

ARCH 193 | Design Studio – The New Library

Schedule

Mondays 9:30AM-12:30PM, 1:30PM-5:30PM EST

Thursdays 9:30AM-12:30PM, 1:30PM-5:30PM EST

Instructors

David Correa (he/him) – david.correa@uwaterloo.ca (**co-coordinator**)

Isabel Ochoa (she/her) – iochoa@uwaterloo.ca (**co-coordinator**)

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Teaching Assistants

Adrian Allexander Hutchinson (he/him) – a8hutchinson@uwaterloo.ca

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“The ability to build assumes the knowledge of all architecture and construction forms, as well as their development. To build means to advance this process, to investigate, and to make. The development of buildings began over ten thousand years ago and has reached an extremely high level, but is in no way a closed process. There are still an infinite number of open possibilities, infinite discoveries to make.”

– **Frei Otto** in *A Conversation with Frei Otto*, Juan Marial Songel, 2010.

Territorial Acknowledgment

We acknowledge that the School of Architecture is located on the traditional territory of the Neutral, Anishinaabeg and Haudenosaunee peoples. The University is situated on the Haldimand Tract, the land promised to the Six Nations that includes 10 kilometres on each side of the Grand River. (See references here: <https://uwaterloo.ca/engineering/about/territorial-acknowledgement>)

Course Description

ARCH 193 is the second in a series of design studios intended to engage students in spatial thinking and architectural representation. Building on the design foundations acquired in ARCH 192, students will continue developing design and representation skills, architectural literacy, and critical thought, albeit in increasingly more complex contexts.

Within this studio, architecture is treated as a practice-based discipline engaged by way of a variety of activities, or operations. The 1B studio will foreground **accessible building and site design** as well as **material and tectonic explorations** as key drivers of architectural production. Students will be asked to think about the strategies, methods, and materials used to help shape ideas and forms. Assignments are organized around three sets of design exercises which will serve as the primary vehicles for students to pursue these learning objectives, experiment, take risks, and take clear intellectual positions.

Course Goals and Learning Outcomes

- Ability to make a comprehensive analysis and evaluation of a building, building complex, and urban space.
- Ability to apply material, structural, and constructional principles to the conception and development of spaces, building elements, and tectonic components.
- Ability to respond to natural and built site characteristics in the development of a program and the design of a project.
- Ability to analyze and respond to a complex program for an architectural project that accounts for user needs.
- Develop an introductory understanding of issues of accessibility, way-finding, and barrier-free design.
- Develop an introductory understanding of the impact spatial planning has on physical mobility and multi-sensory perception (haptic, acoustic, thermal etc.).
- Demonstrate an understanding of human scale. This includes both the relation between proportional elements in a composition and the relation between the human body and the spaces it occupies both physically and visually.
- Ability to make technically precise descriptions and documentation of a proposed design for purposes of review and construction.

CACB Student Performance Criteria

The BAS/MArch program enables students to achieve the accreditation standards set by the Canadian Architectural Certification Board as described here. This course addresses the CACB criteria and standards that are noted on the Accreditation page of the School of Architecture website. For ARCH 193, these student performance criteria include, but are not limited to:

A1. Design Theories, Precedents, and Methods

"The student must demonstrate an ability to articulate a design process grounded in theory and practice, an understanding of design principles and methods, and the critical analysis of architectural precedents."

A3. Design Tools

"The student must demonstrate an ability to use the broad range of design tools available to the architectural discipline, including a range of techniques for two-dimensional and three-dimensional representation, computational design, modeling, simulation, and fabrication."

C1. Regulatory Systems

"The student must have an understanding of the applicable building codes, regulations, and standards for a given building and site, including universal design standards and the principles that inform the design and selection of life-safety systems."

C2. Materials

"The student must have an understanding of the basic principles used in the appropriate selection and application of architectural materials as it relates to fundamental performance, aesthetics, durability, energy, resources, and environmental impact."

Course Assessment

Course assessment will be broken up into three sets of deliverables:

Project 1: Pedestrian Bridge – 25% of total grade – completed individually

Project 1 will start with a hands-on investigation on the role that spatial sequencing, structural form and material assemblies play in the advancement of an architectural idea. Students will explore physical phenomena, and generate hypothesis about how and why these phenomena affect the perception of space. These insights will then be used to shape an expanded architectural idea.

P1 Learning Objectives:

- Apply iterative design strategies as a tool for design development.
- Implement formal and tectonic logic as a design driver.
- Engage in the design of systems rather than objects.
- CACB SPC – A3: *The student must demonstrate an ability to use the broad range of design tools available to the architectural discipline, including a range of techniques for two-dimensional and three-dimensional representation, computational design, modeling, simulation, and fabrication.*
- CACB SPC – C2: *The student must have an understanding of the basic principles used in the appropriate selection and application of architectural materials as it relates to fundamental performance, aesthetics, durability, energy, resources, and environmental impact.*

Project 2: Reverse Competition – 15% of total grade – completed in groups

To prepare for Project 3, Project 2 will serve as a case study of the library typology. To execute this case study, students will put themselves in the mind of the project architects, developing a graphic competition proposal to communicate the key ideas of their selected case study building.

P2 Learning Objectives:

- Gain an applied understanding of historical and contemporary approaches to library and community hub design.
- Investigate diagramming and abstraction as design drivers.
- Apply graphic storytelling and critically position the hierarchy of concepts.
- CACB SPC – A1: *The student must demonstrate an ability to articulate a design process grounded in theory and practice, an understanding of design principles and methods, and the critical analysis of architectural precedents.*

Project 3: The New Library – 60% of total grade – completed individually

Building on skills developed up to this point, students will design a modern library/community hub in an urban context. Through the development of the project, students will be encouraged to incorporate knowledge from parallel technical courses.

P3 Learning Objectives:

- Use representational tools such as sections, vignettes, massing models, and site analysis as design drivers.
- Investigate the necessary spatial and atmospheric qualities that support vibrant, inclusive, and functional, community spaces.
- Develop an understanding of accessible and barrier-free design principles found in the building code.
- Develop an understanding of design for inclusivity using mobility, cognition, and multi-sensory aids.
- Use architectural design tools to spatially curate conflicting and diverse programmatic requirements in a small building footprint.
- Apply environmental stewardship strategies informing material and tectonic approaches.
- *CACB SPC – C1: The student must have an understanding of the applicable building codes, regulations, and standards for a given building and site, including universal design standards and the principles that inform the design and selection of life-safety systems.*
- *CACB SPC – C2: The student must have an understanding of the basic principles used in the appropriate selection and application of architectural materials as it relates to fundamental performance, aesthetics, durability, energy, resources, and environmental impact.*

In addition to the criteria provided as part of each assignment outline, all submissions will be evaluated on:

Intellectual Clarity: Inquiry and extension of the course material will be essential to producing successful explorations. Students must be able to clearly articulate their design ambitions, intellectual underpinnings, and all design work in discussions, desk crits, pin-ups and presentations.

Independent Inquiry: Student are expected to advance their projects through self- motivated and self-framed agendas and pursuits. Projects are seen as offering students a framework through which to explore and exercise architectural skills.

Technique/Craft: All work must be executed with intent and care where the precision and craft of artifacts created are continuously valued.

Attendance and Steady Progress: Work should be developed over the entire length of a project. Iteration and incremental development are paramount.

The following is offered as a guide to numerical grade assignments:

90+: Consistent exemplary work that exceeds expectations. Work is holistically thought provoking and executed at a very high level.

85-89: Some elements of work are exceeding expectations and executed at a high level, but this level of achievement is not maintained throughout all project elements.

80-84: Work is consistently above average, and student is actively participating and actively engaging the course material.

77-79: Average work. Student is completing work in a timely manner and participating in the course. No attendance issues. Shows expected levels of competency in course materials.

70-76: Work is complete and meets expectations on some points while operates below expectations on others.

60-69: Work is incomplete or completed with minimal comprehension and effort.

60-: Work is unacceptable and does not fulfill the course requirements.

Things to do to support your success:

- Be curious and open-minded.
- Be organized.
- Be prepared to do things more than once.
- Take notes for each other during reviews.
- Work consistently throughout the term.
- Take risks and push your abilities and limits.
- Work in studio.
- Find a way to be passionate about your work.
- Build healthy habits in terms of food, exercise, friends, and sleep.

Desk Critiques

Studio days will generally be for scheduled 'desk crits.' Students are expected to generate a significant amount of new work for these critiques. Time outside of scheduled crit times on studio days should be used for working on studio projects. These are great opportunities to produce new work, as well as share your work with your peers, and get a second opinion.

As you become familiar with 3D modelling, it is important that you continue to produce/print drawings for crits. Showing a project by flying around a model can be very disorienting and difficult to annotate. In addition to this, the act of creating a drawing will reveal design issues and opportunities not present in a model. **Students are thus required to print their drawings and bring trace paper to all desk critiques** so that they may be as productive as possible in design discussions.

Due to the structure of this studio, you may see multiple instructors and teaching assistants over the course of one project. This makes it important for you to take ownership over your ideas and motives so that they remain

strong as you get feedback from different sources. The role of the instructors is to support your inquiry, not to tell you what your project is about.

Collaborative Work

Professional practice in architecture, design, or engineering takes place through close collaborations between teams of people. Identifying effective ways to communicate, assign responsibilities, identify milestones and achieve objectives are essential skills to succeed in professional practice. For this reason, the studio will require students to work in teams at various points throughout the term. This collaboration should allow for intensive work and iteration to take place in parallel. All members of each group will be graded equally.

Course Delivery Platforms and Communication

This course will be done in-person and attendance is expected during class hours. The following platforms will be used to deliver, organize, and share course content:

- **LEARN** – Work submission, distribution of course documents, grade recording and release.
- **Email** – Official communications including communications outside of class hours. *Informal questions should wait until scheduled studio hours for teaching faculty, and until scheduled office hours for teaching assistants. No Teams messaging will be responded to at any time.

Response times for communication outside class time with the teaching team will be up to 24 hours, Monday to Friday 9AM-6PM EST. All communications regarding special circumstances, student accommodations and late submissions are to be directed to the undergraduate officer ONLY.

Field Trip

As part of Project 3, the studio will involve two 1-day field trips to support learning and engagement with existing libraries. Transportation to and from the field trip destinations will be arranged by the Administrative Office at the School of Architecture. **Transportation costs will be paid for by students. Students should tentatively allot \$80CAD for the cost of transportation for both trips (\$40CAD per trip).** This fee is subject to change and only includes the bus between the field trip destinations and the School of Architecture in Cambridge. This fee does not cover meals or any other costs students may incur during the trips. Students should be prepared to pay the field trip transportation cost within the first two weeks of the semester when prompted to by the Administrative Office.

Material Costs

ARCH 193 consists of a material-oriented set of investigations that have material costs. It is expected that participants purchase required materials to support these explorations as well as plotting for project reviews. Please budget \$300-\$400CAD for material and plotting costs for the term.

Covid-19 Special Statement

Given the continuously evolving situation around COVID-19, students are to refer to the University of Waterloo's developing information resource page (<https://uwaterloo.ca/coronavirus/>) for up-to-date information on academic updates, health services, important dates, co-op, accommodation rules and other university level responses to COVID-19.

Fair Contingencies for Emergency Remote Teaching

To provide contingency for unforeseen circumstances, the instructor reserves the right to modify course topics and/or assessments and/or weight and/or deadlines with due and fair notice to students. In the event of such challenges, the instructor will work with the Department/Faculty to find reasonable and fair solutions that respect rights and workloads of students, staff, and faculty.

Late Work

Course deliverables that are handed in late will receive an initial penalty of 5% if submitted within one hour of the deadline. An additional 5% penalty will be applied to course deliverables submitted within the subsequent 23-hour period. This means that all late course deliverables submitted more than 1 hour after the deadline will receive an automatic 10% deduction. Course deliverables handed in 24 hours beyond the deadline will receive 0%.

ARCH 193 relies on digital tools to complete all course deliverables. Students are expected to work diligently to ensure all assignments are submitted on time. Digital fluency, including file and software maintenance, are critical to both your academic success as well as your professional development. Computer crashes, corrupt files or forgetting to save or back-up will not be acceptable excuses for late submissions.

Only in the case of a justified medical or personal reason will these penalties be waived, and only if these have been officially submitted to the Undergraduate Student Services Coordinator and accepted by the Undergraduate Office.

Students seeking accommodations due to COVID-19, are to follow Covid-19-related accommodations as outlined by the university here: (<https://uwaterloo.ca/coronavirus/academic-information#accommodations>).

Passing Grades

The minimum passing for ARCH 193 is 60%. Grades below the specified passing grade result in a course failure. Students must complete all exercises and pass the final project in order to receive a passing grade for the course.

Mental Health Support

All of us need a support system. We encourage you to seek out mental health supports when they are needed. Please reach out to Campus Wellness (<https://uwaterloo.ca/campus-wellness/>) and Counselling Services (<https://uwaterloo.ca/campus-wellness/counselling-services>). We understand that these circumstances can be troubling, and you may need to speak with someone for emotional support. Good2Talk (<https://good2talk.ca/>) is a post-secondary student helpline based in Ontario, Canada that is available to all students.

Equity Diversity and Inclusion Commitment

The School of Architecture is committed to foster and support equity, diversity and inclusion. If you experience discrimination, micro-aggression, or other forms of racism, sexism, discrimination against 2SLGBTQ+, or disability, there are several pathways available for addressing this:

A) If you feel comfortable bringing this up directly with the faculty, staff or student who has said or done something offensive, we invite you, or a friend, to speak directly with this person. People make mistakes and dealing them directly in the present may be the most effective means of addressing the issue.

B) You can reach out to either the Undergraduate office, Graduate office, or Director (Maya Przybylski). If you contact any of these people in confidence, they are bound to preserve your anonymity and follow up on your report.

C) You can choose to report centrally to the Equity Office. The Equity Office can be reached by emailing equity@uwaterloo.ca. More information on the functions and services of the equity office can be found here: <https://uwaterloo.ca/human-rights-equity-inclusion/about/equity-office>.

D) Racial Advocacy for Inclusion, Solidarity and Equity (RAISE) is a student-led Waterloo Undergraduate Student Association (UWSA) service launching in the Winter 2019 term. RAISE serves to address racism and xenophobia on the University of Waterloo campus with initiatives reflective of RAISE's three pillars of Education and Advocacy, Peer-to-Peer Support, and Community Building. The initiatives include but are not limited to: formal means to report and confront racism, accessible and considerate peer-support, and organization of social events to cultivate both an uplifting and united community. You can report an incident using their online form.

Academic Integrity, Grievance, Discipline, Appeals, and Note for Students with Disabilities

Academic integrity – In order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect and responsibility. [Check the Office of Academic Integrity for more information.]

Grievance – A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read Policy 70, Student Petitions and Grievances, Section 4. When in doubt, please be certain to contact the department's administrative assistant who will provide further assistance.

Discipline – A student is expected to know what constitutes academic integrity to avoid committing an academic offence, and to take responsibility for his/her actions. [Check the Office of Academic Integrity for more information.] A student who is unsure whether an action constitutes an offence, or who needs help in learning how to avoid offences (e.g., plagiarism, cheating) or about “rules” for group work/collaboration should seek guidance from the course instructor, academic advisor, or the undergraduate associate dean. For information on categories of offences and types of penalties, students should refer to Policy 71, Student Discipline. For typical penalties, check Guidelines for the Assessment of Penalties.

Appeals – A decision made or penalty imposed under Policy 70, Student Petitions and Grievances (other than a petition) or Policy 71, Student Discipline may be appealed if there is a ground. A student who believes he/she has a ground for an appeal should refer to Policy 72, Student Appeals.

Note for students with disabilities – AccessAbility Services, located in Needles Hall, Room 1401, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with AccessAbility Services at the beginning of each academic term.

Turnitin.com – Text matching software (Turnitin®) may be used to screen assignments in this course. Turnitin® is used to verify that all materials and sources in assignments are documented. Students’ submissions are stored on a U.S. server, therefore students must be given an alternative (e.g., scaffolded assignment or annotated bibliography), if they are concerned about their privacy and/or security. Students will be given due notice, in the first week of the term and/or at the time assignment details are provided, about arrangements and alternatives for the use of Turnitin in this course. It is the responsibility of the student to notify the instructor if they, in the first week of term or at the time assignment details are provided, wish to submit the alternate assignment.

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
January 09 Course Introduction <u>P1.1</u> Assigned Lecture on Parti	10	11	12 <u>P1.1</u> Due at 9AM <u>P1.1</u> Group Pin-ups <u>P1.2</u> Assigned Lecture on Structural Systems	13	14	15
16 <u>P1.2</u> Desk Crits	17	18	19 <u>P1.2</u> Due at 9AM <u>P1.2</u> Group Pin-ups <u>P1.3</u> Assigned	20	21	22
23 <u>P1.3</u> Desk Crits	24	25	26 <u>P1.3</u> Desk Crits	27	28	29 <u>P1.3</u> Due at 9PM
30 <u>P1.3</u> Reviews <u>P2</u> Assigned	31	February 01	02 <u>P2</u> Desk Crits	03	04	05

**Note: Course content and schedule subject to change.*

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
06 P2 Desk Crits	07	08	09 P2 Desk Crits	10	11	12
13 P2 Desk Crits P2 Due at 9PM	14	15	16 P2 Reviews P3.1 Assigned Lecture on Site Design	17	18	19
20 Reading Week	21	22	23	24	25	26
27 Field Trip (tentative)	28	March 01	02 P3.1 Desk Crits Guest Lecture on Accessibility (tentative)	03	04	05

**Note: Course content and schedule subject to change.*

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
06 P3.1 Desk Crits Guest Lecture (tentative)	07	08	09 P3.1 Desk Crits Lecture on Libraries	10	11	12 P3.1 Due at 9PM
13 P3.1 Pin-ups P3.2 Assigned Lecture on Material Assemblies	14	15	16 P3.2 Desk Crits Model Making Workshop	17	18	19
20 Field Trip (tentative)	21	22	23 P3.2 Desk Crits	24	25	26 P3.2 Due at 9PM
27 P3.2 Reviews P3.3 Assigned	28	29	30 P3.3 Desk Crits	31	April 01	02

**Note: Course content and schedule subject to change.*

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
03 P3.3 Desk Crits	04	05	06 P3.3 Desk Crits Last day of class	07 Statutory Holiday	08	09 P3.3 Drawings Due at 9PM
10	11	12 P3.3 Models Due at 9PM	13 P3.3 Reviews	14	15	16

*Note: Course content and schedule subject to change.