THESIS YEAR STUDENTS

FALL 2018 - CORE CLASSES

Course Topic:  Architectural Research and Analysis
Course Code:  ARCH 610
Instructor(s):  Tracey Winton
Day/Time:  Tuesday 6:30-9:30pm ARC 2026

This course exposes students to research methodologies and diagrammatic strategies used for the analysis of works of architecture, approaches to design and key texts. These will act as case studies to learn about the conceptual ideas, formal/spatial principles, material systems and operative design strategies employed in the making of architecture while introducing students to analytical methods and processes considered integral to advanced research and design. The rigorous consideration of precedent and design research methods fosters a deeper connection of students' work with the discipline, better enabling them to position their ideas within a larger conceptual discourse while giving them the methodological tools to prepare them for the undertaking of a research and design thesis.

Course Topic:  Thesis Research and Design Studio I
Course Code:  ARCH 692
Instructor(s):  Jane Hutton, Maya Przybyski, John McMinn, Tracey Winton
Day/Time:  Tuesday 9:30-12:30 & 1:30-5:30 / Thursday 9:30-12:30 & 1:30-5:30

Graduate Thesis Research & Design Studio I guides students through the development of their thesis projects. Students may draw from a wide range of sources both within and beyond the conventional boundaries of the architectural discipline, using methods of exploration that may employ the tools of architectural production and critique, and that culminate in a written research document and/or design proposal. The goal of the Graduate Thesis is to make an active contribution to the field by opening up new ways of understanding an existing architectural topic. Students do not enroll in a studio section until studio assignments are finalized on September 5, 2018.

For students in the 2-year program (NOT for students entering directly into Thesis year):

Course Topic:  Theory, Culture & Criticism
Course Code:  ARCH 640 (held with ARCH 442)
Instructor(s):  Tara Bissett
Day/Time:  Wednesday 10:00am-12:50pm ARC 1001

Against the backdrop of the larger interdisciplinary field known as cultural studies, this course will trace and examine critical bodies of theory that have influenced the development of
contemporary architectural thought and practice. This course will emphasize and study important writings and theoretical systems that have emerged in various fields including philosophy, art theory/criticism, literary theory, psychoanalysis, the natural and social sciences, and cultural studies, to investigate the ways in which these have generated conceptual tools within architectural theory, criticism and analysis while contributing to the evolution of architectural practice. Pedagogical Objectives: To present a thematically and chronologically organized survey of contemporary architectural theory that focuses on the relationship between seminal theoretical texts drawn from outside of the architectural discipline and critical developments in contemporary architectural theory and practice. The course is intended to provide students with an advanced knowledge base in contemporary architectural theory to ground more specialized graduate elective coursework while acting as a support for thesis and other forms of advanced architectural research.

FALL 2018 GRADUATE ELECTIVES

*An additional elective may also be offered – details are to be announced.*

Course Topic: Material Syntax
Course Code: ARCH 684_001
Instructor(s): David Correa
Day/Time: Wednesday 6:30-9:30 pm ARC 2008
Enrolment Cap: 16

This course will explore design at multiple scales. Building from the micro-structure of material, the functioning form and the process of materialization to the design of a brand identity. Conceived as a hands-on, concise design project, the course will look at Making as an emergent design process of direct engagement with conceptual and material elements.

Interest in materials to inspire curiosity and curiosity to challenge design boundaries are assets for this course.

Course Topic: Approaches to Architecture and Urbanism
Course Code: ARCH 520_001
Instructor(s): Marie-Paule Macdonald
Day/Time: Wednesday 2-5pm ARC 2026
Enrolment Cap: 10

The course develops a trans-disciplinary overview to design approaches in architecture and urbanism using image- and symbol-making as key activities in designing environments. The course evaluates the quality of results and the quality of process of design of environments. The students address topics within a wide range of subject matter groupings, from sustainable architecture to engineering, landscape and infrastructure, to branding and aesthetic practices, to design within the municipal political forum. Students present seminars on diverse categories of
design as a means to develop a personal design ethos. The final submission includes a set of drawings, diagrams and images that represent a set of design principles allowing students to consciously take a position in the world as a designer.

*This course requires a course add form in order to be added to your schedule. Please email eeanglin@uwaterloo.ca beginning August 2nd at 9am if you are interested in enrolling and a permission number will be provided to those interested until the course is full.*

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**Course Topic:** Twelve Architectures  
**Course Code:** ARCH 520_001  
**Instructor(s):** William Woodworth  
**Day/Time:** Tuesday 10am-1pm ARC 2026  
**Enrolment Cap:** 5

We are all indigenous peoples of this Earth, and we need to come together in our original identities to nurture our relationships together in respectful and meaningful ways. Out of that encounter arises authentic and beautiful architectural expression. For thousands of years the places/spaces of the Grand River watershed have hosted the occupations and cultures of native peoples. They are all still here in some identity [actual, adopted, or integrated]. The landscape surrounding Lake Ontario “the beautiful water” and Lake Erie are sacred to three aboriginal cultures – Wendat, Haudenausane and Anishnabec. In their continuing adjustments to settler encounters and migrations, the community surrounding the small village of Ohsweken have become the homeland of the Six Nations. As Architects, it behooves us to understand the origins of place held in the land itself examined through the rituals of archaeological investigation and recording, and to respectfully confer with the memories of our aboriginal Elders for grounding and guidance. These are the ancient and necessary protocols out of which all design and use of materials spring most naturally and profoundly.

Here at Waterloo Architecture Cambridge the primary place in this search is located fifty kilometers south along the banks of the Grand River at Six Nations — the sanctuary of the Iroquois, or Haudenausane, culture today. Haudenausane translates “people who build the long house” imparting the culture with a uniquely architectonic identity and duty making it particularly relevant to architects. In the deepest sense, all true architecture is carried out as a cultural “duty”, but one must be conscious of what comprises one’s culture. As an Architect and carrier of Haudenausane blood, it is my “duty” to share with you this fundamental knowledge. Mine will be an attempt to convey an architectonic teaching through the lens of Iroquoian culture at Six Nations of the Grand River Territory. The hope is that you will be enabled to take up these teachings, adopt/adapt them, integrate/utilize them, deeply and understandingly, in your architectural practices. This will require an attempt to help you in the recovery of your indigenous mind.

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Course Topic: First Nations / University of Waterloo Design Build elective
Course Code: ARCH 684_003
Instructor(s): John McMinn & Paul Dowling
Day/Time: Wednesday 2-5pm Room TBA
Enrolment Cap: 16

The First Nations / University of Waterloo Design Build program engages with the cultural history of the Grand River valley and the relationship to land, natural habitat and the cultural heritage of the Haudenosaunee peoples who have lived here since the late 18th century, as well as the Anishinaabe peoples whose territory this has been for millennia.

Both the School of Architecture building in Cambridge and the University of Waterloo main campus sit within the Haldimand Tract treaty lands, ceded to the Haudenosaunee confederacy in 1784, for their service to the British crown during the American Revolution. Originally the Haldimand Tract extended 6 miles on either side of the Grand River from Lake Erie to its headwaters, yet the current Haudenosaunee territory of Six Nations of the Grand River retains less than four percent of the original Haldimand Tract treaty lands.

Despite surrounding us, First Nations culture remains elusive from every day experience for many of us. The Design Build program responds, in addressing our situation of occupying treaty lands, taking on the opportunity of working with First Nations community groups, contributing to the momentum of the reconciliation movement and offering students the opportunity to design and construct a full scale permanent building, that contributes to local First Nations community infrastructure.

The course aims to build awareness of the diversity of First Nations culture in the Grand River region particularly related to indigenous conceptions of space, ritual events, material culture and architecture. Extending from this cultural awareness training, the course provides the opportunity for collective design work for a pow wow arbor, to be used for annual pow wow gathering at the Mississaugas of the New Credit First Nation, near Hagersville Ontario. In addition, there will be an opportunity for hands-on fabrication in the completion and structural testing of the ritual event pavilion at the sacred oak grove of the Mississaugas, built during the past summer term by Waterloo Architecture students.
The fall graduate elective is the first part of an annual two-course sequence in which the pavilion design, carried out to the level of preliminary working drawings, are completed in anticipation of the building phase that is carried out during the Spring term each year. The Spring term design studio is open to both graduate and undergrad students, allowing graduate students continued involvement in a mentoring role with undergrad students.

Course Topic:  RESPONSIVE ARCHITECTURAL SYSTEMS: ABIGENESIS
Course Code:  ARCH 684_004
Instructor(s):  Philip Beesley
Day/Time:  Monday 6:30-9:30pm ARC 2008
Enrolment Cap:  16

This seminar course will offer a series of readings of specialized aspects of responsive, interactive architecture. Readings from contemporary philosophy, cybernetics, and experimental life sciences will be included. The contemporary study of abiogenesis, the transition between inorganic and organic life forms, provides potent material that can be applied to contemporary architecture. These interdisciplinary readings can provide a context for designing complex interdependent systems within contemporary architecture.

Ilya Prigogine, the mid-20th century physicist, proposed a set of paradigms that seem to question the stable world of Vitruvian architecture. We will follow a set of readings and design explorations related to the dynamic form-languages and interacting systems implied by Prigogine’s theories. Prigogine proposed diffusion and dissipation as key terms for understanding how materials could interact in a dynamic, constantly evolving and self-organizing world. Quasiperiodic organizations are revealed by the new interpretations of physics and chemistry offered by Prigogine, forming hybrid topologies composed of multiple interconnected and interdependent systems. These terms can act as emerging paradigms for design.

The seminar will be conducted as a series of readings led by students throughout the term, alternating with professor-led readings and presentations. Material from the Living Architecture System (LAS) group from Waterloo Architecture, Electrical and Computer Engineering, Psychology and Knowledge Integration will be included. Students will be encouraged to participate in active reflection, exploring the implications of the material being presented in open-ended round-table discussions. Critique and extension of the themes embodied in LAS installations will be invited. The varying topics within the seminar course can be refined in order to relate to individual thesis investigations, providing material for integration. No specialized experience in these multiple disciplines is required, but students should have strong interest in exploration of nature and technology.

Readings will include:
- D’Arcy Wentworth Thompson
- Ernst Schrodinger
- Ilya Prigogine
- Gordon Pask
- Humberto Maturana and Francesco Varela
- Jack Szotak
- Craig England
Course Topic: Competitions in Architecture
Course Code: ARCH 686
Instructor(s): Terri Boake

This course provides an opportunity for the student to independently engage in the respected tradition of the Architectural Competition. The competition entry and accompanying research paper must focus on the use of architectural precedents as the basis for the creation of typologically based propositions. Submission to the external competition is mandatory, the timing and detailed requirements of which will determine one part of the academic requirements for this course. A student must develop a course outline, consisting of an outline for the research paper (including a preliminary bibliography), and the competition brief. Both the professor in charge, and the Graduate Officer, must approve the outline in advance of the term in which a student plans to take the course. Once approved a permission number will be provided for enrolment.

Please read though both of the course pages about this course. There are many example projects posted for your reference with respect to course expectations.

http://www.tboake.com/384-comp.html

This independent study elective requires that you research and select a competition to be approved by Terri before you can proceed with the course. After the competition is approved you must prepare an outline of the research paper, along with a bibliography, for approval. The competition entry and accompanying research paper must be completed before the academic term in which you are registered for the course.

It is preferred that master’s students work singly towards this elective unless a compelling case can be made for a group submission (i.e. large scope and multiple board requirements). Single board submissions are to be done by individual students. However, each student must prepare a unique research paper.