog, and Building" in *Project Journal*, spring 2014.
- 2. "High Optimism," in Cityscape, US Department of Housing and Urban Development, December 2013
- 3. "Architecture in Reverse," The Edge, US Department of Housing and Urban Development, Sept 2013
- 4. "The Falcon's Return," The Edge, US Department of Housing and Urban Development, March 2013
- 5. "Addressing Urban Vacancy," The Edge, US Department of Housing and Urban Development, Jan 2012

## **CONFERENCES, SYMPOSIA, WORKSHOPS**

- 1. Moderator, "The Future of the Humanities PhD" Conference, Carleton University, 2016
- 2. Seminar Leader, "Carceral Coordinates," American Comparative Literature Association Conference (with Brett Story), Toronto, 2013
- 3. Seminar Leader, "Murderous Space," American Comparative Literature Association Conference (with Layla Forrest-White), Providence, 2012
- 4. Session Leader, "Urban Atlas of Perpetual Change," TOWARD A JUST METROPOLIS CONFERENCE, (with Stephen Goldsmith), University of California, Berkeley, summer 2010.

## SELECTED EXHIBITIONS

- i. "Urban Islands 10-year Anniversary Exhibit", Tin Sheds Gallery, Sydney Australia, 2016
- ii. OWA (Oranization of Women Architects) San Francisco. Included in exhibition at the SF AIA 2010.
- iii. "Imagining Recovery" Competition Winning Entry, 2009. *Exhibit at the Berlage Institute, Netherlands*
- iv. History Channel "City of the Future" Competition, 2008. *Exhibit at San Francisco Ferry Building, January 2008, and exhibit at California College of the Arts, February 2008*

#### CURRICULUM VITAE

#### **VOORDOUW, Johan**, Assistant Professor, Tenure track (2012)

#### **DEGREES**:

2009	M.Arch, Bartlett School of Architecture, UCL, U.K.
2007	Grad. Dip. Bartlett School of Architecture, UCL, U.K.
2003	B.Env. University of Manitoba, Canada

#### **HONOURS**:

2016	Nominated, Carleton Leader
2012	Nominated, DMU Vice Chancellor's Teaching Excellence Award

#### **EMPLOYMENT HISTORY:**

#### **Teaching Positions**

2012- Assistant Professor, Azrieli School of Architecture, Carleton University 2010-12 Senior Lecturer, Leicester School of Architecture, DMU, U.K. 2007-09 Lecturer (Part-time) London Southbank University, U.K.

#### **Professional Employment**

2009-10, Architectural Assistant, Foster+Partners, London, U.K. 2007-09 Architectural Assistant, HKR Architects LLP, London, U.K.

#### **GRADUATE SUPERVISIONS:**

Completed: 10 M.Arch (professional), 9 M.Arch (professional, co-supervised) In progress: 5 M.Arch (professional),

## TEACHING ACTIVITY:

2016-17	ARCS 5102 – M.Arch Studio
	ARCH 5002 – Thesis Seminar: Methods of Making
2012-17	ARCN 2105/5000 – Digital Modeling & Form Finding
2014-16	ARCS 5105 – Gateway Studio
2012-16	ARCN 4103 – Digital Fabrication & Theory
2014-15	ARCS 5105 – Gateway Studio
2012-16	ARCS 4105 – Fourth year BAS Studio
2012-14	ARCS 3105 – Third year BAS Studio
2012-14	ARCN 4102 – Problems in Computing
2012	ARCS 2106 – Second year BAS Studio

#### SCHOLARLY AND PROFESSIONAL ACTIVITY

#### Guest Design Critic

- 2016 University of Manitoba, Trans-Plan: Water+ Competition Jury Member
- 2012 Bartlett School of Architecture; Royal College of Art, Unit AD5; Oxford Brookes Univ.
- 2011 Oxford Brookes University; Architectural Association
- 2010 Bartlett School of Architecture, Unit 20 Review
- 2009 Oxford Brookes University; Ecole Speciale d'Architecture, Paris, Architectural Association; University of Brighton, Undergraduate Review

## RESEARCH AND FUNDING - Overview

T. External	Research Funding.			
Year	Source Type*	Amour	nt per year	<u>Purpose</u>
2017	Canadensis	F	\$10,000	design build (pend.)
2016	ORF	G	\$4,000,000	research
2016	Quartier Vanier BIA	F	\$13,000	design build
2016	Glebe Comm. Assoc.	F	\$8,000	design build
2014	NSERC CRD	С	\$108,000	research
<u>2. Internal</u> <u>Year</u> 2014	<u>Research Funding</u> : <u>Source</u> <u>Type</u> Carleton Univ. REF	<u>Amour</u> \$60,00	<u>nt per year</u> 10	<u>Purpose</u> research

## PUBLICATIONS:

Chapters in Books:

1. "Topology & Interiority: Folding Space Inside", in Gregory Marnic (eds), Interiority Reader (Routledge, 2016) in press

Papers in refereed Journals:

1. **Voordouw, J.,** as "Hybrid Representations: Intaglio Etching of Digial Models". International Journal of Architectural Computing. 13:5, 2015

#### Papers in Refereed Conference Proceedings

- 1. **Voordouw, J. & Daoud, B.,** as "Making Machines that Make Buidings" . eCAADe Conference. TU Wiens, 2015
- 2. **Voordouw, J.,** as "Digital Etching: An Alternative to Drawing" . eCAADe Conference. Northumbria University, 2014

#### EXHIBITIONS:

- 2015 *Silver Linings*, Semperdepot, Vienna Academy of Fine Art; F. Schafschetzy & E. Sommeregger, Curator.
- 2014 Urban by Nature: International Architecture Biennale Rotterdam, Kunsthal; Dirk Sijmons, Curator.
- 2011 Royal Academy Summer Show, Royal Academy, Piers Gough & Alan Stanton, Curator
- 2010 Venice Biennale, Austria Pavilion, Marjan Colletti, Curator
- 2010 Spontaneous Schooling, London Festival of Architecture, London
- 2010 Royal Academy Summer Show, Royal Academy, David Chipperfield, Curator
- 2010 Sublime Flesh, Christ Church Spitalfields, Marcos Cruz & Marjan Colletti, Curator
- 2009 Digital Hinterlands, Arup Gallery, London, Ruairi Glynn & Sara Shafiei, Curators
- 2009 Perdidos, Colegio Oficial de Arquitectos, Madrid.

## **PROFESSIONAL PROJECT LIST**

- 2010 Foster + Partners Office, Beijing; Foster + Partners
- 2009 Ilham Baru Tower, Kuala Lumpur; Foster + Partners
- 2009 Royal Horseguards Hotel, London; HKR Architects LLP
- 2009 The Kensington Hotel, Doyle Collection, London; HKR Architects LLP

## Carleton University Azrieli School of Architecture and Urbanism Accreditation Program Report September 2016

#### **Contract Instructors & Cross-appointed Instructors CVs**

Archambault Eric Brillant Louis Campos Roberto Conty Karen Cook John Cooke John Denegri Maria **Desrochers** Brigitte Fortin Lyette Fright Sean Gagnon Kristen Hately Larry Holmquist Paul Hoyt Christopher Huot Richard Knight Christopher Kramer Clarice Leung Thomas Lim Jay Sze-Leon MacGuigan Mark Mansfield Peter Pienkowska Honorata Ross Adriana Salmon Jeffrey Santana Quintero Mario Sgarbi Claudio Swaranjali Pallavi Taj Masud Vandenberg Jack Wood Robert

#### **CURRICULUM VITAE**

#### ARCHAMBAULT, Eric Sessional Lecturer / Adjunct Professor

#### **DEGREES**:

1994	M.Arch., Cranbrook Academy of Art, U.S.A.
1988	B.Arch., Carleton University, Canada

#### EMPLOYMENT HISTORY:

## **Teaching Positions**

- 2004-16 Contract Instructor, Azrieli School of Architecture & Urbanism, Canada
- 1996-97 Visiting Lecturer, University of Oulu Dept. of Architecture, Finland
- 1995-96 Guest Lecturer, Visiting Critic, Lahti Polytechnic Institute of Technology, Finland
- 1996 Guest Lecturer, Visiting Critic for International Summer School on
- Finnish Architecture, Lahti Polytechnic Institute of Technology, Finland
- 1996 Guest Lecturer, University of Toronto Finnish Studies Programme, Canada

#### **Professional Employment**

- Designer, Project Manager, Proposal Writer, Griffiths Rankin Cook Architects, Ottawa 2003-05
- Designer, Project Manager, Proposal Writer, Lemay Dorval Fortin Doyle Architects 2000-02
- 1990-91 Designer, Project Manager, Shulim Rubin architecte, Montreal, Quebec,
- 1989-90 Designer, Project Manager, Gary Stunden Architect, Ottawa, Ontario,

#### SCHOLARLY AND PROFESSIONAL ACTIVITIES:

- 2013-16 Member, Board of Directors, SAW Video Media Art Centre, Ottawa, ON
- 2013-16 Chair, Facilities Committee / Arts Court Redevelopment Project, SAW Ottawa, ON
- 2013-16 Chair, Programming Committee, SAW Video Media Art Centre, Ottawa, ON
- 2014-16 Member, Centre de production DAÏMÕN, Gatineau, Quebec
- 2012-14 Member, Documentary Organization of Canada, Toronto, ON
- 2004-16 Member, Royal Architectural Institute of Canada, Ottawa, ON

## **TEACHING ACTIVITY:**

Studios, Lecture Courses, Workshops and Seminars:

- 2005-16 ARCS 3105 - Studio 4 (BAS 4<sup>th</sup> year) ARCS 2106 - Studio 3 (BAS 3<sup>rd</sup> year)
- 2011-16
- Vertical Summer Studio ARCS 2105/3105/4106 (co-taught with H. Masud Taj) 2010
- ARCS 4106 Studio 5 (DSA Paris Coordinator) 2010

#### SCHOLARLY AND PROFESSIONAL ACTIVITY

#### Guest Lecturer

2013-16 Carleton University Dept. of Geography and Environmental Studies, GEOG 4021A Seminar in Culture, Identity and Place, Imag[e]ining the City

External Observer

2011 CACB Accreditation Visit, Azrieli School of Architecture and Urbanism

Guest Thesis Adviser, External Critic

2004-05 Thesis Defences, Graduate Programme

#### LIST OF MEDIA ART EXHIBITIONS / LIVE CINEMA PERFORMANCES:

Group Exhibitions / Performances

2016 - Cultural Engineering, SAW Video Media Art Centre, Ottawa, ON; Michael Davidge Curator.

- 2016 Resolution 2016, SAW Video Media Art Centre, Ottawa, ON, Penny McCann Curator.
- 2015 Anomaly Vol. 5, House of Common, Ottawa, ON

2015 - Autopia, Gatineau Electronic Music Festival, Gatineau, Quebec

2016 – Where is Mawt Trood? Vernissage + Exhibition,

Daïmôn, Centre de production et diffusion en arts médiatiques, Gatineau, Quebec

- 2016 Drone Day, House of Common, Ottawa, ON
- 2013 Resolution 2013, SAW Video Media Art Centre, Ottawa, ON, Penny McCann Curator.

## ARCHITECTURAL / ENVIRONMENTAL DOCUMENTARY PROJECTS:

Videographer/Video Editor/Documentary Filmmaker

- 2016 Microplastics and the Ottawa River, for Ottawa Riverkeeper/Sentinelle de l'Outaouais,
- 2016 American Eel Tag and Release Program, for Ottawa Riverkeeper/Sentinelle de l'Outaouais
- 2016 4K River Swim, for Ottawa Riverkeeper/Sentinelle de l'Outaouais, Videographer/Video Editor
- 2013 Fields of LeBreton Part I Playing Field, Documentary Filmmaker
- 2013 Fields of LeBreton Part II Battle Field, Documentary Filmmaker
- 2013 Fields of LeBreton Part III Brown Field, Documentary Filmmaker
- 2012 Of Concrete and Other Secrets, Documentary Filmmaker

## **CONTINUING EDUCATION - MEDIA ART WORKSHOPS AND SEMINARS**

- 2014 Experimental Smartphone Video by Izabel Barsive, SAW Video Media Art Centre, Ottawa,
- 2014 Moving Collages: art video, experimental cinema and animation cinema symposium curated by Guillaume Lafleur, Daïmôn, Centre de production et diffusion en arts médiatiques, Gatineau, Quebec
- 2014 Facets of independent documentary film by Philippe Lesage and Jean-François Lesage, Daïmôn, Centre de production et diffusion en arts médiatiques, Gatineau, Quebec
- 2014 Documentary cinematography and direction by Philippe Lesage and Jean-François Lesage, Daïmôn, Centre de production et diffusion en arts médiatiques, Gatineau
- 2013 Logline, Synopsis, Demo and Pitch:
   How to Make Your Documentary Fundraising Demo by Fernanda Rossi, SAW Video Media Art Centre, Ottawa, ON
- 2013 Introduction to VJ'ing, by Kerry Campbell, SAW Video Media Art Centre, Ottawa, ON
- 2013 Introduction to Architectural Mapping / MadMapper
- by Joseph Lefèvre, SAT Société des art technologiques, Montreal, Quebec
- Grant Writing for Media Artists by Penny McCann, SAW Video Media Art Centre, Ottawa,
   Digital Video Formats by Christopher Payne, SAW Video Media Art Centre, Ottawa, ON
- 2013 Digital Video Formats by Christopher Payne, SAW Video 2011-12 Documentary Production Program (full-time)
  - Course listings: Videography I and II; Editing I and II; Documentary Form; Documentary Storytelling; Interactive Documentary I and II; New Documentary; Directing the Documentary; Documentary Business I and II, Algonquin College, Ottawa, ON
- 2011 History of Documentaries by Julia Elliott, Algonquin College, Ottawa, ON

#### **CONTINUING EDUCATION - FABRICATION WORKSHOPS AND SEMINARS**

- 2014 3D models for 3D printing with Blender by Mike Belanger, Artengine M70 Lab, Ottawa, ON
- 2014 Introduction to Laser Cutting by Britta Evans-Fenton, Artengine M70 Lab, Ottawa, ON
- 2014 3D Printer and Laser Cutter Certification, ImagineSpace (OPL Nepean branch), Ottawa, ON
- 2013 Introduction to Cinder Frameworks by Anthony Scavarelli, Artengine M70 Lab, Ottawa, ON

A selection of media work is available online at www.vimeo.com/archamba

ARCHITECTURE

September 2016

## CURRICULUM VITAE

BRILLANT, LOUIS CONTACT INSTRUCTO	BRILLANT, Louis	Contract Instructor
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#### DEGREES :

ada

1989 B.Arch. Carleton University, Ottawa, Canada

#### HONOURS :

2007	Meritas Award of Excellence from the Association of Master Roofers Of Quebec for
	the Restoration of the Sisters of St-Anne' Great Dome at their Convent in Lachine
2006	Award of Excellence (Institutions) form the Association of Masons of Quebec for the
	Outremont Chapel in the Mount-Royal Cemetary, Outremont
1989	Alpha Rho Chi Medalist from the American Institute of Architects
1989	Magna cum Laude B.Arch from Carleton University

#### **EMPLOYMENT HISTORY:**

2013-2016	Contract Instructor Azrieli School of Architecture & Urbanism, PhD Program
2007-2008	Contract Instructor Azrieli School of Architecture & Urbanism, M.Arch Program
1997	Contract Instructor, McGill University School of Architecture, B.Arch Thesis
1991	Contract Instructor, McGill University, M. Arch Workshops

#### PROFESSIONAL EMPLOYMENT

1994-2016	Owner, L'étude Louis Brillant, architecte
2006-2016	Owner, Anamnèse - Recherche et documentation du patrimoine

#### **GRADUATE SUPERVISIONS :**

Completed :	3 PhD
In Progress :	1 PhD

#### **TEACHING ACTIVITY :**

## SCHOLARLY AND PROFESSIONAL ACTIVITY

1991-2013	Guest Design Critic, McGill University, Carleton University, Montreal University,
	Université du Québec à Montréal (UQAM)
1001-2000	Guest Moderator, McGill University M. Arch Seminars in History/Theory of Archite

- 1991-2000 Guest Moderator, McGill University M. Arch Seminars in History/Theory of Architecture
- 2000-2013 Guest Critic, McGill University PhD Seminars in History and Theory of Architecture
- 2005-2013 PhD Thesis Committee Member, McGill University

#### PUBLICATIONS:

Heritage Assessment Reports 28

Louis Brillant, Collège Dawson, Montréal, 2015, 73 pp. (11 x 17)

Louis Brillant, Westmount Square, Montreal, 2014, 158 pp. (11 x 17)

Louis Brillant, Église Anglicane st-George, Montréal, 2014, 110 pp. (11 x 17)

Louis Brillant, Maison Louis Hyppolite LaFontaine, Montréal, 2013, 82pp. (11 x 17)

Louis Brillant, 3518-3530 de la rue Durocher, Montréal, 2013, 59pp. (11 x 17)

Louis Brillant, Central Korean United Church, Montréal, 2012, 34pp. (11 x 17)

Louis Brillant, 3300-3310 Avenue Troie, Montréal, 2011, 34pp. (11 x 17) Louis Brillant, 3830 avenue Lacombe, 3777 rue Jean-Brillant, Montréal, 2011, 58pp. (11 x 17)

2 Workshops presented to the Quebec Order of Urbanists on Heritage Assessment Reports

Louis Brillant, J.B.Fischer Von Erlach and Political Rhetoric under Karl VI (171201722), M.Arch Thesis, McGill University, 1992

## **EXHIBITIONS:**

- 2007 70 Architects on Love, Centre de Design de l'UQAM
- 2004 St-Jean de Matha Abbey Competition, Finalist with TAG
- 2001 Portails/Portals, Centre Canadien d'Architecture
- 1992 M.Arch History and theory Final Exhibition, McGill University
- 1989 Old Port of Montreal Competition Exhibition, with Peter Rose Architect
- 1986 Atelier international d'habitation, Montréal, avec Jean Nouvel et Blouin & Associés

#### **PROFESSIONAL PROJECT LIST:**

- 2014-2016 Generalate Headquarters, Sisters of St-Anne, Lachine, Qc
- 2010-2016 Restoration of Entrance Portal, Mount Royal Cemetary
- 2002-2016 Restoration of Church and Presbytery, St-Joachim, Pointe-Claire
- 1995-2016 Restoration of St-Pierre-Apôtre Historic Site, Montréal
- 2010-2016 Restoration of Bon-Secours Chapel, Old Montréal
- 2010-2016 Restoration of Church and Presbytery, St-Léon de Westmount, Westmount
- 2009-2016 Restoration of Notre-Dame de la Défense Historic Site, Montréal
- 2002-2016 Restoration of Church and Presbytery, Sts-Anges historic Site, Lachine
- 1995-2016 Restoration of Historic Site, Gesù Church, Montreal
- 2008-2016 Restoration of Church and Presbytery, St-Jean-Baptisite historic Site, Montréal
- 2009-2016 Restoration of Church and Presbytery, St-Ambroise Historic Site, Montreal
- 1989-2016 Architectural Follow-Up, Centre Canadien d'Architecture, Montréal
- 1996-2014 Restoration of College and Convent, Sisters of St-Anne, Lachine

This list is indicative only; I have overseen over 300 projects in my firm since 1994.

#### ROBERTO CAMPOS OAA, MRAIC, ORSA

Roberto Campos is Director of our Ottawa studio and a Partner at Rubin & Rotman. He has worked extensively in the design of recreation facilities, schools, institutional, large scale residential and commercial projects. Before joining Rubin & Rotman Architects, he was a Senior Project Manager with acclaimed architect Douglas Cardinal, where he was responsible for the completion of several of the firm's recent projects. These included the Wabano Centre for Aboriginal Health in Ottawa, and the Aanischaaukamikw - Cree Cultural Institute (in collaboration with Rubin & Rotman Architects) in Oujé-Bougoumou, Quebec. He is currently lead architect for first two mixed use buildings for the high profile Zibi Development project along the Ottawa River. Roberto was not only a key member of the planning team for this development but was also lead architect responsible for the Site Plan submission package to the City of Gatineau for the Quebec portion of the project. Roberto not only continues to lead the firm's Ottawa projects but is intimately involved in the firms' national and international projects.









## curriculum vitae

Aanischaaukamikw Cree Cultural Institute, Oujé-Bougoumou, QC Project Director / Design Architect (at Douglas Cardinal Architect) New 2-storey museum designed to provide exposition halls

and multi-purpose rooms. Centre also houses specialized rooms, research lab and administrative offices. Pending LEED-NC Certification. WINNER - GRAND PRIX DU DESIGN 2012 (Joint Venture: Douglas Cardinal, Architect) 30,000 sq.ft. (2,787 sm) \$10M

#### CEPEO Cité Jeunesse School, Quinte West, ON - CFB Forces Trenton Project Director / Design Architect

**Phase 1** of the addition includes a daycare space designed for toddlers and pre-school age children, staff kitchen and office space, washrooms, and a multipurpose room designed for community off-hours use. **Phase 2** includes an additional 6 classrooms and is designed to accommodate a second storey future expansion. Phase 1 : 7,115 sq.ft. (661 sm) \$3M Phase 2 : 7,072 sq.ft. (657 sm) Budget TBD

#### Zibi Mid-River Condo Project, Gatineau, QC Project Director / Design Architect

Residential and retail complex: the ground floor retail provides convenience and supports the project's urban goals. The 6-stories of residential cater to a wide variety of lifestyles and budgets, offering floor plans ranging from small studios to 2-storey loft units with oversized balconies, private terraces and shared rooftop patios. Phase 1 : 125,000 sq.ft. (11,613 sm) \$20M In Progress

#### Sanmina Broccolini - March Rd. Kanata, ON

#### Project Director / Design Architect

New 2-storey research and development facility for Sanmina. Project required administrative offices, laboratory facilities, a Class 1000 clean room, and large multi-use meeting spaces to house world wide company town hall meetings. Project also includes a 150 seat cafeteria and commercial kitchen. 120,000 sq.ft. (11,148 sm) \$22M



#### EDUCATION

2005 Master of Architecture Azrieli School of Architecture and Urbanism Carleton University Ottawa, Ontario

#### 2002

Bachelor of Architectural Studies Azrieli School of Architecture and Urbanism Carleton University Ottawa, Ontario

1998 Architectural Technology Diploma Algonquin College Ottawa, Ontario

#### PROFESSIONAL ASSOCIATIONS

Registered Architect Ontario Association of Architects (OAA)

Member of the Royal Architecture Institute of Canada

Chair of the Ottawa Regional Society of Architects

## PROFESSIONAL EXPERIENCE

2011 - present Director - Ottawa Studio Rubin & Rotman Architects Ottawa, Ontario

2002 - 2011 Senior Project Manager Douglas Cardinal Architect Inc Ottawa, Ontario

1997 - 2001 Intern Architect Richard Chmiel Architect & Associates Ottawa, Ontario

2005 - 2009 Visiting Instructor- Design Studio Azrieli School of Architecture and Urbanism Carleton University Ottawa. Ontario















Air Canada, aéroport d'Ottawa Katana, ON Production Team Manager New industrial warehouse facility with administrative office space on the second floor.

28,700 sq. ft. (2,665 sm) \$N/A

#### Wabano Centre for Aboriginal Health Ottawa, ON Senior Project Manager

#### (at Douglas Cardinal Architect)

The project is an urban health centre providing clinical, social, economic and cultural initiatives that promote the health of all Aboriginal people in Ottawa. The building's programs will promote community-building through education and advocacy. 25,000 sq.ft. (2,322 sm) \$15M

#### Driver House | Dawson Creek Native Housing Dawson Creek, BC

Project Manager

(at Douglas Cardinal Architect)

Design Development and Construction Administration Manager of this BC Housing funded, 25 unit multi-unit residential housing project in Northern BC.

30,000 sq.ft. (2,787 sm) \$8M

#### The Sioux Lookout Meno-Ya-Win Health Centre Sioux Lookout, ON

## Senior Project Manager for Masterplanning & Public Spaces (at Douglas Cardinal Architect)

The hospital serves over 30,000 patients a year from Sioux Lookout and 28 remote aboriginal communities in northern Ontario. A state of the art health facility that works with the traditional healing methods of the aboriginal communities (*Joint Venture: Stantec - Murphy Hilgers Architects*) 145,000 sq.ft. (13,470 sm) \$90M

#### Gordon Oakes-Red Bear Student Centre University of Saskatchewan, Saskatoon, SK Design & Construction Documents Manager (at Douglas Cardinal Architect)

Due to the increase in Native enrolement, the U of S took the opportunity to revitalize the future of their institution. While providing the necessary amenities and resources for aboriginal students, the building will reflect Aboriginal culture to the University community. 27,000 sq.ft. (2,508 sm) \$15M

## Kelowna Waterfront Competition WINNER Kelowna, BC

Project Director - Design Lead

Revitalization of existing marina and Stewart Park. Included relocation of yacht club over water allowing broader public waterfront access. Also included adaptive re use of old warehouse for urban shops, restaurants, 2 water parks, small concert grounds, and series of public parks connected through bike and pedestrian pathways.



#### **CURRICULUM VITAE**

#### CONTY, KAREN ELEANOR

8 Lipstan Avenue Nepean, Ontario K2E 5Z3 613.889.1751

karen.conty@carleton.ca karenconty.com

#### EDUCATION

Ph.D. (Architecture), Carleton University (in progress) M.Arch., Carleton University, 2009 B.A.S. (High Distinction), Carleton University, 2006 B.Sc. (Biology), University of Ottawa, 1983

#### **SCHOLARSHIPS**

Departmental Scholarship, Carleton University, 2013-14, 2012-2013 and 2011-2012 Azrieli PhD Entrance Scholarship, Carleton University, 2011-12 John Adjelian Graduate Scholarship, Carleton University, 2007 Ontario Graduate Scholarship, Ontario Ministry of Training, Colleges and Universities, 2007-2008 Domestic Tuition Scholarship, Carleton University, 2007-2008 Maxwell Taylor Scholarship, Carleton University, 2007 Ontario Graduate Scholarship, Ontario Ministry of Training, Colleges and Universities, 2006-2007 John Ruddy Architecture Scholarship, Carleton University, 2006 Domestic Tuition Scholarship, Carleton University, 2006 Graduate Studies and Research Scholarship, Carleton University, 2006 William E. Beckel Scholarship, Carleton University, 2005 Ontario Association of Architects Award, 2005 Gerhard Herzberg Scholarship, Carleton University, 2004 Ontario Association of Architects Award, 2004 David A. Golden Scholarship, Carleton University, 2003 University of Ottawa Entrance Scholarship, 1979

#### AWARDS and HONOURS

Winner, Royal Architectural Institute of Canada National Urban Design Competition 2006 AIA Henry Adams Medal, American Institute of Architects, 2006 University Medal in Architecture, Carleton University, 2006 Award of Excellence in Drawing (Book Prize), Carleton University, 2006 Murray and Murray Award, Recipient, (Book Prize), Carleton University 2003 Deans' Honour List, Carleton University 2002/3, 2003/4, 2005/6 and 2005/6

#### **TEACHING EXPERIENCE**

2009-present	Sessional Instructor, Azrieli School of Architecture and Urbanism, Carleton University Courses taught:		
	ARCS 1105 Studio 1: Spatial and Temporal Experience of Architecture, 2009, 2010, 2011, 2014, 2015, 2016 ARCS 2105 Studio 2: Development of Cultural Imagination within the Field of Architecture, 2013, 2014 ARCH 5200 Graduate Seminar 1: Introduction to Critical Thought in Architecture, 2015		
2014-present	Part-time Faculty, Architecture, Civil and Building Science, Algonquin College Courses taught: DSN8441 Design I: 2014F, 2015W DSN8442 Design II: 2015W, 2015F, 2016W		

## TEACHING EXPERIENCE (Cont'd)

2003-8 and	Teaching Assis	tant, Azrieli School of Architecture and Urbanism, Carleton University
2011-2013	Teaching respo	onsibilities:
	ARCS 1005	Drawing (2003, 2004, 2005)
	ARCS 1105	Studio 1 (2004, 2005, 2006, 2007)
	ARCS 5102	MArch1 Studio 1 (2012)
	ARCH 1000	Introduction to Architecture (2007)
	ARCH 4105	Theories of Landscape Architecture (2012)
	ARCH 4200	Architectural Conservation Philosophy and Ethics (2011)
	ARCH 4206	Recycling Architecture in Canada and Abroad (2011)
	ARCH 4808	Conservation and Sustainability Independent Study Group Supervisor (2011)
	ARCH 4201	History of Modern Housing (2013)
	ARCH 4301	Post-War Period Architecture (2012)
	ARCH 5201	Graduate Seminar II: Contemporary Theory (2008)
	ARCC 3202	Architectural Technology 4 (2006)

## PRACTICAL EXPERIENCE

2004-present Partner and Architectural Designer, Symbiosis Construction and Design Design/build residential construction and renovation

## OTHER RELEVANT WORK EXPERIENCE

2012, 2013	Research Intern, Carleton Immersive Media Studio (CIMS), Carleton University
2009	Interviewer, Oral History of Ottawa Project, RAIC College of Fellows
2001-2003	Research Technician, ECORC, Agriculture Canada
2000	Project Co-Leader, Political Infrastructure Project Team, Ottawa Transition Board
1984-1990	General Manager, Conference/Aide Convention Services Ltd., Ottawa

ARCHITECTURE October 2016

#### CURRICULUM VITAE

COOK. John. Principal, GRC Architects

DEGREES: Bachelor of Arts, Cambridge University, 1976 Master of Arts, Cambridge University, 1979 Diploma in Architecture, Cambridge University, 1980

#### HONOURS AND PROFESSIONAL AFFILIATIONS:

Fellow of the Royal Architectural Institute of Canada, FRAIC Member of the Royal Canadian Academy of Arts, RCA Member of the Ontario Association of Architects, OAA Member of the Order of Architects of Quebec, OAQ Member of the Alberta Association of Architects, AAA Member of the Nova Scotia Association of Architects. NSAA Member of the Architects' Association of New Brunswick, AANB Member of the Manitoba Association of Architects, MAA LEED Accredited Professional

## **EMPLOYMENT HISTORY:**

#### **Teaching Positions**

1983-2016 (present), Sessional Lecturer, Carleton University School of Architecture; Design Studio - assignments in all programme years; Coordinator, Professional Practice Programme 1998-2006 1987, Assistant Professor, Carleton University (directed studies abroad)

#### Professional Employment

Principal, GRC Architects Inc., 1985-present

## SCHOLARLY AND PROFESSIONAL ACTIVITIES:

- Canadian Architectural Certification Board Review Committee
- Carleton University Art Gallery Advisory Committee
- Heritage and Site Plan Committee, Rockcliffe Park
- Adjunct Research Professor, Carleton University

#### GRADUATE SUPERVISIONS:

None in the past 6 years (20+ in prior years)

TEACHING ACTIVITY: past 6 years, by year

Studios,	Lecture	Courses,	Workshops	and	Seminars:	

- Spring 2017 Second Year Design Studio
- Third Year Design Studio Fall 2016
- Spring 2016 First Year Design Studio
- Graduate Design Studio Fall 2015
- Spring 2015 First Year Design Studio
- Fall 2009-14 Fourth Year Design Studio First Year Design Studio
- Spring 2014
- Spring 2012-13 Second Year Design Studio
- Spring 2010-11 Fourth Year Design Studio
- Spring 2009 Second Year Design Studio

## SCHOLARLY AND PROFESSIONAL ACTIVITY:

#### Public Lectures

- Open Forum October 2015 Carleton University School of Architecture
- Heritage Ottawa
  - Urban Infill October 2015
  - Building 94 October 2014
  - Plant Bath Recreation Centre October 2012

#### **PUBLICATIONS:**

- Heritage Canada Newsletter Plant Baths
- National Trust Newsletter Building 94

#### **EXHIBITIONS:**

- Group Exhibitions: OAA Juried Exhibition Reclaiming the City
- ORSA Annual Exhibitions
- City of Ottawa Awards of Excellence Exhibitions

### REPRESENTATIVE PROFESSIONAL PROJECT LIST

2014- <sup>current</sup>	Place la Cité, Multi Purpose Theatre, La Cité Collégiale
2015- <sup>current</sup>	Les Terrasses de la Chaudière (LTDLC) Refit Involvement: Architect
2012- <sup>current</sup>	Algonquin College Campus Development Plan and Health Sciences Programme Development
2011-13	Building 94 Canada Agriculture and Food Museum
2010-11	Rideau Hall, West Wing Rehabilitation National Capital Commision
2010-12	Algonquin College Student Centre
2008-09	Algonquin College Campus Expansion, Centre for Construction Trades and Building Science

## JOHN G. COOKE, B.E., P. Eng., FCSC, RSW, CAHP President

John Cooke became a Partner and President of John G. Cooke & Associates Ltd. in 1992. Prior to that, his career has taken him from Ireland to Calgary and later to Toronto. He has extensive experience with building envelope conservation, heritage renovations and educational facilities. His organizational and managerial competency can be demonstrated by his ability to keep past projects within budget, complete them on time and to the satisfaction of the client. His career has been distinguished by numerous awards and honorary appointments including the presidency of Construction Specifications Canada in 2006/07.

Mr. Cooke is currently working with CSA A179 sub-committee to expand Annex A and D to better address the issue of Historic Mortars.

He is a Past President of Construction Specifications Canada, and has been conferred with a Fellowship in 2008. He is currently on the faculty of the Azrieli School of Architecture at Carleton University, Ottawa, where he teaches a post graduate course on Historic Masonry Conservation.

In 2008, he was the **private sector engineer chosen** to carry out a review of the *Standards and Guidelines for the Conservation* of *Historic Places in Canada*,  $2^{nd}$  ed., as published by Parks Canada.

## Achievements/Awards:

2014 CAHP Award of Excellence for Bank of Montreal Rehabilitation 2014 City of Ottawa Conservation Award of Merit for Restoration to St. Alban's Church, Ottawa 2011 City of Ottawa Conservation Award of Merit for Restoration and Renovation of the Irish Ambassador's Residence 2006/2007 Construction Specifications Canada: President 2006 CSC Quality Documents Competition Honourable Mention 2006 Algonquin College Heritage Institute Award for support of students and programs 2006 City of Ottawa Certificate of Merit for Restoration and Renovation of the Glebe Community Centre, Ottawa 2005 City of Ottawa Certificate of Merit for Restoration and Renovation of Plant Bath, Ottawa 2005 Frontenac Heritage Foundation Award of Excellence for Restoration of Gordon Hall, Queens University, Kingston 1999 City of Ottawa Award of Excellence for Restoration of William Saunders Building on the Experimental Farm 1997 City of Ottawa Award of Excellence for Restoration of Cartier Square Drill Hall, Ottawa

## **Education:**

Bachelor Degree in Civil Engineering University College, Galway, Ireland, 1977

Years Experience: 39 Years with Firm: 24

## Associations:

Association of Professional Engineers of Ontario, Designated **Consulting Engineer** Association of Professional Engineers of Alberta Institute of Engineers of Ireland, Chartered Engineer American Concrete Institute **Construction Specifications** Canada –Past President and Fellow **Construction Specifications** Institute Canadian Association of Heritage Professionals NRC Heritage Mortars Working Group CSA Technical Committee for CSA A179 Mortars and Grout/Historic Mortars CSA A371 Masonry Construction for Buildings Association of Preservation Technology

## **Publications:**

Masonry Wall Conservation, Sainte-Anne D'Ottawa Church: ICOMOS Canada, June 1993 Preserving Old Landmark Buildings: Conservation of Stonemasonry Structures: Construction Canada, July 2002. Presented with F. Ross Browne Award for editorial excellence. Conservation of the Building Envelope: Construction Canada, November 2008

## **Representative Relevant Experience:**

# West Block Rehabilitation, Parliament Hill, Ottawa (2009-Present): Senior Structural/Conservation Engineer

Structural rehabilitation to heritage structure. Four storey structure and attic floor, no basement. Project includes rehabilitation of exterior heritage fabric of building; removal of selected existing load bearing walls; structural upgrading to meet seismic requirement of NBC 2010; reinforcement of existing floors; design of diaphragm floor connection with walls; strengthening of the existing shear walls; reinstatement of original structure altered during previous renovations; new elevators and stairs.

# Hotel Vancouver, Vancouver, British Columbia (2008-Present): Prime Consultant

Historic Vancouver landmark. Feasibility study carried out to examine various options with regard to masonry and copper roof rehabilitation. Project phased as budgeting allowed. Repair details prepared balancing the conservation objectives with budget constraints and project objectives. Identification of strategies and principals to minimize impact on the heritage fabric. Site review was transitioned to a Vancouver team while providing direct assistance and leadership throughout the project.

# Fairmont Royal York Hotel, Toronto (2007-Present): Prime Consultant

This project involves on-going masonry rehabilitation to a heritage building, including copper flashing replacement. Repairs to the anchors to the structural steel backup have been required. The scope of work included a condition survey, preparation of bid documents and construction administration for each phase of work. Contract Administration must be timely and efficient to accommodate the highly sensitive nature of the project in a very public environment.

# Fairmont Chateau Laurier Hotel, Ottawa (1999-2011): Prime Consultant

This heritage building has been the subject of a multi-phase masonry rehabilitation and copper roofing replacement project. Repair and replacement of the anchors to the structural steel backup have been completed as work proceeds. Rewaterproofing of several flat roofs within the courtyard has also been completed. The scope of work included a condition survey, preparation of bid documents and contract administration for each phase of the project. The constraints of a continuously occupied hotel provided for a challenging construction schedule and demand excellence in project management.



West Block, Parliament Hill, Ottawa



Hotel Vancouver, Vancouver, B.C.



Fairmont Royal York Hotel



Fairmont Chateau Laurier Hotel, Ottawa

#### **CURRICULUM VITAE**

**DENEGRI, MARIA** Contract Instructor

Principal, Denegri Bessai Studio Architecture Principal, DBS Fabrication, MRAIC, MOAA, LEED AP

## EDUCATION

1998 Universidad Politecnica de Barcelona / CCCB Master of Architecture

- 1994 University of British Columbia School of Architecture Bachelor of Architecture
- 1990 University of British Columbia Bachelor of Arts, Art History Major

#### ACADEMIC APPOINTMENTS

2014-2015	Part Time Appointment: Ryerson University RSID, Faculty of Communication & Design
2013-2016	Part Time Appointment: Ryerson University, Department of Architectural Science
2013-14	2014 Canadian Scholar-in-Residence Carleton University ASAU
2015- Present	Lecturer – Core Faculty: Univ. of Toronto, John H. Daniels Faculty of AL&D
2009-2015	Sessional Instructor II Univ. of Toronto, John H. Daniels Faculty of AL&D
2002-2009	Sessional Instructor I Univ. of Toronto, John H. Daniels Faculty of AL&D

#### ACADEMIC COMMITTEES

2008-2009	Advisory Committee, John H. Daniels Faculty of Architecture, Landscape and Design
	Decanal Search Committee, faculty member

## **TEACHING DOSSIER**

2015-16	Ryerson University, Faculty of Engineering and Architectural Science
	ASC421, Design Studio IV
2010-11-12-15	Univ. of Toronto, John H Daniels Faculty ALD
	Global Architecture; Summer Studies Abroad- Buenos Aires, Argentina; Program Coordinator;
2011/13-16	ARC313 Architectural Design 2 Studio Coordinator;
	ARC314 Architectural Design 3, Instructor
2014-15	Ryerson University, School of Interior Design
	IRD300, Design Dynamics Studio III, Studio Instructor
	IRD400, Design Dynamics Studio IV, Winter Term Studio Instructor
	Ryerson University, Faculty of Engineering and Architectural Science
	ASC520, Integration Studio 1, Bachelor of Arch. Science Program, Fall Term Studio Instructor
	University of Toronto, John H Daniels Faculty of Architecture, Landscape & Design
	ARC2014 Architectural Design Studio 4; Comprehensive Building Project, Studio Instructor
2013-14-15	ARC101 How to Design Anything, Winter Term Studio Instructor
2013-14	Ryerson University, Faculty of Engineering and Architectural Science
	AR8101 Studio in Critical Practice, Fall Term Co-Studio Instructor w/ Dr. Ian McBurnie
	Carleton University, Azrieli School of Architecture and Urbanism
	ARCS 5105, Gateway Studio: Comprehensive Design, Fall Term Studio Instructor
	University of Toronto, John H Daniels Faculty of Architecture, Landscape & Design
	ARC2014 Architectural Design Studio 4; Comprehensive Building Project, Studio Instructor
2011-12-13	University of Toronto, John H Daniels Faculty of Architecture, Landscape & Design
	ARC313 Architectural Design 2, Fall Term Studio Coordinator
	ARC2014 Architectural Design Studio 4; Comprehensive Building Project, Winter Studio
	Instructor
	ARC213 How to Design Anything, Winter term Studio Instructor
	ARC321. Architectural Representation 2. Summer Term; Fall Studio Coordinator
2010-12	University of Toronto, John H Daniels Faculty of Architecture, Landscape & Design
	ARC1011 Architectural Design Studio 1: Introductory Design, Fall Term Studio Instructor
	ARC2014 Architectural Design Studio 4: Comprehensive Building Project, Winter Term

#### PROFESSIONAL EXPERIENCE

2013- Present	DBS Design and Fabrication	Toronto	ON Principal
2010-1103011	DDo Design and Labrication,	TOTOTILO,	

2013- Present Denegri Bessai Studio, Toronto, ON Partner

2008- 2013 Maria Denegri Architect, Toronto, ON Principal

#### **HONOURS & AWARDS**

- 2016 OAA Emerging Practice Award Denegri Bessai Studio
- 2015 OAA Concept Award Dancing Cubbies; Huron Street Public School
- 2011 Ambient Shroud Pavilion, Borden Park Edmonton Pavilion Competition, with KIMIIS Design

#### LECTURES, WORKSHOPS AND SYMPOSIA

June 2016	Leaside Matters; Panel Discussion, Leaside, Toronto, ON, panelist
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- 2013 TSA Ideas Forum: Emerging Voices; Harbourfront Centre, Toronto
- 2013 Denegri Bessai Studio Current Work, Lecture Azrieli School of Architecture and Urbanism

## **PROFESSIONAL PROJECTS**

2016	NXNE 2016, Temporary Installation – June 2016, Toronto. ON
2015	PanaMaze, Temporary Installation in the Athletes Village - July-Aug, 2015, Toronto, ON
	Mangrove Structure, 3DXL Exhibition at the Design Exchange – May- Aug. 2015, Toronto ON
	Mangrove Structure 2, B3D; Conference Installation, Elgin Theatre, Oct. 2015 - Toronto, ON
2014	Cottingham Residence and Wall Screen, Toronto, ON Denegri Bessai Studio
	Canada Day Picnic Table, Gatineau, PQ, National Capital Commission/ Heritage Canada
	TSA Ideas Forum: Emerging Voices
	Brunswick Avenue Renovation, Toronto ON Denegri Bessai Studio
	Red Eye Expresso, Toronto ON Denegri Bessai Studio
2013	Brock Avenue renovation, Toronto ON Denegri Bessai Studio
	Durie Street Addition, Toronto ON Denegri Bessai Studio
	Huron Cubbies, Huron Street Public School, Toronto, ON Denegri Bessai Studio
2012	Delaware Avenue Renovation & Light Box, Toronto ON Denegri Bessai Studio
	Indian Crescent Road Renovation, Toronto, ON Denegri Bessai Studio
	Wallace Ave Café, Toronto ON Denegri Bessai Studio
2011	Rural House, Ottawa/ Carleton, ON Denegri Bessai Studio
	Vermont Street Renovation, Toronto, ON Denegri Bessai Studio
	Indian Crescent Renovation, Toronto, ON Denegri Bessai Studio
	117 Street Residence and Studio, Edmonton, AB Denegri Bessai Studio
	Gatineau House, Aylmer, PQ Denegri Bessai Studio

#### **COMPETITIONS / RESEARCH PROJECTS**

2011 Ambient Shroud Pavilion for Borden Park, Edmonton, AB Denegri Bessai Studio w/ KIMIIS Edmonton Park Pavilion Design Competition, City of Edmonton Victoria Park Amenity Building, Edmonton, AB Denegri Bessai Studio w/ KIMIIS Edmonton Park Pavilion Design Competition, City of Edmonton

#### **PROJECTS PUBLISHED, EXHIBITED; CITATIONS**

- 2014 Delaware Avenue, Toronto ON. Denegri Bessai Studio Globe and Mail, March, 2014, PROFILE: DENEGRI BESSAI STUDIO ARCHITECTURE | DBS DESIGN AND FABRICATION Designlines, Summer 2014 Issue *The Mighty Morphers* by Mike Dohety Article by LeeAnn Pallett; *[E]MERGING REALMS* Canadian Architect, March 2014.
- 2013 **Hepbourne Avenue**, Toronto ON. Denegri Bessai Studio >Globe & Mail, April 18, 2013. *"A Concrete Solution to a Shady backyard"* by Alex Bozikovic
- 2012 Kendal Avenue Residence, Toronto, ON. Denegri Bessai Studio >Publication, City Home, Toronto Life April 2012, *Extreme Make-Over* by Meaghan Binstock Gatineau Residence, Aylmer PQ. Denegri Bessai Studio >Publication, Ottawa Citizen, March 31, 2012; Homes Section; Showing their Metal, by Paula McCookey >Publication, Globe and Mail, Matthew Hague, Modern Design turns Organic, June 2014

CURATED EXHIBITIONS: 2009-13 Global Architecture Program, Student Work, John H. Daniels Faculty

#### **CURRICULUM VITAE**

## DESROCHERS, Brigitte Contract Instructor

#### EDUCATION

Harvard Graduate School of Design

- Doctor of Design, 1992-95

Master of Architecture in Urban Design, 1986-88
 Swiss Federal Polytechnic Institute, Student exchange, doctoral level, 1995
 University of Montreal, Bachelor in Architecture, 1982-86
 CEGEP of Valleyfield, Collegiate degree in Physical Sciences, 1980-82

#### **EMPLOYMENT**

**Canada Council for the Arts:** contract employee, 2000; Architecture Officer, Visual Arts Section, 2002-6 and 2008-present; Finance Officer, 2006-7; Liaison Officer, Arts Disciplines Division, 2007-8; Prizes Officer, 2014-15.

Ontario Association of Architects, 2016: Consultant.

Jackpine Digital, 2014

Canadian Centre for Architecture, 1999-2001

#### ACADEMIC ENGAGEMENTS

#### **Studio instructor**

- **Azrieli School of Architecture at Carleton University**, studios in architecture and urban design, 2011present. I teach students to engage stakeholders as part of their design exercises, in projects such as:
  - <u>Aboriginal Studio</u>: Consultation of the First Nation and Inuit student communities at Carleton, to design a dedicated lobby and a new University building. Canadian Studies professors, the Equity Office, Building Services and the Development Office were brought into the conversation. Douglas Cardinal played a mentorship role.
  - <u>Tower remediation studio</u>: Redevelopment of a group of 1970s residential towers into a mixed-use, pedestrian-friendly neighbourhood. Contributors include the Ottawa Neighbourhood Survey, the Centertown Citizens Ottawa Corporation, the City Councillor, a private developer, a green engineer and City of Ottawa urbanists.
  - <u>Pine Creek restauration and Eco-Development studio</u>: This studio engages student with potential, real-life stakeholders from City Hall to activist groups. We use the Senior Boom as a development driver to let this two-mile-long urban creek regain its original character as a convener of life.
     Participants include employees from the City of Ottawa, the National Capital Commission, the Ottawa Council on Aging, Ottawa Biosphere Eco-City and a hairdressing salon.
- University of Montreal, Urban design studio, 1990

#### Teaching fellow and research assistant

- Harvard Graduate School of Design, 1993-94
  - Polemical Debates in 20<sup>th</sup> Century Architecture and Urbanism, by George Baird
  - o Buildings, Texts and Contexts, by Michael Hays and Wilfried Wang
  - Introduction to Architectural Theory by Michael Hays
  - o Urban Life, Urban Form, Urban Theory by Edward Robbins

## 22 Fellowships and Awards, including:

- Canadian Center for Architecture, Research Fellowship, 2001-2002
- National Gallery of Canada, Lisette Model/Joseph G. Blum Fellowship, 2000
- British School at Rome, Rome Scholarship in the Fine Arts, 1996
- Rockefeller Foundation Fellowship, 1995

#### 25 lectures, including:

- Council on Canadian Urbanism Conference, 2016
- Milan Polytechnical University, 2004
- University of Mendrisio School of Architecture, Switzerland, 2002
- Columbia Architecture, Paris-New York Program, 1998, 1999
- Classical Archaeology towards the third millennium conference, Amsterdam, 1998

#### 35 publications, including:

- Journal of Architectural Education, online edition, exhibition review of *Artists, Architects & Artisans: Canadian Art 1890-1918*, 2014
- Canadian Architect, Grantmakers for Architecture, writer for the interview, 2013
- Journal of the History of Photography, The Archaeological Gaze, 2003
- RACAR, the Canadian Journal of Art History, Images de Pompéi, 2000

## 27 critiques of student work, including:

- Pratt Institute School of Architecture 1996, 1998
- McGill University 1997, 2000, 2001
- Architectural Association 1996
- Harvard Graduate School of Design 1987, 1994, 1954

#### ASSOCIATIONS

- Adirondack Mountain Club, member
- Ottawa New Edinburgh Club, rowing member
- Harvard Club of Ottawa, Arts Director
- Ottawa Council on Aging, member

#### **CURRICULUM VITAE**

#### FORTIN, Lyette Contract Instructor

### **DEGREES**:

1982 Bachelor of Architecture, School of Architecture, Carleton University, Ottawa, Ontario, Canada

#### DIPLOMAS:

- 1983 Conservation of Historic Structures, Institute of Advanced, Architectural Studies, King's Manor York, England
- 1986 Architectural Conservation, International Center for the Study of the Preservation and Restoration of Cultural Property (ICCROM) Rome, Italy

#### **HONOURS**:

1982 Heritage Canada Research Medal

#### **EMPLOYMENT HISTORY:**

**Teaching Positions** 

2014-16 Contract Instructor Azrieli School of Architecture and Urbanism

#### **Professional Employment**

- 2012- Consultant in Architectural Conservation, Lyette Fortin, L'Ange-Gardien, Québec
- 1996-2012 Director, Architecture and Program Strategic Planning, House of Commons, Parliament of Canada, Ottawa, Ontario

#### **PROFESSIONAL ACTIVITIES:**

- 2014-16 Board Member Commission Culturelle des Municipalités Régionales de Comté (MRC) des Collines de l'Outaouais
- 2016 Jury Member, Public Art Competition, MRC des Collines de l'Outaouais
- 2015 Jury Member, Cultural and Heritage Projects, MRC des Collines de l'Outaouais
- 2015 Urban Forum Public Lecture Guest Speakers, Robert Allsopp (DTAH) and Lyette Fortin *"Heart of the Nation" Long Term Vision and Plan Parliamentary and Judicial Precincts of Canada*
- 2015 Heritage Ottawa Public Lecture Guest Speakers, Robert Allsopp (DTAH) and Lyette Fortin "A Momunental Issue"
- 2014 Jury Member, Cultural and Heritage Projects, MRC des Collines de l'Outaouais
- 2014 The Association for the Preservation of Technology International (APT) abstract reviewer for Conference, Québec City
- 1990-16 Member, Comité Consultatif d'Urbanisme, L'Ange-Gardien, Québec

#### THESIS MENTOR:

2014-16 Completed: 1 Master of Architecture

#### **TEACHING ACTIVITY:**

2014-15 Fall	ARCH 4200 – Lecture Course
2015-16 Fall	ARCH 4200 – Lecture Course
2016-17 Fall	ARCH 4200 – Lecture Course
2016-17 Winter	ARCC 3302 - Conservation in Practice II Studio

#### SCHOLARLY ACTIVITIES:

- 2016 Azrieli School of Architecture and Urbanism, Master thesis guest reviewer
- 2016 Azrieli School of Architecture and Urbanism, ARCC 4909 Guest Design Critic
- 2014 Azrieli School of Architecture and Urbanism, ARCC 3301 Guest Design Critic
- 2013 Guest Speaker Azrieli School of Architecture and Urbanism ARCH 4200
- 2013 Jury Member Heritage and Technology Charette, Azrieli School of Architecture and Urbanism

## **PUBLICATIONS:**

Jean-Pierre Landry (Production coordinated by Communications Branch, Public Works and Government Services Canada,1996), 50 pages English, 52 pages French

- B.C. Dawson City Dyke, Preservation Under Climatic Extremes co-prepared by Linda Fardin and Lyette Fortin
- 1987 Society for Industrial Archaeology, *Klondike Industrial Archaeology*" co-prepared with Alex Barbour and Lyette Fortin
- 1994 Tokyo Japan National Research Institute of Cultural Properties Guest Speaker *Principles* and *Practices of Heritage Conservation in Canada*
- 1995 Treasury Board Real Property Conference, Quality Control and Cost Control for Heritage Projects

#### PROFESSIONAL PROJECT LIST

2012-2016 – Strategic advice on conservation projects

- 1996-2012 Oversee, on behalf of the House of Canada, Parliament of Canada:
  - development of the Parliamentary Precinct Long Term Vision and Plan (LTVP)
- planning and implementation of LTVP related projects i.e.:
  - Centre Block Underground Services Building (new construction)
  - Justice Building, Wellington Street (rehabilitation/adaptive re-use)
  - Bank of Nova Scotia, Sparks Street (rehabilitation/adaptive re-use)
  - Library of Parliament (restoration/rehabilitation)
  - 130 Sparks Street (rehabilitation)
  - 1 Wellington Street (rehabilitation/adaptive re-use)
  - Former Bank of Montreal, Wellington Street (rehabilitation/adaptive re-use)
  - 180 Wellington Street (rehabilitation/adaptive re-use)
  - West Block (restoration/rehabilitation/adaptive re-use)
  - Center Block (restoration of South Façade and emergency stabilization)
  - Center Block (rehabilitation planning)

#### CURRICULUM VITAE

Fright, Sean Contract Instructor

#### DEGREES:

2016	M.Arch, Architecture, Carleton University, Canada.
2008	B.A.S., Architecture, Carleton University, Canada

#### **HONOURS**:

2016	Royal Architectural Institute of Canada Honour Roll Certificate
2015	Steel Structures Education Foundation Scholarship

## **EMPLOYMENT HISTORY:**

#### **Teaching Positions**

2016 Contract Instructor Azrieli School of Architecture & Urbanism
 2016 Digital Media Instructor, Studio F1rst Summer Studio, Carleton University
 2014-2016 Teaching Assistant, Azrieli School of Architecture & Urbanism

#### **Professional Employment**

2014- Manager, Students' Design Clinic, Ottawa, ON. 2009-2013 Designer, FAD Architects Inc., Parry Sound, ON.

#### SCHOLARLY AND PROFESSIONAL ACTIVITIES:

2014-2015 Graduate Student Representative, Azrieli Architecture Student Association

## **TEACHING ACTIVITY:**

F2016 ARCN 5005 – Theory & Practice of Architectural Representation (M.Arch1 – 1<sup>st</sup> year) – Contract Instructor

#### SCHOLARLY AND PROFESSIONAL ACTIVITY

<u>Guest Design Critic</u> 2014-2016 Azrieli School of Architecture & Urbanism, 1<sup>st</sup> & 2<sup>nd</sup> year design studio

#### **EXHIBITIONS:**

Group Exhibitions

2016 – *Graduate Work Exhibition*, The Pit, Carleton U; Riar, I, Curator. 2015 – *Graduate Work Exhibition*, Azrieli Gallery, Carleton U; Riar, I, Curator.

#### PROFESSIONAL PROJECT LIST

- 2016 Residential Project, 38 Fulton Ave., Ottawa ON; SDC
- 2016 Residential Project, 1027 Hindley St. Ottawa, ON; SDC
- 2016 Residential Project, 830 Fisher Ave. Ottawa, ON; We Are Craftsmen
- 2015 Residential Project, 26 Paul Rd. Seeley's Cove, NB; SDC
# ARCHITECTURE

#### CURRICULUM VITAE

GAGNON, Kristen Contract Instructor

#### DEGREES:

2012-present	Ph.D. Architecture, Carleton University, Canada (Current)
2012	M.Arch, Architecture, Carleton University, Canada
2009	B.A.S., Architecture, Carleton University, Canada

## **HONOURS**:

2016	Ontario Graduate Scholarship (OGS), Carleton University.
2015	John Ruddy Scholarship, Carleton University
2014	Ontario Graduate Scholarship (OGS), Carleton University

#### **EMPLOYMENT HISTORY:**

#### Teaching / Research Positions

- 2014-16 Contract Instructor, Azrieli School of Architecture & Urbanism (Contract)
- 2012-16 Teaching Assistant, Azrieli School of Architecture & Urbanism
- 2014-16 Research Assistant, Carleton Immersive Media Studio, Carleton University

#### **Professional Employment**

2009 Student Intern, Urban Design, National Capital Commission, Ottawa, ON

#### SCHOLARLY AND PROFESSIONAL ACTIVITIES:

- 2014-16 Member, Doors Open Ottawa Advisory Committee to the City, Ottawa, ON
- 2013-16 Editor and Columnist, Spacing Magazine, Toronto, ON
- 2013-14 Graduate Student Representative, Directorship Search Committee, Azrieli School of Architecture & Urbanism
- 2012 Team Advisory, Alternative Spring Break, Student Experience Office, Carleton Univerity

# **TEACHING ACTIVITY:**

W 2016	ARCS 1105 – Studio 1 (BAS 1 <sup>st</sup> year) – Contract Instructor
F 2015	ARCH 4205 – Recycling Architecture (BAS 3 <sup>rd</sup> -4 <sup>th</sup> year) – Contract Instructor
S 2015	Enriched Mini Course Program (EMCP), High School Student Summer Program
W 2015	ARCU 3100 – Morphology of the City (BAS 3 <sup>rd</sup> year) – Teaching Assistant
F 2014	ARCH 4206 – Recycling Architecture (BAS 3 <sup>rd</sup> -4 <sup>th</sup> year) – Teaching Assistant
W 2014	ARCS 2106 – Studio 3 (BAS 2 <sup>nd</sup> year) – Contract Instructor
F 2013	ARCH 4206 – Recycling Architecture (BAS 3 <sup>rd</sup> -4 <sup>th</sup> year) – Teaching Assistant
W 2013	ARCS 2106 – Studio 3 (BAS 2 <sup>nd</sup> year) – Teaching Assistant
F 2012	ARCH 4206 – Recycling Architecture (BAS 3 <sup>rd</sup> -4 <sup>th</sup> year) – Teaching Assistant

# SCHOLARLY AND PROFESSIONAL ACTIVITY

#### Guest Design Critic

2012-15 – Graduate colloquium, 1<sup>st</sup> & 2<sup>nd</sup> year undergraduate reviews, Azrieli School of Architecture & Urbanism

#### Symposium Organizer

2015-16 – POP CAN CRIT: Current Conditions in Popular Architecture Criticism, Azrieli School of Architecture & Urbanism, SSHRC funded through Connection Grant

**PUBLICATIONS:** papers in refereed journals, papers in refereed conference proceedings, abstracts and/or papers read, and others. Each title must show the names of the author and inclusive page numbers.

1) Life-time summary according to the following categories:

- Chapters in books.....1
- Papers in conference proceedings (referred abstract submission) ..........1
- Other (editorials / columns / articles) ......4 (listed)

2) Details for past six years same categories as above Chapters in Books:

1. Gagnon, Kristen. "Speed/Walking: From the Flâneur to the Ferrari, How the Acceleration of the Modern City has Resulted in a Shift in Urban Perception". *Urban Planning and Civil Engineering.* Ed. Sisiopiku, Virgina P., Ossama E. Ramadan. Athens: ATINER, 2015. p. 3-13. Print. ISBN: 978-960-598-009-2

# Papers in Conference Proceedings (referred abstract submission):

1. Gagnon, Kristen. "Critical Criticism: A Loss of Criticalities in Popular Architecture Criticis", ARCHTHEO'14 Theory of Architecture: Architecture and Writing Conference Proceedings, p. 89-100. Mimar Sinan Fine Arts University, Istanbul, Turkey, DAKAM, 2014. ISBN: 978-605-5120-90-0

# Abstracts and/or Papers Read:

1. Gagnon, Kristen. "Architecture Criticism vs. The Public: 'Mirvish + GehryToronto' A Case Study". Mapping.Crit.Arch Architecture Research Network Workshop: Between Public Debate and Autonomous Discipline Conference, Université Rennes 2, Rennes, France, 2016. Paper read.

2. Gagnon, Kristen. "How the globalization of architectural practice has resulted in the popularization of architecture and the proliferation of the 'star architect': Mirvish + Gehry Toronto – A Case Study". ICRH Interdisciplinary Post Graduate Conference: Reconfiguring Urban Spaces: Cultural Exchange through the City, Queen's University, Belfast, Northern Ireland, 2014. Paper read.

3. Gagnon, Kristen. "Speed/Walking: From the Flâneur to the Ferrari, How the Acceleration of the Modern City has Resulted in a Shift in Urban Perception". 4<sup>th</sup> Annual International Conference on Urban Studies + Planning, Athens Institute for Education and Research (ATINER), Greece, 2014. Paper read, abstract published: ISBN: 978-618-5065-49-2.

4. Gagnon, Kristen. "(Semi)Urbanism: Creating a Hybrid Through Slippage". Cultures of the Suburbs Symposium: Out of Control Suburbs? Comparing Representations of Order, Disorder and Sprawl, Hofstra University, Hempstead, Long Island, New York, 2013. Paper read.

# Other (Editorials / Columns / Articles):

1. Gagnon, Kristen. "Architecture Criticism in Canada", RAIC Journal, *Canadian Architect*, August 2016, p. 22.

2. Gagnon, Kristen. "Star Architects + the City: Toronto adds a BIG bead to its 'starchitect charm bracelet", *Spacing*, January 2016, p. 12.

3. Gagnon, Kristen. "Grand Prairie Regional College", *Canadian Architect*, July 2015, p. 34.

4. . Gagnon, Kristen. "Inclusivity as Architectural Program: A Reflection on Vancouver's Woodward's Redevelopment Five Years On", *ArchDaily.com*, December 2014. Online.

ARCHITECTURE

# September 2016

CURRICULUM VITAE	
HATELY, Larry	Contract Instructor
EDUCATION:	Architectural Technology Diploma, 1968 Ryerson Polytechnical Institute, Toronto
	Bachelor of Architecture, 1974 Carleton University, Ottawa
	Teaching Certificate, 1990 Eastern Region College Development Program, Kingston
EMPLOYMENT:	Architectural Offices: Robert Simpson Company Architects, 1968 A.J. Diamond and Associates, 1975 to 1976 Murray and Murray and Associates, 1976 to 1978 Ogilvie and Hogg Architects, 1978 to 1982
	<b>Private Practice:</b> Larry William Hately Architect, 1982 to 1992
	<b>Teaching Experience:</b> Professor, Department of Architectural Technology Algonquin College, Ottawa, 1988 to 2005
	Contract Instructor, Azrieli School of Architecture and Urbanism Carleton University, Ottawa, 2000 to Present Courses taught:
	ARCC 3202Architectural Technology 42007 to 2016ARCC 5099Building Technology IV2014 to 2015ARCC 5100Advanced Building Systems2003 to 2006ARCC 2202Architectural Technology 22000
	<b>Consultant Work:</b> Building Envelope Design and Building Science consultant, Ottawa, 2004 to present Technical editor, wood-frame handbook for CMHC, 2006 to 2009
PUBLICATIONS:	"Durable Wood-Frame Construction for All Climates", CMHC, 2011
MEMBERSHIPS:	Ontario Association of Architects, 1979 to Present (Retired 2003) Royal Architectural Institute of Canada, 1979 to 2003 Ottawa Regional Society of Architects, 1986 to 2006 Ottawa Valley Bid Depository, Board of Directors, 1990 to 1991 Building Envelope Council Ottawa Region, Member since 1990 Building Envelope Council Ottawa Region Board of Directors, 1992 to 1993

ARCHITECTURE September 2016

#### **CURRICULUM VITAE**

HOLMQUIST, Paul Contract Instructor

#### DEGREES:

2016	Ph.D., Architecture, McGill University, Canada
2009	M.Arch., Architecture, McGill University, Canada
1999	M.Arch., Architecture, Southern California Institute of Architecture, USA
1990	B.A., Art, University of California at Los Angeles, USA

# HONOURS:

2016	Finalist, Gardiner Museum Ceramic Sculpture Competition, with Linda Swanson
2014	Graduate Research Mobility Award, School of Architecture, McGill University
2012	Artist in Residence, Cité Internationale des Arts, Paris
2010	Collection Research Grant, Canadian Centre for Architecture
2010	Schulich Creducto Scholarchin, McCill University

2010 Schulich Graduate Scholarship, McGill University

# **EMPLOYMENT HISTORY:**

**Teaching Positions** 

- 2012-16 Contract Instructor, Azrieli School of Architecture & Urbanism, Carleton University
- Contract Instructor, School of Architecture, McGill University 2014
- Contract Studio Instructor, School of Architecture, McGill University 2011-12
- 2009-13 Graduate Teaching Assistant, School of Architecture, McGill University
- 2007-08 Visiting Assistant Professor, College of Architecture, Planning and Design, Kansas State University
- 2004-07 Lecturer, Assistant Professor, Computer Imaging and Architectural Technology, SUNY College of Technology at Alfred

# **TEACHING ACTIVITY:**

Studios, Lecture Courses, Workshops and Seminars:

- ARCH 5201 Graduate Seminar 2 (MARCH) 2015-16
- ARCS 2105 Studio 2 (BAS 2<sup>nd</sup> year) ARCS 4106 Studio 7 (BAS 4<sup>th</sup> year) 2015
- 2014
- 2012-13 ARCH 5200 – Graduate Seminar 1 (MARCH)

# SCHOLARLY AND PROFESSIONAL ACTIVITY

Invited Design Critic/Reviewer/Reader:

- 2016 McGill University School of Architecture, external reader, graduate research projects in architectural history and theory
- Journal of Architectural Education, referee 2016
- 2014-16 Azrieli School of Architecture and Urbanism, Carleton University, undergraduate and graduate studio reviews, external graduate thesis critic, scholarship competition juror
- 2014-15 McGill University School of Architecture, undergraduate and graduate studio reviews
- 2011,15 Concordia University, Department of Studio Arts, MFA sculpture reviews

#### Membership in Academic Societies:

Association of Collegiate Schools of Architecture; College Art Association; American Society for Eighteenth-Century Studies; University Art Association of Canada; Historians of Eighteenth-Century Art and Architecture

# PUBLICATIONS:

# Life-time summary:

- Books authored	0
- Books edited	0

- Chapters in books	2
- Papers in refereed journal	1
- Papers in refereed conference proceedings	1
- Technical reports	0
- Abstracts and/or papers read	10
- Others (public lectures, other research contributions)	5

# Chapters in Books:

- "More Powerful than Love: Imagination and Language in the Oikéma of Claude-Nicolas Ledoux." In Chora 7: Intervals in the Philosophy of Architecture, edited by Alberto Pérez-Gómez and Stephen Parcell, 95-116. Montreal, QC: McGill-Queens University Press, 2016.
- "Tying the Seductive Powers of Art to the Innate Rights of Man: The Architect as Legislator in the Ideal City of Chaux." In Agents of Space: Eighteenth-Century Art, Architecture and Visual Culture, edited by Christina Smylitopoulos, 85-114. Newcastle upon Tyne, UK: Cambridge Scholars Press, 2016. (Non-peer reviewed.)
- 3. <u>Accepted</u>: "Dreaming the City through Unicorn Skulls: Reading Murakami with Agamben." In *Reading Architecture: Literary Imagination and Architectural Experience*, edited by Angeliki Sioli and Yoonchun Jung. London: Routledge, 2017.

# Papers in Refereed Journal:

1. "Towards an Ethical Technique: Reframing Architecture's 'Critical Call' through Hannah Arendt." *The Plan Journal* 1, no. 1 (July, 2016): 11-23. doi: 10.15274/tpj.2016.01.01.03.

Papers in Refereed Conference Proceedings:

 In press. "Towards an Ethical Technique: Reframing Architecture's 'Critical Call' through Hannah Arendt." In the 104<sup>th</sup> ACSA Annual Meeting Proceedings, Shaping New Knowledges. Washington, D.C.: Association of Collegiate Schools of Architecture, 2016.

Abstracts and/or Papers Read:

- "L'harmonie tient tout dans un équilibre parfait: Re-enacting Origins in Claude-Nicolas Ledoux's Ideal City of Chaux." American Society for Eighteenth-Century Studies Annual Meeting, Pittsburgh, PA, April 2016.
- "Towards an Ethical Technique: Reframing Architecture's 'Critical Call' through Hannah Arendt." Association of Collegiate Schools of Architecture Annual Meeting, Seattle, WA, March 2016.
- 3. "Centralizing Love: Eros and Politics in the *Oikéma* of Claude-Nicolas Ledoux." College Art Association Annual Conference, Washington D.C., March 2016.
- 4. "Cannons in the *Val d'Amour*: The Ambivalent Coincidence of *Philia* and the Revolutionary Wars in Claude-Nicolas Ledoux's Ideal City of Chaux." Society for French Historical Studies Annual Conference, Montreal, QC, April 2014.
- "Tying the Seductive Powers of Art to the Rights of Man: The Architect as Legislator in the Ideal City of Chaux." Universities Art Association of Canada Annual Conference, Banff, AB, October 2013.
- 6. "The Architect Commands: Claude-Nicolas Ledoux and the Authority of *Génie*." Paper presented at the graduate symposium *Research in Progress: Beyond the Author*, Department of History, Theory and Criticism of Art and Architecture, MIT, Cambridge, MA, March 2011.
- "Into the MXT." Co-authored and co-presented with Jason Crow. Paper presented at Atmosphere 2011: Mediated Cities, University of Manitoba School of Architecture, Winnipeg, MB, February 2011.
- <u>Accepted</u>: "Elle fonde les Villes:' The Physiognomy of Reconnaissance in Claude-Nicolas Ledoux's Ideal City of Chaux." Universities Art Association of Canada Annual Conference, Montréal, October 2016.
- 9. <u>Accepted:</u> "Hannah Arendt: Architecture's Pharmakon." *Theory's History 196X-199X: Challenges in the Historiography of Architectural Knowledge*, Brussels, February 2017.

# Public Lecture

 "Cities Imagined and Lived: Notes from Chaux and Montréal." With Suresh Perera, Architect. Invited lecture at the Department of Design, Architecture and Civil Engineering, Instituto Tecnológico y de Estudios Superiores de Monterrey, Puebla, México, April 2016. ARCHITECTURE September 2016

#### **CURRICULUM VITAE**

HOYT Christopher, AIA, OAA, MRAIC, Contract Instructor

# DEGREES:

1998 B. Arch, Andrews University, Minor: French language

#### **REGISTRATIONS:**

Licensed Architect, Ontario and Washington D.C.

2009 - Present	OAA member number 6862.
2005 - Present	Washington D.C. License number ARC1000731

# **EMPLOYMENT HISTORY:**

#### **Teaching Positions**

2016 Contract Instructor, Azrieli School of Architecture & Urbanism, Carleton University, Ottawa, ON

#### **Professional Employment**

2012- Present	Senior Architect, National Capital Commission (NCC), Ottawa, ON
2011-2012	Architect and Senior Designer, Kuwabara Payne McKenna Blumberg,
	Toronto, ON
2009-2011	Architect, Diamond and Schmitt Architects, Toronto, ON

# SCHOLARLY AND PROFESSIONAL ACTIVITIES:

2015 – Present	Co-Chair, Internal Design Review Committee (IDRC), NCC, Ottawa, ON
2015	Selection Committee, NCC, LeBreton Flats Redevelopment, Request for
	Qualifications (First Stage)
2015	Subject Matter Expert, Sustainability – Review of LeBreton Flats
	Redevelopment Proposals, Request for Proposals (Second Stage)
2014	Member, Stakeholder Committee, Blocks 1,2,3 Master Plan, Ottawa
	Ontario
2010-Present	Editor, <u>www.see-change.net</u> , a blog about sustainability and cities (9,000
	views)

# **TEACHING ACTIVITY:**

2016 ARCU 3303A – Urbanism Studio (3rd year); ASAU

#### SCHOLARLY AND PROFESSIONAL ACTIVITY

Guest Design Critic

2014- University of Waterloo School of Architecture, Graduate thesis reviews.

# PUBLICATIONS:

1) Life-time summary (count):	
- Books edited	1
- Technical reports	2
- Interviews Given	1
- Conference Presentations	1
- Conference Presentations Submitted	1

# 2) Details:

# Books edited:

1. EHDD: Building Beyond the Bay ed. by Raul Barraneche, Marc L'Italien, Edizioni Press 2010, 143 pp. (served as editorial assistant)

# Technical Reports:

- 1. Urban Design Guideline, LeBreton Flats Request for Proposals, 2015
- 2. Project Manager: Capital Illumination Plan, the NCC's in-progress master plan for illuminating Canada's Capital. Anticipated completion: 2017.

# Interviews Given:

1. Interviewed for an article regarding ongoing development of the NCC's Capital Illumination Plan. To be published in: *Lighting: Illumination in Architecture*, Volume 48, Issue 6, 2016

Conference Presentations Given:

1. *"Lighting and Urbanism: A Means of Adding Value to a Capital", a presentation to the Canadian Institute of Planners' Accent on Planning Conference, July, 2016. Joint presentation with Veronique Koulouris, Architect.* 

Conference Presentations Submitted:

1. *"A Vision for the Capital at Night",* a presentation proposed to the joint conference of the Royal Architectural Institute of Canada (RAIC) and the Ontario Association of Architects to be held in Ottawa in spring 2017.

# PROFESSIONAL PROJECT LIST:

- 2012 Bay Adelaide Centre, East Tower, 22 Adelaide St. West, Toronto, ON. With KPMB Architects.
- 2012 Arts Court Redevelopment, 2 Daly Ave., Ottawa, ON. With KPMB Architects
- 2012 Residential renovation, 455 Northcliffe Blvd, Toronto, ON. Christopher Hoyt Designer.
- 2011 Bridgepoint Active Healthcare Redevelopment, 1 Bridgepoint Drive, Toronto, ON. With Diamond and Schmitt Architects.

ARCHITECTURE

September 2016

# CURRICULUM VITAE

HUOT, Richard,	Contract Instructor
, , ,	

# DEGREES:

2012	M.Arch. Architecture, Carleton University, Canada
2009	B.A.S. Architecture, Carleton University, Canada

#### HONOURS:

2015	Architectural License, Member of the Ontario Association of Architects. (OAA)
2015	Member of Royal Institute of Architects of Canada (MRAIC)
2015	Member of BuildSMART Canada
2010	Green Roof Professional, Green Roofs for Healthy Cities (GRP+ GRHC)

**EMPLOYMENT HISTORY:** dates, rank/position, department, institution/firm

#### **Teaching Positions**

2012- 2011 Teaching Assistant, Tech 4, Azrieli School of Architecture & Urbanism, Carleton

# **Professional Employment**

2016- Present	Project Architect/ Project Manager/ Contract Administrator,
	Parkin Architects Limited (PAL), Ottawa, ON
2008- 2015	Architect / Project Manager/ Team Lead /Intern/ Student,
	Farrow Dreessen Architects Limited(FDAI), Ottawa, ON
2007 Architectural E	Designer, Student's Design Clinic, Ottawa, ON

# PROFESSIONAL PROJECT LIST

- CHEO, Redevelopment of PACU & SDS, Ottawa, Ontario 2016-[2018], Value \$7M.(Parkin Architects Limited)
- CHEO, CT Scan, Ottawa, Ontario 2016-[2018], Value \$2M.(PAL)
- Igloolik High School, Igloolik, Nunavut 2016-[2018], Value \$25M. (PAL)
- Hydro Ottawa Limited Design Build Competition, Ottawa, Ontario 2016, Value \$60M. (PAL)
- Secure Government Laboratories, Ontario 2009-2015 Value \$58M. LEED Silver (FDAI)
- Leitrim Generator Addition, Ottawa, Ontario 2011-2015, Value \$4.5M.: DND/DCC (Bouthillette Parizeau A. w/FDAI)
- Car Dealerships, Ontario, 2010-2015, Value \$200,000-15M. each (FDAI)
- Secure Government Laboratories, Ontario 2008-2015, Value \$25M.: Design-Bid-Build- (FDAI)
- Military Base, Fire Alarm Upgrade, Ontario, 2013-2015, Value \$4M.: DND/DCC (BPA w/ FDAI)
- Chiller Replacement, Ontario 2013-[2015], Value \$1.4M: PWGSC/ Transport Can (BPA w/ FDAI)
- RCMP Turbine Replacement, Ontario 2012-2015, Value \$3M.: PWGSC/RCMP- (BPA w/ FDAI)
- Osgood Nursery School, Osgood, Ontario, 2015(FDAI)
- Steeple Replacement & Repair, St. Patrick's Parish, Ottawa, Ontario, 2015, Value \$300,000 (John G Cooke & Associates LTD. w/ FDAI)
- 197 Trainyards Drive, 2014-2015, Value +/-\$5M: Bulk Barn and Other Tenants (FDAI)
- 145 Trainyards Drive, 2014-2015, Value +/-\$300,000, David's Bridal Addition: (FDAI)

- Breakscape Entertainment, 1860 Bank street, 2015 Value +/- \$200,000: Private Client (FDAI)

2015 to Present

- Aldergrove Border Crossing, Aldergrove British-Columbia, 2013-2014, Value: \$18M.(Est.): Design-Build CBSA Client Architect (FDAI)
- McLeod Optometry Clinic, 323 McLeod Street, Ottawa 2011-2014, Value \$1.3M.: (FDAI)

- 175 Trainyards Drive Addition, 2013-2014, Value +/-\$5M: Old Navy andArtimano Furniture (FDAI)
- 575 Industrial Avenue, 2012-2014, Value +/-\$6M: Banana Republic, Sketchers and Mexx(FDAI)
- Partners in Parenting, Change of Use, Ottawa, Ontario 2014, Value \$1M (FDAI)
- Dymon Storage Carling Avenue, 1554 Carling Avenue, Ottawa 2008-2014, Value \$10M(FDAI) 2014
- 665 Industrial Avenue, 2011-2013, Value +/-\$6M. : Stores LCBO and Farm Boy(FDAI)
- Embassy of Japan, Ottawa, Ontario, 2011-2013, Value \$1.5M (FDAI)
- Ismaili Jamatkhana, Conroy Road, Ottawa, Ontario, 2012-2013, Value \$4M(FDAI)

2013

- Prescott Ontario, 2010-2012, LEED Gold Cert., Value: \$17.7M. (\$19.3M): Design-Build (FDAI)
- The Farm Generator Replacement, Ottawa, Ontario, 2013, Value 2M. (BPA w/FDAI)
- Star Gymnastics, 520 Lacolle Way, Ottawa, 2009-2012 Value 1.4M (FDAI)
- TDCT Westboro Station, 412 Richmond Road, Ottawa, 2012 Value \$450,000 (FDAI)

- Ottawa Train Yards Stores, Bldg L Addition, 2011-2012, Value 3M., Marshalls (FDAI) 2012

- Gatineau Preservation Centre, Concrete Floors, Gatineau, Quebec, 2009-2011 (FDAI)
- 1777 Tenth Line Road, Orleans-Good Life Fitness Tenant Fit Up, 2011(FDAI)
- Mercedes Benz, 1110 St. Laurent Blvd., Ottawa ON 2009-2011, Value 1.8M (FDAI)

- Ottawa Train Yards Phase 2 Micheals and SAIL, Ottawa, ON, 2009-2011, Value +/- 9M (FDAI) 2011

- Banting Building Ceiling Ottawa, Ontario, 2008-2010 Value 3.4M (BPA w/ FDAI)
- 67 TD Branches, Accessibility Audits, Ontario, 2010 & 2009 (FDAI)
- 58 Bayshore Drive and 41 Woodridge Drive Entrance Canopies, Ottawa, Ontario, 2009-2010 Value \$150,000 (FDAI)
- National Archives Building Wellington Street, NE Stair, Ottawa, Ontario, 2009-2010, Value \$275,000 (FDAI)

2010

- Supreme Court of Canada, 301 Wellington Street, Ottawa 2009-2015, Value \$5,000-\$300,000 (FDAI)
- Site Planning and Concept Development Design, Various Locations, 2008- 2015(FDAI)
- Area Certificates, Various locations in Ottawa area, 2008-2015(FDAI)
- Jackson Building 9 storeys, Accessibility Audit, Ottawa, Ontario, 2009(FDAI)
- Steps St. Peter Celestine Church Pakenham, Ontario, 2008-2009, Value \$200,000(FDAI)
- CC-125, CFB Petawawa, ON, 2009, Value \$15M.:DCC/DND- Design-Build -(FDAI)
- 460 King Edward Development, Ottawa, Ontario, 2008-2009 (Morris Melamed Architects w/ FDAI)
- CJIRU, Trenton Ont., ON, 2008, Value \$20M: DCC/DND- Design-Build (FDAI)

Christopher James Knight 708-180 York Street Ottawa, Ontario K1N 1J6 phone (613) 854-8066 email Iondon.cjk@gmail.com

# PROFESSIONAL PROFILE

Licensed Architect in Ontario. Project experience includes a diverse range of project size (\$500,000 to \$100M) and types with focus on quality design and project delivery. Project Architect experience from Schematic Design through Contract Administration and project closeout. Strong technical skills with experience coordinating tender packages and Construction Documents. Client-facing, consultant coordination and construction experience. with practice leadership responsibilities including business development and design visioning.

# PROFESSIONAL EXPERIENCE

	HOK Architects Ottawa, Ontario	2013 to present
	Brunswick Street Rehabilitation - Halifax, NS	
	Westin Hotel Ballroom - Ottawa, ON	
	Erskine Dredge & Associates Ottawa, Ontario	2012 - 2013
	Almonte General Hospital; Concept Site Masterplan	
	The Albion Rooms; Novotel Ottawa Bar and Lounge	
	McArthur Condominiums; Ottawa, Ontario	
	Lifschutz Davidson Sandilands London, England	2011
	Caxton House; 10 storey, 25,000 sqm office building	
	Allies and Morrison Architects London, England	2010
	100 Bishopsgate - 40 storey office building	
	Marina Zayed Yacht Club	
	South Place Hotel - 80 room boutique hotel	
	Rafael Vinoly Architects PC London, England and New York City, USA	2005 - 2009
	Battersea Powerstation Master Plan	
	Birmingham New Street Station Competition	
	Van Andel Institute Laboratory - Grand Rapids, Michigan	
	University of Arizona Science Center	
	Williamson and Williamson (now Williamson Chong) Toronto, Ontario	2004
	2004 Burnam Prize - Water Taxi Stations on the Chicago River	
	Narrow Lot House Competition - Portland, Oregon	
ED	UCATION	
	Master of Architecture (University of Toronto)	2005
	B A with Honours (Carleton Liniversity)	2000
	ש.ה. שונד דוסרוסטרש (סמופנטרו טרוועפושונץ)	2000

# Christopher James Knight phone (613) 854-8066 email Iondon.cjk@gmail.com

# HONOURS Birmingham New Street Rail Station competition with Rafael Vinoly Architects 2008 Burnham Prize Finalist with Williamson and Williamson 2004 Quadrangle Architects Innovative Design Award 2004 Portfolio Award Finalist 2003 and 2004 **TEACHING** Carleton University Ottawa, Ontario Winter 2015 and 2016 Sessional lecturer for Graduate Level Introduction to Professional Practice (ARCC 5200 R & W). University of Toronto Toronto, Ontario Summer 2010 Guest critic for study abroad undergraduate course in England. STUDY ABROAD AND TRAVEL INTERNSHIPS Switzerland University of Toronto Fall 2003 2 week intensive tour of modern and contemporary Swiss architecture. The Netherlands University of Toronto and the Berlage Institute Summer 2003 5 week intensive tour of modern and contemporary Dutch architecture. 2 week design studio at the Berlage Institute. Paris, France Conseil des Communes et Régions d'Europe Summer 1997 4 month internship performing translation and administrative services for organization promoting role of municipal and regional governments in the European Union. SKILLS Excellent communication, design and graphic skills. Ability to work independently, self-starter and team-player. CAD Software; AutoCAD, Bentley Microstation 3D Modeling; Rhino, 3DS Max, Google Sketch-up BIM Software; Autodesk Revit Graphic and Office Software; Adobe Creative Suite, Microsoft Office.

# PROFESSIONAL MEMBERSHIPS

Ontario Association of Architects, License No. 7748 LEED Green Associate

# Clarice Kramer

contact info	<ul> <li>73A Second Avenue, Ottawa, ON K1S 2H4 phone/fax #(613) 680-2889, <u>claricekw@rogers.com</u></li> </ul>
professional credentials	* Ontario Association of Architects, 2013 - present
	AlA Intl. Assoc. Member, Grand Valley, Michigan Chapter, 2003 – present
	* Licensed Architect in the State of Michigan 2010 - present
	US National Council of Architectural Registration Boards, Certified 2010
	Canadian Architectural Certification Board, Academic Certification 2004
education	<ul> <li>PRINCETON UNIVERSITY SCHOOL OF ARCHITECTURE</li> <li>Princeton, New Jersey, 3-year Graduate Fellowship, Master of Architecture 1993</li> </ul>
	<ul> <li>* UNIVERSITY OF MICHIGAN SCHOOL OF ARCHITECTURE Ann Arbor, Michigan, Bachelor of Science in Architecture 1990</li> </ul>
	<ul> <li>CALVIN COLLEGE, Grand Rapids, Michigan, Bachelor of Arts; Major in Art History, Minor in Spanish 1988</li> </ul>
professional practice	<ul> <li>CHRISTOPHER SIMMONDS ARCHITECT, Ottawa, ON. 2013-present.</li> <li>Project Architect, Full-time. Full architectural services for custom residential, multi-unit housing, condominiums, commercial and institutional buildings.</li> </ul>
	<ul> <li>CLARICE KRAMER DESIGN, Private Consulting, Ottawa, ON. 2008-2013.</li> <li>Residential Projects, Renovations and Additions, Design Consulting.</li> </ul>
	* CORBETT-CIBINEL ARCHITECTS, Winnipeg, MB. Red River College Renovation & Addition, Full-Time term contract, May-August 2002. LEED Silver Certified, Heritage restoration project. I organized the salvage, documentation and restoration of significant artifacts from a 19 <sup>th</sup> -century, commercial block. This included exterior commercial façade restoration, interior built-ins, ceramic tile, moldings and finishes.
	<ul> <li>GBR ARCHITECTS LTD. Winnipeg, MB. Architecture and Interior Design. Full-time, Project Architect, August 1999-May 2001. Project management, design leadership, client facilitation, consultant coordination and technical details. Notable projects include the C.A.S.T. building research facility and Dafoe Library addition for the rare books of the University of Manitoba's "Icelandic Collection".</li> </ul>
	<ul> <li>WAYNE SWADRON ARCHITECT, Toronto, ON. High-End Residential. Full-time, Intern Architect, March 1998-Sept 1998. Unique design solutions, hand-drawn, details &amp; construction drawings and project management of homes and cottages in Toronto and Muskoka.</li> </ul>
	* THE ART GALLERY OF ONTARIO, Toronto, ON. Full-time, Exhibition Designer, Intern Architect January 1996-March 1998. I proposed and executed the design of many, significant Canadian exhibitions including: Edward Munch, Keith Herring, J.J. Tissot, and The Courtauld Collection. This required detailed collaboration with the Director, the Curator in Charge, the conservation department, lighting technicians, educational specialists and the construction crew to create exhibition environments that were interactive, inviting and educational for the public and also preserved and protected valuable artwork.
	<ul> <li>THE HILLIER GROUP Princeton, NJ. Architecture, Urban Planning, Interior Design, International R&amp;D, Healthcare, Civic and Institutional projects. Full-time, Intern Architect, December 1993 -August 1995. I worked in the USA, UK and in Belgium on very large corporate and institutional projects. These projects included the Yale University Science Hill Master Plan, L4 Virology Lab for Smithkline Beecham, USA IRS headquarters, an Atlantic City Casino and Cornell University's Business School renovation, a renovation of the historically significant Cornell Women's College.</li> </ul>

academic positions	<ul> <li>* UNIVERSITY OF MANITOBA, Faculty of Architecture, Environmental Design Program, Tenure-Track appointment; October 1, 2005. Resigned Aug 7, 2007/moved to Ottawa</li> </ul>
	<ul> <li>* UNIVERSITY OF MANITOBA, Faculty of Architecture, Environmental Design Program, Three-year term appointment, August 1, 2002 to September 30, 2005</li> </ul>
	<ul> <li>* UNIVERSITY OF MANITOBA, Faculty of Architecture, Environmental Design Program, Sessional Instructor, September-May 2000-01 and September-May 2001-02</li> </ul>
	<ul> <li>* UNIVERSITY OF TORONTO, School of Architecture and Landscape Architecture, Adjunct Assistant Professor. September 1997-June1999</li> </ul>
selected awards & fellowships	<ul> <li>Manitoba Home Builders Association, Renovation of the Year Awards, Exterior:</li> <li>2<sup>nd</sup> storey addition and Exterior Renovation, Silver Medal 2003</li> </ul>
renowships	<ul> <li>Manitoba Home Builders Association, Renovation of the Year Awards, Exterior: Front Façade and 2<sup>nd</sup> storey addition, Gold Medal 2001</li> </ul>
	Princeton University Fellowship for Graduate Studies, Full Scholarship, 1990-1993
	<ul> <li>Princeton Association of Graduate Alumni, Travel Grant, 1991</li> </ul>
	* Kamianets-Podilski Foundation, Grant for Research Assistance, 1991
	* Guido Binda Architectural Scholarship, University of Michigan, Merit Award, 1988-90
research & special projects	<ul> <li>* ARCH/ED 79.371 Special Topics Elective "The Green Guide Project" Sustainable Design Studio, Public Outreach Initiative &amp; Magazine Publication. University of Manitoba, Spring Term 2005</li> </ul>
	<ul> <li>ARCH 166.707 LEED NC Cetification -Pilot Project. A collaboration with The Canada Green Building Council, Mr. Richard Kula, CGBA Education Committee. University of Manitoba, Summer 2005. Offered again at students' request, Summer 2006.</li> </ul>
	<ul> <li>ARCH 50.757 Studio Seven/ED 79.368 Studio Five Design-Build Studio "International Program for Mobility in Higher Education", Exchange Program between Canada, USA and Mexico, Dean Syverson, Coordinator, University of Manitoba, Fall Term 2004-05</li> </ul>
	<ul> <li>* ARCH 50.644 Cultural Theory/ ED 79.348 Process Method &amp; Theory 2, Lecture-Seminar, University of Manitoba, Spring Term 2002-03, 2004-05</li> </ul>
	<ul> <li>TRENTON-ROEBLING COMMUNITY DEVELOPMENT CORP, Trenton, NJ. Video Documentary. Non-profit, inner-city re-development project. Exec. Dir: Cliff Zink, May-August 1993</li> </ul>
	<ul> <li>* URBAN SURVEY/PHOTO-DOCUMENTARY, Kamianets-Podilski, Ukraine.</li> <li>Urban analysis and photo-documentation project. Collaboration with A. Petryna, May-Aug 19</li> </ul>
	<ul> <li>UNIVERSITY OF MICHIGAN MUSEUM OF ART, Curatorial and Research Assistant Hillarie Faberman, Curator of Western Art, September 1988-October 1989</li> </ul>
community service	* VOLUNTEER at First Avenue Public School, Ottawa, Parent volunteer, School Board committee reading to children, coordinating school and community events and fundraising, 2007-present
	<ul> <li>VOLUNTEER, Good Morning Creative Arts Centre, Ottawa, Board Member 2010, Fundraising, supply teacher, help with art and drama projects, 2007–2012.</li> </ul>
additional information	<ul> <li>DIGITAL MEDIA SKILLS Macintosh and PC platform fluency. Wide range of software experience including: AutoCad, &amp; Sketchup, Revit MS Office Suite: Excel, MS Word, Powerpoint Adobe CS: Photoshop, Indesign, Illustrator iPhoto, iMovie</li> </ul>

Canadian Citizen, US Citizen

\*

CITIZENSHIP:

# ARCHITECTURE September 2016

#### CURRICULUM VITAE

#### LEUNG, Thomas, Contract Instructor

DEGREES: designation, institution, department, year

- 1996 Masters of Architecture with Distinction, Dalhousie University
- 1993 Bachelor of Environmental Design Studies, Dalhousie University
- 1990 Bachelor of Science, McGill University

#### HONOURS:

1996 Nova Scotia Association of Architects Prize, graduating project at Dalhousie University

EMPLOYMENT HISTORY: dates, rank/position, department, institution/firm

#### Teaching Positions

2012-16 Contract Instructor Azrieli School of Architecture & Urbanism

#### Professional Employment (past 6 years)

2012- Private Practice, thomas h. Leung architect inc., Ottawa, ON 2004-2012 Senior Associate, bbb architects Ottawa Inc., Ottawa, ON

#### SCHOLARLY AND PROFESSIONAL ACTIVITIES:

2004- Member, OAA

#### **TEACHING ACTIVITY:** (past 6 years)

Studios, Lecture Courses, Workshops and Seminars:

2012-13	ARCS 1105 - Studio 1 (BAS 1 <sup>st</sup> year)
2012-13	ARCS 2105 - Studio 2 (BAS 1 <sup>st</sup> year)
2013-14	ARCS 1105 - Studio 1 (BAS 1 <sup>st</sup> year)
2014-15	ARCS 1105 - Studio 1 (BAS 1 <sup>st</sup> year)
2015-16	ARCS 3106 - Studio 5 (BAS 3 <sup>st</sup> year)

#### SCHOLARLY AND PROFESSIONAL ACTIVITY

#### **Guest Design Critic**

2012- Carleton University Azrieli School of Architecture and Urbanism, Graduate thesis reviews.

2012- Carleton University Azrieli School of Architecture and Urbanism, Guest critic various (BAS  $1^{st} - 4^{th}$  year, M. Arch  $1^{st} - 2^{nd}$  year)

#### **PUBLICATIONS:**

1) Life-time summary (7) according to the following categories:	
- Articles in professional publication	7

# 2) Details:

# Articles in professional publication:

- 1. "Crossing the Threshold into Transit-ory Nothingness", in OAA Perspectives 23(4) (Winter 2015-2016): 18-19.
- 2. "The Allure of the Ear Bud", in OAA Perspectives 23(3) (Fall 2015): 34-35
- 3. "The Parable of the Pebble", in OAA Perspectives 21(1) (Spring 2013): 18-19
- 4. "Blind Drawing 1", in OAA Perspectives 19(1) (Spring 2011): 19

# PROFESSIONAL PROJECT LIST (last 6 years)

- 2015- Residential Project, 316 Beechgrove Ave. Ottawa, ON: Thomas Leung Architect
- 2012- Stage 1 Ottawa LRT 10 Above Grade Stations, Confederation Line, Ottawa, ON; with bbb architects Ottawa Inc.
- 2009 911 Institute; Emergency Services Training Centre, La Cité Collégiale 801 Aviation Pkwy. Ottawa, ON; with bbb architects Ottawa Inc.

#### September 2016 ARCHITECTURE

# CURRICULUM VITAE

# LIM, Jay S., AIA, MRAIC, LEED AP, B.Tech, M.Arch, MSAUD; Contract Instructor

Degrees:	
Columbia University: Graduate School of Architecture Preservation + Planning [New Master of Science in Architecture + Urban Design Recipient: Columbia University GSAPP Lowenfish Prize for Best Final Term Project	York, NY] 2007
Syracuse University: School of Architecture [Syracuse, NY] Master of Architecture	2004
Thesis: Mediation of Barriers: Hybridization of the Highway Recipient: Syracuse University Thesis Grant for <u>Barrier Mediation: Hybridization of the High</u> <b>Ryerson University: [Toronto, ON]</b> <b>Bachelor of Technology in Architectural Science</b> Thesis: Urban Alternative: Living Bridge-Adaptive Infrastructure	<u>way</u> 2001
Teaching + Academic Experience	
Carleton University: Azrieli School of Architecture and Urbanism Instructor	2010present
Architectural Technology 3/ Building Technology 3 ARCC 2203 / 5098: (2011, 2012, 20 Architecture Studio 5: (2012, 2013, 2014, 2015, 2016) Architecture Studio 7: (2010)	13, 2014, 2015, 2016)
Awards	
Winner: 2016 Brampton Urban Design Awards Winner: What If NYC-Post Disaster Housing Competition: S.C.A.F.FOLD	2016 2007
Professional Experience	
Perkins + Will Architects, [Ottawa]	2015-Present
Stantec Architecture, [Ottawa]	2011-2015
25:8 Research + Design, [Toronto/New York]	2007- present
ema Architects, [Ottawa, ON]	2009- 2010
Affiliations:	
Ontario Association of Architects American Institute of Architects New York State Registered Architect Massachusetts State Registered Architect Royal Architectural Institute of Canada NCARB [Architecture Registration Exams completed December 2005] LEED Accredited Professional: The U.S. Green Building Council Ottawa Regional Society of Architects: Executive Board Habitat for Humanity	Since 2011 Since 2009 Since 2009 Since 2011 Since 2009 Since 2001 Since 2004 2010-2012 Since2009

#### **PUBLICATIONS:**

Gregory, E., Lim, J., Reynolds, C., "S.C.A.F.FOLD." <u>Climate Change Crossroads.</u> Ed. Richard Plunz, Maria Paola Sutto, Jeffrey Sachs. Italy: Urban Design Lab, 2009.

# Web Press

http://www.yatzer.com/857 what if new york city http://www.whatifnyc.net/WhatifNYC JURY REPORT.pdf http://www.arkitera.com/y639-post-disaster-housing-design-competition.html http://www.deathbyarchitecture.com/viewFeature.html?id=45 http://akichiatlas.com/en/archives/what\_if\_newyork.php

Exhibitions/Conferences	
Pecha Kucha [Ottawa]: "Big things to Small Rings" [January 27]	2010
Green Building Festival: "S.C.A.F.FOLD: Emergency Provisional Housing"	2009

# **Curriculum Vitae**

Mark MacGuigan 317 Ste. Cecile St. Ottawa, On. K1L 5K5 613 252 2475

# Education:

B.A. History Concordia University 1988 BFA Studio Cum Laude University of Ottawa 1992

# Employment:

1995- present: Workshop Chief Technician

Azrieli School of Architecture and Urbanism

Carleton University

Teaching Experience:

ARCC 3902

Chair Prototyping Workshop

6 times 2000-2015

ARCHITECTURE September 2016

# **CURRICULUM VITAE**

MANSFIELD, Peter, Contract Instructor

# DEGREES:

1991	Master of Architecture, University of Manitoba, Winnipeg, Manitoba
1989	Demark International Study Program (Architecture and Design Studies),
	University of Copenhagen, Copenhagen, Denmark
1988	Bachelor of Technology (Architectural Science), Ryerson Polytechnical Institute,
	Toronto, Ontario

# HONOURS:

- Recipient of the 2011 Mississippi Mills Cultural Achievement Award.
- Awarded 1st place in a 1988 University of Manitoba inter-studio design competition for a new German Canadian Centre / Senior's Housing.
- Recipient of an Award for Technical Achievement by Ryerson Polytechnical Institute in 1987.
- Architectural studio work selected as subject of proposed interior mural for the St. Boniface General Hospital expansion in Winnipeg, Manitoba.
- Architectural and promotional renderings selected for the McMaster Health Centre, Niagara College by the Upper Canada College & Canadian Cancer Society.

# **EMPLOYMENT HISTORY:**

1999 – Present: Principal of Peter Mansfield Architect

- 1997 April 1998: Intern Architect with Griffiths Rankin Cook Architects, Ottawa, Ontario.
- 1996 February 1997: Intern Architect with Bukit Cahaya Resorts, Kuala Lumpur, Malaysia.
- 1994 January 1997: Intern Architect with Commonwealth Historic Resource Mgt, Perth, ON.

# **TEACHING ACTIVITY:**

2016 Winter Term	ARCS 2106 - Studio 3 (BAS 2 <sup>nd</sup> year), Azrieli School of Architecture &
	Urbanism, Carleton University
2015 Fall Term	ARCU 3902 – ARCU5402 – Workshop in Urban Studies, Azrieli School
	of Architecture & Urbanism, Carleton University
2015 Winter Term	ARCC 3301 - Studio 3 (Conservation in Practice, 3rd year Studio), Azrieli
	School of Architecture & Urbanism, Carleton University
2014 Winter Term	ARCC 3301 - Studio 3 (Conservation in Practice, 3 <sup>rd</sup> & 4 <sup>th</sup> year Studio),
	Azrieli School of Architecture & Urbanism, Carleton University
2013 Winter Term	ARCS 3105 - Studio 3 (Studio 4, BAS 3 <sup>rd</sup> year) Azrieli School of
	Architecture & Urbanism, Carleton University

# SCHOLARLY AND PROFESSIONAL ACTIVITY

- Licensed Member: Ontario Association of Architects, September 1999 to present
- Guest Critic: Algonquin College Architectural Technology, 2013
- Guest Speaker: Urban Studies & Heritage Conservation, Carleton University School of Architecture, 2003 – 2012
- Member: Advisory Committee for Carleton University Almonte Satellite Campus Expansion Initiative, 2011
- Advisor: Almonte Downtown Riverwalk, Town of Mississippi Mills, ON

- Advisor & Judge: Mississippi Mills Community Conservation Awards Program
- Member: Local Architectural Conservation Advisory Committee, 1993 1994

# PROFESSIONAL PROJECT (SAMPLE) LIST (last 6 years)

- Orchard View by the Mississippi, Almonte, ON 130,000 ft2 121-suite retirement centre (under construction)
- Clothier Street Apartment Building, Kemptville, ON 7,000 ft2 6-unit apartment building (under construction)
- Mills Community Support Corp., Almonte, ON 5,000 ft2 Country Street community centre (in development)
- Garden Villa Retirement Residence, Chesterville, ON 7,500 ft2 12-unit addition (2015)
- St. Andrews United Church, Arnprior, ON 18 to 24-unit affordable housing apartment (2014 study)
- Mills Community Support Corp., Carleton Place, ON 40 to 54-unit affordable senior's housing (2014 study)
- Orville Street Apartment Building, Stitsville, ON 16,500 ft2 20-unit apartment building (2013)
- Action Ottawa Affordable Housing Competition, Ottawa, ON 60-unit residential development (2012)
- Loeb Centre, Ottawa Association for Persons with Developmental Disabilities, Ottawa, ON – Addition (2012)
- Mills Community Support Corp., Almonte ON 18,000 ft2 20-unit affordable senior's apartments (2011)
- Invista Centre, Kingston, ON 2,300 ft2 City of Kingston track & field washroom & maintenance building (2011)
- Heritage Court, Almonte, ON 12,000 ft2 mixed-use commercial & office development (2010)
- Old Flour Mill, Almonte, ON 20,000 ft2 6-storey residential adaptive re-use & addition (2010)
- Thoburn Mill, Almonte, ON 31,000 ft2 4-storey residential & commercial adaptive re-use & addition (2009)
- Mills Community Support Corp., Almonte, ON 5,000 ft2 office building (completed 2008)
- Canadian Hydro Components, Almonte, ON 15,000 ft2 manufacturing facility & offices (2008)
- Various Custom Residences

# HONORATA PIEN'KOWSKA A R C H I T E C T

M. Sc(Arch), OAA, MRAIC, ORSA

EDUCATION AND REGISTRATION	
1974	M.Sc.(Arch) Architecture and Urban Design, Warsaw Polytechnical University, Poland
1977	Certificat d'Etudes Pratiques en Français, Université de Genève, Switzerland
1977-78	Ecole des Beaux Arts, Université de Genève, Switzerland
2009	Verona, Italy, International Architectural 'Designing with Natural Stone' Scholarship recipient
2011	University of Ferrara, Department of Architecture 'Recovering the Past to Create a Sustainable Future' Summer Course
	Carleton University, Certificate in Fundamentals of University Teaching
1978	RAIC Certification
1983	OAA Professional Licence
1986	OAA Certificate of Practice
PROFESSIONAL MEMBERSHIPS	
1978	RAIC Royal Architectural Institute of Canada
1983	OAA Ontario Association of Architects
1992	ORSA Ontario Regional Society of Architects
TEACHING EXPERIENCE	
1995 –2007	Sessional Lecturer
	School of Architecture, Carleton University,
	3d year Studio Fall term 3d year Studio Winter term
	4th year Thesis Supervisor:
	4th year Thesis Supervisor; ARCS 2106 Studio 4 Winter term
	4th year Thesis Supervisor; ARCS 2106 Studio 4 Winter term ARCS 3105 Studio 3 Fall term
2007 – current	4th year Thesis Supervisor; ARCS 2106 Studio 4 Winter term ARCS 3105 Studio 3 Fall term Adjunct Professor
2007 – current	4th year Thesis Supervisor; ARCS 2106 Studio 4 Winter term ARCS 3105 Studio 3 Fall term Adjunct Professor Azrieli School of Architecture & Urbanism, Corleten University Ottowo, Canada
2007 – current	4th year Thesis Supervisor; ARCS 2106 Studio 4 Winter term ARCS 3105 Studio 3 Fall term Adjunct Professor Azrieli School of Architecture & Urbanism, Carleton University, Ottawa, Canada ARCS 2106 Studio 3 Winter term
2007 – current	4th year Thesis Supervisor; ARCS 2106 Studio 4 Winter term ARCS 3105 Studio 3 Fall term Adjunct Professor Azrieli School of Architecture & Urbanism, Carleton University, Ottawa, Canada ARCS 2106 Studio 3 Winter term ARCS 3105 Studio 4 Fall term
2007 – current	4th year Thesis Supervisor; ARCS 2106 Studio 4 Winter term ARCS 3105 Studio 3 Fall term Adjunct Professor Azrieli School of Architecture & Urbanism, Carleton University, Ottawa, Canada ARCS 2106 Studio 3 Winter term ARCS 3105 Studio 4 Fall term ARCU 3106 Studio 5 Winter term
2007 – current	4th year Thesis Supervisor; ARCS 2106 Studio 4 Winter term ARCS 3105 Studio 3 Fall term Adjunct Professor Azrieli School of Architecture & Urbanism, Carleton University, Ottawa, Canada ARCS 2106 Studio 3 Winter term ARCS 3105 Studio 4 Fall term ARCU 3106 Studio 5 Winter term ARCU 4105 Studio 6 Fall term
2007 – current	4th year Thesis Supervisor; ARCS 2106 Studio 4 Winter term ARCS 3105 Studio 3 Fall term Adjunct Professor Azrieli School of Architecture & Urbanism, Carleton University, Ottawa, Canada ARCS 2106 Studio 3 Winter term ARCS 3105 Studio 4 Fall term ARCU 3106 Studio 5 Winter term ARCU 4105 Studio 6 Fall term ARCU 4106 Studio 7 Winter term
2007 – current	4th year Thesis Supervisor; ARCS 2106 Studio 4 Winter term ARCS 3105 Studio 3 Fall term Adjunct Professor Azrieli School of Architecture & Urbanism, Carleton University, Ottawa, Canada ARCS 2106 Studio 3 Winter term ARCS 3105 Studio 4 Fall term ARCU 3106 Studio 5 Winter term ARCU 4105 Studio 6 Fall term ARCU 4106 Studio 7 Winter term Master Thesis Faculty Review Committee Member
2007 – current PROFESSIONAL EXPERIENCE 1974-1976	4th year Thesis Supervisor; ARCS 2106 Studio 4 Winter term ARCS 3105 Studio 3 Fall term Adjunct Professor Azrieli School of Architecture & Urbanism, Carleton University, Ottawa, Canada ARCS 2106 Studio 3 Winter term ARCS 3105 Studio 4 Fall term ARCU 3106 Studio 5 Winter term ARCU 4105 Studio 6 Fall term ARCU 4105 Studio 6 Fall term Master Thesis Faculty Review Committee Member K. Strom & O. Tuomisto, Arkkitehti, Helsinki, Finland
2007 – current PROFESSIONAL EXPERIENCE 1974-1976 1978-1979	4th year Thesis Supervisor; ARCS 2106 Studio 4 Winter term ARCS 3105 Studio 3 Fall term Adjunct Professor Azrieli School of Architecture & Urbanism, Carleton University, Ottawa, Canada ARCS 2106 Studio 3 Winter term ARCS 3105 Studio 4 Fall term ARCU 3106 Studio 5 Winter term ARCU 4105 Studio 6 Fall term ARCU 4105 Studio 6 Fall term ARCU 4106 Studio 7 Winter term Master Thesis Faculty Review Committee Member K. Strom & O. Tuomisto, Arkkitehti, Helsinki, Finland Rysavy & Rysavy, Architects, Ottawa, Canada
2007 – current PROFESSIONAL EXPERIENCE 1974-1976 1978-1979 1980-1985 1986-1987	4th year Thesis Supervisor; ARCS 2106 Studio 4 Winter term ARCS 3105 Studio 3 Fall term Adjunct Professor Azrieli School of Architecture & Urbanism, Carleton University, Ottawa, Canada ARCS 2106 Studio 3 Winter term ARCS 3105 Studio 4 Fall term ARCU 3106 Studio 5 Winter term ARCU 4105 Studio 5 Winter term ARCU 4105 Studio 7 Winter term Master Thesis Faculty Review Committee Member K. Strom & O. Tuomisto, Arkkitehti, Helsinki, Finland Rysavy & Rysavy, Architects, Ottawa, Canada Ogilvie and Hogg, Architects, Ottawa, Honorata P. Roseman Architect, Ottawa, Sole
2007 – current PROFESSIONAL EXPERIENCE 1974-1976 1978-1979 1980-1985 1986-1987	4th year Thesis Supervisor; ARCS 2106 Studio 4 Winter term ARCS 3105 Studio 3 Fall term Adjunct Professor Azrieli School of Architecture & Urbanism, Carleton University, Ottawa, Canada ARCS 2106 Studio 3 Winter term ARCS 3105 Studio 4 Fall term ARCU 3106 Studio 5 Winter term ARCU 4105 Studio 6 Fall term ARCU 4105 Studio 7 Winter term Master Thesis Faculty Review Committee Member K. Strom & O. Tuomisto, Arkkitehti, Helsinki, Finland Rysavy & Rysavy, Architects, Ottawa, Canada Ogilvie and Hogg, Architects, Ottawa, Honorata P. Roseman Architect, Ottawa, Sole Proprietor

# HONORATA PIEN'KOWSKA A R C H I T E C T

M. Sc(Arch), OAA, MRAIC, ORSA

ACADEMIC, PROFESSIONAL AND PUBLIC S 1998 – current	SERVICE OAA Intern Architect Programme Mentor
2005	LEED Green Building Design Workshop
2005	City of Ottawa Design Pilot Project - Consultant
2006	Ontario Association of Architects Conference - Niagara on the Lake
2007	Ministry of Municipal Affairs and Housing BCDS Programme Examination and Re- registration
2008	Union Internationale d'Architects (UIA) Conference Torino, Italy – Participant
2009	RAIC International Architectural Scholarship - Verona, Italy
2010	Ontario Association of Architects Conference - Windsor, Ontario
2011	University of Ferrara, Department of Architecture Summer Training Course 'Recovering the Past to Create a Sustainable Future'
2012	Urban Design and Architecture Studio Study in Havana, Cuba
	Ontario Association of Architects Conference - Ottawa, Ontario
	Research Study: Shanghai, China
2013	Research Study: Morocco and Spain
2015	Directed Studies Abroad 2015 Berlin + Rotterdam + Amsterdam + Bruges
2016	Directed Studies Abroad 2016 Berlin + Rotterdam + Amsterdam + Delft
	Ontario Association of Architects Conference -
OTHER PAST	
OAA Experience Requirements Committe OAA Experience Requirements Committe OAA Regulatory Affairs Committee (RAC	ee - Member ee - Chair ) - Member antion Cortificato

OAA Experience Requirements Committee - Chair OAA Regulatory Affairs Committee (RAC) – Member Ontario Association of Architects – Recognition Certificate Royal Institute of Architects (RAIC) – Appreciation Certificate RAIC International Ideas Competition, Time Place and Symbol, Architecture and Urban Design Professional Advisor National Capital Commission (NCC) Ottawa Csentre Core Master Plan, Urban Study Workshop Invited Consultant City of Ottawa Design Pilot Projects Consultant Ottawa Design Review Committee - Member ARCHITECTURE September 2016

#### **CURRICULUM VITAE**

Ross, Adriana Contract Instructor

DEGREES: designation, institution, department, year

2011-present Ph.D. Candidate, Architecture, Carleton University, Canada

2009 B.A., Architecture, Carleton University, Canada

#### HONOURS:

- 2010 RAIC Student medal
- 2010 John Adjeleian Scholarship, Carleton University, Canada
- 2008 RAIC Ernst Wilby Memorial Scholarship, Canada
- 2007 Nicholas Scolozzi Scholarship, Canada

# **EMPLOYMENT HISTORY**

**Teaching Positions** 

2009-16 Contract Instructor, Azrieli School of Architecture & Urbanism

2014-16 Contract Instructor, Algonquin College, Ottawa, ON

2007-09 Teaching Assistant, Azrieli School of Architecture & Urbanism

#### **Professional Employment** (past 6 years suffice)

2003- Private Practice, ADesign, Designer, Ottawa, ON 2007-2009 Design Consultant, Anand Aggarwal Manor Park Management, Ottawa, ON 1998-2003 Senior Designer, Susan Firestone Design, Ottawa, ON

# **TEACHING ACTIVITY:**

Studios, Lecture Courses, Workshops and Seminars:

- 2016 ARCN 2106 - Introduction to Multimedia (BAS 1<sup>st</sup> year)
- 2016 Studio F1rst - (Post-Baccalaureate program)
- Enriched Mini Course Program (EMCP), High School Student Summer Program 2016
- ARCS 1105 Studio 1 (BAS 1<sup>st</sup> year) 2016
- 2015 ARCU 3902A – Workshop in Urban Studies and Heritage Conservation
- Enriched Mini Course Program (EMCP), High School Student Summer Program 2015
- 2015
- ARCS 1105 Studio 1 (BAS 1<sup>st</sup> year) ARCS 2105 Studio 2 (BAS 2<sup>nd</sup> year) 2014
- Enriched Mini Course Program (EMCP), High School Student Summer Program 2014
- ARCS 1105 Studio 1 (BAS 1<sup>st</sup> year) 2014
- ARCS 2105 Studio 2 (BAS 2<sup>nd</sup> year) 2013
- ARCS 1005 Drawing (BAS 1<sup>st</sup> year) 2011
- ARCS 1005 Drawing (BAS 1 'year) ARCS 1105 Studio 1 (BAS 1<sup>st</sup> year) ARCS 3105 Studio 3 (BAS 3<sup>rd</sup> year) ARCS 1105 Studio 1 (BAS 1<sup>st</sup> year) ARCS 3105 Studio 3 (BAS 3<sup>rd</sup> year) 2011
- 2010
- 2010
- 2009

# SCHOLARLY AND PROFESSIONAL ACTIVITY

# **Guest Design Critic**

2007-2016 - undergraduate and graduate reviews ASAU, Carleton Univ.

**PUBLICATIONS:** The Publications should be listed in the categories shown below and include the following information: books authored, books edited (a list of the chapters contributed by the editor must follow each title), chapters in books (other than those listed in the above category), papers in refereed journals, papers in refereed conference proceedings, technical reports, abstracts and/or papers read, and others. Each title must show the names of the authors in the order in which they appear in the original publication and inclusive page numbers. Publications submitted, but not yet accepted, must be listed separately within the various categories.

1) Life-time summary:

- Books authored	1
- Books edited	2
- Chapters in books	4
- Papers in refereed journal	15
- Papers in refereed conference proceedings	3
- Technical reports	1
- Abstracts and/or papers read	6
- Others (workshops presented)	2

# 2) Details:

# Books authored:

1. Ross, Adriana and Frascari, Marco. "Drawing in the Silence" (Lulu Press, 2012).

# Papers in refereed journal:

1. Ross, Adriana. "Corso and Ricorso, Reawaking the Covenant Church", in IntIAR Journal of Interventions & Adaptive Reuse, *Difficult Memories: Reconciling Meaning*, Vol. 04, 2013, 36-40 page, Print ISBN 978-0-9832723-2-8

# Papers in Refereed Conference Proceedings

- 1. Ross, Adriana. "Comatose and Ricorso, An Ecclesial Exploration", The Future of Churches Conference, Bologna, Italy, 2016, paper read; upcoming publication.
- 2. Ross, Adriana. "Corso and Ricorso, Reawaking the Covenant Church", AHGSS Access/Restriction Conference, Carleton University, Ottawa, 2014 paper read
- Ross, Adriana. "Comatose and Ricorso, Early Canadian Ecclesial Exploration", The 10<sup>th</sup> Annual McGill-Queen's 2013 Conference in History, Queen's University in Kingston, Ontario from March 1-2, 2013, abstract accepted.

# Journal edited:

1. Ross, Adriana and Fok, Vance. "Azrieli Architecture Grimoire" 2011-2012

Jeffrey Salmon, M.Arch. MRAIC 276B Loretta Ave South, Ottawa ON K1S 4R1 Jeffrey.salmon@carleton.ca

# EDUCATION

2010	Master of Architecture
	Azrieli School of Architecture and Urbanism, Carleton University
2008	Bachelor of Architectural Studies, with distinction
	Azrieli School of Architecture and Urbanism, Carleton University

# PROFESSIONAL EXPERIENCE

2014-present	Intern Architect, Nicholas Caragianis Architect Inc.
2014-present	Contract Instructor, Azrieli School of Architecture and Urbanism, Carleton University

- 2011-present Co-director, yowLAB
- 2011-present Urban art and critical practice, Impromptu Playground
- 2010-present Guest studio reviewer, Azrieli School of Architecture and Urbanism, Carleton University
- 2011-2014 Intern Architect, Liff & Tolot Architects Inc.
- 2010 Building assessments contract, WGD Architects Inc.

# COURSES TAUGHT

2014-present Instructor. Azrieli School of Architecture and Urbanism, Carleton University. ARCC 4500 Design Economics (Fall 2014, Fall 2015)

# ACADEMIC CONTRIBUTIONS

• master thesis

Salmon, J. (2010). [untitled]. Master of Architecture, Carleton University.

• conferences

Salmon, J. (2011). "Unstable Architectures." Fixed? Architecture, Incompleteness and Change Conference. Plymouth, UK.

# NON-ACADEMIC CONTRIBUTIONS

• articles in professional or trade journals and magazines

Salmon, J. (2013-Present). Urbsanity column in Centretown Buzz and Spacing Ottawa.

- public lectures
- Salmon, J. (2014). A Case for Installations. Pecha Kucha x Ottawa Architecture Week. Ottawa, ON.

Salmon, J. (2012). Guerrilla Urbanism. Pecha Kucha Ottawa Vol. 6. Ottawa, ON.

# ART AND DESIGN CONTRIBUTIONS

- urban art projects (Independent / Impromptu Playground)
- Gelbard, S., K Gillelan, K Lucas, J Salmon. (2013). DynamicMaze, International Children's Festival. Ottawa, ON.

Gelbard, S., K Gillelan, K Lucas, J Salmon. (2011) Pause & Play PARK(ing) Day 2011. Ottawa, ON.

- Salmon, J. (2010). [untitled] urban installations. Ottawa ON.
  - competitions

Gelbard, S., K Gillelan, K Lucas, J Salmon. (2012). Impromptu Playground: yow/bru. Upcycle Human Cities. Brussels. (finalist)

Duckworth, T., K Lucas, J Salmon. (2009). Ryerson Post-Secondary International Student Housing Competition, Toronto, ON. (competition entry)

Lucas, K., J Salmon. (2009). Temporary Outdoor Gallery Space 2 Competition, Austin, TX. (honorable mention)

ARCHITECTURE September 2016

#### **CURRICULUM VITAE**

#### SANTANA QUINTERO, Mario,

Assistant professor, tenured (2012) Director, NSERC Heritage Engineering Program

DEGREES: designation, institution, department, year

- 2003 Ph.D. in engineering (Built heritage Conservation), University Leuven, Belgium
- 1997 Master in Conservation of Historic Towns and Buildings, University Leuven, Belgium
- 1994 Architect, Universidad Central de Venezuela

#### HONOURS:

- 2012 Tartessos Award for his leadership as president of CIPA. Spanish Society of Virtual Archaeology (SEAV).
- 2010 Merit Award, University of Ontario.

#### **EMPLOYMENT HISTORY:**

#### **Teaching Positions**

2011- Professor (part time), University College St-Lieven, Ghent, Belgium 2011- Assistant Professor (part time), University of Leuven (KU Leuven): Raymond Lemaire International Centre for Conservation, Leuven, Belgium

2011 Lecturer, University of Pennsylvania (Graduate program in Historic Preservation), USA *Professional Employment* 

2003-2016- Consultancy work (Architectural heritage) Algerie; Abu Dhabi (TCA); The Getty Conservation Institute, UNESCO, Euromed; World Monuments Fund, ICCROM.

#### SCHOLARLY AND PROFESSIONAL ACTIVITIES:

2016 - Co-Editor, Journal of Cultural Heritage Management and Sustainable Development

2014 - 17 Board Member, International Council of Monuments and Sites

2015 - 18 Vice President, International Scientific Committee for Heritage Documentation (CIPA-ICOMOS)

2010 - 14 President, International Scientific Committee for Heritage Documentation (CIPA-ICOMOS)

#### **GRADUATE SUPERVISIONS:**

Completed: 3 M.Arch (professional), 7 M. Sc. (Conservation), 3 PhD. In progress: 4 M.Arch (professional), 4 M.Sc. (engineering), 2 M. Sc. (Conservation), 2 PhD.

#### **TEACHING ACTIVITY:**

2016

Studios, Lecture Courses, Workshops and Seminars:2012-16ARCN 4100 – Historic Site Recording2014-16ARCN 4200 – Building Pathology and Rehabilitation

#### SCHOLARLY AND PROFESSIONAL ACTIVITY

University Administration

2012-2016 – Hiring Committee 2013-2015 – Tenure and Promotion committee – Member

# RESEARCH AND FUNDING - Overview

Carleton Univ.

1. External F	Research Funding:				
Year	Source	Type*	Amount per year	-	<u>Purpose</u>
2016	Mitacs Accelerate	0	\$15,000		Research
2016	Cyark Foundation	F	\$5,000		Project
2015-21	NSERC Create Prog	С	\$1,650,000		Research
2015	Mitacs Accelerate	0	\$15,000		Research
2014	Mitacs Accelerate	0	\$30,000		Research
2014	NSERC Discovery	С	\$100,000		Research
2012-16	Getty Conservation	F	\$188,039		Project dev
*Type: C-Granting councils; G-Government; F-Foundations; O-Other					
2. Internal Research Funding:					
Year	Source Type	Amount	per year	Purpose	**
2016	Carleton Univ.	GR-6	\$8,685	Researc	h

GR-6 \$7,000

Publication

# PUBLICATIONS:

1) Life-time summary (count) according to the following categories:

- Books authored	2
- Books edited	7
- Chapters in books	15
- Papers in refereed journal	14
- Papers in refereed conference proceedings	51
- Technical reports	32
- Abstracts and/or papers read	8
- Others (workshops presented)	10

## 2) Details:

Books authored:

- (2012). Risk Management at Heritage Sites: a case study of the Petra World Heritage Site 1 (Cesaro, G. Fakhoury, L. Paolini, A. Santana Quintero, M. Vadafari, A. Van Balen, K. Vileikis, O.), Paris, France: UNESCO, Katholieke Universiteit Leuven & UNESCO Amman Office Books edited:
- (2011). Protecting BAALBEK's Integrity. (Santana Quintero, M., Ed., Seif, A., Ed.). Leuven, 1. Belgium: Raymond Leimare International Centre for Conservation (KU Leuven) - University College St. Lieven.

Chapters in Books:

- 1. Santana Quintero, M. Eppich, R. Introduction – Current Trends in Cultural Heritage and Documentation (2016), in Stylianidis, E. Remondino, F. (Eds.) 3D Recording, Documentation and Management of Cultural Heritage, Whittles Publishing, pp. 1-13. ISBN 978-184995-168-5.
- 2. Mezzino, D. Pei, W. Santana Quintero, M. Interpretation of reality-based 3D documentation, in Münster, S. ed. How to manage data and knowledge related to interpretative digital 3D reconstructions of Cultural Heritage, Springer (submitted)
- 3. Santana Quintero, M. Documentation of built heritage in times of conflict: priorities and approach (2015). In ICCROM. (in press)
- Santana Quintero, M. Introduction (2014) In: Remondino, F. Campana, S. (Eds.), 3D 4. Recording and Modelling in Archaeology and Cultural Heritage Theory and best practices, Archaeopress, Oxford (UK) pp. 3-4. ISBN 9781407312309.
- 5. Almagro Vidal, A. Santana Quintero, M. (2013). Improving Capacity of Conservation Professionals: Integrating Heritage Information Activities to the Conservation Process In: Conservation of Cultural Heritage in the Arab Region: Issues in the Conservation and Management of Heritage Sites, Selected readings from Athar. ICCROM, Rome, Italy. Pp. 61-68.

Papers in refereed Journals:

- Myers, D. Santana Quintero, M. Introduction, Special Issue: Cultural heritage inventory 1. systems for posterity and conservation, Journal of Cultural Heritage Management and Sustainable Development, Vol 6 No 2, 2016, Emerald, ISSN: 2044-1266
- 2. Santana Quintero, M. Percy, K. Ward, S. Morrison, T. Digitizing Alexander Grahan Bell's Beinn Bhreagh for its conservation. SCIRES-IT Vol 4/1 (2014). E-ISSN 2239-4303. Pp. 141-147
- 3. Ntregkaa, A. Georgopoulos, A. Santana Quintero, M. Investigation on the use of HDR images for Cultural Heritage Documentation, International Journal of Heritage in the Digital Era, Vol 3/1, 2014, pp. 2 -18.
- Heras, V. Wijffels, A. Santana Quintero, M. Cardoso, F. Della Torre, S. Van Orshoven, J. 4. Steenberghen, T. Van Balen, K. A value based monitoring system to support heritage conservation planning Journal of Cultural Heritage Management and Sustainable Development, Vol. 3 No. 2, 2013, pp. 130-147.
- Ioannides, M. Santana Quintero, M. Akashesh, T. Preface. Ioannides, International Journal of 5. Heritage in the Digital Era Vol 1 No 2, 2012, iii - iv. Multi Science Publishing, Essex (UK), ISSN 2047-4970.
- 6. Cesaro, G. Vadafari, A. Paolini, A. Santana Quintero, M. Van Balen, K. Vileikis, O. Petra Archaeological Park: defining boundaries and mapping risk, American Journal of Archaeology, The Archaeological Institute of America, Vol 116 No 4, October 2012, pp. 733-734.
- 7. Cesaro, G. Santana Quintero, M. Preliminary Risk Assessment at the Petra Archaeological Park: Recording Strategy. loannides, International Journal of Heritage in the Digital Era Vol 1 No 2, 2012, 295-312. Multi Science Publishing, Essex (UK), ISSN 2047-4970.

# ARCHITECTURE September 2016

# **CURRICULUM VITAE**

#### SGARBI, Claudio Contract Instructor, Adjunct Research Professor

#### Academic, Professional Degrees and Education

- 1993 Doctor of Philosophy (PhD), University of Pennsylvania,
- 1985 Master of Science in Architecture, University of Pennsylvania
- 1983 Architetto, Registered Architect (Italy)
- 1982 Dottore in Architettura, IUAV Istituto Universitario di Architettura di Venezia
- 1982 Diploma "Scienza delle Connesioni", Venezia, RAI, 1981-82.
- 1976 Diploma, Classical Studies High School, San Carlo, Modena, 1972-76

#### **Recent Academic and Professional Activity:**

- Visiting Scholar. 2016
- Adjunct Research Professor, 2010-2016
- Technical Director, Building Company: Edra srl, Carpi since 2003
- Practicing Architect (Modena, Italia) since 1982

#### TEACHING EXPERIENCE (Didactic Activities, Lectures and Conferences from 2011):

2016 – Adjunct Research Professor and Visiting Critic: ASAU Carleton Univ. Fall: M.Arch. PhD Colloquium.

2016 – Bezalel Academy, Jerusalem. School of Architecture, Visiting Critic and Conference Moderator.

2016 - ASAU Carleton Univ., Director of "STUDIO 1first bridge program", spring/summer.

2015 – Washington Alexandria Center of Virginia Tech WAAC, Ph.D. students dissertations' review.

2015 - First International Symposium on Funerary Architecture, Ravenna, October 21-24

2015 - Adjunct Research Professor and Visiting Critic; ASAU Carleton Univ. Fall: M.Arch Studio & Seminar

2015 - Bezalel Academy - Jerusalem, 20-26 July, Visiting Critic and Conference Moderator.

2015 – Biennale of the Public Space – Rome, May 23-24, Participant and Moderator at International Symposium.

2015 – Chub - Cantine HUB – Ravenna, May 14, Public Lecture: "Steel Islands in the Stream", Int'l Conference.

2015 - City Space Architecture - Bologna, april 9, Discussant: "Urban Visions...", Urban Center.

- 2015 ISI Florence. International Studies Institute, march 30, Public Lecture: "The Master Builder's Night".
- 2014 Adjunct Research Professor and Visiting Critic; ASAU Carleton Univ. Fall: M.Arch Studio & Seminar

2014 - City Space Architecture - Bologna, Chair, at the International Conference, June 25-27.

- 2014 Washington Alexandria Center of Virginia Tech WAAC, Speaker at Frascari Symposium II,
- Confabulations. Storytelling in Architecture, March 28-29, title of the presentation: "Stories of Spaces of Genders"
- 2013 Carleton University, Coordinator of the Symposium "Comprehending Building" Azrieli Pavillion, Nov. '13.

2013 – Adjunct Research Professor and Visiting Critic; ASAU Carleton Univ. Fall: M.Arch Gateway Studio; PhD "Colloquium" for the 1<sup>st</sup> and 2<sup>nd</sup> Year Ph.D. Students;

- Pit Lecture Series, October 7, "Imagination";

Coordinator and Chair: Symposium: "Comprehending Building"

2013 - University of West England, TRANSGRESSION, The 10th annual conference of the AHRA.

- 2013 Boalsburg, Pennsylvania, Academy Street "Cagalibri" Symposium, paper presented: "Cosmo-po..iesis".
- 2013 Biennale of Public Space Rome, May 18, "The Public Space of Education"
- 2013 The Italian Cultural Institute of Chicago, "Italian Design Between Aesthetics and Identity Workshop", April.

2013 - Loyola University Chicago, "City of God / Towns for Humans - An International Conference " April.

- 2012 ASAU Carleton Univ. Ph.D. Program, Lecture and Seminar: "Vitruvius on Architecture as scientia".
- 2012 Festival degli Appetiti. ArtApp, July 23-29, Monastero di Siloe, Grosseto, Lecture: "Body and Landscape".
- 2012 Laboratory for the Research on the Cities, Istituto di Studi Superiori, International Conference, Bologna.

2011-12 - ASAU Carleton Univ., Coordinator/instructor: Directed Studies Abroad (DSA), Bologna, Italy:

- Courses taught: Advanced Building Systems; Collective Seminars in Contemporary Architecture; History and Theory of Architecture; Design Studio ("An Urban Historical Park of Debris").
- 2011 Visiting Lecturer, ASAU Carleton Univ., Fall: Hist/Theory Elective, Adv. Bldg Systems; PhD Seminar

# PUBBLICATIONS

#### Books

- 2004, *Vtruvio Ferrarese. De architectura: la prima versione illustrata*, Franco Cosimo Panini Editore, Modena. Preface by Joseph Rykwert.

-2013 Editor with Luisa Bravo of the special issue of the magazine IN\_BO. Ricerche e progetti per il territorio, la città e l'architettura, Vol. 4, n. 1, "The public space of education".

#### **Books' Chapters**

- 2014 "Il Vitruvio Ferrarese, alcuni dettagli quasi invisibili e un autore: Giacomo Andrea da Ferrara" in *Giovanni Giocondo. Umanista, architetto e antiquario*, Atti del Convegno su Fra Giocondo, Vicenza 2010, Centro Internazionale di Studi di Architettura Andrea Palladio, Marsilio Editori, pp. 121-138 and pp. 289-294.

-2013 "The Female Body of the City", in *Nature and the City. Beauty is Taking on a New Form*, Jale Erzen and Raffaele Milani editors, International Yearbook of Aesthetics, Vol. 17, Sassari, Edizione Edes, 2013, pp. 267-284.

- 2010, "Il teatro vitruviano dopo il *De re aedificatoria*" in Société Internationale Leon Battista Alberti, *Gli Este e l'Alberti: Tempo e Misura*, Pisa-Roma, Fabrizio Serra Editore.

#### **Peer review Articles**

- 2016 "Oneiric Dialogue", in *Marco Frascari, The Dreamhouse. A magic storytelling for Architects*, F. Goffi editor, Routledge-Taylor & Francis Group, (in course of publication)

- 2016 "Walls of Gender", *Confabulations: Story Telling in Architecture*, Paul Emmons, Carolina Dyer and Marcia F. Feuerstein editors, Ashgate Publishing Ltd, (in course of publication)

- 2015 "The Death and the Tomb of the Architect", *City of the Dead, City of the Living*, L. Bartolomei curator, *IN\_BO*, Vol. 6, n. 8, 2015.

- 2015 "Questions and Answers" in *IN\_BO*, Vol 6, No 3 (2015); TEACHING AND MAKING ARCHITECTURE TODAY. A global inquiry, special issue edited by L. Bartolomei and G. Giancipoli

#### Articles

- 2015, "Teaching and Making Architecture Today. A Global Inquiry. Questions and Answers", IN\_BO, vol 6.

- 2013 "The Education of the Architects" in IN\_BO. Vol. 4, n. 1 (2013) The Public Space of Education,
- 2013 "Notes for a Conversation with Joseph Rykwert"

- 2013 "Italian Design? Tradition and Invention"

- 2012 "All'origine dell'Uomo Ideale di Leonardo" in DISEGNARECON, vol. 5, n. 9, giugno 2012.
- 2011 "Il futuro delle città e i luoghi del progetto aperto e del cantiere continuo. IN\_BO, N. 3, dicembre

# PROFESSIONAL WORKS: DESIGNS AND BUILDINGS (from 2011)

- 2016 design proposals for a commercial centre (Ex Imatex) in Carpi (Mo).
- 2016 Structural Renovation of CERMAG Industrial Buildings, Rio Saliceto (RE
- 2016, with Adriana Ross, "Protocol", Int'l Competition "Fairy Tales 2016"
- 2015 with Jill Stoner, "Rigenerare Corviale", International Competition, Rome
- 2014 Structural Renovation of Hotel Touring, Carpi, Technical Direction on Building Site (Built)
- 2014 Stage -- set design for "Fola", Verasimile, Soliera (Designed and Built)
- 2013 Structural Renovation of Enerplan Headquarters, Carpi
- 2013 Renovation of a Stanza, Via Barbieri 84, Modena (Designed and Built)
- 2012 with Qi Zhu and Marco Frascari, Amsterdam Bridge, International Competition.
- 2012 Restoration of Church of S.Ignazio, Casa Cortesi, Palazzo Corso, Convento delle Clarisse Carpi Technical Director on Building Sites (Built)
- 2011 Housing Complex in Budrione, Carpi (Modena). Technical Direction on Building Site
- 2011 Restoration of the Multifunctional complex in Via del Corso, Carpi. Technical Direction on Building Site

# CURRICULUM VITAE

SWARANJALI, Pallavi	Contract Instructor
DEGREES 2012-onwards	Ph.D. candidate, Carleton University, Azrieli School of Architecture
2003-2005	M. Design, Indian Institute of Science, Center for Product Design and Manufacturing, Bangalore, India
1997-2002	B. Architecture, Birla Institute of Technology, Department of Architecture, Mesra, India
HONOURS	
June-September 2015 Sept.–Dec. 2015 January, 2015 2016_2017 2003-2005 2002	CCA Collection Research grant; CCA Residency, Montreal Mitacs Globalink Research Award, Canada John Ruddy Scholarship Carleton University Ontario Graduate Scholarship, Carleton University Graduate Scholarship, Ministry of Human Resources Development, India, Gold medalist, Bachelors in Architecture
EMPLOYMENT HISTORY: Teaching Positions	
Winter 2016	Contract Instructor ASAU, Carleton
Fall 2016	Contract Instructor, School of Interior Design, Algonquin College
May, 2015	Contract Instructor, 35th Enrichment Mini- course Program, Carleton U
2012-2016	Teaching Assistant, ASAU, Carleton
2006-2011	Senior Lecturer, MAEER'S MIT Institute of Design, Pune, India
Professional Employment	
2016	Research Assistant, Parliament - Center block, CIMS, Carleton
2005- 2011	Architecture and Design Consultant, Opus One Architects, India
SCHOLARLY AND PROFESSIO	NAL ACTIVITIES:
2014-2015	International Student Mentor, ISSO, Carleton University
2015 –to present	Career mentor, Immigrant Services Organization (OCISO), Ottawa
2012-present	Lead, Design Team, Organizing committee, Festival of India, Ottawa
<b>TEACHING ACTIVITY</b> (TA = T Winter 2017 Fall 2016 Summer 2016 Winter 2016 Winter 2015 2015-2016 Fall 2014 Winter 2014 Fall 2013 Fall 2012	eaching Assistant; CI = Contract Instructor) ARCH 5200 Graduate Seminar - (Teaching Assistant) DSN4013, Fundamentals of Design 1(1 <sup>st</sup> year), Algonquin College- CI Theories of Landscape design, Course Development-(Teaching Assistant) ARCS 1105 Studio 1(BAS 1 <sup>st</sup> Year)- (Contract Instructor), Carleton ARCS 1105 Studio 1(BAS 1 <sup>st</sup> Year)- (Teaching Assistant) Workshop Facilitator, Educational Development Center, Carleton University ARCH 1000, Introduction to Architecture, (BAS 1 <sup>st</sup> Year)- (TA) ARCS 1105 Studio 1(BAS 1 <sup>st</sup> Year)- (TA) ARCH 1000, Introduction to Architecture, (BAS 1 <sup>st</sup> Year)- (TA) ARCH 2300, Introduction to Architecture (BAS 1 <sup>st</sup> Year)- (TA)
SCHOLARLY AND PROFESSIO	NAL ACTIVITY

#### Guest Design Critic 2012-2013 Azrieli School of Architecture and Urbanism Graduate thesis reviews. 2015-2016 Azrieli School of Architecture and urbanism, Undergraduate studio

# **PUBLICATIONS:**

1) Life-time summary (count) according to the following categories: - Papers in refereed journal .....

- Papers in refereed conference proceedings	3
- Abstracts and/or papers read	8
- Others (workshops facilitator)	3

#### 2) Details

#### Papers in refereed journal

-Article titled (Re) collecting Yesterday, Today: The Universal Museum, Louvre Abu Dhabi," The International Journal of the Inclusive Museum, Volume 9, Issue 3, pp.1-10. Article: Print (Spiral Bound). Published online: January 29, 2016 (Article: Electronic (PDF File; 453.216KB)).

#### Papers in Refereed Conference Proceedings

- Art for Architecture, or Architecture for Art, peer reviewed abstract and paper published in Conference proceedings, AR (t) CHITECTURE An International Conference at the Technion Israel Institute of Technology Faculty of Architecture and Town Planning 19-21 April 2016
- -Spaces of Otherness: The Saadiyat Island and the Idea of Estrangement, Abstract published in conference proceedings, Endnotes 2014, Annual Graduate Conference, Department of English, University of British Columbia, May 16-17, 2014,
- (Re)collecting Yesterday, Today: The Universal Museum, Louvre Abu Dhabi," Abstract published in conference proceedings, The Seventh International Conference on the Inclusive Museum, The Autry National Center of the American West, LA,USA, 4-6 August, 2014, Special Focus, Shared Visions and Shared Histories

# Abstracts and/or papers read -

- Art for Architecture, or Architecture for Art, Paper presented virtually at AR (t) CHITECTURE An International Conference at the Technion – Israel Institute of Technology Faculty of Architecture and Town Planning 19-21 April 2016
- True or False: Louvre Abu Dhabi and the idea of 'Simulacra', Paper presented, Interface 2015, Annual graduate conference, Institute for Comparative Studies in Literature, Art and Culture (ICSLAC) at Carleton University, May 2, 3, 2015
- Associate Editor, The International Journal of the Inclusive Museum, Volume 7, Issue 3-4., Part of the Blind Peer Review Process and reviewed 4 articles for the journal (referenced by Scopus and Australian Government Research Council, ISSN 1835-2014), 2014
- Spaces of Otherness: The Saadiyat Island and the Idea of Estrangement, Paper Presented at Strangely Familiar, Endnotes 2014, Annual Graduate Conference, Department of English, University of British Columbia, May 16-17, 2014, Abstract printed in Conference booklet
- (Re)collecting Yesterday, Today: The Universal Museum, Louvre Abu Dhabi," Paper presented at The Seventh International Conference on the Inclusive Museum, The Autry National Center of the American West, LA, USA, 4-6 August,2014, Special Focus, Shared Visions and Shared Histories, Abstract published in Conference booklet

# Others

- Conducted the workshop, Visually wired, Feb 25 2015, 1-2:30, Visual strategies for better presentations for teaching in class, Teaching Assistant Training Workshop, Carleton University
- Conducted Workshop for International Students- Facilities and Resources available on University Campus, at International Student Services Office, Carleton University, Nov 26th, 2014
- Conducted the workshop Visually wired, TA Training Day, Educational Development Center, Carleton University, January 23, 2016, 1:15-2:30 pm

# PROFESSIONAL PROJECT LIST (last 6 years)

- 2016 Parliament Rehabilitation Project, Center Block, Carleton Immersive Media Studio, Carleton University, Ottawa
- 2016 CDMICA (Cultural Diversity and Material Imagination in Canadian Architecture), Carleton Immersive Media Studio, Carleton University, Ottawa,

ARCHITECTURE September 2016

#### **CURRICULUM VITAE**

TAJ, H Masud Adjunct Professor, Carleton University

#### **DEGREES**:

M.Arch. (post-prof. with distinction), ASAU CU, 2004 G.D.Arch. (prof.), Bandra School of Art, Bombay 1982 Certificate in University Teaching, Carleton University 2010

#### HONOURS:

Visiting Fellow in four departments: Architecture, Fine Arts, Language & Literature, Quranic Studies. Aligarh Muslim University India, 2016 *The Embassy of Liminal Spaces* inducted in the Library of Parliament 2016 Special Mention by VC CU : *State of the University* Address 2014-2015 CUSA Teaching Excellence Award 2012 Capital Educators Award 2011

#### **EMPLOYMENT HISTORY:**

#### **Teaching Positions**

Since 2005 Contract Instructor, Adjunct Professor, ASAU CU since 2009

#### **Professional Employment**

Since 2007 Director, Transnational Architectural Journeys, India

#### SCHOLARLY AND PROFESSIONAL ACTIVITIES:

Advisor: Sea Container Design Competition ASAU, ID, UOttawa
 Member Appointed CUPE 4600, CU CI Teaching Awards Committee

#### **TEACHING ACTIVITY:**

2017	Seminar: Six Degrees of Architecture ARCH 4505 ASAU CU
2005-2016	Architectural Design Studio 1 & 2, ASAU CU
Since 2010	Eleven Lecture Courses 12 hrs each CIE. CU

# SCHOLARLY AND PROFESSIONAL ACTIVITY

 M.Arch Internal Examiner

 2011-2015
 5 Thesis, School of Architecture, ASAU CU

 Guest Design Critic

 2011-2015
 M.Arch Review ASAU CU

 2012-2016
 4<sup>TH</sup> Yr Final Review

 2011-2012
 Graduate Summer Studio in Architectural Conservation Review

 School of Planning & Architecture, New Delhi,

 2010
 1<sup>st</sup> Yr Final Reviews, Marywood University, USA

 Panelist

 2016
 Author Meets Readers panelists, Ottawa International Writers Festival

#### **PUBLICATIONS:**

1) Life-time summary (count) according to the following categories:

- Books authored	4
- Chapters in books	2
- Papers in refereed journal	1
- Papers in refereed conference proceedings	2
- Technical reports	1
- Abstracts and/or papers read	8
- Others (see below)	40
#### 2) Details:

Books: all archived in Archives and Research Collections (SPC) CU

- 1. <u>The Embassy of Liminal Spaces</u> DFAIT:Ottawa; 2014 French translation: Dr Roseann Runte
- 2. <u>Alphabestiary</u> with co-author Dr. Bruce Myer; 2011 Featured: International Festival of Authors, Toronto 2011
- 3. Nari Ghandi: apprentice to FLWright (Mumbai: Foundation For Archt, 2009)

#### Chapters in Books:

- 1. Taj, H Masud *"Toledean Testimony: Reconquesta, Architectural Convivencia and the Man from La Mancha"* <u>Engaging the Other, M Eid K Karim Eds.(NY: Palgrave)</u> 2014
- Architectural photography medieval buildings in Toledo, Spain in Summer 2012
- Featured in Faculty of Public Affairs Research Month, CU 2015

#### Papers Read

- 1. The Role of Imagination Canadian Consulate General, Bangalore, India 2015
- 2. The Bookstand & The Book, Centre for the Study of Islam, CU 2014
- 3. *"Toledean Testimony"* GCA Conference, Universite Saint-Paul 2013
- 4. *"The Unnamed Image of the Wordless"* 26<sup>th</sup> Conference SVA, NY 2012
- 5. "Guftgu: A Conversation on Architecture" 9 nine schools of architecture India 2012.
- 6. *"Cube And Chiasm: Spatiality Of the Sacred"* Art Univ. of Isfahan, Iran 2010

#### Others

Summer Lecture Tour, India 2015:

(i) Sinan: Architect at the Centre of the World, 6 Cities Lecture Tour

(i) Conversation with Architect-Poet-Calligrapher Taj Goa College of Architecture, Goa

(iii) Charles Correa: In Memorium, Mumbai

Summer Lecture Tour, 2014:

The Bookstand & The Book, FAAA Talk, Mumbai, India; Aga Kahn Univ, London, UK

Summer Lecture Tour, India 2013:

(i) In Transit: Photograph Poem Calligraphy Video Building Goa College of Architecture(ii) Alphabestiary Sir JJ College of Architecture, Mumbai

(iii) Mosques of Mimar Sinan, Dept of Archt Conservation, SPA, Delhi

(iv) The Architect, The Translator & The Poet. Academic Staff College, JMI Univ, New Delhi

#### **EXHIBITIONS:**

Individual Exhibitions

2015- Permanent installation, Canadian Consulate General, Bangalore, India Group Exhibitions

2016 – The Meaning of Life @ 91, RIA, Ottawa

2015 - Zahra & The Messy Birth of Digital Calligraphy RIA, Ottawa

2009 - Nari Gandhi: calligraphy Claude Bately Architectural Gallery, Mumbai

#### PROFESSIONAL PROJECT LIST (last 6 years)

Since 2007Director, Transnational Architectural JourneysResidentialHouse Between Mountain & Lake (under construction) 2015/16ResidentialHouse of Last Days (built), Khandala, India; 2010InstitutionalThe Green School (built), New Delhi, India; 2013InstitutionalThe Green School (under construction), Aligarh, India; 2014

ARCHITECTURE September 2016

#### CURRICULUM VITAE

VANDENBERG, Jack T. N

M.Eng., P.Eng.

Adjunct Professor, Instructor Level III - Architecture, Engineering

#### **Teaching Area**

Engineering: Statics & Mechanics; Core-curriculum (BAS, B.Eng: Conservation & Sustainability)

#### EDUCATION

1988	M.Eng - Civil Engineering – Carleton University
1986	<b>B.Eng</b> with High Distinction - Civil Engineering - Carleton Univ.

#### HONOURS

- 2015 Deputy Minister Award of Excellence in Leadership and Management, Public Services and Procurement Canada.
- 2012 Queen Elizabeth II Diamond Jubilee Medal.
- 1997 Assistant Deputy Ministers Award.
- 1996 Director's Merit Award. Awarded for excellence in conservation engineering.

#### **EMPLOYMENT HISTORY:**

#### **Teaching Positions**

Architecture, Civil & Environmental Engineering, Carleton Univ.; BAS - Conservation & Sustainability; B.Eng Architectural Conservation & Sustainability

- 1997- present Azreli School of Architecture and Urbanism, Arch'l Technology 2 (CIVE 2005/ARCC5097).
- 2010 Present Mechanics of Solids (CIVE 2200), Civil / Environmental / Architectural Conservation and Sustainability Engineering students / BAS students with a major in Conservation and Sustainability
- 2013-15 Eight sections of Mechanics I (ECOR 1101), a first year core course 400 600 students per year

#### Professional Employment

2001 - present **Director** Heritage Conservation Directorate (HCD), Professional and Technical Services Management Sector

- 2006 07 Acting Director, PWGSC's services to Indian and Northern Affairs Canada (INAC)
- 2004 05 Acting Director, Architecture and Engineering Resources Directorate (AERD)
- 1999 00 Program Manager for Parks Canada, Heritage Conservation
- 1995 99 Business Development Manager, Heritage Conservation
- 1989 01 Conservation Engineer, Heritage Conservation Program,
- 1988 89 Structural Engineer, Adjeleian, Allen, Rubeli Ltd., Ottawa; Suter Keller Inc., Ottawa

#### **CURRICULUM VITAE**

WOOD, Robert,

Contract Instructor

#### DEGREES:

1986 Bachelor of Arts (Law), Carleton University, Ottawa, Ontario

#### **EMPLOYMENT HISTORY:**

#### **Teaching Positions**

2016	Contract Instructor Azrieli School of Architecture & Urbanism
2014	Contract Instructor Azrieli School of Architecture & Urbanism

#### Professional Employment (past 6 years suffice)

2012- Present	Workshop Technician,	Azrieli School of Architecture &	Urbanism
1995-Present	Owner, Wood 'n' Drear	ms Cabinetmaking, Ottawa, Onta	ario

#### **TEACHING ACTIVITY:** past 6 years, by year

Studios, Lecture Courses, Workshops and Seminars:

2016	ARCS 3902 – Architectural Technology Workshop – Chairs
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2014 ARCS 3902 – Architectural Technology Workshop – Chairs

2003-2012 WOO 5503 - Woodworking II, Algonquin College, Ottawa, Ontario

## 4.4 Visiting Team Report from Previous Visit



2011 Visiting Team Report Master of Architecture Program Carleton University

Continuing Accreditation Visit Date: March 12-16, 2011

The Canadian Architectural Certification Board

1 Nicholas Street, Suite 710 Ottawa (Ontario) Canada K1N 7B7 Voice: (613) 241-8399 Fax: (613) 241-7991 E-mail: info@cacb.ca Web Site: <u>www.cacb-ccca.ca</u>

Carleton University Azrieli School of Architecture and Urbanism Visiting Team Report March 12-16, 2011

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#### 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 <u>Architecture Program Report</u> (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 professional program as observed exists in a moment of transition, characterized by relative financial health and apparently enjoying substantive institutional support. In such a context, the School's strategic priorities need to be exercised not only in the service of new and emergent programs, but also advanced through the ongoing review and enhancement of the 4+2 professional stream - the specific concern of the CACB review process.

Having concluded the review of the program's APR and the Team Visit, the team would suggest an overarching comment in summary of our understanding of the program:

The team would encourage the program to more fully embrace the contemporary alongside the evident and longstanding validation of the timeless: more specifically to collectively imagine the potential for these two conditions to constructively engage.

While broadly stated, the team encourages the School to consider this comment in specific terms. These could include issues of faculty research, the deployment of digital media, the regard for technical and professional topics within the curriculum, and the cultivation of faculty governance and renewal. The School appears well positioned to take progressive action in this regard - congruent with their own strategic planning position - and we encourage their future success.

Finally, the team acknowledges the representation of the proposed MArch1 professional option within the School. While concluding an inability to comment in the context of this visit, the proposal and its need for CACB deliberation is accordingly brought to the attention of the Board.

#### 2. Conditions for Accreditation "met" and "not met": a summary

1.	Program Response to the CACB Perspectives	Met	Not Met
	<ul> <li>A. Architecture Education and the Academic Context</li> <li>B. Architecture Education and the Students</li> <li>C. Architecture Education and Registration</li> <li>D. Architecture Education and the Profession</li> <li>E. Architecture Education and Society</li> </ul>	[X] [X] [X] [X] [X]	[ ] [ ] [ ] [ ]
2.	Program Self-Assessment	[X]	[ ]
3.	Public Information	[]	[X]
4.	Social Equity	[X]	[]
5.	Human Resources	[X]	[]
6.	Human Resource Development	[X] Page	[ ] e 5 of - 39

# **Carleton University** Azrieli School of Architecture and Urbanism Visiting Team Report March 12-16, 2011

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.	<ul> <li>Student Performance Criteria (SPC)</li> <li>A1. Critical Thinking Skills</li> <li>A2. Research Skills</li> <li>A3. Graphic Skills</li> <li>A4. Verbal and Writing Skills</li> <li>A5. Collaborative Skills</li> <li>A6. Human Behavior</li> <li>A7. Cultural Diversity</li> <li>A8. History and Theory [ ]</li> <li>A9. Precedents</li> </ul>	[X] [X] [X] [X] [X] [X] [X] [X]	[ ] [ ] [ ] [ ] [ ] [ ] [ ]
	<ul> <li>B1. Design Skills</li> <li>B2. Program Preparation</li> <li>B3. Site Design</li> <li>B4. Sustainable Design</li> <li>B5. Accessibility</li> <li>B6. Life Safety Systems, Building Codes and Standards</li> <li>B7. Structural Systems</li> <li>B8. Environmental Systems</li> <li>B9. Building Envelopes</li> <li>B10. Building Service Systems</li> <li>B11. Building Materials and Assemblies</li> <li>B12. Building Economics and Cost Control</li> </ul>	[X] [X] [X] [X] [X] [X] [X] [X] [X] [X]	[ ] [ X] [ ] [ ] [ ] [ X] [ ] [ ] [ ]
	<ul> <li>C1. Detailed Design Development</li> <li>C2. Building Systems Integration</li> <li>C3. Technical Documentation</li> <li>C4. Comprehensive Design</li> </ul>	[X] [] [X] []	[ ] [X] [ ] [X]
	<ul> <li>D1. Leadership and Advocacy</li> <li>D2. Ethics and Professional Judgment</li> <li>D3. Legal Responsibilities</li> <li>D4. Project Delivery</li> <li>D5. Practice Organization</li> <li>D6. Professional Internship</li> </ul>	[X] [X] [X] [X] [X] [X]	[ ] [ ] [ ] [ ] [ ]

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3. Program's Progress since the previous site visit and VTR

There has been significant improvement since the last visit, in a number of key areas. The program appears to enjoy a considerably improved institutional support - with attendant access to resources - as well as benefiting from the generous endowment from David Azrieli.

In this context, meaningful strategic planning has usefully occurred, concluding in the current approved strategic/business plan. This support has, in turn, allowed for a number of distinct enhancements to the program. These include the addition of new faculty positions with the result of refreshing local discourse while significantly enhancing faculty : student ratios; incremental - if modest - improvements made to the program facilities; and the significant recent augmentation of IT infrastructure and equipment.

Of course institutional support is seldom given arbitrarily, and the team acknowledges Sheryl Boyle's time as Director as one of building strong relationships and clear lines of communication.

4. Program Strengths

The program is distinct in its persisting emphasis on analog drawing, related model-making and the very particular exploration of space and materials that such media encourage.

The continuing contribution made by the Stinson/Corneil building to the culture of the School and its professional program is palpable, and no doubt encourages the sense of student community observed over the course of the visit. This important asset is noted, notwithstanding the need for more vigilant maintenance and ongoing renewal of this resource and its furnishingss.

The breadth of concern and sophistication of execution of MArch thesis work was notable.

The clear and direct contribution of the Azrieli endowment to both fundamental and enriched capacities of the program remains remarkable.

The varied educational settings available to students, including long and short-term studiesabroad, workshops and electives makes strong complement to core professional curriculum. 5. Causes of Concern and Team's recommendations

As noted in the introductory remarks, the School is observed at a transitional and arguably formative moment. Apart from furthering allied academic ambitions, the preoccupation with new academic programs appears to have displaced due attention from full and ongoing review of the 4+2 professional stream.

Notwithstanding the enabling of significant resources that accrue from these new programs, the team observes a number of rather specific concerns that remain outstanding.

1. Continuity of Undergraduate and Graduate components of the professional program

While the team observed significant renewal of the MArch component of the professional stream, the BAS component appeared to have observed very little change over the course of the past cycle of accreditation visits. It is essential that the program observe the professional stream as a *whole* curriculum.

2. Technical component of professional curriculum

The delivery of technical aspects of the professional curriculum is at present in a state of considerable disarray - characterized by a somewhat confounding confluence of areas of excellence and those of complete neglect. Given the extraordinary developments in technical and professional realms recently, any degree of neglect can only compromise the ability of graduates to contribute to future professional roles and should be immediately reviewed. More specifically, the expertise of recent hires - with their consistent emphasis on the School's expanded academic needs - speaks to an ethos in which these curricular components are not being given the specific attention that is their due.

## 3. Regard for Digital Technology

The responsibility of a contemporary professional program to engage with and embrace digital media and their impact upon the conventions of practice is clear. Notwithstanding the School's own mission statements, the emphasis in expertise of recent hires and the inability to enact a matter-or-fact daily engagement between these media and the curriculum remains problematic. The team notes that students are not unaware of this issue, and the very recent deployment of improved resources is very likely to aggravate their expectations in this regard.

Allied with comments concerning technical components of the curriculum more generally, the team observes that the current preoccupation with infusing incoming students with a sense of ethos might usefully be balanced by providing an operative tool-kit of technique.

#### 4. Role of Faculty Research

The School's faculty in their vitae reveal a tradition of privileging teaching accomplishment over research. Whatever the institutional encouragement for such a preference, the role of active, contemporary research in contributing to local collegial discourse, including the enrichment and critical review of curriculum, cannot be overstated. The need for concerted and collective discussions among faculty - particularly among new hires - regarding research interests, potential overlaps, recognition of inter-disciplinary opportunities, etc. is both important and timely. The proposal for an Associate Director for Research with overview of these discussions might go some way to bringing this agenda item forward.

#### 5. Program Governance

The team observed an imbalanced sense of empowerment and engagement in School decisions among its faculty. The degree that 'ownership' - whether of academic programs or research directions - can devolve to a sense of entitlement is always an issue to be aware of in academic institutions, and the team's sense is that of a need to more deliberately cultivate open and collegial regard between all members of the faculty.

#### 6. Resources / Academic Expansion

As noted elsewhere, the motivation for academic expansion does not immediately resonate with the need to assess and renew the core professional program of the School. While human resources - although more in terms of faculty than staff - have been enriched, it is difficult to assess the longstanding contribution of this expansion to the success of the program.

## 7. Acknowledgement of Locale

The circumstances of Ottawa as the nation's capital are - for any academic program - potentially formidable. The team encourages the program to cultivate this potential.

It is not in the habit or interest of the CACB Visiting Team to propose direct and specific recommendations for the redress of perceived concerns. In the context of this particular visit, the team believes that the capacity for redress is very much within the capacity of resources and desire of the School to respond positively - and successfully.

## 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 team notes evidence of engagement with other academic units. Although not exclusively lodged within the professional program, future engagement accompanying the new academic programs appears likely to constructively contribute to the professional realm.

University President Dr. Roseann O'Reilly Runte demonstrated a refreshing sensitivity and commitment to the Architecture Program. Her initiative relative to the Batawa community, and its interdisciplinary research and practice opportunities brings the school of Architecture front and Centre in the vision for Carleton, going forward. The School of Architecture has been consulted on the Masterplanning of the Campus, but has not been engaged beyond the role of other faculties.

Dr. Rafik Goubran, Dean of the Faculty of Engineering & Design, identified and re-affirmed that the School of Architecture and Urbanism is a "treasure" that is valued within the Faculty of Engineering and Design. His recent support for the Architecture program is significant, as is his acknowledgement of the importance of maintaining a clear degree of authonomy in terms of academic affairs and governance.

Dr. John Shepherd, Dean, Graduate & Postdoctoral Affairs identified the interdisciplinary nature of Architectural education as aligned with the mission.

In general, the Team was positively impressed by the strong relationships of the School of Architecture and University community, and commends the Director and Faculty of the school for nurturing these constructive and mutually beneficial relationships. In forging the current strategic plan the School has been well aware of the larger University priorities and sought to find alignment wherever possible. From the CACB perspective, it should be noted that the priorities of professional education are seldom directly implicated in University visions, and that the School must remain vigilant in ensuring that the program remain vigorous in this regard.

Overall, the senior administrators speak highly of the architecture programmme. They cited faculty participation in interdisciplinary research - especially digital media - as work that benefits the greater University research community and were appreciative of the School faculty's contributions to University committees.

## 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] [ ]

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Team comments:

The school provides support to the students through academic discourse and administrative engagement, and the team overall observed an enthusiastic esprit de corps.

In terms of anticipating student participation in the profession, the team observes that the current co-op option does not fully achieve its potential. This, at least in part, appears to stem from the administrative / logistical support being located at University level rather than being integrated within the School. While the co-op option might well benefit from a shift in current practice, the team would note that an accompanying increase in staff support would be necessary. The team also observed that the timing of first co-op placement is not necessarily consistent with appropriate skill sets of the students.

As the new streams in the bachelor's degree mature, it is vital to clearly communicate to students the nature of assessment between first and subsequent years. Following an intensely competitive application process for admission to the BAS, the potential to be disallowed from continuing in the direct professional Design stream did not appear to be fully understood by students in the midst of this process. A variety of administrative and procedural remedies might be imagined, but particularly if the School wishes the alternative, non-professional streams to attain their own identity and status, the team would raise this issue as one of considerable importance.

Related to this point, students were keen generally to have more explicit and more regular review of their progress through the course of a term, and program protocol in this regard appeared to be ad-hoc and rather informal. Particularly with respect to the entry to Design stream after the first year, the team would encourage some form of formal debriefing after the first term's grades have been finalized in order to focus expectations over the course of the second term.

Finally, students communicated to the team the desire for the program to have less hesitation in using new digital technology, and that this technology be more fully integrated with design studios. To this end, they also identified gaps in the capacity of TA's and faculty to provide the full support required to effect such desires effectively.

## 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:

The program encourages practitioners' involvement in many levels such as lectures, seminars, panel discussions and studio critiques. The OAA offers information and student affiliation, and the co-op option introduces approximately one-third of undergraduate students to direct professional work experience. Overall, the students demonstrated a clear understanding of registration issues.

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## 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:

There was evidence of certain strong relationships between the program and the profession, in which many aspects of this criterion would be engaged. Specifically, the practitioners' support for the lecture series, the sponsorship of a studio by Stantec and the use of practitioners to deliver the visiting critic studio were each positive and well-received by the students.

Effort to maintain currency in this respect, however, appeared less clear in the coursework dedicated to professional issues, where only limited exposure to the many aspects of contemporary practice was observed. The one professional practice course presents only the traditional small-practice "sole-practitioner" approach to practice, without framing the many other roles that architects take on - especially in the context of Ottawa where there are so many public agencies who employ architects. There appears to be modest contact with the many government agencies - PWGSC, DND, Health Canada, NRC, IRC, DFAIT, etc. - with the particular emphasis and inflection that they give to practice.

## 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:

Such understanding occurs in many instances across the professional curriculum. The criterion suggests a cumulative response whereby capacity builds alongside the program, and the staging of Studio Six offered the clearest instance where a full range of social and environmental concerns were deliberately engaged in the design studio. In this respect, the topic studios of the MArch program embraced a much more narrow set of concerns.

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:

Both curricular and financial strategic planning are evident and in place. As noted, many of the team's comments concerning the program support the intentions of the School mission.

With respect to curricular review, however, the process of self-assessment remains less clear. The motivation for introduction of the Directed Research Studio, for instance does not appear to be prompted by assessment of the value of the thesis - for the program and for students - but rather appears bound up in issues of human resources, research aspirations and budget. More generally, the enthusiasm for new academic programs and the delineation of their curriculum has occurred at some cost to the review of the 4+2 professional sequence - particularly with respect to the undergraduate sequence.

#### 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 Team notes the lack of conformance of the published text with the wording of Annex A of the CACB Conditions and Procedures.

Equally important, the information available to prospective and current students is ambiguous about the current accreditation status of the proposed MArch1 sequence, and less than clear about the points of choice and assessment within the four streams of the BAS degree and the competitive nature of application to the existing professional MArch.

While incidental to fulfillment of this criterion, the team notes that the web presence of the professional program offers little evidence of the strengths and specific cultural ethos embodied in the School's daily life.

## 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] []

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Team comments:

The School provides a supportive and collegial environment for teaching, learning and working. Facilities have in general been upgraded to accommodate the needs of all physical abilities, with the addition of ramps and renovated washrooms, in the past few years.

The Team recognizes the achievement of the program in redressing issues of gender imbalance in the faculty, as well as increasing the number of internationally-trained professors. The team would further encourage the program to continue to take advantage of the visiting lecture series and sessional appointments to establish gender equity.

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:

Progress has been made, and is acknowledged. The student/faculty ratios have improved over the past five years, since the last accreditation visit. The Director of the program has been effective in working with the Faculty and the University and continues to address this concern. The necessary attention to new programs and course delivery, however, would suggest less dramatic progress with respect to the professional program.

The Team notes that the faculty members are typically required to teach the equivalent of two design studios, one core course, and an elective that actively contributes to the development of their individual body of research. The overall impression is one of a faculty - even while supplemented by contract hires - preoccupied with teaching activities. As noted elsewhere, the role of research in refreshing faculty knowledge bases and ensuring a contemporary currency should not be underestimated.

Notwithstanding the observed progress, it is important to conclude the cycle of faculty renewal with hires successfully completed in the near future.

With respect to support staff, the team notes some apprehension concerning the capacity of current administrative resources to successfully respond to the proposed expansion of student enrollment and enacting of new degree programs. The team also noted the use of Azrieli endowment resources to fund an essentially technical support position - CNC technician - that appears inconsistent with the intent of the endowment, irrespective of local necessity.

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 Research and research interests were partially demonstrated during the visit. While there are some remarkable projects being undertaken by Dr. Stephen Fai, and some delightful examples of student/faculty work in the renovated HUB lobby, the balance of the faculty demonstrated limited research activity. There was no exhibition of Faculty work presented as part of the Accreditation Visit Exhibition. Certainly there would be benefit in mounting such an exhibition for future Visiting Teams.

Faculty are allocated an annual bursary of funds for travel and professional development, to purchase books, equipment, etc and there is evidence in Faculty resumes that publications and research are underway, but there does not seem to be any tradition of concerted and coordinated research agendas being set within the School. The team would also encourage the expanded use of facilities as do exist: most obviously the resources of the CIMS could be only enhanced by including other faculty members as associated researchers with access to facilities.

With respect to student opportunities, the studies abroad options, visiting critic studios and short directed studies abroad workshops all speak to the program's delivery of an array of opportunities for student growth. Within the inevitably hidebound necessities of a professional curriculum, the program offers a strong range of elective coursework and workshops.

## 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 team acknowledges the incremental improvements within the main building and the graduate area in Azriel Pavilion, and the imminent acquisition of the fifth floor of the Stinson/Corneil building.

The Architecture building remains one of the finest purpose-built schools of architecture in North America, and this facility is well-complemented by those in the new Azrieli building which provide an excellent space for the Graduate Studios. The practical and logistical concerns of occupying the varied facilities should be allied with a clear overview of program relationships, and the team encourages the School to this end.

Not withstanding the demonstrable virtue of the Architecture building, proposed remedial work to the ventilation system of the CNC installation and a more general attention to aspects of both maintenance and renewal require immediate attention. While universal accessibility to labs, studios, and other resources has largely been addressed, overcrowding in certain studios remains a concern. Environmental problems associated with an obsolete heating plant and an aging building envelope remain outstanding.

The team encourages the School to develop a comprehensive Facility Renewal Program and expresses the hope that the University will be sensitive to the heritage value of this building in Canada's architectural culture. More specifically, the team encourages the Faculty to consider including this building in DOCOMO once it has achieved 40 years of age, in another year.

Beyond the care of the historic building, significant funding for the renovation of the fifth floor of the building will be needed. Despite the relatively recent construction of that space and its enviable technological infrastructure, its configuration is not yet suited to the needs of the School. The team encourages the undertaking of a major renovation to ensure that space is as effective, accessible and supportive of the School's academic mission as the rest of the building.

Finally, noted that institutional neglect in the upgrading of studio furniture, maintenance of the building and effective provision of janitorial services can only too easily contribute to the 'broken window' phenomenon, encouraging a culture of neglect only aggravated by the reality of a '24+7' occupation of the premises.

#### 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:

#### Library Resources

Communication between the University Library and the School appears collegial and productive. In addition to actively supporting the permanent collection, the Library regularly accepts input from School faculty regarding acquisitions and provides introductory sessions for both Undergraduate and Graduate students, outlining the specialist data-bases available and providing a general orientation to Library resources. The staff is looking forward to utilizing the archives with the new Ph.D. program in the Azrieli School of Architecture and Urbanism

Recent renewal to facilities available in the Technical Data Room should encourage increased student use as a local source of current periodicals and as an informal meeting/working space.

In addition, the Archives and Special Books Collection are available to School Graduate Students and Faculty, including work sessions that introduce key aspects of primary archival research methods. Elizabeth Knight – Subject Specialist for Architecture – noted during the visit that the collection's architectural material was well used, with a notably high incidence of circulation relative to the holdings generally.

#### Information Technology Resources

Through the agency of the Dean's office, significant resources have recently been made available that greatly enhance the capacity of the School to responsibly support student needs in this regard. As noted during the visit, the program will not doubt find that such enhanced support will fuel enhanced expectations, and the team encourages the School to consider strategic planning with respect to software and hardware provision alongside the technical support they imply.

The needs of the program in terms of digital lab and workshop equipment appear adequate, although subject to topical extremes in their use. In particular, the focus of dedicated IT staff to the mundane procedures of running prints - for instance - aggravate the stress of staff and appeared an unnecessarily inefficient application of resources. The use of staff-dependent CNC installation in the service of relatively small scale-model making was another instance where specialist resources appeared to be casually calibrated to student needs - perhaps in this instance an issue that might help shape ongoing discussions concerning the efficacy of laser-cutting technology.

Noted that while students in their second year of the undergraduate program purchase their own computers, conformity with stated program technical profile is inconsistent. As the School pursues its strategic goal of increasing engagement with new technologies, it is essential that ample 'entry-level' criteria for both hardware and software are made clear and enforced.

Finally, noted the intention to profile the next faculty hire as a colleague with specific expertise in emerging digital media and production. This would go some way in responding to student apprehensions concerning the expertise of current design faculty - and TA support - in contributing to coursework and assisting with day-to-day necessities.

9. Financial Resources

Programs must have access to sufficient institutional support and financial resources.

Met	Not Met
[X]	[]

Team comments:

As noted elsewhere, the School appears to possess stable and sufficient resources to undertake its professional program alongside the new and proposed academic offerings.

To the extent that the use of Azriel monies is somewhat at the discretion of the Director, and that the recent resources accruing from the Dean's office are discretionary, it is essential that the resources necessary to sustain the professional program are clearly observed over time.

It should also be noted that while the recent enhancement of financial resources is significant, to some degree it has been used to redress historical shortfalls. In particular, the capacity of program faculty to undertake significant research appears somewhat curtailed by their necessary obligations to delivering program curriculum. This would appear to be a quite specific issue that future fundraising efforts might usefully address.

Finally, noted that ongoing fund-raising efforts allied with public lecture series, etc. continue with the support of the Dean's office and University.

#### 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 institutional position as designated School within the Faculty of Engineering and Design provides an evident degree of autonomy consistent with the intent of this criterion. The current Dean appears well aware of this distinction and stressed his own efforts to maintain a sense of both autonomy and identity specific to the School.

Within the School, the Director's position is given due administrative release time, and is augmented by Associate Directors for Undergraduate and Graduate programs as well as by coordinators of specific curricular streams. The anticipation of an Associate Director for Research would appear constructive, and the team would encourage delineation of responsibilities and deployment of such an administrative role.

As noted elsewhere, the team encourages mindful awareness of the specific needs of the professional program as its context of allied academic programs expands - perhaps suggesting a reconfiguration of the current undergraduate / graduate designations for Associate Directors in due course.

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]	[]

\_

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:

The team observed a program being undertaken with ongoing vigour set in the context of a relatively secure curriculum at the Bachelor's level and a more recently revised structure at the Master's level.

While the program overall demonstrates an enduring commitment to analogue drawing and model-making across the curriculum, it has yet to fully acknowledge the dynamic changes in digital technology as it pertains to design, project management and emerging fabrication technologies. This is most directly observed in persisting assumptions regarding design process and procedure.

Given the material available for review, it is apparent that coverage of technical concerns is uneven: generally strong in its delivery where addressed, but with specific and conspicuous gaps. This unevenness speaks to a need to more deliberately orchestrate the various coursework, but also to consider how such material occurs in design studies as an integrative force - especially with respect to environmental systems, professional necessities and issues of sustainability.

The manner in which current and local issues are addressed as studio topics was seen as positive and relatively consistent in the material observed. The team would encourage the program to be more explicit and regular in its engagement with the varied resources that are highly specific to the Ottawa culture.

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:

Condition is considered to be well met.

The students display a clear understanding of the significance of critical thought processes as related by their response to the academic program, evidenced in a variety of curricular settings.

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#### 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:

Condition is considered to be well met.

While research skills can be observed across the professional curriculum, the team notes the particular accomplishment evident in the Thesis and Directed Research Studios.

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:

The manual graphic skills are strong and demonstrate the students ability to communicate their intentions clearly. A full engagement of contemporary and emerging digital media remains to be demonstrated, however. While this criterion focuses on 'the programming and design process', the team would extend its comment across all aspects of the professional curriculum.

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:

Student writing samples demonstrate appropriate abilities in writing. Efforts to raise student writing skills in the context of the MArch sequence is noted, and commended as an imaginative application of endowment resources to the professional curriculum.

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]

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Team comments:

In both studio and specific coursework group work is given due emphasis. Students more generally demonstrate the collegial respect that necessarily underpins constructive collaboration.

A6. Human Behavior Understanding of the relationship between human behavior, the natural environment and the design of the built environment.

Met	Not Met
[X]	[]

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:

The team observed this criterion most clearly in various elective coursework, while appearing rather undernourished in the curricular core.

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]	[]

A9. Precedents

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

Met	Not Met
[X]	[]

Team comments:

Most studio projects draw from some form of precedent studies. However, it is noted that observation - however finely delineated - provides the basis for 'analysis and evaluation' rather than standing in their stead.

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:

A clear architectural language is displayed the studio projects and - particularly in the undergraduate work observed - contributes to a sense of common design culture permeating the program. The team did observe instances in which longstanding commitment to specific design processes actively discouraged integration with the full range of issues present in a professional curriculum in Architecture.

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.

Vlet	Not Met
]	[X]

Team comments:

While aspects of program preparation appear in various aspects of the curriculum, there is no instance in which specific focus is exercised and sustained. While certain of the thesis work observed was exemplary in this matter, engagement with program preparation was - not unreasonably - inconsistent across the range of thesis preoccupations.

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:

Condition is considered to be minimally met.

The presence of work demonstrating fulfillment of this criterion was uneven, and where observed often remained in the realm of close observation rather than 'analysis and response'.

#### 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:

Condition is considered to be minimally met.

Given the increasing emphasis granted to sustainable practice, the work observed remained curiously mute on the topic: certainly not generally understanding sustainability to be central and formative to contemporary design practice.

This being said, effort is clearly being made to raise awareness of material implications of a sustainable agenda, in particular with respect to the adaptive re-use of urban buildling stock.

B5. Accessibility

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

Met	Not Met
[X]	[]

Team comments:

Level four design studio projects showed a degree of awareness of and ability to work with principles of accessibility, including accessible washrooms, ramp access, and barrier free movement through buildings. More generally, students display a range of ability in this area.

## 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:

Students show some awareness of egress systems, and distinctions between combustible and non-combustible construction, although the role of sprinkler systems is not apparent in any tests, papers or drawings observed. The team encourages that this suite of interests be more deliberately brought into the formulation of design strategy and intent.

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#### 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:

Condition is considered to be well met.

Beyond the aspects of coursework devoted to this criterion, the exploration of structural systems and performance through the construction of scale models is commended.

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:

Acoustics, artificial illumination, and mechanical systems for large buildings are apparently not being taught in the current year, although a breadth of related material including building envelopes and natural light are covered in the technical sequence in good detail. Faculty involved appear enthusiastic and well respected by students and their peers.

## 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] [ ]

The team notes that the study of high-performance systems, especially in regard to coldclimates, were under-represented in the work observed.

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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:

Plumbing, electrical, communication and sprinkler & other fire protection systems are not evident in the material made available to the reviewing team.

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:

Covered in various coursework, this material is also addressed in the coordination of technical concerns with the two comprehensive design studios.

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:

This condition is considered to be well met.

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]	[]

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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]

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Team comments:

Student work demonstrates an ability to integrate knowledge of structural systems and building envelopes, but other issues are not consistently present.

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 ]	[]

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:

The level four studio focused upon housing design offered evidence of student attention to a reasonable level of detail of certain aspects of this criterion. However, since lighting, acoustics & mechanical systems are not currently being taught, these components are simply not evident - comments on other required concerns as noted.

The team notes some concern regarding the building type and complexity presented as the appropriate vehicle for successfully undertaking the intent of this criterion. It was also noted that since the intended comprehensive studio occurs within the undergraduate portion of the professional program, it will inevitably include students not destined to complete the full accredited program in Architecture - yet compelled to fulfill this challenging student performance criterion as part of their undergraduate degree requirements.

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] [ ]

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D2.	Ethics and Professional Judgment Understanding of the ethical issues involved in the formation of profe	essional	judgment
	regarding social, political and cultural issues in architectural design and prac	tice. Met [X]	Not Met
D3.	Legal Responsibilities Understanding of the architect's responsibility to the client and the public codes, regulations and contracts common to the practice of architec jurisdiction.	c under cture in	the laws, a given
	<b>-</b> .	Met [X]	Not Met [ ]
	leam comments:		
	The student work displays a good overall understanding of practice issues. F architects are deliberately engaged with the students and their coursework, I and regulations still remain sporadically applied, as noted elsewhere.	Practicing	g codes
D4.	Project Delivery Understanding of the different methods of project delivery, the corresponding forms of servi contracts, and the types of documentation required to render competent and responsible professional service		of service sible
		Met	Not Met
	Team comments:	[X]	[]
	The student work demonstrates a good knowledge of project delivery, contra appropriate documentation required to communicate effectively.	acts as v	vell as
D5.	Practice Organization Understanding of the basic principles of practice organization, ir	ncluding	financial

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:

The coursework provides good level of understanding, exposure and access to practice issues. The student accessibility to the CHOP is reinforced with the inclusion of local practitioners in the delivery of this content.

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## 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]	[]

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#### IV. Appendices

Appendix A: Program Information

The following is condensed from the Program's 2010 Architecture Program Report

#### 1. Brief History of Carleton University

Carleton University's origins lie in a wartime initiative to offer university-level instruction to veterans and a younger generation of civil servants. Carleton College, as it was first known, began offering classes in 1942. During this period, the College operated out of the high-school facilities and temporary buildings under very stringent financial conditions. Enrolment continued to expand and in 1952 Carleton's degree-granting privileges were confirmed by the Province with the Carleton College Act. The College was renamed Carleton University in 1957.

Carleton had been the first post-secondary institution to be established in Ontario since the nineteenth century and its move to the current campus in 1959 coincided with a substantial expansion of the Provincial university system. The University's development in the 1960s was characterized by rapid increases in enrolment and by almost continuous construction activity. As organized at present, the University consists of five faculties offering more than fifty disciplines of study. The faculties of Arts and Social Sciences (FASS), Public Affairs and Management (PAM), Engineering and Design (FED), and Science provide instruction to some 15,000 full-time and 3800 part-time undergraduate students; the Faculty of Graduate Studies enrols 2100 full-time and 4600 part-time graduate students.

#### 2. Institutional Mission

Carleton University President Dr. Roseann O'Reilly Runte, in consultation with a wide range of internal and external groups, has developed a strategic plan that informs the university's decision-making over the next five years, highlights its top priorities and set specific targets with timelines.

"Defining Dreams", approved by the Board of Governors on Feb. 2, 2010, guides academic and administrative units as they develop their plans and agendas in the coming months and years.

The full content of "Defining Dreams" can be found at the following link: <u>http://www2.carleton.ca/about/ccms/wp-content/ccms-files/strategic\_plan\_final.pdf</u> 3. Program History

The School of Architecture held its first classes in the fall of 1968, with twelve students and four faculty members. The School offered a five-year undergraduate professional degree, accredited, from the outset, by the Ontario Association of Architects. The first degree was awarded in 1973. In the fall of 1972, the School moved into its present purpose-built facility, designed by Toronto architects Carmen Corneil and Jeff Stinson. The Architecture Building was planned for a total of 250 students (a number long since exceeded). The building is highly regarded by the architectural community. It continues to provide a supportive, appropriate environment and to constructively influence the School's programs.

In 1997, the School developed a proposal to restructure its 5-year Bachelor of Architecture to a 4-year, pre-professional Bachelor of Architectural Studies followed by a 2-year professional Masters of Architecture degree. The undergraduate component was approved by the University Senate in 1997 and began accepting students in the Fall of 1998. The graduate component was approved by the Ontario Council of Graduate Studies in 1998 as a variation on the previously approved postprofessional M.Arch. The first class accepted into the professional M.Arch. entered in September of 2001. The first graduates from that class were conferred with the M.Arch degree in November, 2004. The School instituted a formal co-op program in 1999 as an option within the BAS. Students must spend minimum of three terms (two of which are contiguous) to satisfy the requirements for the co-op designation. Work terms begin after students complete the second year of the BAS. This option is now well established.

The 4+2 program at Carleton is now in its eleventh year and has undergone only minor changes since its inception. Until 2008, the most significant of these changes was the development of the Directed Research Studio (DRS) as a thesis option in the final year of the M.Arch. intended as an important research vehicle and a viable option for students less inclined toward independent research. Other changes include a short duration (1-3 weeks) undergraduate Directed Studies Abroad (DSA) option in the third year of the BAS and a full term DSA in the first year of the M.Arch. The School offers a visiting critics studio as an option to graduate students who choose not to participate in the DSA.

The last and most significant shift is presently underway as the school develops four new Majors at the undergraduate level. All BAS Majors (Design, Urbanism, Conservation & Sustainability, Philosophy & Criticism) will share a common first year: This year lays a broad foundation on which further architectural studies are built.

The BAS – Major in Design - is based on the historic program and course structure with minor changes, and will continue to provide for the majority of architecture students who are seeking a professional career in architecture with an emphasis on design. The strength of the existing program lies in its ability to deliver an architectural education through an exploration of diverse disciplines that influence the built environment. This model of architectural education is, by necessity, a comprehensive one. It not only prepares students for a future in the profession of architecture but also provides a broad-based foundation for a multitude of interdisciplinary and related design fields. Students learn not only to handle the conflicting demands of function, aesthetics, technology and economy, but are trained in a variety of means of expression including writing, model-making, drawing, photography, video, digital media, and verbal presentations. The current B.A.S. is not only a prerequisite for the 2-year M.Arch. (professional) degree but an excellent and comprehensive undergraduate degree for a range of careers or further studies in all design fields.

4. Program Mission

Note: The School of Architecture formalized its mission at a Faculty Board meeting, Oct. 6, 1999. At the same time, a long-term Strategic Plan was implemented with its goals outlined in the APR (2000 and 2004). In 2008, additional strategic components were added to reflect the expansion of the BAS with 4 Majors as outlined above.

• To offer a high-calibre undergraduate and graduate education that instils a deep appreciation for the built environment and a firm understanding of the complex social, structural, technical, cultural, and economic forces that produce it.

• To recognize and to promote the role of architects and the relevance of architectural principles in the widest possible context.

• To provide a university-level professional architectural education within a broad, multidisciplinary pedagogy that also prepares students for a wide range of design disciplines.

• To promote global perspectives on human development through planning and design principles of sustainable built environment.

• To recognize Canadian ideals and realities that can be positively served through architecture and to promote them through educational as well as real-life situations.

• To promote the value of academic inquiry and applied research especially in those areas that directly influences the practice of architecture, urbanism & sustainable design.

• To provide education and training towards the adoption of high technology (visualization, content design).

• To promote an appreciation of material culture and pedagogy of learning by making -- recognizing design as a form of research and the primacy of the studio as a pedagogical venue.

The School's Mission Statement is in line with the University's goals, and the 4+2 program along with the introduction of new undergraduate Majors, will greatly expand the School's participation and in graduate studies in architecture, as well as in other Carleton programs and disciplines.

5. Program Action Plan

a) Implementation the new 4+2 program (fully implemented in 2003/04 with first graduating class in 2004)
b) To implement 4 new Majors within the BAS program and to increase enrolment by 10% over 4 years. Process begun in 2008; fully implemented in University Calendar in 2009; Undergraduate Program Review & Approval Spring 2010. First students currently entering 3rd year – Fall 2010.
c) To increase the volume of faculty research through professional and post-professional graduate offerings, through workshop-based coursework and through the School's Architectural Research Units (ORUs).
d) To rebuild the faculty establishment through strategic replacement of faculty positions. In response to the increased enrolment from the new Majors, the school anticipates an increase in faculty establishment from 16.5 to 20.5 over 4 years. These will be supplemented by 1 faculty awarded the Azrieli Chair and 1 rotating visiting Azrieli Professorship for a total of 22.5 by 2011/12

e) To secure additional space to accommodate the proposed expansion of the School's programs with augmentations of information technologies. Integrate the undergraduate and graduate programs by securing un-segregated studio space for Professional M.Arch. students (by 2011)

f) To stabilize the School's financial position and augment its autonomy through program restructuring (addition of 4 undergraduate Majors within the BAS degree), increased research funding, contract work, donations, and endowments.

g) To establish links and continue to work with other units in the University -- especially units within the Faculty of Engineering and Design -- on initiatives related to the University's strategic goals.h) To enhance the integration of new technologies into the School's curricula.

These objectives continue to be important because they focus both on the School's formal mission statement and the mission statement of the University to "advance knowledge and scholarship and to provide people who have the ability and the desire to learn with opportunities to realize their intellectual potential." The strategic plan also created common goals for the Faculty to pursue. To further establish the School as one of the top schools of architecture in Canada, the School's recently appointed Director has added to the stated vision for the School the following:

i) Maintain the quality of existing programs

j) Advance the position of the current programs and research centres

k) Create new programs and research that pioneer the teaching, research, and community service frontiers for the School, and

I) Increase the visibility of the programs and research developed by the School through paper and electronic publications.

Carleton University Azrieli School of Architecture and Urbanism Visiting Team Report March 12-16, 2011

Appendix B: The Visiting Team

CHAIR

Christopher Macdonald Educator University of British-Columbia School of Architecture-Landscape Architecture Lasserre Building #402 - 6333 Memorial Road Vancouver, BC V6T 1Z2 Tel.:(604).822.2779 Fax :(604).822.3808 cmac@interchange.ubc.ca

#### **MEMBERS**

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Carleton University Azrieli School of Architecture and Urbanism Visiting Team Report March 12-16, 2011

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SCHOOL OBSERVER

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Appendix C: The Visit Agenda

ACCREDITATION VISIT SATURDAY, 12 MARCH 2011 TO WEDNESDAY, 16 MARCH 2011

Saturday, March 12th, 2011

Visiting Team Arrive and check-in at hotel

7:30 p.m. Dinner (Team Only)

Sunday, March 13th, 2011

8:00 a.m.	Breakfast – with Director S. Boyle APR Review
10:00 a.m.	Initial review of exhibits and records
11:00 a.m.	Tour of School w/S. Boyle
11:30 a.m.	Meet with Associate Directors (R. Connah – Graduate and J. Debanné – Undergraduate), program coordinators (M. Báez – Design, M. Esponda – Conservation & Sustainability, B. Gianni – Urbanism, M. Frascari – Philosophy and Criticism) and Accreditation Coordinators (M. Báez and P. Kariouk)
12:00 noon	Lunch – Team Members only
2:00 p.m.	Faculty introductions
2:30 p.m.	Review of exhibits and records (accompanied by Faculty in both the Azrieli Pavilion, Architecture Building, and CIMS Lab)
4:00 p.m.	Team commences review of exhibits
7:30 p.m.	Dinner – Team Members only

Monday, March 14th, 2011

8:00 a.m.	Team Breakfast with Director S. Boyle
10:00 a.m.	Meeting with Dr. John Shepherd, Dean, Graduate & Postdoctoral Affairs
10:45 a.m.	Meeting with Dr. Roseann O'Reilly Runte, President

-

#### Carleton University Azrieli School of Architecture and Urbanism Visiting Team Report March 12-16, 2011

11:30 a.m.	Meeting with Dr. Rafik Goubran, Dean, Engineering & Design
12:30 p.m.	Lunch – Team Members Only
1:30p.m.	Elizabeth Knight , Anita Hui, & Patti Harper – University Library
2:30p.m.	Studio class observations and continuation of review of student work
3:30 p.m.	Meet with all Faculty
5:00 p.m.	Cocktail Reception – Faculty, Administrators, practitioners, alumni
7:00 p.m.	Dinner

## Tuesday, March 15th, 2011

8:00 a.m.	Team Breakfast with Director S. Boyle			
9:30 a.m.	Meet with Student NUG Representatives, CSAAS, CASA			
10:30 a.m.	Meet with Support Staff			
11:30a.m.	Continue Review Exhibits			
12:30 p.m.	Lunch - Team members only (catered at Team Office)			
1:30p.m.	Complete review of exhibits and begin draft of VTR Team members available for individual consultation with school community members by appointment			
8:00 p.m.	Dinner – Team Only			
Evening	Accreditation deliberations			
Wednesday, Ma	rch 16 <sup>th</sup> , 2011			
8:00 a.m.	Team Breakfast with Director S. Boyle			
9:45 a.m.	Exit Meeting with J. Shepherd, Dean of Graduate & Post Doctoral Affairs and R. Goubran, Dean of Engineering and Design			
11:00 a.m.	Exit Meeting with R. O'Reilly Runte, President			
11:45 a.m.	School-wide exit meeting with all faculty/staff/instructors/students			

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University (name) Visiting Yeam Report Month x-xx, 20xx

V. Report Signatures

Christopher Macdonald• Team Chair representing the educators

Gordon Richards representing the practitioners

atricia O' car

Patricia d'Leary representing the educators

Vivian Manasc representing the practitioners

Pierina Saia representing the practitioners

an 14 **Eric Archambault** 

AL

school / program observer

CACB observer

George Wagner CACB observer

# Report submitted to the Canadian Architectural Certification Board

# 2013 FOCUSED EVALUATION REPORT

## AND

# CLARIFICATION OF M.ARCH1 CURRICULAR SEQUENCE LEADING TO THE MASTER OF ARCHITECTURE

Submitted by Carleton University

Azrieli School of Architecture & Urbanism

April 2013

CACB Focused Evaluation Report 2013 <u>and</u> Clarification of M.Arch1 Sequence 29 Apr/13 Carleton University – Azrieli School of Architecture & Urbanism





Azrieli School of Architecture & Urbanism

1125 Colonel By Drive Ottawa, ON K1S 586 Canada Tel: (613) 520-2855 Fax: (613) 520-2849

April 15, 2013

Mourad Mohand-Said, B.Arch, M.Sc.A Executive Director | Registrar Canadian Architectural Certification Board 1 Nicholas Street, Suite 710 Ottawa, Ontario, Canada K1N 7B7 <u>info@cacb.ca</u> <u>www.cacb.ca</u>

Dear Mourad Mohand-Said, Executive Director, CACB,

Please find attached the documents from Carleton University's Azrieli School of Architecture & Urbanism in response to the CACB's request for the following:

- 1) 2013 CACB Focused Evaluation Report (*according to the Focus Evaluation Submission Guidelines*), and
- Clarification of the M.Arch1 curricular sequence fulfilling the Master of Architecture (first professional degree) as requested by the CACB President, Ivan Martinovic in his letter dated June 29<sup>th</sup>, 2012.

Our goal in this report has been to present our responses with clarity and precision. The report is structured in two parts as listed above.

Should you have any questions regarding this report, please feel free to contact me at any time at <a href="mailto:sheryl\_boyle@carleton.ca">sheryl\_boyle@carleton.ca</a> or via phone at 613-520-2861. Thank you for your encouragement and guidance.

Sincerely,

Sheryl Boyle, Interim Director Azrieli School of Architecture & Urbanism, Carleton University

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#### APPENDIX

JSB of Student Work and Course Outlines:
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- 1) Section 1 Material for the Focused Evaluation Report
- 2) Section 2 Material for the M.Arch1 sequence clarification

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# PART 1

# FOCUSED EVALUATION REPORT

## **Executive Summary of the Focused Evaluation Report**

The Azrieli School of Architecture & Urbanism at Carleton University received a site visit from the CACB Accreditation Team to assess eligibility for continuing accreditation on March 12-16, 2011. Carleton's *Master of Architecture* received accreditation from the Canadian Architectural Certification Board for a six-year term with a Focused Evaluation at the end of three years effective January 1, 2011 and ending 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 the letter dated June 22, 2011 from Terrance Galvin (CACB President) to Sheryl Boyle (Director of the Azrieli School of Architecture & Urbanism), the CACB summarized the following six points deemed NOT MET that are the subject of this Focused Evaluation Report:

- Condition 3 Public Information
- SPC B2: Program Preparation
- SPC B8: Environmental Systems
- SPC B10: Building Service Systems
- SPC C2: Building Systems Integration
- SPC C4: Comprehensive Design

# In Part 1 of this report, we clearly identify the steps that have been taken to satisfy these six points as well as future steps that will be implemented beginning in the fall of 2013. Student work is included on the attached USB.

In a further letter dated June 29, 2012 from the CACB President, Ivan Martinovic, Carleton was asked to give clarification to the M.Arch1 curricular sequence leading to the Master of Architecture degree, with particular attention to providing clarity regarding its professional designation.

In Part 2 of this report, we clearly identify that Carleton offers only one first-professional degree in architecture, namely our Master of Architecture. We further clarify that this conforms to two of the recognized paths to the first-professional degree as identified by CACB Condition 3.11: Professional Degrees and Curriculum:

- Master of Architecture degree with a related pre-professional bachelor's degree requirement, typically amounting to five or six years of study; *and*
- Master of Architecture degree without a pre-professional requirement, consisting of an undergraduate degree plus a minimum of three years of professional study.

Further, we have provided clear diagrams and listed the courses in a CACB SPC matrix for the M.Arch1 curricular sequence. On an attached USB we have included examples of course work produced by current M.Arch1 students.

*The Appendix* contains a USB divided into two parts: Section 1 containing all material requested for the Focused Evaluation, and Section 2 containing all material requested relating to the M.Arch1 curricular sequence.

# **Response Sections to the SPC Conditions & Criteria Deemed NOT MET**

This section addresses the specific CACB conditions and criteria deemed as <u>NOT MET</u> in the Visiting Team Report.

#### Format of Response

Each condition and criteria is dealt with individually in the following order and format:

- CACB Condition/SPC number and title; for reference
- CACB Condition description; for reference
- CACB VTR Team Comments; for reference
- Azrieli School of Architecture & Urbanism Response Section which includes:
  - **Identification** and list of the *specific elements* noted in the Visiting Team Comments justifying the "NOT MET" designation,
  - **Table of Action Taken**: identifying the *specific elements* (in the column headings) cross-listed with rows naming the specific **courses that have been modified** to include said elements in our professional program.

#### TABLE LEGEND

- X denotes new element added to course,
- A denotes the particular Assignment (e.g. Assignment 3 = A3)
- L denotes the particular date of a lecture in which the specific element was delivered (e.g. the Lecture on October 24<sup>th</sup> is shown as L Oct.24)
- **P** denotes the particular Project Number where the specified element is demonstrated (e.g. Project 2 = P2)
- **Narrative** describing how each of the identified elements are now integrated into our Professional Program in the order listed in the Response Table.
- All Courses that have been modified and that demonstrate each *specific element* noted as missing in the Team Comments Section are on a USB in the Appendix.
  - Individual courses are given separate folders with folder names identifying course code and course name.

NOTE: The following seven courses are taken by students in the BAS (Undergraduate program) AND the M.Arch1 sequence (Graduate program) on their way to the first professional degree (Master of Architecture) and are identified by two course numbers – one with an undergraduate designation (i.e. beginning with number 1, 2, 3 or 4) and one with a Master's designation (i.e. beginning with 4 or 5).

CACB Focused Evaluation Report 2013 <u>and</u> Clarification of M.Arch1 Sequence 29 Apr/13 Carleton University – Azrieli School of Architecture & Urbanism

Shared Professional Studies	Undergraduate Course Code	Graduate Course Code
Courses	_	
Architectural Technology 1	ARCC 2202	ARCC 5096
Architectural Technology 2	CIVE 2005	ARCC 5097
Architectural Technology 3	ARCC 2203	ARCC 5098
Architectural Technology 4	ARCC 3202	ARCC 5099
Modern Architecture	ARCH 2300	ARCH 5100
Computer Aided Design	ARCN 2105	ARCN 5000
Design Economics	ARCC 4500	ARCC 4500

• Files within course folders are consistently named identifying subject, assignment and grade range (High, Medium, or Low pass)

## **Condition 3 – Public Information**

Condition: 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.

#### **Team Comments:**

"The Team notes the lack of conformance of the published text with the wording of Annex A of the CACB Conditions and Procedures.

Equally important, the information available to prospective and current students is ambiguous about the current accreditation status of the proposed MArch1 sequence, and less than clear about the points of choice and assessment within the four streams of the BAS degree and the competitive nature of application to the existing professional MArch.

While incidental to fulfilment of this criterion, the team notes that the web presence of the professional program offers little evidence of the strengths and specific cultural ethos embodied in the School's daily life."

#### **Response:**

The four areas deemed "not met" are identified as:

- 1) Conformance of published text with Annex A
- 2) Clarity regarding accreditation status of M.Arch1 sequence
- 3) Clarity regarding points of choice and assessment in BAS degree
- 4) Clarity regarding competitive nature of application to the Master of Architecture

We have addressed these points on the University website and in our new "Prospectus" document for the graduate program.

#### **Table of Action Taken for Condition 3**

	Conformance	Clarity re	Clarity re Points of	Clarity re
	with Annex A	Accreditation Status	Choice and	Competitive
		for M.Arch1 sequence	Assessment in BAS	Application to
				M.Arch
University Website	Х	Х	Х	Х
Graduate Prospectus	Х	Х		Х
publication				

#### **Narrative for Condition 3 – Public Information:**

#### 1) CONFORMANCE WITH ANNEX A

a) Completed Changes

CACB Focused Evaluation Report 2013 <u>and</u> Clarification of M.Arch1 Sequence 29 Apr/13 Carleton University – Azrieli School of Architecture & Urbanism

i) We have updated our website to conform to Annex A as it is published in the 2012 CACB Conditions and Terms for Accreditation. We would note that in the letter dated June 29<sup>th</sup>, 2012 from CACB President, Ivan Martinovic we were asked to post text stating that "...all provinces *require* a degree from an accredited professional degree program..." instead of "...all provinces *recommend* a degree from..." In our best efforts to follow the wishes of the CACB, we have followed the wording for Annex A as provided by the Visiting Team Report, but will change this to "*require*" should this be deemed to be the correct wording. See:

http://www1.carleton.ca/architecture/current-graduate-students/master-of-architecture-1-m-arch1/

 We have created a new recruitment document for the Master of Architecture program entitled the "Graduate Prospectus". The Prospectus was written to conform to Annex A as published in the 2012 CACB Conditions and Terms for Accreditation. The Graduate Prospectus may be viewed online at:

http://issuu.com/azrielischoolofarchitecture/docs/2012-2014graduateprospectus

# 2) CLARITY REGARDING ACCREDITATION STATUS FOR THE M.Arch1 CURRICULAR SEQUENCE:

#### a) Completed Changes

i) With this section, we with to make clear that the M.Arch1 is simply a new sequence to the first professional degree at Carleton University - the Master of Architecture. We have updated our website to reflect this clarity.

As per the CACB website, the accreditation status at Carleton University is as follows<sup>1</sup>:

Degree: **Master of Architecture**: Accredited since 2005 Terms of accreditation: Six-year term with a Focused Evaluation at the end of Three years 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.

ii) We have created a diagram to assist in making clear the various paths towards our accredited degree – the Master of Architecture (See Figure 1 below). This diagram is included on our website at:

 $\underline{http://www1.carleton.ca/architecture/current-graduate-students/master-of-architecture-1-m-arch1/2000}{} \\$ 

This diagram is also used in our Graduate Prospectus available at:

http://issuu.com/azrielischoolofarchitecture/docs/2012-2014graduateprospectus

# Note: Further elaboration of the M.Arch1 program is presented in Part 2 of this report beginning on page 30.

<sup>&</sup>lt;sup>1</sup> CACB website, http://www.cacb-ccca.ca/index.cfm?Voir=sections&Id=8355&M=1357&Repertoire\_No=660386109 last accessed 22 March, 2013, 5:17P PM.



sequence

**M.ARCH**: According to the Canadian Architectural Certification Board: Conditions and Terms for Professional Degrees and Curriculum, the **M.Arch sequence** leading to the first professional degree (Master of Architecture) conforms to Condition 3.11 as a "Master of Architecture degree with a related pre-professional bachelor's degree; requirement typically amounting to five or six years of study".

\* M.ARCH1: According to the Canadian Architectural Certification Board Conditions and Terms for Professional Degrees and Curriculum, the M.Arch1 sequence leading to the first professional degree (Master of Architecture) conforms to Condition 3.11 as a "Master of Architecture degree without a pre-professional requirement, consisting of an undergraduate degree plus a minimum of three years of professional studies".

At Carleton University, the M.Arch1 sequence is a 13.0 credit course of study. Students without significant professional course-work (including design studios) must follow the M.Arch1 sequence (with up to a maximum of an additional 2.5 credits of Professional Studies) to complete the Master of Architecture, as shown in the chart above.

# Figure 1: Diagram showing the various paths to first-professional degree at Carleton University: Master of Architecture.

#### 3) CLARITY REGARDING POINTS OF CHOICE AND ASSESSMENT IN THE B.A.S.

#### a) Completed Changes

i) We have posted the following chart (see Figure 2 below) on our school website to best describe the paths of study available at Carleton University.

Carleton University - Azrieli School of Architecture - Program Flow-through Chart



### Figure 2: Carleton Architecture: Program Flow-Through Chart

Our school website links to the University Calendar entry regarding the points of assessment after the 1st year of the B.A.S to give easier access to this information. The link leads to information published in the Undergraduate Calendar under Academic Performance Evaluation in Section 7.5 - "Additional Information Concerning Academic Performance Evaluation for Some Degrees" and can be found at:

 $\underline{http://calendar.carleton.ca/undergrad/regulations/academicregulationsoftheuniversity/acadregsuniv7/$ 

Figure 2 depicts the admission of approx. 85 students into the 1st year of the BAS, all of whom are enrolled in a common curriculum.

All students choose their Major after the common first year. Continuation in the Design major requires that students meet the Calendar's criteria - Section 7.5 upon completion of their first year, namely:

- Minimum grade point average of 8.00 taken over the following courses: <u>ARCS 1005</u> Drawing, <u>ARCS 1105</u> [1.0] Studio 1, <u>ARCN 2106</u> Introduction to Multimedia;
- An overall CGPA of 6.00 or higher.
- iii) We have posted a link to the University Calendar regulations for each BAS Major on our school website so it is easily accessed by the public and by our students. The link is:

http://calendar.carleton.ca/undergrad/undergradprograms/architecturalstudies/

All students complete their distinct BAS - Major in years 2 through 4 graduating with a Bachelor of Architectural Studies with a Major identified as follows:

- Bachelor of Architectural Studies with a Major in Design
- Bachelor of Architectural Studies with a Major in Urbanism
- Bachelor of Architectural Studies with a Major in Conservation & Sustainability
- Bachelor of Architectural Studies with a Major in Philosophy & Criticism

Typically 60-65 students continue in the BAS - Major in Design while 20-25 students continue in an alternate Major.

#### 4) CLARITY REGARDING COMPETITIVE APPLICATION TO THE MASTER OF ARCHITECTURE

#### a) Completed Changes

i) We have updated our website to indicate that all students, including internal students, must apply to the Master of Architecture Program. The on-line information can be found at:

http://www1.carleton.ca/architecture/current-graduate-students/master-of-architecture-1-m-arch1/

- ii) We have produced a new "Graduate Prospectus" that clearly describes the criteria for admission to each curricular sequence leading to the Master of Architecture degree.
- **iii)** We have initiated a new <u>Graduate Recruitment Event</u> to better communicate the various courses of study at Carleton. Our inaugural event was held on January 25<sup>th</sup>, 2013 where we invited all our own third and fourth year undergraduate students and sent out invitations to neighbouring schools to discuss the competitive nature of the program and the unique content of the graduate studies at Carleton.

As shown above in Figure 2, our graduate program at Carleton is separated into two distinct pillars; **practice** via the first Professional Degree (Master of Architecture) and **research** via the MAS/PhD.

## **SPC B2 – Program Preparation**

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

#### **Team Comments:**

"While aspects of program preparation appear in various aspects of the curriculum, there is no instance in which specific focus is exercised and sustained. While certain of the thesis work observed was exemplary in this matter, engagement with program preparation was – not unreasonably – inconsistent across the range of thesis preoccupations."

#### **Response:**

The area deemed "not met" is identified as:

1) Program Preparation in a specific identified studio.

We have added or enhanced modules and requirements for this point into the following courses or sections of courses as follows:

Course Name	Course Code	Program PREPARATION
M.Arch1 Studio II	ARCS 5103	Х
M.Arch1 Studio III	ARCS 5104	Х
Grad Studio 1	ARCS 5105	starting fall 2013
Thesis – Directed Research Studio	ARCN 5909	starting fall 2013

#### Table of Action Taken for SPC B2 – Program Preparation

#### Narrative for SPC B2 – Program Preparation:

#### **1) PROGRAM PREPARATION**

In our interpretation, the ability to prepare a program comes in two stages, *interpretation* of program, and *preparation* of program. *Interpretation of program* occurs at all levels of undergraduate and graduate studios, increasing in complexity throughout the professional program. This was in place during the Accreditation Visit. We have focused our efforts to *fully prepare a program in a specific studio*, firstly in the second and third studio of our M.Arch1 sequence (Studio III) and secondly in the new Master's "Gateway Studio" which <u>all</u> students in the graduate program must complete.

#### a) Completed Changes

i) M.Arch 1-Studio II in the Winter of 2013 required students to develop alternate programs for a competition in which an existing building was undergoing adaptive reuse. Each student was required to research and justify their program selection and develop their own

building program. This course outline and samples of student work can be found in the Folder entitled: M.Arch1-Studio II\_ARCS 5013.

M.Arch 1-Studio III in the Fall of 2012, required students to choose a site on Carleton campus, and to identify the needs of the university, the local community and to work within the proposed site in the creation of a program for a building that dealt with hospitality and the context of enhanced community exchange. The buildings were required to have an exhibition space, accommodation spaces for visitors, a café and other "hospitality" programs defined in broad strokes. From this, students developed diverse, individually defined programs ranging from a light-rail station, a new Student Unicentre building, a Recreational Kayak Sports Club, and a Media Centre. This course outline and samples of student work can be found in the Folder entitled: M.Arch1-Studio III\_ARCS 5014.

#### b) Future Changes

i) The new Master's Gateway Studio (ARCS 5105/ARCN 5909): In the fall of 2013, we will initiate a new Master's Gateway Studio for <u>all</u> graduate students working towards their first professional degree at Carleton. This studio will occur in the Fall semester and be paired with the Advanced Building Systems core course. Over the course of the semester, students will be required to prepare a detailed building program appropriate for a large building.

## **SPC B8 – Environmental Systems**

**Criteria:** *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.

#### **Team Comments:**

"Acoustics, artificial illumination, and mechanical systems for large buildings are apparently not being taught in the current year, although a breadth of related material including building envelopes and natural light are covered in the technical sequence in good detail. Faculty involved appear enthusiastic and well respected by students and their peers."

#### **Response:**

The three areas deemed "not met" are identified as

- 1) Acoustics
- 2) Artificial Illumination
- 3) Mechanical Systems for Large Buildings

We have added or enhanced modules and requirements for these three areas into the following courses or sections of courses as follows:

			1	2	3
	Undergrad	Grad Course	Acoustics	Artificial	Mechanical
	Course	Number		Illumination	Systems for Large
	Number				Buildings
Tech 1	ARCC 2202	ARCC 5096	Starting fall 2013	Starting fall 2013	
Tech 3	ARCC 2203	ARCC 5098	X (L Oct 31)	X (L Oct 24)	X (L Oct 24)
Tech 4	ARCC 3202	ARCC 5099	X (L Oct 11)		
Advanced Building		ARCC 5100		X (A1)	X (A1, A2, A3)
Studio 4	ARCS 3105		X (P3)		
Studio 5	ARCS 3106				Х
M.Arch1 Studio III		ARCS 5104		X (P3)	X (P3)

#### Table of Action Taken for SPC B8 – Environmental Systems

#### Narrative for SPC B8 – Environmental Systems:

#### 1) ACOUSTICS

a) Completed Changes:

CACB Focused Evaluation Report 2013 <u>and</u> Clarification of M.Arch1 Sequence 29 Apr/13 Carleton University – Azrieli School of Architecture & Urbanism

- i) Tech 3 has added a lecture module on acoustics, delivered in the October 31<sup>st</sup>, 2012 lecture. This lecture addressed STC ratings, acoustic isolation and techniques for controlling acoustic transmission through vibration. The course used case studies such as Frank Gehry's Disney Concert Hall in Los Angeles and the Royal Conservatory of Music in Toronto by KPMB with specific focus on construction details used to isolate the concert halls from the rest of the building. The quiz at the end of the acoustics lecture addressed calculation of STC ratings. The course outline and student work can be found in the Folder entitled: "Tech3\_ARCC 2203\_ARCC 5098".
- ii) Tech 4 includes a full lecture dedicated to acoustics, delivered on October 11<sup>th</sup> in 2012. It focuses on sound control, including sources of sound (air-borne and impact sounds), transmission of sound including flanking, the types of sound control, measurement of sound transmission (Sound Transmission Coefficient, Impact Insulation Class) and a discussion of decibel ratings and detailed comparisons of construction details for sound control. The course investigates building envelope detailed design relating to acoustics, including sound absorption in partitions in different types of construction (wood, concrete or steel), construction details of partitions, party floors and party walls across various building types (residential, multi-unit residential and commercial). Reference Material is also provided in the lectures relating to acoustics and sound control as well as reference and definitions outlined in the National Building Code. The course outline and student work is included in the Folder entitled: "Tech 4\_ARCC 3302\_ARCC 5099".
- **iii**) Studio 4 incorporated a new building type as the major building project of the term to allow the concept of acoustics to be introduced in the third year studio. Project 3, the Research Centre in Almonte included the assessment of a 250 seat auditorium in a heritage building and the design of a new 150 seat auditorium. This project introduced students to the basic ideas of acoustics and spatial arrangements in a theatre. Elements addressed included issues of materiality, the concept of ceiling and wall profiles, and sight lines. This course outline and student work is in the Folder entitled: "Studio 4\_ARCS\_3105".

#### **b)** Future Changes:

i) We will introduce a lecture module on acoustics to our Tech 1 class in the fall of 2013 through a discussion of materials and acoustic properties as it relates to interiors in small-scale wood frame buildings.

#### 2) ARTIFICIAL ILLUMINATION

#### a) Completed Changes:

- i) Tech 3 has added a lecture module on artificial illumination that was delivered on October 24<sup>th</sup>, 2013. The lecture addresses foot candles and lumens, how they are calculated, how to determine sufficient lighting, including electrical systems from source to switch, circuits, voltage, amps, resistance and conductivity as they relate to various types of equipment and appliances. The quiz at the end of class addresses simple electrical concepts. The Case Study (Assignment #3) required students to identify the electrical room and understand the wiring diagrams and symbols. The course outline and student work is in the Folder entitled: "Tech 3\_ARCC 2203\_ARCC 5098".
- ii) Our Advanced Building course was completely revised in the summer of 2012 to address several key areas, with a focus on contemporary environmental systems and building

performance. In Assignment 1, students were asked to dissect a given project and identify, describe and understand all of the integrated building systems including artificial illumination. This course outline and student work is in the Folder entitled: "Advanced Building\_ARCC 5100".

iii) M.Arch1-Studio III incorporated the concept of electric lighting into their project design for a building on Carleton University campus dealing with hospitality services. Students were taken on a field trip to a lighting design and distribution company to understand the most recent lighting technologies including incandescent, fluorescent, compact florescent and LED. This included a demonstration of the appropriate use and energy issues relating to each fixture type. Students were given catalogues from which they were to choose appropriate fixtures for their large-scale buildings. A studio discussion on lighting qualities for various uses of space including experiments with low-voltage halogen lighting was delivered during Project 1. This course outline and student work is in the Folder entitled: "M.Arch1-Studio III\_ARCS 5014".

#### **b)** Future Changes:

i) We will introduce a lecture module on artificial illumination to our Tech 1 class in the fall of 2013 through a discussion of the qualities of light from natural and artificial sources as it relates to interiors.

#### 3) MECHANICAL SYSTEMS FOR LARGE BUILDINGS

#### a) Completed Changes:

- Tech 3 has added a lecture module on mechanical systems for large buildings that was delivered on October 24<sup>th</sup>, 2012. The lecture addressed topics in HVAC, including the use of rooftop chillers and how they are mounted including detailed drawings of the roof penetrations. Other elements of the HVAC lecture included forced air systems types, variable air volume controls, supplementary heating (e.g. perimeter heating) radiant floor heating and cooling (such as in a hockey arena) and ground source heating. The case study (assignment #3) analyses the mechanical systems in large buildings such as a library or concert hall etc. The course outline and student work is in the Folder entitled: "Tech3\_ARCC 2203\_ARCC 5098".
- ii) Studio 5
- iii) Our Advanced Building course was completely rewritten in the summer of 2013 to address several key areas, with a focus on contemporary environmental systems and building performance. The course explores *Large Buildings* as the primary building type. Mechanical Systems for large buildings, including the principles and concepts for mechanical systems and environmental control systems is a major part of all three assignments. Students were asked to propose systems for large buildings in Assignment 3 with a focus on solar shading explored through iterative designs. Examples of the student knowledge of mechanical systems for large buildings can be seen in Assignments 1, 2 and 3. This course outline and student work is in the Folder entitled: "Advanced Building\_ARCC 5100".
- **iv)** M.Arch 1-Studio III introduced the concept of <u>mechanical systems for large buildings</u> in the design studio's Project 3. A formal studio lecture on HVAC systems for large

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buildings was delivered including basic rules of thumb for duct-sizes and air handling equipment. Students also were required to perform calculations of distribution duct sizes for their studio project, and to locate the mechanical rooms and the primary paths for duct distribution in their building designs. This course outline and student work is in the Folder entitled: "M.Arch1-Studio III\_ARCS 5014".

## **SPC B 10 – Building Service Systems**

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

#### **Team Comments:**

"Plumbing, electrical, communication and sprinkler & other fire protections systems are not evident in the material made available to the reviewing team."

#### **Response:**

The four areas deemed "not met" are identified as

- 1) Plumbing
- 2) Electrical
- 3) Communication
- 4) Sprinkler and other fire suppression systems

We have added or enhanced modules and requirements for these four areas into the following courses or sections of courses as follows:

			1	2	3	4
			Plumbing	Electrical	Communication	Sprinkler/Fire Suppression
Tech 1	ARCC 2202	ARCC 5096	X (Dec 2)	Starting fall 2013	3	
Tech 3	ARCC 2203	ARCC 5098	X (Oct 24)	X (Oct 24)	X (Nov 7)	X (Sept 19)
Tech 4	ARCC 3202	ARCC 5099				X (L Oct 11)
M.Arch1 Studio I			X (P2)			
Advanced Building	ARCC 5100		X (A1)	X (A1)	X (A1)	X (A1)
Studio 4	ARCS 3105				X (L Sept 12)	

#### Table of Actions Taken for SPC B10 – Building Service Systems

#### Narrative for SPC B10 – Building Service Systems:

#### 1) PLUMBING

#### a) Completed Changes

i) Tech 1 now includes a lecture module (delivered on December 2, 2012) that addresses plumbing in small-scale wood frame construction. Topics include type of piping and how plumbing runs and fixtures should be vertically stacked. The course outline and student work is in the Folder entitled: "Tech1\_ARCC 2202\_ARCC 5096".

- ii) Tech 3 has added a lecture module on plumbing systems, delivered on October 24<sup>th</sup>, 2012. The lecture addressed sanitation runs versus supply feeds, operation of fixtures, concepts of water pressure as well as city services and storm water management. A short quiz on these topics at the end of class as well as documentation of plumbing in the Case Study (Assignment #3) tested students understanding of these concepts. The course outline and student work is in the Folder entitled: "Tech3\_ARCC 2203\_ARCC 5098".
- iii) M.Arch1 Studio I included studio discussion of on-grid water dispersion and usage, water services location in the building, off-grid water collection, site attributes and water sourcing from the site. The course outline and student work is in the Folder entitled: "M.Arch1 Studio I\_ARCS 5102".
- **iv**) Our Advanced Building course was completely rewritten in the summer of 2013 to address several key areas, with a focus on contemporary environmental systems and building performance. The first exercise is a full building systems inventory and includes plumbing systems. Students also looked at issues of storm water and grey water recycling. Examples of the student knowledge of plumbing systems can be seen in Assignments 1, 2 and 3. This course outline and student work is in the Folder entitled: "Advanced Building\_ARCC 5100".

#### 2) ELECTRICAL

#### a) Completed Changes

- Tech 3 has added a lecture module on electrical systems, delivered on October 24<sup>th</sup>, 2012. The lecture addresses foot candles and lumens how they are calculated, how to determine sufficient lighting, including electrical systems from source to switch, circuits, voltage, amps, resistance and conductivity as they relate to various types of equipment and appliances. The quiz at the end of class addresses simple electrical concepts. The Case Study (Assignment #3) required students to identify the electrical room and understand the wiring diagrams and symbols. The course outline and student work is in the Folder entitled: "Tech3\_ARCC 2203\_ARCC 5098".
- Our Advanced Building course now has a focus on contemporary environmental systems and building performance. The first exercise is a full building systems inventory and includes electrical systems. The course explored electricity generation through active systems such as photovoltaic cells, wind and geothermal energy. Examples of the student knowledge of electrical systems can be seen in Assignments 1, 2 and 3. This course outline and student work is in the Folder entitled: "Advanced Building\_ARCC 5100".

#### **b)** Future Changes

i) We will introduce a lecture module on electrical systems to our Tech 1 class in the fall of 2013 including a presentation of electrical systems in residential wood-frame construction.

#### **3) COMMUNICATION**

#### a) Completed Changes

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- Tech 3 has added a lecture module on communication systems that was delivered on November 7<sup>th</sup>, 2012. Students will have an understanding of how to locate telephone rooms, connections required for internet and cable as well as issues relating to penetrations made in the building for these types of services. Drawing details of fire stops, the use of the plenum, entry and exit points for communication services and general locations for communication rooms are also covered. The course outline and student work is in the Folder entitled: "Tech3\_ARCC 2203\_ARCC 5098".
- ii) As part of our Studio 4 lecture series for Project 2 (the Design-Build of a new Hybrid Studio environment) students received a one-hour lecture entitled "Wired and Wireless" communication systems. This included concepts of amperage/wattage/voltage, computer connections and their various speeds relating to data volume, fibre optics versus copper connections, cloud computing and power requirements for computers and networks. This course outline and student work is in the Folder entitled: "Studio 4\_ARCS\_3105".
- iii) Our Advanced Building course now has a focus on contemporary environmental systems and building performance. The lectures covered topics including communication systems with a focus on the concepts and systems for smart building technologies and automated environmental systems. Examples of the student knowledge of communication systems can be seen in Assignment 2. This course outline and student work is in the Folder entitled: "Advanced Building\_ARCC 5100".

#### 4) SPRINKLER & OTHER FIRE SUPPRESSION SYSTEMS

#### a) Completed Changes

- Tech 3 has added a lecture module on fire suppression systems that was delivered on September 19<sup>th</sup>, 2012. Students will have an understanding of "Siamese connections" and their location, water pressure, sprinkler location and distribution as per the building code. They will also understand "occupancies" as defined by the OBC, as well as their related fire ratings, fire separation classes, occupancy types, and sprinkler requirements within these types. The course outline and student work is in the Folder entitled: "Tech3\_ARCC 2203\_ARCC 5098".
- ii) Tech 4 presents a full lecture dedicated to fire suppression systems, delivered on October 11<sup>th</sup>, 2012. This lecture, under the heading of Floor and Wall Systems is paired with the module on sound control. Students will understand Fire Resistance Ratings (FRR), Fire Protection Ratings (FPR), openings in fire separations including walls, windows and doors. The lecture goes over the difference between a fire separation and a firewall including design details and associated reference materials. Topics relating to fire separation in the National Building Code are examined including limiting distances, access for fire-fighting equipment and other fire control strategies. Additionally, the topic of combustible construction and the difference between wet and dry systems of fire suppression including sprinkler and non-sprinkler options are explored. The course outline and student work is included in the Folder entitled: "Tech 4\_ARCC 3302\_ARCC 5099".
- iii) Our Advanced Building course now has a focus on contemporary environmental systems and building performance. The first exercise is a full building systems inventory and includes sprinkler and other fire suppression systems. Examples of the student knowledge of fire suppression systems can be seen in Assignments 1. This course outline and student work is in the Folder entitled: "Advanced Building\_ARCC 5100".

## SPC C2 - Building Systems Integration

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

#### **Team Comments:**

"Student work demonstrates an ability to integrate knowledge of structural systems and building envelopes, but other issues are not consistently present."

#### **Response:**

The three areas deemed "not met" are identified as

- 1) Environmental Systems into building design
- 2) Life Safety Systems into building design
- 3) Building Service Systems into building design

We have added or enhanced modules and requirements for these three areas into the following courses or sections of courses as follows:

			8	
		Environmental Systems	Life Safety Systems	Building Service Systems
		into building design	into building design	into building design
Advanced	ARCC	X (A3)	X (A3)	X (A3)
Building	5100			
Studio 4	ARCS		X (P3)	
	3105			
Studio 5	ARCS	X (P1)	X (P1)	
	3106			
M.Arch1	ARCS	X (P3)	X (P3)	
Studio III	5104			
Grad Studio 1	ARCS	Starting Fall 2013	Starting Fall 2013	Starting Fall 2013
	5105	-	-	_

Table of Action Taken for SPC C2 – Building Systems Integration

#### Narrative for SPC C2 - Building Systems Integration

#### 1) ENVIRONMENTAL SYSTEMS INTEGRATION INTO BUILDING DESIGN

#### a) Completed Changes

i) Our Advanced Building course was completely rewritten in the summer of 2012 to address several key areas, with a focus on contemporary environmental systems and building performance. Examples of the student knowledge of environmental systems integration into building design can be seen in Assignments 3. In this project, students acquire the ability to develop a schematic design for an institutional-scale building with an emphasis on proposing and testing building form and orientation through iterative design modelled in "Rhino" with a day-lighting and energy modelling plug-in (DIVA). Students understand the relationship between building form and energy performance in this process by

analyzing day-lighting and passive solar radiation as a primary component of the environmental systems. Metrics for illumination and radiation were the primary elements of Assignment #3. This course outline and student work is in the Folder entitled" "Advanced Building\_ARCC 5100"

- **ii**) Studio 5 required that students develop the ability to locate environmental systems into their studio design including HVAC, lighting grids, plumbing stacks, mechanical rooms and to demonstrate this ability via a large axonometric of the building's environmental systems utilizing "Building Information Modelling" software. The course outline and student work is in the Folder entitled: "Studio 5\_ARCS 3106".
- iii) M.Arch 1-Studio III introduced students to the concept of environmental systems integration into a building design in their design studio's Project 3. A formal studio lecture was given on day-lighting principles, performance of building envelopes and natural ventilation. Students were required to demonstrate their ability to integrate building orientation, shading devices and envelope design in their studio project proposals. The course outline and student work is in the Folder entitled: "M.Arch1-Studio III\_ARCS 5014".

#### **b)** Future Changes

 New Graduate Gateway Studio's integration with Advance Building core course: After having tested our new Advanced Building course in the fall of 2012, we are now planning to further integrate it with the graduate program's new Master's Gateway Studio (ARCS 5105) required of all graduate students. Students must demonstrate an ability to integrate environmental systems into their studio project.

#### 2) LIFE SAFETY SYSTEMS INTEGRATION INTO BUILDING DESIGN

#### a) Completed Changes

- i) Our Advanced Building course was completely rewritten in the summer of 2012 to address several key areas, with a focus on contemporary environmental systems and building performance. Examples of student's ability to integrate life safety systems into a building design can be seen in Assignment 3. Students were required to design circulation routes in the project and relate it to the integrated strategy for other building systems. In addition, students were required to demonstrate the ability to understand the relationship of egress routes and environmental systems, site strategies and building massing through iterative design. This course outline and student work is in the Folder entitled: "Advanced Building\_ARCC 5100".
- Studio 4 introduced the concept of life safety systems integration into building design through Project 3, the "Research Centre in Almonte". A lecture on egress and the building code with focus on fire safety and programmatic separation was given to the entire class. Topics also included code requirements concerning corridor widths, fire separations, and the relationship between renovations in an existing historic building and new construction. Students must have the ability to include appropriate egress in their design. This course outline and student work is in the Folder entitled: "Studio 4\_ARCS 3105".
- **iii**) Studio 5 requires students to understand egress for assembly and commercial occupancy for a large-scale building in their final project. Students must have the ability to include

appropriate egress in their design. The course outline and student work is in the Folder entitled: "Studio 5\_ARCS 3106".

 iv) M.Arch 1-Studio III introduced students to the concept of life safety systems integration in building design as part of their design studio Project 3. Students had to demonstrate the ability to include appropriate egress in their design. This course outline and student work is in the Folder entitled: "M.Arch1-Studio III\_ARCS 5014".

#### c) Future Changes

 New Graduate Gateway Studio's integration with Advanced Building core course: After having tested our new Advanced Building course in the fall of 2012, we are now planning to further integrate it with the graduate program's new Master's Gateway Studio (ARCS 5105) required of all graduate students.. Students will be required to demonstrate the ability to integrate life safety systems into their studio project.

#### 3) BUILDING SERVICE SYSTEMS INTEGRATION INTO BUILDING DESIGN

#### a) Completed Changes

i) Our Advanced Building course was completely rewritten in the summer of 2012 to address several key areas, with a focus on contemporary environmental systems and building performance. Examples of the student knowledge of building service systems integrated into a building design can be seen in Assignment 3. This course outline and student work is in the Folder entitled: "Advanced Building\_ARCC 5100".

#### **b)** Future Changes

i) New Graduate Gateway Studio's integration with Advanced Building core course: After having tested our new Advanced Building course in the fall of 2012, we are now planning to further integrate it with the graduate program's new Master's Gateway Studio (ARCS 5105) required of all graduate students.. Students will be required to demonstrate the ability to integrate building service systems, including plumbing, electrical, vertical transportation, communication, security, and fire protection systems into their studio projects.
### <u>SPC C4 – Comprehensive Design</u>

**Condition:** *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.

### **Team Comments:**

"The level four studio focused upon housing design offered evidence of student attention to a reasonable level of detail in certain aspects of this criterion. However, since lighting, acoustics & mechanical systems are not currently being taught, these components are simply not evident – comments on other required concerns as noted.

The team notes some concern regarding the building type and complexity presented as the appropriate vehicle for successfully undertaking the intent of this criterion. It was also noted that since the intended comprehensive occurs within the undergrad portion of the professional program, it will inevitably include students not destined to complete the full accredited program in Architecture – yet compelled to fulfill this challenging student performance criterion as part of their undergraduate degree requirements."

### **Response:**

The three areas deemed "not met" are identified as

- 1) Lighting, acoustics and mechanical systems as a part of a comprehensive design
- 2) Building type used for comprehensive design
- 3) Level of study for student completing comprehensive design

We have added or enhanced modules and requirements for these three areas into the following courses or sections of courses as follows:

		Lighting, Acoustics and	Building Type as a	Level of student
		Mechanical systems as	part of a	completing comprehensive
		part of a comprehensive	comprehensive design	design
		design		
Studio 5		X (P1)	X (P1)	
M.Arch1	ARCS	X (P3)	X (P3)	X (P3)
Studio III	5103			
Grad Studio 1	ARCS	Starting Fall 2013	Starting Fall 2013	Starting Fall 2013
	5105			
Advanced	ARCC	X (A3)	X (A3)	X (A3)
Building	5100			

### Table of Action Taken for C4 – Comprehensive Design

### Narrative for SPC C4 – Comprehensive Design

## 1) LIGHTING, ACOUSTICS AND MECHANICAL SYSTEMS AS PART OF A COMPREHENSIVE DESIGN

### a) Completed Changes

- i) Studio 5 altered the building type for the entire studio. We used a large building type a Library with Community Centre or a Gymnastics club with a hockey rink all with a large clear span, focused program and a residential component. The project required that students demonstrate the ability to integrate HVAC, lighting grids, plumbing stacks, and mechanical rooms into their project, represented in a large axonometric of the building drawn in a "Building Information Modelling" software. The course outline and student work is in the Folder entitled: "Studio 5\_ARCS 3106".
- M.Arch 1-Studio III introduced concepts for lighting and mechanical systems as part of a comprehensive design program in the design studio's Project 3. This included appropriate selection of the site, program development, preliminary design, structural and envelope design in a large building. The use of case studies offered guidance through precedent. This course outline and student work is in the Folder entitled: "M.Arch1-Studio III\_ARCS 5014".
- ii) In Advanced Building, students were required to demonstrate the ability to design lighting and mechanical systems in their iterative design project (Project 2). Acoustics was not covered. Passive day-lighting and solar strategies were the driving elements of a design proposal for institutional scale buildings. This included building orientation, massing and site development strategies. This course outline and student work is in the Folder entitled: "Advanced Building\_ARCC 5100".

### b) Future Changes

i) Grad Studio 1 – this new Graduate Gateway Studio will require of students to demonstrate their abilities to integrate lighting, acoustics and mechanical systems as part of a comprehensive design program.

### 1) BUILDING TYPE AS A PART OF COMPREHENSIVE DESIGN

### a) Completed Changes

- i) Studio 5 altered the building type for the entire studio. We used a large building type a Library with Community Centre or a Gymnastics club with a hockey rink all with large clear spans, focused program and a residential component. The course outline and student work is in the Folder entitled: "Studio 5\_ARCS 3106".
- **ii**) M.Arch 1-Studio III introduced a project to design a large public building dealing with the concept of hospitality. Students were required to demonstrate the ability to design a large building in this comprehensive studio. This course outline and student work is in the Folder entitled: "M.Arch1-Studio III\_ARCS 5014".
- **iii**) Advanced Building required students to demonstrate the ability to design a large building, with institutional or commercial program in a comprehensive design.

### b) Future Changes

**ii**) Grad Studio 1 – this new Masters Gateway Studio will require students to demonstrate the ability to design a large-scale building as part of a comprehensive design program. This new course will be coupled with the existing Advanced Building core course.

### 2) LEVEL OF STUDENT COMPLETING A COMPREHENSIVE DESIGN

### a) Completed Changes

- M.Arch1-Studio III brought comprehensive design to the graduate program as requested by the CACB Visiting Team. This course outline and student work is in the Folder entitled: "M.Arch1-Studio III\_ARCS 5014".
- **ii**) Advanced Building is a graduate course that introduces comprehensive environmental design at the graduate level as requested by the CACB Visiting Team. This course outline and student work is in the Folder entitled: "Advanced Building\_ARCC 5100".
- iii) We have clarified the placement and development of our comprehensive design studios. We now deliver the comprehensive design criteria through the pairing of technology courses and design studios in a progressive manner throughout the entire professional program as follows:

Pairings Completed Since Last Visit:

Tech 1 (ARCC 2202/5096) paired with Studio (ARCS 2105/5102) Tech 3 (ARCC 2203/5098) paired with Studio (ARCS 3105/5104)

### b) Future Changes

- i) Grad Studio 1 the new Graduate Gateway Studio will introduce the concept of a comprehensive design project to all students in the graduate program. This new course will be coupled with the existing Advanced Building core course.
- **ii**) We have clarified the placement and development of our comprehensive design studios. We now deliver the comprehensive design criteria through the pairing of technology courses and design studios in a progressive manner throughout the entire professional program as follows:

Future Pairings:

Advanced Building (ARCC 5100) paired with Studio (ARCS 5105)

## PART 2

# M.ARCH: CLARIFICATION OF M.Arch1 SEQUENCE

### INTRODUCTION

In the letter dated June 29, 2012 from the CACB president, Ivan Martinovic, the Azrieli School of Architecture & Urbanism was asked to clarify a number of points regarding the M.Arch1 sequence. Specifically we were asked to:

- a) Outline CACB Condition 3.11 (Professional Degrees and Curriculum) and the first professional degree at Carleton University, and
- b) Clarify the new M.Arch1 sequence and whether or not it is an accredited degree and,
- c) Further clarify the two paths to the Master of Architecture, and
- d) Provide evidence of how the students following the M.Arch1 sequence will meet the CACB accreditation criteria through a CACB matrix (indicating the SPC's), and
- e) Provide student work for these SPC's (included in the Appendix of this report on USB)

The clarification of the above information is herein submitted as Part 2 of this package and accompanies Part 1 - the "Focused Evaluation Report". We acknowledge that some of the information in Part 2 may repeat portions of Part 1 of this package. This allows for Parts 1 & 2 to be read independently without loss of information.

Our goal is to be clear, concise and thorough. We will therefore follow the format of the above five points as they were outlined in the CACB letter.

### A) CONDITION 3.11 & CARLETON UNIVERSITY'S FIRST PROFESSIONAL DEGREE

*Carleton only offers one first-professional degree program in architecture, namely our Master of Architecture.* We further wish to clarify that this conforms with two of the general paths to the first-professional degree as identified by CACB Condition 3.11 Professional Degrees and Curriculum;

- Master of Architecture degree with a related pre-professional bachelor's degree requirement, typically amounting to five or six years of study; and
- Master of Architecture degree without a pre-professional requirement, consisting of an undergraduate degree plus a minimum of three years of professional study.

### **B)** THE ACCREDITED DEGREE AT CARLETON UNIVERSITY

As per the CACB website, the accreditation status at Carleton University is as follows<sup>2</sup>:

Degree: **Master of Architecture**: Accredited since 2005 Terms of accreditation: Six-year term with a Focused Evaluation at the end of Three years 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.

<sup>&</sup>lt;sup>2</sup> CACB website, http://www.cacb-ccca.ca/index.cfm?Voir=sections&Id=8355&M=1357&Repertoire\_No=660386109 last accessed 22 March, 2013, 5:17P PM.

### C) TWO SEQUENCES/PATHS TO THE MASTER OF ARCHITECTURE

Clarity regarding Accreditation Status for M.Arch1 sequence:

The following diagram shows the various paths towards our Master of Architecture:



sequence

**M.ARCH**: According to the Canadian Architectural Certification Board: Conditions and Terms for Professional Degrees and Curriculum, the **M.Arch sequence** leading to the first professional degree (Master of Architecture) conforms to Condition 3.11 as a "Master of Architecture degree with a related pre-professional bachelor's degree; requirement typically amounting to five or six years of study".

\* M.ARCH1: According to the Canadian Architectural Certification Board Conditions and Terms for Professional Degrees and Curriculum, the M.Arch1 sequence leading to the first professional degree (Master of Architecture) conforms to Condition 3.11 as a "Master of Architecture degree without a pre-professional requirement, consisting of an undergraduate degree plus a minimum of three years of professional studies".

At Carleton University, the M.Arch1 sequence is a 13.0 credit course of study. Students without significant professional course-work (including design studios) must follow the M.Arch1 sequence (with up to a maximum of an additional 2.5 credits of Professional Studies) to complete the Master of Architecture, as shown in the chart above.

Figure 3: Diagram showing the various paths to first-professional degree at Carleton University: Master of Architecture.

According to Condition 3.11, "*The CACB awards accreditation only to first-professional degree programs in architecture*". We wish to be absolutely clear, that we only offer one Professional degree – the Master of Architecture at Carleton University, as per Figure 1 above.

Condition 3.11 further describes the allowable pathways to the first-professional degree as:

• Master of Architecture degree with a related pre-professional bachelor's degree; requirement typically amounting to five or six years of study;

The **definition of a pre-professional bachelors degree** is not separately stated in the CACB document, but can be deduced from the two listed paths to the first professional degree that are **defined by the number of years of study required at the graduate level** (according to the CACB Condition 3.11).

Using this deduced definition, the pre-professional bachelor's degree at Carleton University is the four-year Bachelor of Architectural Studies (**BAS**) with a Major in Design followed by two years (8.0 credits) at the Graduate level Master of Architecture.

We should also note that the definition above does state that the pre-professional degree plus Masters *typically* amounts to *five or six* years of study, but we feel that *it could amount to seven or more*, and therefore would include our other BAS Majors.

The BAS at Carleton has four distinct majors, each of which complete varying components of the CACB Professional Program at the undergraduate level with the remaining components of the professional program delivered at the graduate level:

- BAS (Major in Design) requires 8.0 additional credits at the graduate level,
- BAS (Major in Conservation & Sustainability) requires 13.0 additional credits at the graduate level
- BAS (Major in Urbanism) also requires 13.0 additional credits at the graduate level, and
- BAS (Major in Philosophy & Criticism) requires a full 15.5 additional credits at the graduate level

The critical reason for these definitions is to ensure that the Student Performance Criteria are met by all sequences to the first Professional Degree at Carleton, the Master of Architecture, as demonstrated in Part 2 of this report.

• Master of Architecture degree without a pre-professional requirement, consisting of an undergraduate degree plus a minimum of three years of professional studies;

This definition would clearly apply to students admitted to our 13.0 + 2.5 = 15.5 credit sequence (referred to as the M.Arch1 sequence) leading to the Master of Architecture , who apply from outside architecture and who hold a university- level Honours Degree, normally consisting of 20 credits over 4 years of study.

The diagram in Figure 1 above depicting the various sequences to the first Professional Degree (Master of Architecture) at Carleton University is available online as public information at:

http://www1.carleton.ca/architecture/current-graduate-students/master-of-architecture-1-m-arch1/

Pursuing the first professional degree in Architecture (Master of Architecture):

- Note that we admit approximately 45 students each year into the Master of Architecture:
  - 30 to the M.Arch (8 credit) sequence,
  - 15 to the M.Arch1 (13+ credit) sequence
- a) Carleton students wishing to pursue their first professional degree must **apply** to the Master of Architecture. Admission is not guaranteed for internal applicants. Students graduating from the BAS-Design will follow the M.Arch (8 credit) sequence. Students graduating from the BAS-C&S or BAS-Urbanism majors must follow the M.Arch1 (13.0 credit) sequence. Students graduating from the BAS-P&C must follow the M.Arch1 (13.0 + 2.5) credit sequence.
- b) External applicants with a pre-professional bachelor's degree in architecture may also apply to the Master of Architecture and are individually assessed for the sequence they are required to complete.
- c) Students with an Honours degree in fields of study other than Architecture may also apply to the Master of Architecture and must follow the M.Arch1 (13.0 + 2.5) credit sequence.
- d) Students may also complete a one-year Graduate Diploma in Architectural Conservation during their Master of Architecture studies as per Figure 2.

Pursuing the PhD or MAS (non-professional graduate studies in Architecture):

e) Students wishing to pursue a graduate degree in architecture that does not lead to the first professional degree can apply to Master of Architectural Studies (MAS) or the PhD as indicated in Figure 2 in Part 1 of this report.

### **Definition of the term M.Arch1:**

As per Figure 1, Carleton University only offers one professional degree, namely the Master of Architecture (our only first-professional degree), accredited until December 31, 2016 with this **Focused Evaluation** (in **2013**).

To differentiate between the two-year (8 credit) path to the degree of Master of Architecture and the 3-to-3.5 year (13 to 15.5 credit) path to the Master of Architecture, Carleton adopted the commonly used distinction of **M.Arch** (for the 2-year) and **M.Arch1** (for the 3 - 3.5 year). This terminology is used in similar programs in both Canada (University of Calgary) and the US (Sci-ARC, Cornell, University of Pennsylvania, and UCLA to name a few) and provides applicants with clarity as to the admissions options and curricular sequences available at Carleton.

Secondly, at the Faculty of Graduate and Postdoctoral Affairs at Carleton, it was necessary to distinguish between graduate students enrolling in the typical 2-year sequence versus a 3-year sequence for clarity of internal tracking and the duration of provincial funding. (Typical Masters funding from the Province is only allotted for 2 years. Our MArch1 is distinguished by a unique 3.5 year funding formula, required to properly support the program).

### CACB Focused Evaluation Report 2013 <u>and</u> Clarification of M.Arch1 Sequence 29 Apr/13 Carleton University – Azrieli School of Architecture & Urbanism

Finally, it is important to note that the M.Arch1 sequence completes the three CACB curricular components for the Master of Architecture (General Studies, Professional Studies, and Electives) by placing the *Professional Studies* component towards the end of the curricular path (i.e. within the Master of Architecture curriculum - see Figure 1), while the majority of the *General Studies* and *Elective* courses are undertaken as part of the Honours Degree or BAS Major (Urbanism, Conservation & Sustainability, Philosophy & Criticism) curricula.

It should also be noted that the *Professional Studies* courses identified for the M.Arch1 curricular sequence are the **same courses** taken by those in the BAS/M.Arch sequence but identified with a Graduate Course numbering system. These courses are otherwise identical (i.e. they are in the same classrooms with the same teachers, delivering the same content, with the same assignments). As an exception, <u>the first three design studios</u> in the M.Arch1, are delivered separately from the existing BAS/M.Arch sequence in order to ensure accelerated content, skills and production.

Lastly, the Professional Studies of the M.Arch1 sequence comprise 15 credits at the graduate level, out of a total of 35.5 credits (assuming the normal 20-credit Honours degree) for a total of 42% of the student's post-secondary education, meeting the CACB requirement for balance between undergraduate and graduate studies.

D) CACB MATRIX OF SPC'S FOR THE M.ARCH1 SEQUENCE (PROFESSION	<b>JAL STUDIES</b> )
--	----------------------

Course title	Course Number	Matchi ng Course	B AS	M.Ar ch	MArc h1	A 1	A 2	A 3	A 4	A 5	A 6	A 7	A 8	A 9	В 1	В 2	B 3	В 4	B 5	В 6	В 7	B 8	B 9	B 10	B 11	B 12	C 1	C 2	C 3	C 4	D 1	D 2	D 3	D 4	D 5	D 6
PROFESSIO NAL STUDIES																																				
Tech 1	ARCC 2202	ARCC 5096	√		√	X	Х	X	X	0			X	х				/		/	X	0	X	0	Х			0	X					Γ	X	
Tech 2	CIVE 2005	ARCC 5097	~		$\checkmark$		Х							Х	/						Х		/		/											
Tech 3	ARCC 2203	ARCC 5098	√		√	X	Х	Х	Х				Х	Х				/		/	Х	0	Х	0	Х			X	Х					Π	Х	Х
Tech 4	ARCC 3202	ARCC 5099	√		√	X	X	Х		Х	Х	Х		Х				X		X	X	0	Х	0	X	X	Х	/	Х	/	X	Х	X	/		/
Design Economics	ARCC 4500		√		√	X	Х	X	X	X	X			х	X	Х	X	/	0	/		/	/	/	/	Х			/	/	X	/	/	/	X	/
Advanced Building	ARCC 5100			V	√	X		X	X				Х		X			X			Х	0		0	Х		х	0		0				Π		
Professional Practice	ARCC 5200			V	√	X	X		X																	Х					X	Х	X	X	X	Х
Modern Architecture	ARCH 2300	ARCH 5010	√		√	X	X		X	0	X	X	Х	Х							/		/		/											
Grad Seminar 1	ARCH 5200			√	√	X	X	0	Х	0	Х	Х	Х	Х		0	0	0			0	0							0	0				Π		
Grad Seminar 2	ARCH 5201			√	V	X	X	X	X	0	0	X	Х	Х		0	0	0	l		0	0							0	0				Γ		
Computer Aided Design	ARCN 2105	ARCN 5000	√		V	X	Х	X		0			0	0	X				l										Х					Γ		
Advanced Representatio n	ARCN 5005	new course			~	х		Х					х	X	х		х																			
MArch1 Studio I	ARCS 5102				√	Х	X	Х		Х	X			Х	Х	X	X				X		X	0	X				Х	0				Γ		
MArch1	ARCS				$\checkmark$	Х	Х	Х	Х		Х	Х	Х	Х	Х	0	X	Х	Х	Х	Х	/	/		Х		Х			Х			T	Π		İ
Studio II	5103																																			
MArch1	ARCS				$\checkmark$	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	0	Х	Х	Х	Х	Х	0	Х	Х	Х		Х	0	Х	Х						
Studio III	5104																																			
Grad Studio 1	ARCS 5105			$\checkmark$	$\checkmark$	Х	Х	Х	Х	0	Х	Х	Х	Х	Х	0	Х	0	Х	0	Х	0	0	0	Х		Х	0	Х	0						
Grad Studio 2	ARCS 5106			√	$\checkmark$	X	х	X			X	X	X	х	X	Х	Х	Х			х		Х	0	/		x									
Directed Research Studio	ARCN 5909			V	~	Х	Х	Х	Х	0	Х	0	Х	Х	Х	0	X	0	Х	0	х	0	Х	0	Х		X	0	0	0						

 $\checkmark$  = class taken with BAS or M.Arch students, or as separate class

• = Course content revised since last visit to meet CACB Student Performance Criteria

X = CACB SPC Criteria Met by Course

0 = CACB Criteria Dependent of Course Option, Project Proposal, or Assignment

/ = CACB Criteria is introduced in a lecture format as part of a studio course, and may not necessarily be demonstrated by the project

## APPENDIX

### THIS APPENDIX CONTAINS A USB ATTACHED TO THIS PAGE:

1) Section 1: Material for the Focused Evaluation Report

2) Section 2: Material for the M.Arch1 sequence clarification

## 4.5 Annual Reports





Office of the Director 1125 Colonel By Drive Ottawa, ON K1S 5B6 Canada Tel: (613) 520-2855 Fax: (613) 520-2849

June 26, 2013

Carole Caron, AANB President Canadian Architectural Certification Board 1508-1 Nicholas Street Ottawa, Ontario K1N 7B7

Dear Ms. Caron:

The following is Carleton University's Annual Report to the Canadian Architectural Certification Board for the academic year 2012-13. We are pleased to report that the School has made considerable progress in addressing the concerns raised by the Visiting Team Report (VTR) in the spring of 2011 that addressed and reported upon in the Focused Evaluation Report submitted in April 2013. We will also address successes and concerns noted in the CACB Focused Evaluation Team Report sent to us on June 14, 2013.

This Annual Report is presented in 3 sections:

- A. Response to specific issues raised in the 2013 Focused Evaluation Report.
- B. Highlights of the period from May 2012 to June 2013.
- C. Human Resources Statistics Report.

**A. Response to:** The 2013 Focused Evaluation Team Report - "Conditions Not Met" and a few other areas to improve in "Conditions deemed Met".

### **Condition 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]	[]

### Focused Evaluation Team comments:

The FE Team acknowledges that your program structure is now in line with CACB criteria. There is only one first-professional M. Arch accredited program. Second, the team thanks the School for pointing out the discrepancy between 'recommend' and 'require.' Please use the term "require" for all public information regarding promotion of the M. Arch program.

In the Carleton website, under Master of Architecture description (Prospective Students) please write a text that corresponds to the current diagram (p.11 of the 2013 Focused Evaluation Report). Please describe the regular BAS 20 credits with a Major in Design (4+2 yrs.); how the other BAS with two streams works for an additional 13 credits (3+3 yrs.); and how the final stream leading from the BAS with a Major in Phil. + Criticism or the B.Hons. (no pre-professional architecture degree) with 15.5 credits works (4+3.5 yrs.). No matter which route, they all culminate in the first-professional M. Arch degree. This should all be clear to prospective students as well as to the public.

With your description correlating to the diagram on p. 11 of the Focused Evaluation Report, then please make sure that this is consistent across all public information for the program, including multiple places on the website.

### Response by Carleton to FER Team Comments:

During the summer of 2013, we will ensure that our website includes clarity for all four majors of our undergraduate Bachelor of Architecture. We are also considering implementing direct entry into each major from high school. We will ensure that it is clear in all literature that all degrees culminate in the first professional degree – the Master of Architecture, as per our charts in the Focused Evaluation Report.

### **Student Performance Criteria:**

### **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]

### **Focused Evaluation Team comments:**

The VTR comment still holds. As a whole, the work submitted displays a modest approach to programming. Program work seems to be more interpretative than developing a comprehensive program from the onset of design. ARCS 5103 appears to be a small room with emphasis on memory. ARCS 5104 again emphasizes design concepts. The "complete book" shows some evidence of technical details, sizing of air-cooling, etc. Evidence of how students developed program spaces in themselves and in relation to each other is still absent overall. Perhaps students need a sustained effort throughout the semester culminating in a final report (as mentioned in the syllabus).

In ARCS 5104 Project 3A Deliverable requires: "A written document that describes your attitude towards program." This requirement does not fully appear in the design work at the moment. The former ARCS 5105 has a series of well-executed case studies. The FE Team feels that, given the School's goals, there should be a translation from the analyses done in the case studies to the design process and program development in other courses, including ARCS 5104 and ARCS 5103.

### Response by Carleton to FER Team Comments:

In the fall of 2013, we are implementing a new graduate "gateway studio" which all students in the Master of Architecture must take. This studio will include a full semester project that will require students to develop a comprehensive building program for a large-scale building. We will ensure that students prepare and submit their building program as a course deliverable for the gateway studio in addition to the other initiatives taken across the program.

### **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 Me
[]	[X]

### **Focused Evaluation Team comments:**

This SPC is partially there, but is still not met. ARCC 2203 shows evidence of construction. ARCC 3302 shows building science study. However, the FE Team questions how the "understanding" of B8 gets expressed as an outcome that manifests student "understanding." This is still required, and should be evident through an assignment or a series of assignments that test the information delivered in the lectures. Acoustics needs to be more evidence based.

From the 2011 VTR comments, the FE Team feels that artificial illumination and mechanical systems for large buildings are being adequately addressed.

ARCS 3105 addresses the theatre as a building type. However, as a constant theme of this FE Team Report, what is intended and what is evident in the student presentation of work is still too often disjunct.

### Response by Carleton to FER Team Comments:

We will continue our efforts in Tech 3 (ARCC 2203) and in Tech 4 (ARCC 3302) to improve upon deliverables that can better demonstrate student understanding of Environmental Systems, with particular focus on acoustics. We hope that by including more emphasis on the theatre in the ARCS 3105 that evidence of acoustics will be better demonstrated.

### 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]

### **Focused Evaluation Team comments:**

This SPC is not yet evident and consistent, but the Focused Evaluation Team feels that the School has made great progress in this direction. The case studies and method of group work are supporting this approach to integrated design. ARCC 5100 shows a series of case studies that reflect good analysis skills. This is followed up by the integrated design projects done in small groups. All the work in this course displays a valid attempt to take on building system integration.

In terms of SPC C4, what is missing is advanced structural design, building assemblies, and life safety provisions. Larger annotated wall sections or other types of models could certainly address these issues. ARCS 5104 has some studies with project data and wall sections showing assembly, but how this information is derived (or is given in a syllabus or other course?) is unclear. Elements of program are listed in the syllabus, and the syllabus goals are clear as Learning Objectives. The SPC of Comprehensive Design is still not uniform throughout the projects submitted. Qualitative differences between high, medium and low are also not self-evident.

In ARCS 5104, the syllabus for Project 3A states: "we will be creatively exploring the idea of program," and a Deliverable for Project 3A includes: "A written document that describes your attitude towards program." The written document that would describe what was learned during such an exercise is not included with the current submission.

The former ARCS 5105 has a series of well-done case studies. The Focused Evaluation Team feels that there needs to be a translation from the analyses done in the case studies to inform the design process and program development in other courses, including ARCS 5104 and ARCS 5103.

### Response by Carleton to FER Team Comments:

In 2013, we will integrate the development done in Advanced Buildings (ARCC 5100) with the Gateway Graduate Studio (ARCS 5105) that will address the advanced structural design, building assemblies and life safety provisions in a design project. We will work with the faculty teaching the first Gateway Studio to implement these deliverables. In addition, as mentioned above, students in the gateway studio will also be producing their own program for the project.

### **B.** Highlights of the School Activities

### Facilities

The school has received a generous donation to renovate the third and fourth year studios. We are installing studio group working tables instead of individual drafting tables and lockers. The large solid maple group tables can accommodate up to 15 students and are supplemented with an adjacent model building table, hardware for a temporary drafting surface, upgraded electrical for multiple electronic devices, direct connections to a new render farm via high-speed direct links and high-speed internet connections. In addition, each table will have a permanent projection screen with paper pad at one end for informal digital projections that can be drawn upon. The studio lockers will be moved to the perimeter beneath several long pin-up/projection boards. We hope that the "dinner table" studios will encourage collaboration and cross-group discussions.

Our first year studios will also begin a new Health & Safety training project that will see them build their own wooden lockers (called LOCT) in first year that they carry with them through the years. The LOCT project allows students to use all the key wood and metal shop tools necessary for Health & Safety training, so once completed, they can use the shop. This innovative idea and prototype was designed by a group of our own third year Design students as part of our design/build at the beginning of the term.

In September 2012 we also took over and renovated the fifth floor of the Architecture Building for various studio spaces, lecture rooms and a new 30-seat computer facility.

### Research

The School has experienced continued growth in funded research in the field of advanced digital visualization technologies and sustainable design. Faculty have received funding from CFI for a solar thermal house project that is being built on campus. Carleton Immersive Media Studio, directed by Stephen Fai is working on a range of projects funded by SSHRC, MITACS, CIHR, the Carleton Research Excellence Fund, and the Getty Conservation Institute. CIMS has 22 full time research assistants this summer—undergraduate, masters and PhD students.

### **Directed Studies Abroad**

The School offered two graduate Directed Study Abroad (DSA) programs, five undergraduate DSA's and a number of exchange options. In the undergraduate program, students in the second term of third year (studio 5) are given a choice of three travelling studios that went to Lyon, London and New York in 2013. In addition we ran an Urbanism DSA to Buenos Aires and a Conservation & Sustainability DSA to Barcelona. Travel takes place over two weeks in February. The range of options recognizes financial and other constraints faced by students as well as faculty research objectives. Students interested in international exchange programs must complete their exchange during the same semester that studio 5 is being offered. Through the ISSO (International Student Services Office) Carleton has exchange agreements with a number of institutions abroad including France, the UK, Australia, Germany, Mexico, South Africa, Israel, Turkey, and others.

At the graduate level, students had the option of studying abroad for the full term of their first year which included a Fall semester in Paris and a winter semester in Finland.

### Visiting Critic's Graduate Studio

Graduate students who do not participate in the Graduate DSA can opt to participate in the Visiting Critics Studios that run in both semesters and are taught by international guests. This year our Visiting Critic Studios were taught in the Fall semester by Halldora Arnardottir and Javier Sanchez from Spain and in the Winter semester by Jonathan Hale from the UK and Jamie Salazar from Germany.

### Frascari Symposium

Professor Federica Goffi and Roger Connah along with Visiting Critic Jonathan Hale organized and held a symposium on the topic of Critical Phenomenology founded on the ideas in the career of Professor Marco Frascari. The event attracted national and international visitors and guests along with participation by our students. Speakers included Jonathan Hale, Paul Emmonds, Donald Kunze and Sam Ridgeway. The event concluded with one of the school's Forum Lecture Series Kenneth Frampton lecture.

### **Forum Lecture Series**

Our 2012/13 Forum Lecture Series included lectures by Alex Rankin and Raymond Moriyama at the Canadian War Museum, Emmanuelle Combarel and Tania Concko (France), Paul Goldberger (New York), Eva Juricna (London), Kenneth Frampton (New York) and Russell Acton (Vancouver) who all lectured at the National Gallery of Canada.

### C. Statistics and Human Resources Report - 2012-13

Please see attached report.

In 2013 we will be advertising for a new Director and a new tenure-track faculty in the area of advanced building technology. We hope to have these two positions filled by July 2014.

Should you or the Board require any additional information, please feel free to contact me.

Sincerely,

Sheryl Boyle Interim Director Azrieli School of Architecture and Urbanism

Encl. A4 – Human Resources Statistics Report 2012-13

### A-4• Human Resources Statistics Report • 2012– 2013

School or Program : Azrieli School of Architecture & Urbanism, Carleton University, Ottawa, ON

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					
with a related pre-professional bachelor's degree	8	4	2.00	78	624
Master of Architecture degree	15.5	7	2.22	78	1209
without a pre-professional requirement, and					
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 Post-					of.	B	٩Ś	Ot	her	Lice	nsed	Stu	dio
	D.A	rch	Pro	f Ms	M.A	rch					archi	tects	teac	hing
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT
Regular Faculty	6	1	7	2	1		0	0	1				11	1*
Men	3	1	5	1					1				7	
Women	3	0	2	1									4	1
Total FT Equivalent (FTE) Regular														
Faculty: Number of FT Regular Faculty +	15.5													
Typical FT teaching load / year	4 cre	edits												
Other Faculty														
Visiting														
Adjunct      Sessional      Lecturer						4		22		1				11
Ph.D Candidate														
Men						3		17		1				8
Women						1		5						3
Total FT Equivalent (FTE) Other	Fall:	13/4	= 3.25	5										
Faculty: a figure equating other faculty	Wint	er: 19.	5/4=	4.875	)									
Total ETE Dogular + Othor	15 F	, 0.11	)5 _ 2	2 6 2 5										
Faculty	10.0	+ 0.12	20 – Z.	5.025										
Total Regular and Other Faculty														
who are licensed architects														
Total Regular and Other Faculty													10 +	18
teaching in studio													= 28	
Nb of pre-professional studios														
taught by all Faculty for the year													7	7
Nb of Masters studios taught by														
all Faculty for the year													7	7

Student Data	Pr	e-profess	ional degr	ee	Maste Bache	r of Archi elor of Arc	tecture deg	ree <u>or</u> learee
	Fall	Winter	Summer	Mean/yr	Fall	Winter	Summer	Mean/yr
Full-Time Students								
	155	151	0	306	48	44	6	97
Men (optional)	59	58	0		20	18	3	
Women (optional)	96	93	0		29	26	3	
Part-Time Students								
	4	1	8	13	0	0	2	2
Men (optional)	3	0	2	5	0	0	1	1
Women (optional)	1	1	6	8	0	0	1	1
Total Full-Time Equivalent (FTE)								
Students <sup>1</sup>	155	151	0	306	48	44	5	97
FTE Foreign Students <sup>2</sup> (optional) –	9	9		18	3	3	1	6
Students who paid international fee								
Students in Design Studio	170	000			50	47	0	
Chudia Datia (Chudanta in Dasim	172	232	0		50	47	0	
Studio Ratio (Students in Design		67	71			1	0.4	
		57	./			I	9.4	
year)	Fall	Winter	Summor	Total/vr	Fall	Winter	Summor	Total/vr
	1 all	WIIIICI	Jummer	TOtali yi	i ali	WIIILEI	Junner	TOtali yi
Number of applicants for a given	450	450		240			_	
term and total for a year	159	152	8	319	48	44	/	99
Number of entering students for a					24			24
Vith advanced standing (antional)	80			80	31			31
								1
Iotal Degrees Awarded-Expected			_					
for a given term and total for a		4	56	60		4	25	29
year			(Spring)				(Spring)	
ivien (optional)		3	23	26		1	6	7
women (optional)		1	33	34		2	19	22
Graduation Rate (%) <sup>3</sup>								
	75.4%				31.3%			

\*Does not include faculty on Sabbatical or LOA

<sup>2</sup> FTE Foreign Students : Students included in Total FTE Students who are not Canadian citizens or landed immigrants.

<sup>&</sup>lt;sup>1</sup> 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.

<sup>&</sup>lt;sup>3</sup> No of degrees awarded or expected / No of entering students at the beginning of the degree.

University: Carleton University

Faculty: Engineering, Azrieli School of Architecture & Urbanism



Head of the Program (Name): Sheryl Boyle

Signature: .

Date: June 30th, 2015

### 1- INTRODUCTION

JUNE 29, 2015

Mourad Mohand-Said, B.Arch, M.Sc.A Executive Director | Registrar Canadian Architectural Certification Board 1 Nicholas Street, Suite 710 Ottawa, Ontario, Canada K1N 7B7 info@cacb.ca www.cacb.ca

Dear Mourad Mohand-Said, Executive Director, CACB,

Please find attached the 2014/15 Annual Report from Carleton University's Azrieli School of Architecture & Urbanism.

As per your letter dated December 16, 2014 this report will address the conditions identified as "not met" namely SPC: B2 (Program Preparation), B8 (Environmental Systems) and C4 (Comprehensive Design). In addition we will update you on our progress on the "Causes of Concern" as listed in the 2011 Visiting Team Report noted under Section 1, Point 5 (page 8 and 9 of 39). Our goal in this report has been to present our responses with clarity and precision.

Should you have any questions regarding this report, please feel free to contact me at any time at sheryl\_boyle@carleton.ca or via phone at 613-520-2861.

Sincerely,

Sheryl Boyle, Interim Director Azrieli School of Architecture & Urbanism Carleton University

### 2- STATEMENT OF CHANGES TO THE PROGRAM

• In 2014/15 we allowed students to apply directly to the three BAS Majors (Design, Conservation & Sustainability or Urbanism) directly out of high school rather than having them choose their Major after first year. This change simply gives students a better feeling of inclusion rather than "transfering out of Design" as was done in the past and starts to streamline admissions. The curriculum also moved to include more design-based courses for the BAS C&S and Urbanism in their third and fourth year. Students can apply to change Majors but the curriculum requirements for each program must be met. The program requirements for the professional degree (the M.Arch) do not change with this new admission pathway.

• In the M.Arch Program, we offered the M.Arch studio (ARCS 5104) and Building Technology 3 (ARCC 5098) in the summer semester, allowing students in the 13 credit M.Arch curriculum to align their courses with the 8.0 credit curriculum more efficiently. The program requirements did not change, just the semester offered.

### 3- RESPONSE TO TEAM FINDINGS

### 3.1- CAUSESES OF CONCERN

In the order listed in the Visiting Team Report (2011 VTR)

1. Continuity of Undergraduate and Graduate components of the professional program

"While the team observed significant renewal of the MArch component of the professional stream, the BAS component appeared to have observed very little change over the course of the past cycle of accreditation visits. It is essential that the program observe the professional stream as a whole curriculum."

### Response 2015

Since 2011, several changes have been made to give continuity between the BAS and M.Arch including running a comprehensive studio in the fall each year from 2nd through to Grad Gateway studio (a succession of 4 years in a row) bridging across the BAS and M.Arch. These courses are now integrated with the fall Tech courses in a much more determined and progressive way than in 2011.

As noted in previous reports, we also defined a new Associate Director position which looks only at the continuity of the professional stream *as a whole* (Associate Director Professional Program: Yvan Cazabon) as a key associate to the Director.

Each year since 2011, we have improved the diversity of offerings and content in the BAS including upgraded technology integration and technical coursework supported by new faculty hires and improved technical resources, the details of which are included in the responses below.

### 2. Technical component of professional curriculum

"The delivery of technical aspects of the professional curriculum is at present in a state of considerable disarray - characterized by a somewhat confounding confluence of areas of excellence and those of complete neglect. Given the extraordinary developments in technical and professional realms recently, any degree of neglect can only compromise the ability of graduates to contribute to future professional roles and should be immediately reviewed. More specifically, the expertise of recent hires - with their consistent emphasis on the School's expanded academic needs - speaks to an ethos in which these curricular components are not being given the specific attention that is their due."

### Response 2015

Our significant attention to the technical aspects of the curriculum and their integration into the fall comprehensive studios in year 2, 3, 4, and Graduate Gateway Studio have given clear structure to our technical curriculm and its integration into design work in studios. To teach a great comprehensive studio requires progressive revisiting of the comcept and these fall studio/tech combinations expand the material questions, technical concepts and scale of this integration.

In 2014/15 we brought two new full-time faculty onboard with expertise in the technical field: Giancarlo Mangone (Advanced Building Systems) and Scott Buckling (Tech 1 - collaborative BIM hire with Civil Engineering). We also expanded (and continue to expand) our excellence in Contract Instructors (including Barry Craig from the CMHC) to our Tech 4 delivery Team. These experts are excellent additions to our existing technical Cl's; they including Larry Hately whose publication on building envelopes is part of the CMHC collection (Tech 4) and Jay Lim, an architect with Perkins Will Architects (Tech 3). In 2014 we also worked with Civil Engineering to hire Contract Instructor, Jack Vandenberg (architect and engineer at the Heritage Directorate of PWGSC) as full-time Instructor at Carleton (Jack delivers Tech 2).

### 3. Regard for Digital Technology

"The responsibility of a contemporary professional program to engage with and embrace digital media and their impact upon the conventions of practice is clear. Notwithstanding the School's own mission statements, the emphasis in expertise of recent hires and the inability to enact a matter-or-fact daily engagement between these media and the curriculum remains problematic. The team notes that students are not unaware of this issue, and the very recent deployment of improved resources is very likely to aggravate their expectations in this regard."

"Allied with comments concerning technical components of the curriculum more generally, the team observes that the current preoccupation with infusing incoming students with a sense of ethos might usefully be balanced by providing an operative tool-kit of technique."

### Response 2015

In addition to the improvements noted in prior year reports, we continue to expand our daily inclusion of digital media into the program and pedagogy, embracing the hybridity of architectural design, in the acquisition, manipulation and output of data/images/form using digital tools and skills.

Our strategic hire of Professor Johan Voordouw (with his expertise not only in digital systems but in their application to design thinking in studios etc.) has proved highly transformative for both our undergraduate and graduate students and for the profile of the school.

Our 2014 hire of Professor Giancarlo Mangone has brought digital thinking into realms of quantative analysis, human performance and urban ecologies in both technical and comprehensive design courses.

In 2015 we hired a new technical position (Digital Craft Technician) who will oversee the expanding digital photography and photogrammetry software and hardware, printing, expanded laser-cutter and our 3-d printing media lab. This expansion moves into the area formerly used by the darkroom and photo studio adjacent to the Assembly Room. This technician position works with a team of student employees in providing access to this equipment and software which inherently expands and changes quickly. In addition to the hire, we also purchased three new laser cutters and upgraded our software packages in the

expanded computer labs. This has not aggravated the students as anticipated by the Visiting Team, but rather has increased their use and enjoyment of the media and allowed more faculty and courses to include digital media in their assignments and teaching. Some of this expansion has included a revamp of the Introduction to Multimedia course in first year under the guidance of PhD student James Hayes (e.g. including the use of PhotoScan/photogrammetry) and the inclusion of BIM in the second year Tech course under the guidance of new BIM hire Scott Buckling. We continue to update tools and concepts of acquisition, manipulation and production/output of media each year.

Our recent collaborative hire with Civil Engineering of the Building Information Modeling position will allow us to expand our BIM course offerings and integration into studio. This is first being done in Tech 1 in 2015 fall.

In 2015, Professor Stephen Fai, whose research bridges digital craft and historic conservation practices (a first for Canada)received over \$2 million in SSHRC grants which includes provision to purshase a Kuka robot. His research unit (CIMS) also collaborated on an additional \$2.5 million NSERC grant as well as approximately \$1 million in contracts for his research team which includes several architecture faculty.

The gap between the new BAS majors and emerging technologies sensed by the Visiting Team in 2011 has certainly closed, as our faculty have achieved success in grants to compliment the ethos instilled in the program. These grants will also continue to expand our technical expertise at the school and infuse the entire accredited program with access to new leading-edge technologies and experience through summer placements, work-study, thesis work and research assistantships and emerging technologies in the curriculum.

### 4. Role of Faculty Research

"The School's faculty in their vitae reveal a tradition of privileging teaching accomplishment over research. Whatever the institutional encouragement for such a preference, the role of active, contemporary research in contributing to local collegial discourse, including the enrichment and critical review of curriculum, cannot be overstated. The need for concerted and collective discussions among faculty - particularly among new hires regarding research interests, potential overlaps, recognition of inter-disciplinary opportunities, etc. is both important and timely. The proposal for an Associate Director for Research with overview of these discussions might go some way to bringing this agenda item forward."

### Response 2015

In response to the need for *critical assessment and enrichment of the curriculum and collegial discourse* discussed in the 2011 VTR, we have moved forward with several initiatives. Our success in securing over 5 million in research funding in 2014 from SSHRC and NSERC as well as contracts (noted above) confirms recognition of our efforts in this area.

In 2014, we reeceived the first round of applicantions for the Research Facilitator/Manager (a two-year term) whose job it will be to solely assist faculty in the school with advancing their research. We were not satisfied with the pool and have readvertised. The position will be hired during summer 2015 and the new Director, Jill Stoner will be working with this person to stage a series of events devoted to faculty research agendas, including collaborations with faculty from other departments and schools at Carleton. The research facilitator will identify collaborators, apply for grants, and manage funds as well as broadcast research successes of the school.

In 2014 several key research accomplishments include the completion of the solar thermal research house (full-scale) on the front lawn of Carleton Campus which was a major CFI grant (Sheryl Boyle), the committment by several journals to publish the current work of Professor Federica Goffi, Professor Stephen Fai's ongoing digital craftmanship work on Parliament Hill and at CIMS, a book chapter by Professor Inderbir Riar and many other exciting projects.

### 5. Program Governance

"The team observed an imbalanced sense of empowerment and engagement in School decisions among its faculty. The degree that 'ownership' - whether of academic programs or research directions - can devolve to a sense of entitlement is always an issue to be aware of in academic institutions, and the team's sense is that of a need to more deliberately cultivate open and collegial regard between all members of the faculty."

### Response 2015

Since 2011, we have worked and successfully transformed the culture of the school and addressed the concerns identified by the Visiting Team. This transformation was fuelled by a series of open and substantive conversations and meetings which also included new committee structures and breaking down perceived barriers. The school now embodies an open and collaborative environment, and is in good shape for our new Director.

### 6. Resources / Academic Expansion

"As noted elsewhere, the motivation for academic expansion does not immediately resonate with the need to assess and renew the core professional program of the School. While human resources - although more in terms of faculty than staff - have been enriched, it is difficult to assess the longstanding contribution of this expansion to the success of the program."

### Response 2015

Since 2011, all hires have been in response the the enrichment of the core courses of the accredited program.

### 7. Acknowledgement of Locale

"The circumstances of Ottawa as the nation's capital are - for any academic program - potentially formidable. The team encourages the program to cultivate this potential.

It is not in the habit or interest of the CACB Visiting Team to propose direct and specific recommendations for the redress of perceived concerns. In the context of this particular visit, the team believes that the capacity for redress is very much within the capacity of resources and desire of the School to respond positively - and successfully."

### Response 2015

In 2013 we received a new \$1 million endowment from the Azrieli Foundation (the same foundation that endowed the school). The funds from this gift are now available for use and being deployed in establishing connections between the city of Ottawa and the Azrieli School of Architecture & Urbanism. Professor Roger Connah has begun to build an agenda with city officials around the "Ottawa 2017" events. The research work of

Professor Fai on Parliament, the focus of studio work on local conditions and contract instructor hiring from the local architecture and research (CMHC) as well as the publication and public voice of faculty members in local media, are all a part of our increased engagement with our locale since 2011.

### 3.2- CONDITIONS AND SPC "NOT-MET"

In the order listed in the Visiting Team Report (VTR) as well as in the Focused Evaluation Report if it applies.

### Condition 3 – Public Information

Condition: 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.

### Team Comments:

"The Team notes the lack of conformance of the published text with the wording of Annex A of the CACB Conditions and Procedures.

Equally important, the information available to prospective and current students is ambiguous about the current accreditation status of the proposed MArch1 sequence, and less than clear about the points of choice and assessment within the four streams of the BAS degree and the competitive nature of application to the existing professional MArch.

While incidental to fulfilment of this criterion, the team notes that the web presence of the professional program offers little evidence of the strengths and specific cultural ethos embodied in the School's daily life."

### Response 2015:

Since 2011 we have addressed all these points on the University website and in our new "Graduate Prospectus" document which is linked to our website. Current updates to website format in 2015 will also include this information as required by CACB. In the summer of 2015, we are one of the first units at Carleton University to move to the new magazine format website that will include video and image based information conveying both the information and the specific strengths of the school as noted by the visiting team.

### SPC B2 – Program Preparation

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

<sup>&</sup>lt;sup>1</sup> CACB website, http://www.cacb-ccca.ca/index.cfm?Voir=sections&Id=8355&M=1357&Repertoire\_No=660386109 last accessed 22 March, 2013, 5:17P PM.

"While aspects of program preparation appear in various aspects of the curriculum, there is no instance in which specific focus is exercised and sustained. While certain of the thesis work observed was exemplary in this matter, engagement with program preparation was – not unreasonably – inconsistent across the range of thesis preoccupations."

### Response 2015:

The area deemed "not met" was identified as Program Preparation in a specific identified studio.

As noted in the 2014 report, we believe that the ability to prepare a program comes in two stages, *interpretation* of program, and *preparation* of program. *Interpretation of program* occurs at all levels of undergraduate and graduate studios, increasing in complexity throughout the professional program. This was in place during the Accreditation Visit in 2011. In 2015 we continued to build upon the program preparation in the Master's "Gateway Studio" which all students in the professional program must complete. This studio was run in the fall of 2014 and the program was a large urban library where each student was required to write a clear and defined building program for their project.

### SPC B8 – Environmental Systems

**Criteria:** 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.

### Team Comments:

"Acoustics, artificial illumination, and mechanical systems for large buildings are apparently not being taught in the current year, although a breadth of related material including building envelopes and natural light are covered in the technical sequence in good detail. Faculty involved appear enthusiastic and well respected by students and their peers."

### Response 2015:

As noted in the 2014 report, we now include the three areas of acoustics, artificial illumination and mechanical systems for large buildings across our technical stream (especially in Tech 1, Tech 3 and Tech 4).

The modules for each area were described in detail in the 2014 report and in 2015 we simply continued to deliver these enhanced programs, evaluate them and refine them with great success.

### SPC B 10 – Building Service Systems

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

### Team Comments:

"Plumbing, electrical, communication and sprinkler & other fire protections systems are not evident in the material made available to the reviewing team."

### Response 2015:

The four areas deemed "not met" are identified as plumbing, electrical, communication and sprinkler and other fire suppression systems.

As noted in the 2014 Annual report, we have added or enhanced modules and requirements for these four areas into our Tech stream courses in incremental steps and continued to deliver these modules evaluate them and refine them with great success in 2014/15.

### SPC C2 - Building Systems Integration

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

### Team Comments:

"Student work demonstrates an ability to integrate knowledge of structural systems and building envelopes, but other issues are not consistently present."

### Response 2015:

The three areas deemed "not met" are identified as Environmental Systems into building design, Life Safety Systems into building design and Building Service Systems into building design.

As noted in the 2014 report, we have added or enhanced modules and requirements for these three areas into the courses and continued to deliver these modules evaluate them and refine them with great success in 2014/15.

### SPC C4 – Comprehensive Design

**Condition:** 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.

### Team Comments:

"The level four studio focused upon housing design offered evidence of student attention to a reasonable level of detail in certain aspects of this criterion. However, since lighting, acoustics & mechanical systems are not currently being taught, these components are simply not evident – comments on other required concerns as noted.

The team notes some concern regarding the building type and complexity presented as the appropriate vehicle for successfully undertaking the intent of this criterion. It was also noted that since the intended comprehensive occurs within the undergrad portion of the professional program, it will inevitably include students not destined to complete the full accredited program in Architecture – yet compelled to fulfill this challenging student performance criterion as part of their undergraduate degree requirements."

**Response:** 

The three areas deemed "not met" are identified as

- 1) Lighting, acoustics and mechanical systems as a part of a comprehensive design
- 2) Building type used for comprehensive design
- 3) Level of study for student completing comprehensive design

We have addressed the addition of modules for lighting, acoustics and mechanical systems in great detail in the 2014 report and continue to deliver them in the places previously identified. We have also successfully delivered Gateway Studio as our key comprehensive studio for two fall semesters as an integration with Advanced Building Systems under our new hires, Professor Johan Voordouw (Gateway Studio coordinator) and Progfessor Giancarlo Mangone (Advanced Building Systems hire). All students and faculty agree that the success of Gateway Studio is now a defining feature of our Graduate program.

### 4- OTHER RELEVANT INFORMATION

School activities and Initiatives

The Azrieli School of Architecture & Urbanism is proud to announce the selection of their new director, Professor Jill Stoner from the University of California Berkeley who will join the school in July 2015. Professor Stoner has practiced in the US and received her undergraduate degree at New College in Sarasota, Florida and her Master of Architecture from the University of Pennsylvania. She is currently the Associate Dean at Berkeley. Professor Stoner will take over from Professor Sheryl Boyle who has served in the Director's office for five years and who will now return to full time teaching and research. Professor Boyle brought to fruition Carleton's two research based degrees, the PhD in Architecture and the Master of Architectural Studies as well as the Graduate Diploma in Architectural Conservation and the 13-credit pathway to the professional Master of Architecture.

In 2014, Carleton also hired our new specialist in Advanced Building Systems, Professor Giancarlo Mangone from the Technical University of Delft where he was completing his PhD in urban ecologies and building systems. Professor Mangone teaches the graduate course in advanced building systems and is also the principal at Symbiosis Sustainable Design & Consulting out of West Palm Beach in Florida.

Our PhD program is entering its fifth year and our students are working on a wide array of issues relating to the culture of practice including heritage buildings and the integration of the digital craftsman (on Parliament Hill), parametric techniques in material studies, architectural representation and sketching, Middle Eastern gardens, media and the urban environment and marketing for mid-sized architectural firms.

Our professional Masters of Architecture program continues to prosper with admissions of 47 students each year and exciting thesis projects as independent work or as research groups.

Our Bachelor of Architectural Studies continues to garner strong numbers of applications with a 1:10 acceptance rate for the 90 new students each year. Architecture is definitely an interesting profession for our youth. A few highlights include our undergraduate and graduate Directed Study Abroad programs to Helsinki, Lisbon, Guadalajara, Beijing and Hong Kong, New York and Berlin. Our coop program continues to grow and we are happy to have so many new firms sign on to hire a Carleton student. Our shared program

with Civil Engineering in Architectural Conservation & Sustainability saw a highlight year with approximately 50 students entering through Engineering which we hope will forge many new exciting professional partnerships in the near future.

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Our faculty are engaged in research including building a Solar Thermal Research Facility on Carleton campus, expanding the field of digital modeling, visualization and conservation of buildings and working with aboriginal organizations on structural innovations in bent wood to name a few.

We continue to expand our outreach to the professional community and each year present the Forum Lecture Series open to the public and held at the National Gallery of Canada (you can follow us at **twitter.com/forumlecture**). Our new school website is about to be launched and our student and faculty work in our annual school publication, Building 22 which can also be purchased online at <u>www.building22.ca</u>

### A-4 Human Resources Statistics Report • 2014-2015

## School or Program : Azrieli School of Architecture & Urbanism

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	8	4	2.5	X	X
with a related pre-professional bachelor's degree	1	· · · · · · · · · · · · · · · · · · ·	1		
Master of Architecture degree	13	7	2.5	Х	X
without a pre-professional requirement, and consisting of an undergraduate degree plus a minimum of three years of professional studies					
Bachelor of Architecture degree	NA	NA	NA	NA	NA
minimum of five years of study, except in Quebec, where four years of professional studies follow two years of CEGEP studies					

\*Non studio courses=6 hrs per 1.0 credit. Studio courses first year = 9 hours per 1.0 credit. Studio courses upper year =12 hours per 1.5 credit. Note: Nbr hours per credit and total nbr of hours per degree can fluctuate depending on time required to complete the 2.0 credit independent thesis.

Faculty Data		Fac	Ful	reder	tials (FT) +	highe Part-	st deg Time (	gree o PT)	nly)					
	Ph. D.A	D or Arch	Po Pro	st- f Ms	Pr M.A	of. Arch	B.A	rch	Ot	her	Lice arch	nsed itects	Stu teac	idio hing
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT
Regular Faculty	5	0	3	1	4	1			1		5	2	11	2
Men	3	0	1	0	4	1	0	0	1		3	1	9	1
Women	2	0	2	1	0	0	0	0	0		2	1	2	1
Total FT Equivalent (FTE) Regular Faculty: Number of FT Regular Faculty + a figure equating PT Regular Faculty					1	4								
Typical FT teaching load / year			-		2	.0	-				18 C.			
Other Faculty												10	-	
Visiting						2						2		
Adjunct • Sessional • Lecturer		1	1	1		12		3		3		8		13
Ph.D Candidate					1.	3		1.1				1.23		2
Men									-		1			
Women	1.001													
Total FT Equivalent (FTE) Other Faculty: a figure equating other faculty on the basis of a typical FT teaching load					1	0								
Total FTE Regular + Other Faculty					2	4								
Total Regular and Other Faculty who are licensed architects											17			
Total Regular and Other Faculty teaching in studio													2	8
Nb of pre-professional studios taught by all Faculty for the year													1	2
Nb of Masters studios taught by all Faculty for the year													1	1

Page 1 of 2

Student Data	P	re-profess	ional degr	ee	Maste Bache	r of Architelor of Arc	ecture de hitecture	gree <u>or</u> degree
	Fall	Winter	Summer	Mean/yr	Fall	Winter	Summer	Mean/yr
Full-Time Students	321	324	0	322.5	62	66	13	
Men (optional)		1						
Women (optional)								
Part-Time Students	20	12	7	13	4	0	0	4
Men (optional)			1					
Women (optional)		1						
Total Full-Time Equivalent (FTE) Students <sup>1</sup>	331	330	3.5	221.5	64	66	0	130
FTE Foreign Students <sup>2</sup> (optional)		1						
Students in Design Studio	256	256	1	171	47	46	13	35.3
Studio Ratio (Students in Design Studios / Nb studios taught for a year)	15	11.6	1	9.2	3	2	1	2
	Fall	Winter	Summer	Total/yr	Fall	Winter	Summer	Total/yr
Number of applicants for a given term and total for a year	575				250			
Number of entering students for a given term and total for a year F2011-UG, F2013-GR	104	0	0	90	45	0	0	45
With advanced standing (optional)								
Total Degrees Awarded-Expected for a given term and total for a year Men (optional)	1	3	68	72	8	6	31	45
Women (optional)						1		
Graduation Rate (%) 3		1	80			1	100	

2 3

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. FTE Foreign Students : Students included in Total FTE Students who are not Canadian citizens or landed immigrants. 1

No of degrees awarded or expected / No of entering students at the beginning of the degree.
# ANNUAL REPORT to CACB

Narrative Section

Master of Architecture Program

Academic Year 2015-16



Head of Program: Jill Stoner

Date:

30 June, 2016

#### **1.0 INTRODUCTION**

30 June 2016

Mourad Mohand-Said Executive Director / Registrar Canadian Architectural Certification Board 1 Nicholas Street, suite 710 Ottawa, Ontario K1N 7B7

Dear Mourad,

This annual submission coincides with the end of my first year as Director of the Azrieli School. I am pleased to report the conclusion of a productive academic year during which we have added two new faculty, two new staff members, and increased enrolment in our Master of Architecture program.

We are in the process of preparing our Academic Program Review for our upcoming accreditation visit, which will outline in detail many of the developments, improvements, and new initiatives to increase the level of excellence in our graduate program.

Many of the responses to the 2011 accreditation team's comments are similar to those submitted last year by my predecessor Sheryl Boyle; in those cases I have referred to the previous report.

Please let me know if you would like any clarifications; you can contact me at: jill.stoner@carleton.ca.

Respectfully submitted,

Jill Stoner, Director Azrieli School of Architecture and Urbanism

# 2.0 STATEMENT OF CHANGES TO THE PROGRAM

See 2015 response.

# **3.0 RESPONSE TO TEAM FINDINGS**

# **3.1 CAUSES OF CONCERN**

In the order listed in the Visiting Team Report (2011 VTR)

# 1. Continuity of Undergraduate and Graduate components of the professional program

"While the team observed significant renewal of the M. Arch component of the professional stream, the BAS component appeared to have observed very little change over the course of the past cycle of accreditation visits. It is essential that the program observe the professional stream as a whole curriculum."

# Response 2016:

From the 2015 response: Since 2011, several changes have been made to give continuity between the BAS and M. Arch including running a comprehensive studio in the fall each year from 2nd through to Grad Gateway studio (a succession of 4 years in a row) bridging across the BAS and M. Arch. These courses are now integrated with the fall Tech courses in a much more determined and progressive way than in 2011. As noted in previous reports, we also defined a new Associate Director position which looks only at the continuity of the professional stream as a whole (Associate Director Professional Program: Yvan Cazabon) as a key associate to the Director.

Over the course of the past year and in preparation for the next accreditation visit, we have continued to refine the coordination of the technical classes with the design studio. This year, we launched a pilot summer studio for the M. Arch 1 students—their third studio in the sequence, and the one leading up to the point where they join the 4 + 2 stream. This studio was completely integrated with a revised Technology course specifically for this cohort of students. The results were extremely positive, and we look forward to sharing this work during the 2017 accreditation visit.

#### 2. Technical component of professional curriculum

"The delivery of technical aspects of the professional curriculum is at present in a state of considerable disarray - characterized by a somewhat confounding confluence of areas of excellence and those of complete neglect. Given the extraordinary developments in technical and professional realms recently, any degree of neglect can only compromise the ability of graduates to contribute to future professional roles and should be immediately reviewed. More specifically, the expertise of recent hires - with their consistent emphasis on the School's expanded academic needs - speaks to an ethos in which these curricular components are not being given the specific attention that is their due."

#### **Response 2016**

See response in 2015 report.

# 3. Regard for Digital Technology

"The responsibility of a contemporary professional program to engage with and embrace digital media and their impact upon the conventions of practice is clear. Notwithstanding the School's own mission statements, the emphasis in expertise of recent hires and the inability to enact a matter-or-fact daily engagement between these media and the curriculum remains problematic. The team notes that students are not unaware of this issue, and the very recent deployment of improved resources is very likely to aggravate their expectations in this regard."

"Allied with comments concerning technical components of the curriculum more generally, the team observes that the current preoccupation with infusing incoming students with a sense of ethos might usefully be balanced by providing an operative tool-kit of technique."

#### Response 2016

In addition to the improvements noted in prior years' reports, we continue to expand our inclusion of digital media into our program and pedagogy. In the fall of 2015, we purchased four new Makerbot machines, which are now an integral part of our core course in computer technologies. We have also added a permanent staff position to assist students and faculty in digital fabrication, and are offering an advanced digital theory course for thesis students working on fabrication and parametric technologies in their thesis work.

Professor Johan Voordouw, in his 4th year studio, has merged digital fabrication with community involvement, in a design-build studio that constructed two Parklets for the

Vanier neighborhood of Ottawa. The installation of these new public spaces in June 2016 was a cause for celebration among community members, public officials, journalists and the Azrieli School community.

The gap between the new BAS majors and emerging technologies sensed by the Visiting Team in 2011has certainly closed, as our faculty have achieved success in grants to compliment the ethos instilled in the program. These grants will also continue to expand our technical expertise at the school and infuse the entire accredited program with access to new leading-edge technologies and experience through summer placements, work-study, thesis work and research assistantships, and emerging technologies in the curriculum.

#### 4. Role of Faculty Research

"The School's faculty in their vitae reveal a tradition of privileging teaching accomplishment over research. Whatever the institutional encouragement for such a preference, the role of active, contemporary research in contributing to local collegial discourse, including the enrichment and critical review of curriculum, cannot be overstated. The need for concerted and collective discussions among faculty - particularly among new hires - regarding research interests, potential overlaps, recognition of inter-disciplinary opportunities, etc. is both important and timely. The proposal for an Associate Director for Research with overview of these discussions might go some way to bringing this agenda item forward."

# Response 2016

In response to the need for critical assessment and enrichment of the curriculum and collegial discourse discussed in the 2011 VTR, we have moved forward with several initiatives.

In 2015-16, we advertised for a major new position: a Special Projects and Research Facilitator. We are fortunate to now have Mawuena Torkornoo as a full-time member of the staff. With experience in recruitment, and a Master's degree in Business, Mawuena is wellpositioned to assist faculty in identifying research opportunities and preparing grant applications. She is also launching several self-supporting programs, including a suite of post-professional courses that will satisfy Con Ed requirements for professional architects.

Our success in securing over \$5 million in research funding in 2014 from SSHRC and NSERC as well as contracts (noted above) confirms recognition of our efforts in this area. Faculty are actively pursuing multi-year grants in health care design, material technologies, and heritage documentation.

The research of Professor Stephen Fai and his team at CIMS reached new levels this past year with the purchase of a seven-axis robot, and a smaller robot, which are being installed in the School over the summer. The Dean of the Faculty has supported this development, offering \$300,000 to the school for the necessary renovations to accommodate the machines. The robots will be working on several projects, including the ongoing restoration of the Houses of Parliament, carving sandstone replacement pieces for the West and center blocks.

# 5. Program Governance

"The team observed an imbalanced sense of empowerment and engagement in School decisions among its faculty. The degree that 'ownership' - whether of academic programs or research directions - can devolve to a sense of entitlement is always an issue to be aware of in academic institutions, and the team's sense is that of a need to more deliberately cultivate open and collegial regard between all members of the faculty."

**2016 response:** As the 2015 report indicates, the interim director worked hard to successfully transform the culture of the school and to address the concerns identified by the Visiting Team. The School now has an institutionalized practice of three intensive faculty retreats each year—in August before the start of fall semester, in February, and in May following the winter semester. Comprising a total of five full days of meetings, the agendas address critical assessment of curriculum, evaluation of recruitment strategies, working groups to identify specific goals around building up technology infrastructure, space use improvements, balancing the faculty with new hires, and promoting the School nationally and internationally.

# 6. Resources / Academic Expansion

"As noted elsewhere, the motivation for academic expansion does not immediately resonate with the need to assess and renew the core professional program of the School. While human resources - although more in terms of faculty than staff - have been enriched, it is difficult to assess the longstanding contribution of this expansion to the success of the program."

# Response 2016

As noted in the 2015 report, since 2011, all hires have been in response to the enrichment of the core courses of the accredited program. Over the past year, we have worked specifically on introducing elements of social, political, and economic relevance into several parts of the curriculum. This is closely connected with the hiring of two new faculty at the intersection of architecture and urbanism.

#### 7. Acknowledgement of Locale

"The circumstances of Ottawa as the nation's capital are -for any academic program potentially formidable. The team encourages the program to cultivate this potential.

It is not in the habit or interest of the CACB Visiting Team to propose direct and specific recommendations for the redress of perceived concerns. In the context of this particular visit, the team believes that the capacity for redress is very much within the capacity of resources and desire of the School to respond positively - and successfully."

#### Response 2016

In 2015-16, we began a pilot relationship with local development firms to sponsor one of our core housing studios. Based on this success, we have a commitment for three additional sponsored studios for 2016-17. Each of these combines the real situation of urban development in Ottawa with the highly refined and proven pedagogy of this 4th year studio. We are also adding a sponsored studio to the Master's stream, engaging issues of designing for First Nation and northern communities.

# 3.2 CONDITIONS AND SPC "NOT-MET" SPC "NOT-MET"

In the order listed in the Visiting Team Report (VTR) as well as in the Focused Evaluation Report if it applies.

# **Condition 3-Public Information**

Condition: 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.

# **Team Comments:**

"The Team notes the lack of conformance of the published text with the wording of Annex A of the CACB Conditions and Procedures.

Equally important, the information available to prospective and current students is ambiguous about the current accreditation status of the proposed M. Arch 1 sequence, and less than clear about the points of choice and assessment within the four streams of the BAS degree and the competitive nature of application to the existing professional M. Arch.

While incidental to fulfilment of this criterion, the team notes that the web presence of the professional program offers little evidence of the strengths and specific cultural ethos embodied in the School's daily life."

#### Response 2016:

As noted in the 2015 report, these concerns have been addressed in the complete redesign of our website, and in new print materials for recruitment and outreach.

# SPC B2 – Program Preparation

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

# **Team Comments:**

"While aspects of program preparation appear in various aspects of the curriculum, there is no instance in which specific focus is exercised and sustained. While certain of the thesis work observed was exemplary in this matter, engagement with program preparation was not unreasonably - inconsistent across the range of thesis preoccupations."

# Response 2016 (same as 2015)

The area deemed "not met" was identified as Program Preparation in a specific identified studio. As noted in the 2014 report, we believe that the ability to prepare a program comes in two stages, interpretation of program, and preparation of program. Interpretation of program occurs at all levels of undergraduate and graduate studios, increasing in complexity throughout the professional program. This was in place during the Accreditation Visit in 2011. In 2015 we

continued to build upon the program preparation in the Master's "Gateway Studio" which all students in the professional program must complete. This studio was run in the fall of 2014 and the program was a large urban library where each student was required to write a clear and defined building program for their project.

#### SPC B8 - Environmental Systems

**Criteria**: 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.

#### **Team Comments:**

"Acoustics, artificial illumination, and mechanical systems for large buildings are apparently not being taught in the current year, although a breadth of related material including building envelopes and natural light are covered in the technical sequence in good detail. Faculty involved appear enthusiastic and well respected by students and their peers."

#### Response 2016:

As noted in the 2015 report, we now include the three areas of acoustics, artificial illumination and mechanical systems for large buildings across our technical stream (especially in Tech 1, Tech 3 and Tech 4).

The modules for each area were described in detail in the 2014 report and in 2015 we simply continued to deliver these enhanced programs, evaluate them and refine them with great success.

#### SPC B 10 – Building Service Systems

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

# **Team Comments:**

"Plumbing, electrical, communication and sprinkler & other fire protections systems are not evident in the material made available to the reviewing team."

# Response 2016:

The four areas deemed "not met" are identified as plumbing, electrical, communication and sprinkler and other fire suppression systems.

As noted in the 2014 and 2015 Annual reports, we have added or enhanced modules and requirements for these four areas into our Tech stream courses in incremental steps and continued to deliver these modules, evaluate them, and refine them, with great success in 2014/15.

# SPC C2 - Building Systems Integration

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

# Team Comments:

"Student work demonstrates an ability to integrate knowledge of structural systems and building envelopes, but other issues are not consistently present."

# Response 2016:

The three areas deemed "not met" are identified as Environmental Systems into building design, Life Safety Systems into building design and Building Service Systems into building design.

As noted in the 2014 and 2015 reports, we have added or enhanced modules and requirements for these three areas into the courses and continued to deliver these modules, evaluate them, and refine them, with great success in 2014/15.

#### SPC C4 - Comprehensive Design

**Condition**: 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.

# Team Comments:

"The level four studio focused upon housing design offered evidence of student attention to a reasonable level of detail in certain aspects of this criterion. However, since lighting, acoustics & mechanical systems are not currently being taught, these components are simply not evident - comments on other required concerns as noted.

The team notes some concern regarding the building type and complexity presented as the appropriate vehicle for successfully undertaking the intent of this criterion. It was also noted that since the intended comprehensive occurs within the undergrad portion of the professional program, it will inevitably include students not destined to complete the full accredited program in Architecture - yet compelled to fulfill this challenging student performance criterion as part of their undergraduate degree requirements."

#### **Response:**

The three areas deemed "not met" are identified as:

- 1. Lighting, acoustics and mechanical systems as a part of a comprehensive design
- 2. Building type used for comprehensive design
- 3. Level of study for student completing comprehensive design.

We have addressed the addition of modules for lighting, acoustics and mechanical systems in great detail in the 2014 report and continue to deliver them in the places previously identified. We have also successfully delivered Gateway Studio as our key comprehensive studio for two fall semesters as an integration with Advanced Building Systems under our new hires, Professor Johan Voordouw (Gateway Studio coordinator) and Professor Giancarlo Mangone (Advanced Building Systems hire). Several members of the faculty are continuing efforts to improve the challenge and level of accomplishment in the Gateway Studio and the Advanced Building Systems course, and in fall 2016 we hope the work of this studio will achieve a new level of resolution.

All students and faculty agree that the success of Gateway Studio is now a defining feature of our Master of Architecture program.

#### 4. OTHER RELEVANT INFORMATION

School activities and Initiatives 2015-16

One of the most significant initiatives during the past academic year was the search for two additional members of the faculty, both with an emphasis on architecture at the scale of the city. Eighty candidates applied for the positions, and the two top-ranked have accepted an offer of employment; one will be joining the School on August 1st 2016, and the other on January 1, 2017.

Another significant development is the successful recruitment for our three-year Master's program, which will almost double the entering cohort in that stream. Students are entering with a wide range of undergraduate majors, and representing sixteen different undergraduate institutions.

We have several sponsored studios in 2016-17, which will allow us to bring in visiting studio critics representing a wide range of approaches and practice models. We have expanded the reach of our end-of-semester studio guests and external examiners for the Master of Architecture thesis to include renowned architects and academics from the United States, Israel, France, Portugal and Australia.

During summer 2016 we are renovating several spaces in our building, in order to make a new gallery, to improve our main office, and to house the seven-axis robot. There is excitement and enthusiasm for the coming academic year.

# A-4• Human Resources Statistics Report • 2015– 2016

School or Program :

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 with a related pre-professional bachelor's degree	8	4	2.5	X	X
Master of Architecture degree without a pre-professional requirement, and consisting of an undergraduate degree plus a minimum of three years of professional studies	13	7	2.5	Х	Х
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	N/A	N/A	N/A	N/A	N/A

Faculty Data	Faculty Credentials (highest degree only) Full-time (FT) + Part-Time (PT)													
	Ph.	Ph.D or Post- Prof. B.Arch Other		her	Licensed		Studio							
	D.Arch		Prof Ms		M.Arch		_				architects		teaching	
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT
Regular Faculty	5	0	3	1	5	1	0	0	1	0	5	2	11	2
Men	3	0	1	0	4	1	0	0	1	0	3	1	9	1
Women	2	0	2	1	1	0	0	0	0	0	2	1	2	1
Total FT Equivalent (FTE) Regular	15													
Faculty: Number of FT Regular Faculty +														
Typical ET toaching load / yoar	2.0													
Other Ecoulty					2	.0						10		
						2						10		
• VISIUILY		1		1		2 12		2		2		2		10
• Adjunct • Sessional • Lecturer		T		T		12		3		3	-	ð		13
• Ph.D Candidate						3					_			2
Men														
					1	0								
Total FT Equivalent (FTE) Other	10													
on the basis of a typical ET teaching load														
Total FTF Regular + Other	25													
Faculty	ZJ													
Total Regular and Other Faculty											1	7		
who are licensed architects														
Total Regular and Other Faculty													2	8
teaching in studio														
Nb of pre-professional studios													1	2
taught by all Faculty for the year														
Nb of Masters studios taught by													1	1
all Faculty for the year														

Student Data	P	re-profess	sional degr	ee	Master of Architecture degree or Bachelor of Architecture degree					
	Fall	Winter	Summer	Mean/yr	Fall	Winter	Summer	Mean/yr		
Full-Time Students	321	324	0	322.5	111	108	14			
Men (optional)										
Women (optional)										
Part-Time Students	20	12	7	13	0	0	13	13		
Men (optional)										
Women (optional)										
Total Full-Time Equivalent (FTE) Students <sup>1</sup>	331	330	3.5	221.5	111	108	0	219		
FTE Foreign Students <sup>2</sup> (optional)										
Students in Design Studio	256	256	1	171	79	76	14	56.33		
Studio Ratio (Students in Design Studios / Nb studios taught for a year)		171/12	= 14.25		56.33/11 = 5.12					
	Fall	Winter	Summer	Total/yr	Fall	Winter	Summer	Total/yr		
Number of applicants for a given term and total for a year	575				400	0	0	400		
Number of entering students for a given term and total for a year	104			90	48	2	0	50		
With advanced standing (optional)										
Total Degrees Awarded-Expected for a given term and total for a year	1	3	68	72	7	3	27	37		
Men (optional)										
Women (optional)										
Graduation Rate (%) <sup>3</sup>			80				100			

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. FTE Foreign Students : Students included in Total FTE Students who are not Canadian citizens or landed immigrants. 1

<sup>2</sup> 

<sup>3</sup> No of degrees awarded or expected / No of entering students at the beginning of the degree.