

## **Arch 285 002/570 002 Hands Hearth and Home**

Building for affordability, adaptability and ecology

Course Instructors:

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Class hours: Tuesday 9:30-12:30

Class location: Loft 3003

Office location: 3009

Office hours: Tuesday 12:30-2:30 (please e-mail the instructor to schedule meetings)

### **TERRITORIAL ACKNOWLEDGEMENT:**

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.

### **COURSE DESCRIPTION:**

This course focuses on two fundamentals of the human experience: Hearth and Home and how we engage our hands in creation of these essential elements of daily life.

The course is part of the Grand Studio Design Build program at the School of Architecture where we work with communities for the creation of full-scale permanent structures, providing students the opportunity to participate in the creation of architectural projects that contribute to the life of these communities in our local region.

The Grand Studio takes its name from the Grand River, the defining geographic feature of the area and its resulting cultural heritage. The city of Cambridge was founded in 1816, with mills built along the river, harnessing its power for early industry, particularly in lumber and textiles. The building we occupy was one of those mills, producing silk, as part of a vital textile industry that was a key economic engine for the surrounding area. Going back further, as described in our land acknowledgement, the Grand River defined the territory of the Haldimand tract, with a 10 km swath to either side of the river from its headwaters to its end at Lake Eerie, promised to the Haudenosaunee Peoples who had migrated to what was then Upper Canada, from the Finger Lakes area of northern New York State.

These histories influence our work in the Grand Studio Design Build program, via our engagement with Indigenous communities in the region and with the local community in the City of Cambridge. The course involves these communities through engagement with two Tiny Homes projects as well as the creation of a Sacred Fire project, drawing on the roots of Indigenous culture that surrounds us along the banks of the Grand River.

The creation of full-scale permanent buildings involves a scope of work that stretches beyond the confines of a single course. Both Tiny Homes projects we will be working this term were begun in 2021 and the goal of this course is to carry the projects through to completion.

The Sacred Fire project is a new initiative, involving a more modest scope of building, and modification of the existing courtyard at the School of Architecture, accessed from Melville St. In the original planning of the School program, the courtyard was conceived as an outdoor classroom, but has never been used as such. With the appointment of William Woodworth, Rawe:nokwas, as the Elder in Residence at the School of Architecture, we will be creating the Sacred Fire placement, to facilitate William in leading us in Indigenous cultural ceremonies, as part of the expanding of our connection to the Indigenous roots of our location on the Grand River.

One of the Tiny Homes projects is a collaboration with the Mississaugas of the Credit First Nation, located an hour drive south-east of Cambridge. The goal is creation of housing for Elders downsizing to a more modest mode of living from a larger home, and for youth moving toward living independently from their family home. Housing on First Nations reserves across Canada is often a huge challenge and many First Nations are struggling to fulfill needs of their community members, to provide adequate housing, alleviate overcrowding, and replacement of toxic degraded buildings, causing numerous health issues.

The second Tiny Home project is part of an ongoing research initiative led by Martine August, Adrian Blackwell, and John McMinn, focusing on alternative dwelling solutions for housing insecure people, being developed in collaboration with the City of Cambridge, as well as shelter housing initiatives like A better Tent City in Kitchener.

**Micro-housing**

The objective of this course is to design and build housing in which residents have a support structure that encourages their creative inhabitation, fosters sociability, and connects its inhabitants to the environment that surrounds them. Micro-housing is a form of housing which has gained in popularity in recent years and is now reaching the attention of municipalities as a viable housing option. It has gained in popularity because of many of its attributes, which offer advantages over other forms of housing. It is affordable and therefore gives residents with limited means the possibility to have a high degree of agency over their housing. The mobility of micro-housing makes it nomadic and allows it to have a light relationship to property as land. We explore the practice of housing implementation, working hands-on for the detailed design, development and completion of these two prototype Tiny Homes.

We question the following:

- what is the right of dignified housing for each individual in our community
- how can we as architects contribute to the challenge of housing access and affordability
- what are the key parameters and minimum standards for a dwelling
- how can create rapidly deployable housing to meet immediate needs of people facing housing insecurity

Alternative housing options are needed, and this course explores the use of Tiny Homes as a flexible strategy to meet immediate needs, with low cost and flexible housing solutions, for autonomous dwellings designed to provide a stand-alone home, for one or two occupants. The work of the course is part of a larger combined research initiative being carried out in the Grand Studio Design Build program, exploring micro-housing options, related to affordability, mobility and ecology.

	<b>Advantages of microhousing:</b>	<b>Disadvantages of microhousing:</b>
1	Agency	Lack of space
2	Mobility	Insecurity
3	Sustainability	High envelope to volume ratio
4	Potential for aggregation	Untested social arrangements
5	Potential for self-building	Quality of construction may be impacted
6	Decolonizing land relations	Low density provokes sprawl

**The Sacred Fire**

The Sacred Fire project is to be built in the Melville Street courtyard, as part of the evolving project of the School of Architecture in Cambridge, enabling Indigenous ceremonial practice to take place at the School, as part of a larger de-colonization and reconciliation process. Elder in Residence William Woodworth, Rawe:nokwas, will be providing cultural guidance for this project, beginning with a lecture, as part of the course introduction on the first day of class. William will speak about Indigenous cultural practices related to the Sacred Fire, in Haudenosaunee

culture and beyond. The practice of ceremony is a core element of Indigenous culture and provision for these practices in locations on the University of Waterloo campuses is part of the university's outreach programming, to enhance opportunities for Indigenous students, staff and faculty to thrive within the university community.

## **DESCRIPTION OF COURSE PROJECTS:**

### **Project A, Sacred Fire (3 task groups)**

TA1 Landscaping & Stone circle for the fire pit, marker and signage

TA2 Seating/benches

TA3 Place for the fire keeper gear and wood storage

### **Project B, New Credit Tiny Home (3 task groups)**

TB1 Exterior Building envelope

TB2 Interior Services, Insulation, wall finishes

TB3 Interior Millwork and Furniture

### **Project C, City of Cambridge Tiny Home (2 Task groups)**

TC1 Exterior / Greenhouse

TC2 Interior Millwork and detailing

Each project is divided into task groups. You are asked to choose a project and task group within the project A, B, or C, to begin the term. There will be discussion of these projects during the course introduction.

In past Design Build courses we have found it helpful to have an overall project coordinator, ideally someone with some building experience, to act as a facilitator for the project. We recommend each project group of 2 or 3 task groups, to nominate a project coordinator who will coordinate scheduling of the work of the task groups on their project, compile materials order lists, as well as to ensure all members of the project group know their tasks, have their required materials, have the required training to use tools needed and ensure their task groups have the needed supervision for University safety protocols.

There will be a total of 8 task groups, each with four people. Each task group will be responsible for planning and scheduling the work of their group and the coordination of their work with other task groups working on the same project. Each group will also be responsible for determining the materials required for their work, creating material order lists and participating in getting these material orders, either picked up or delivered, to be available when needed for assembly at the School of Architecture.

Hands on building work will be the primary activity of the class. In addition, there will be a requirement for some research about materials, as well as detailed design development and fabrication planning. It will often be necessary for some group members to be working on design and materials research while others are doing hands on fabrication, and for these roles to rotate, ensuring all group members participate in the different aspects of the process, to ensure the intended learning outcomes of the course.

Task group responsibilities have been divided to try to balance the workload for each of the task groups, but there may be a need for some flexibility or movement from one task group to another, of some group members, as the build out of the various components evolve and come to completion.

## **LEARNING OBJECTIVES**

In relation to CACB accreditation requirements, the course will cover the following criteria / requirements.

For Student Performance Criteria:

A1: Design Theories, Precedents and Methods

A2: Design Skills

A3: Design Tools  
A5: Site Context and Design  
A8: Design Documentation  
B1: Critical Thinking and Communication  
B2: Architectural History  
B4: Cultural Diversity and Global Perspectives  
B5: Ecological Systems

C2: Materials  
C5: Environmental Systems

For Program Performance Criteria:

PPC2: Design Education  
PPC3: Global Perspectives and Environmental Stewardship  
PPC4: Collaboration, Leadership and Community  
PPC5: Technical Knowledge  
PPC6: Breadth of Education

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

- demonstrate an understanding small scale construction and assembly
- to pursue independent research
- translate research into spatial understandings and present in a clear and graphically compelling way
- to work through a range of representation modes
- to learn basic skills in contemporary wood construction

**COURSE REQUIREMENTS AND ASSESSMENT:**

Students will be graded on the work performed during this course. Grading will be based on the degree to which submitted work satisfies the requirements and objectives of each assignment and each project. In addition, grading will reflect student participation, commitment, effort and improvement over the 12 weeks of the course. The weighting of the projects throughout the term is as follows:

P1 (2 wks) - Research and Detailed Design Refinements—due 9:00am on May 17 (15 %)

P2 (10wks) – Buildings Phase—due 9:00am on July 26th (80%)

P3 (1 wk) – Documentation – as built drawings and photographs—due 9:00am on August 2nd (5%)

Total 100%

The specific deliverables and basis for the evaluation of each project will be identified in individual project handouts. Grades will be posted on LEARN within 2 weeks of deadline/review. Attendance at all lectures, all pinups (even if you are not presenting that week) and all reviews is required.

Given that this course revolves around hands on group work, it is only possible to provide grades for each task group, during each phase of the course, with the expectation that all members of a task group make a roughly equal contribution to the given task the group is responsible for. It will be the responsibility of the members of each task group to self-monitor group member's contributions and ensure equal contributions.

**Late Work**

Assignments that are handed in late will receive an initial penalty of 5% on the first calendar day late and a 5% penalty per calendar day thereafter. After 5 calendar days, the assignment will receive a 0%.

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 Co-Ordinator 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>).

### **Late Pass**

Students are allocated **one** late pass for the term. This allows students to make **one** submission **up to 72 hours** after the stated deadline without penalty and without any request for accommodation. Students are required to communicate with your instructor their intention to use a late pass before the relevant deadline.

### **Passing Grades**

The minimum passing grade in all studio courses is 60%. Grades below the specified passing grade result in a course failure.

### **SCHEDULE:**

Each task group will be required to carry out a minimum of **two** 3-3.5 hour sessions per weeks, as the core activity of the course.

Supervised course sessions take place as follows:

9:30 – 12:30 on Tuesday mornings

5:30 – 8:30 Tuesday evenings

5:30 – 8:30 Wednesday evenings

9:30 – 12:30 on Friday mornings

With 8 task groups and 2 sessions /week /group, we have a total of 16 task group sessions /week

We anticipate a limit of two task groups on Tuesday and two task groups on Wednesday evenings (total 4 task groups) due to instructor supervision limits. This leaves 12 additional task group sessions, which will need to divide as 6 task groups on Tuesday and 6 on Friday. Morning sessions will have 3 course instructors, while evening sessions will have 1 instructor, unless otherwise determined during the period of the course.

Some groups will work inside the workshop, some will work in the exterior assembly area outside the workshop, and some will work in the Melville Street courtyard.

### **COURSE DELIVERY PLATFORMS & COMMUNICATION:**

We will be using Learn and Teams as the platforms to deliver, organize and share course content, learning and work:

LEARN – Official communication, syllabi, assignments, work submission, and grade recording and release.

MS TEAMS – Virtual Hub for the course. Used for organizing course documents, activities and discussions.

Students will be added to the course team in the first week of class. Class-wide virtual meetings will also be on TEAMS.

### **In-person Activities Planning**

This is a design-build course, and it will be held in person unless public health requirements dictate otherwise during the term.

If course activities are impacted by a change in restrictions to in-person activities, such as changes in room occupancy limits, the instructor will communicate updated in-person activity plans. These plans may alter student plans for in-person activities.

### **Fall 2021 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.

Should we pivot to remote teaching this term, instructors may need to record lectures. In this case, the course's official *Notice of Recording* document will be found on the course's LEARN site. This document outlines shared responsibilities for instructors and students around issues of privacy and security. Each student is responsible for reviewing this document.

#### **Fair Contingencies for Emergency Remote Teaching**

We are facing unusual and challenging times. The course outline presents the instructor's intentions for course assessments, their weights, and due dates in Spring 2022. As best as possible, we will keep to the specified assessments, weights, and dates. 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.

#### **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](#).

### **REFERENCES**

#### **Housing:**

Aureli, Pier Vittorio, Leonard Ma, Mariapaola Michelotto, Martino Tattara, and Tuomas Toivonen, "Promised Land: Housing from Commodification to Cooperation", <https://www.eflux.com/architecture/collectivity/304772/promised-land-housing-from-commodification-to-cooperation/>

Blumgart, Jake. "How Bernie Sanders Made Burlington Affordable", Slate, Jan 19, 2016 <https://slate.com/business/2016/01/bernie-sanders-made-burlingtons-land-trust-possible-its-still-an-innovative-and-effective-model-of-a-ffordable-housing-today.html>

Choi, Binna and Maiko Tanaka, "You ask me if there is another 'Grand Domestic Revolution' going on right now, and the answer is.... an Interview with Dolores Hayden" in *The Grand Domestic Revolution Goes On* eds. Binna Choi and Maiko Tanaka (Amsterdam: Casco-Office for Art Design and Theory, 2010)

Choi, Binna and Maiko Tanaka eds. *Grand Domestic Revolution Handbook*, Amsterdam: Casco-Office for Art Design and Theory, 2014.

Chuang, Céline. "Resistance is Rhizomatic: Towards an Anti-Colonial Praxis Against Gentrification in Chinatown Vancouver," *The Funambulist 31: Politics of Food* (September-October 2020).

Davis, John Emmeus "Origins and Evolution of the Community Land Trust in the United States" in *The Community Land Trust Reader* (Cambridge MA: Lincoln Institute)

of Land Policy, 2010), 3-47.

Lacaton, Anne, Jean Philippe Vassal, Mathieu Wellner, “Surplus” in Reduce, Reuse, Recycle: Architecture as Resource, eds. Muck Petzet / Florian Heilmeyer, Venice: German Pavilion 13th International Architecture Exhibition, La Biennale di Venezia, 2012.

Madden, David and Peter Marcuse, “Against the Commodification of Housing,” in *In Defense of Housing: The Politics of Crisis*, Verso: London, 2016, (epub, 15 pp).

Madden, David and Peter Marcuse *In Defense of Housing: The Politics of Crisis*. London: Verso, 2016.

Masuda, Jeffrey R, Aaron Franks, Audrey Kobayashi, Trevor Wideman, “After dispossession: An urban rights praxis of *remaining* in Vancouver’s Downtown Eastside,; *Environment and Planning D: Society and Space*, July 15, 2019, pp. Right to Remain Collective Vancouver <https://www.righttoremain.ca/>

Osborn, Bud, Nicholas Blomley, and Eugene McCann. “‘Raise Shit’, A Poem by Bud Osborn (4 August 1947 – 6 May 2014)” *Society & Space* (online, May 19, 2014) <https://societyandspace.org/2014/05/09/raise-shit-a-poem-by-bud-osborn-4-august-1947-6-may-2014/>

Parkdale Neighbourhood Land Trust, “Starting a CLT”  
<http://www.pnlt.ca/clt-tool-kit/starting-a-clt/>

[Pohl, Ethel Baraona. “The Elements of the House, revisited” e-flux architecture \(online\) https://www.e-flux.com/architecture/positions/280228/the-elements-of-the-house-revisited/](https://www.e-flux.com/architecture/positions/280228/the-elements-of-the-house-revisited/)

[Right to Housing in Toronto Website: https://right2housingto.ca/](https://right2housingto.ca/)

Right to Remain Collective, <http://www.righttoremain.ca/>

Rosenthal, Tracy Jeanne “101 Notes on the LA Tenants Union”, *Commune* (online, July 17, 2019), <https://communemag.com/101-notes-on-the-la-tenants-union/>

Stavrides, Stavros. “Housing and the City: Reinventing the Urban Commons” in *Grand Domestic Revolution Handbook*, Binna Choi and Maiko Tanaka eds. Amsterdam: Casco-Office for Art Design and Theory, 2014.

SvN. *Housing Affordability in Growing Urban Areas - Independent report on housing affordability in Ontario* Toronto: OAA, 2019.

Video: *The Right to Remain*, What is Solidarity? Speaker Series, with speakers: **Yogi Acharya**, a former organizer with the Ontario Coalition Against Poverty; **Geraldine Dening**, co-founder and Director of Architects for Social Housing (ASH); **Audrey Kobayashi** professor of Geography, Queens University.  
<https://www.youtube.com/watch?v=56NnpCrRylo&list=PLELFwoIN1wlYvK-bGJ0n8Kf6IyMVHp94i&index=5>

Video: *LOCATING AND RELOCATING, Where to House the Unsheltered in Waterloo Region, A graduate symposium at the University of Waterloo*, with **Jeff Wilmer**, Former Chief Administrator’s Officer for the Region of Waterloo and active proponent of A Better Tent City; **Nadine Greene**, Former informal shelter operator and co-founder of A Better Tent City; **Joe Mancini**, Co-founder of The Working Center in Kitchener-Waterloo and recipient of an Order of Canada; Organized by Poorna Patange, **Thursday March 18, 2021**. (This may not have been recorded unfortunately)

## **Sustainable Building:**

[https://www.canadianarchitect.com/asf/perspectives\\_sustainability/measures\\_of\\_sustainability/measures\\_of\\_sustainability\\_intro.htm](https://www.canadianarchitect.com/asf/perspectives_sustainability/measures_of_sustainability/measures_of_sustainability_intro.htm)

<https://cep.ees.ufl.edu/emergy/resources/presentations.shtml>

<https://www.eia.gov/consumption/commercial/data/2012/#b1-b2>

## **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 (Anne Bordeleau). 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](mailto: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 (WUSA) 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.