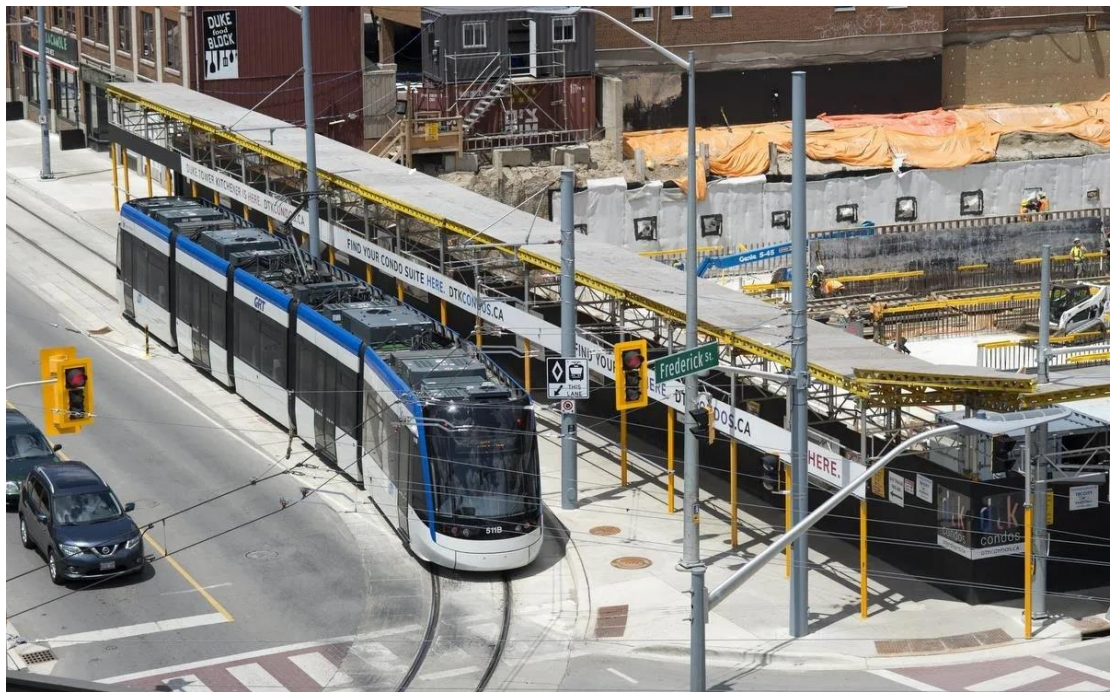


MB Design Studio
M Arch. Urban Design and Building Studio

Arch 690

**Re-Urbanization, Community and Dwelling
in the Mill Creek Corridor in Cambridge, Ontario**



Studio Faculty: Prof. Val Rynnimeri
Mondays from 9:30 am to 5 pm, Room 2026
Thursdays from 9:30 am to 5pm, Room 2026

"To study everyday life would be a completely absurd undertaking, unable even to grasp anything of its object, if this study was not explicitly for the purpose of transforming everyday life."

**Guy Debord, Perspectives for
Conscious Alterations in Everyday Life**

"Thus, the new majority is born in a multitude of colors; normality is created out of the sum of many abnormalities. ... The new market of the majority can be described as a "matrix", made up of a brightly colored parking lot, a chessboard made up out of many different forms of conduct.

...
To go back to design, it is my impression that an era has come to an end. New problems are reaching maturity. And they are not at all the same as the old ones. The new era requires the ability to produce stable codes, many stable codes, many compartments of that matrix on which the new majority is based."

**Andrea Branzi,
Domestic Animals**



Black Flag, 1971, Christiane Pflug



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 kilometers on each side of the Grand River.

Arch 690 2020 Winter Term MA Studio

Course Description

Welcome to Arch 690, the MB Masters design studio. It's your second design studio at Waterloo Architecture and continues your graduate academic career at UW as well as the path to your UW M. Arch professional degree. Arch 690 is the second of your four M. Arch studios and a summer coop work term leading you to completing your Masters thesis under the guidance of a thesis supervisor and committee. As new graduate students to Waterloo Architecture you were placed in the two-year Waterloo Architecture Masters programme. This track allowed you to complete the major accreditation requirement of the Comprehensive Design Studio which gave you a strong grounding in the material and building systems of the buildings you will eventually design. For those of you coming from other parts of the world, that studio, and this one, in this Winter term, are intended to introduce you to Canadian architecture culture, mid-sized and large Canadian urban places, the needs inherent in a winter city climate, the social mores and habits of a diverse immigrant-friendly nation, and Canada's architectural technical building culture and practice.

This studio, the Urban Design and Building Studio is an important part of your preparation for professional work in Canada and most global cities. Urban design and building studios are taught in every professional programme in North America and you most likely had such a studio in your previous undergraduate experience whether in Canada or other countries. The focus for the Arch 690 studio project will be building a bridge between the building practice you learned last term and the urban development, governance and design practices of a growing mid-sized North American city like Cambridge.

Following the analysis of an urban area in central Galt in the City of Cambridge, there will be two main studio projects culminating in a design for an urban building or small group of buildings in the midtown area of the Galt city centre of Cambridge. Urban issues for a series of sites will be introduced and the overall development and building programme will be based on an urban cohousing community (as well as other programme elements). The final building design project that will outline a complex social and functional programme, develop an initial concept parti based on the programme and a site analysis, build on the original concept with a detailed design development phase, and synthesize the student's original preparatory design visualizations. These will be supported by a developed view of architecture as a cultural statement and a focal hub for building communities.

The studio work will be broken into three phases of work, the first one of detailed analysis and review of the urban context, the regulatory urban framework, and the possible urban development programmes for a series of urban sites. The second phase will be a detailed urban design project also developed in groups work. This will develop both building sires and configurations and public space frameworks for the new urban communities. Finally, in the third phase, an individual building work beginning with an initial parti or conceptual design visualization. The parti development will initiate the more detailed spatial and schematic material concepts of the building or buildings, the urban setting and uses of the private and public space systems, and lead the student into the more comprehensive building design work of the final project. At its

completion, the final project will be depicted in drawing, digital 3D models, and urban views and other visualizations. Physical models are optional in this course but not discouraged as part of a design process.

Sustainability, Durability, and Resilience... Green Design in Arch 690

Like in the last term, there will be a strong emphasis from the very beginning of the project design process on the themes of sustainability and green design in the Arch 690 studio. Green design will be central and critically engrained in the project from the start, asking each student to develop an expanding green strategy for their individual project work regardless of the other individual project design concepts.

Such a green discourse will be considered at all levels of the work from the urban design project and its framing of daily life, to more technical concerns of building development and construction. There will be no need for developing building details as in the last Arch 691 term, but those lessons and sustainable green design principles are expected to be intrinsically developed as part of your urban and building design... meaning that the city area and building should work, and not raise questions and criticism in that area.

The need to include sustainability as a fundamental basis of all design is now universally accepted, however the means of embodying these goals architecturally remains a matter of debate and confusion. While sustainability typically implies minimizing the use of working energy and embodied energy, there is no agreement as to the best way to design a metric for judging the "best" building in this respect.

Contemporary sustainability discourses, which mainly seek to minimize energy use through building science based approaches, may also obscure the ways architecture has traditionally been able to respond to the demands of climate and need for amenity. Often the ingenuous flexibility of vernacular or indigenous buildings offers great insight into the dynamic and interdependent way in which design can be at the cultural core of transforming energy and material use. For example, a well-designed building envelope may simultaneously extend interior space, provide valuable social space, and reduce cooling loads.

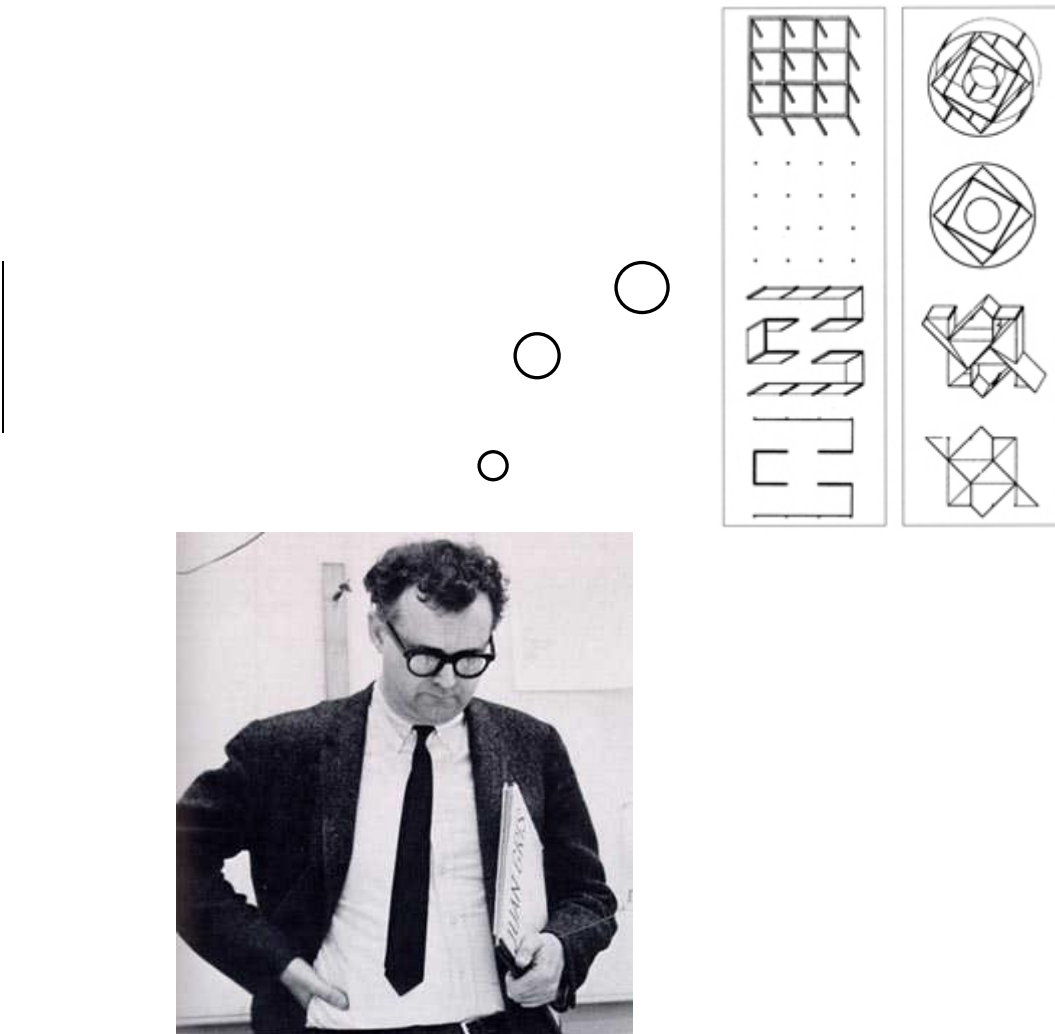
It is important that you be able to develop architectural strategies both conceptual and pragmatic with respect to the critical issue of energy performance for your project. Ultimately the objective is to develop an understanding of how your architectural parti can also be the generator of strategies that work effectively to create a building that requires the least amount of clean and renewable energy, while offering the greatest amount of amenity and well-being to its users, and which suggests that sustainability is not a set of "green" features that are applied to your building after it has been "designed". Neither is it a narrowly based technical solution. Sustainability needs to be an authentic combined source of response to a pre-existing environment, an architectural ambition, and a technical inspiration.

Course Goals and Learning Outcomes

This list below needs to be seen in conjunction with the more general CACB list of student performance criteria and goals for pedagogy found later in this course outline. Listed below are the more specific goals and learning outcomes specific to the approach taken in this studio to both urban design and building design.

- Examining re-urbanization as an alternative urban design theory and practice to that of developing large scale master plans.
- Examine alternatives to the present tendency for large scale urban development to be concentrated at the limited stations of transit initiatives like the ion LRT and to consider a lower scaled but walkable relation to the new rail lines.
- Finding opportunities in the existing underdeveloped urban fabric of mid-sized cities to create opportunities for the "Missing Middle" of residential urban building types. The goals are to minimize the use of high rise buildings in preference to mid-rise built form.
- To examine forms of affordable housing based on models of shared collective life balanced with private life. Cohousing will be used as a baseline critical model of shared life in order to provide a basis for examining this set of relationships and to offer students the opportunity to critically examine the continuum of choices in their project work at an urban design scale and at a building scale.
- To critically examine the possibilities in housing a diverse population to the greatest conviviality. Diversity in all relationships, economic, social, accessibility and cultural should be built from the beginning into the design work for re-urbanized community.
- Examining the role of public open space in community building and its place as a supportive system or network for the people of the community and its buildings. The goal is to review the balance of natural ecologies and those linked open spaces in relation to the need for built up community buildings and recreational resources for the broader needs of the people in the community's neighbourhoods.
- Re-urbanization based on a deeper understanding of the historical development of the community and its existing neighbourhoods and urban fabric. To develop strategies to build on the strengths already in the urban community and its already existing architecture and urban places.
- To deeply incorporate urban sustainability not as a purely technical layer in building design but rather as a fundamental strategy of the development of urban sites and in models of daily life. This will be encouraged through urban design to establish a strong passive energy management in the urban design foundations for siting future green buildings. Focus will be on building orientation, re-urbanization with re-naturalization, tree canopy build up, ground materials, water management of riparian corridors, allotment gardens and urban agriculture for food security.
- Critically examine how the present systems of urban planning regulation both create opportunity and sometimes hinder the development of urban and building design projects.

Arch 690 Studio Work



The Incremental Re-urbanization of the Mill Creek Corridor in the City of Cambridge's Galt City Centre

Mixed Use, Co-Housing and Market-based Housing to be Developed Around the Next Generation Urban Build-out Around the Coming of the ion Waterloo Region LRT to the Historical Galt Urban Centre by 2032

Mid-Sized City Re-Urbanization Sites on the Mill Creek Corridor

Three Urban Areas for the P1 Group Urban Analysis

The sites for the MB design studio will be located on the old industrialized Mill Creek corridor in the city centre of Galt, one of the three centres making up the linear City of Cambridge, itself part of the Waterloo Region linear city comprised of Waterloo, Kitchener and Cambridge. All three Waterloo Region cities are situated on the Grand River watershed which forms its backbone. South of Cambridge the urban corridor extends all of the way along the Grand River to the City of Brantford making a linked chain of four cities, all built from smaller historical urban centres like the City of Galt.

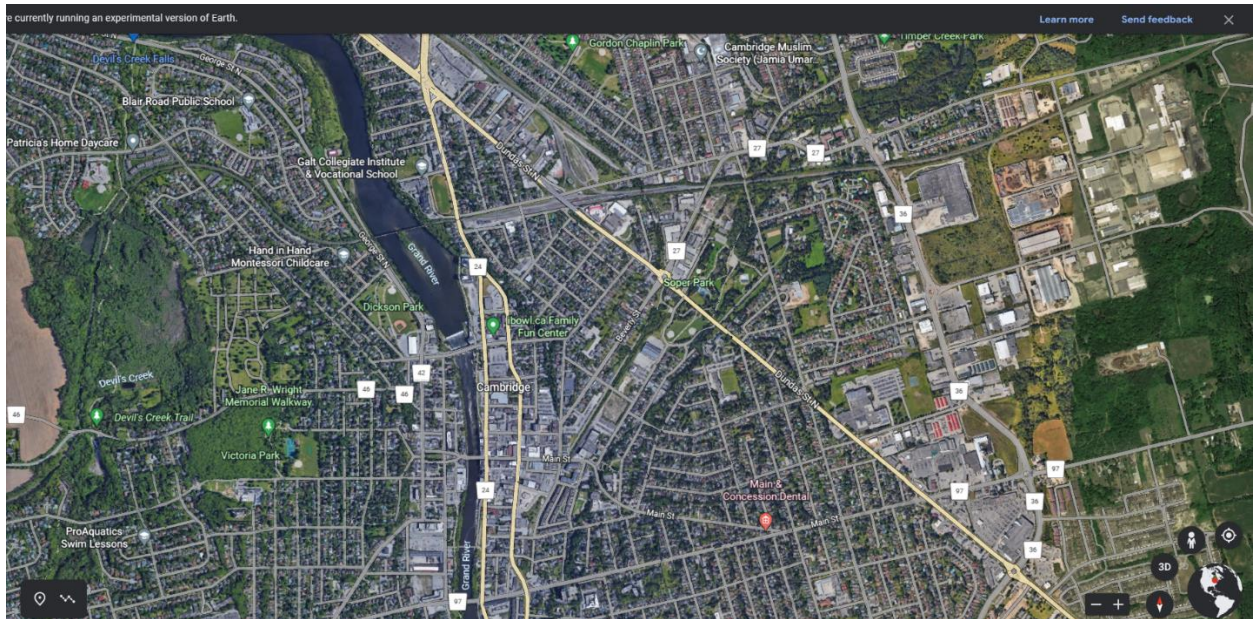
As these small and mid-sized cities all begin to develop quickly with education driven digital, skilled industrial, and agribusiness economies, they are becoming a new agglomerate centre outside the Greater Toronto and Hamilton Area but linked to it by rail and highways across the Ontario Greenbelt, all are undergoing a rapid re-urbanization in the next decade. New infrastructure initiatives like the ion LRT corridor will be the next step in re-urbanizing the urban fabric of these still loosely linked urban places. All of these communities are undergoing re-urbanization, a second generation of development and growth, and in particular in their long decaying and generationally dormant urban centres.

An opportunity for such re-urbanization is the Mill Creek Corridor in the Galt centre of Cambridge, an infrastructural corridor which was one of the original industrial economic engines of the region. It was first, at Galt's foundation, a corridor developed to exploit the ready water power available as the creek flowed into the Grand River. Agricultural mills were followed by water power based industry. In 1856, the Grand Trunk Railway arrived, opening up access to new markets for the local factories. The Mill Creek Corridor added a rail spur along its length running parallel to the original channelized Mill Creek and its retaining ponds. New factories flourished even as water power was replaced by Ontario's hydro electric systems and network.

But by the 1970s with the switch to vehicular traffic on the new Highway 401, the rail based factories slowly shut down and the area has lost its industrial heart, replaced by the factories on Franklin Parkway leading to the 401 highway. Much of the land is now either empty awaiting redevelopment or underbuilt with small obsolete factory buildings. The rail spur is gone. The Mill Creek channel is still there but under developed for any use. The hope for the corridor is for its future use by the phase 2 of the ion LRT linking the three cities of Waterloo, Kitchener and Cambridge.

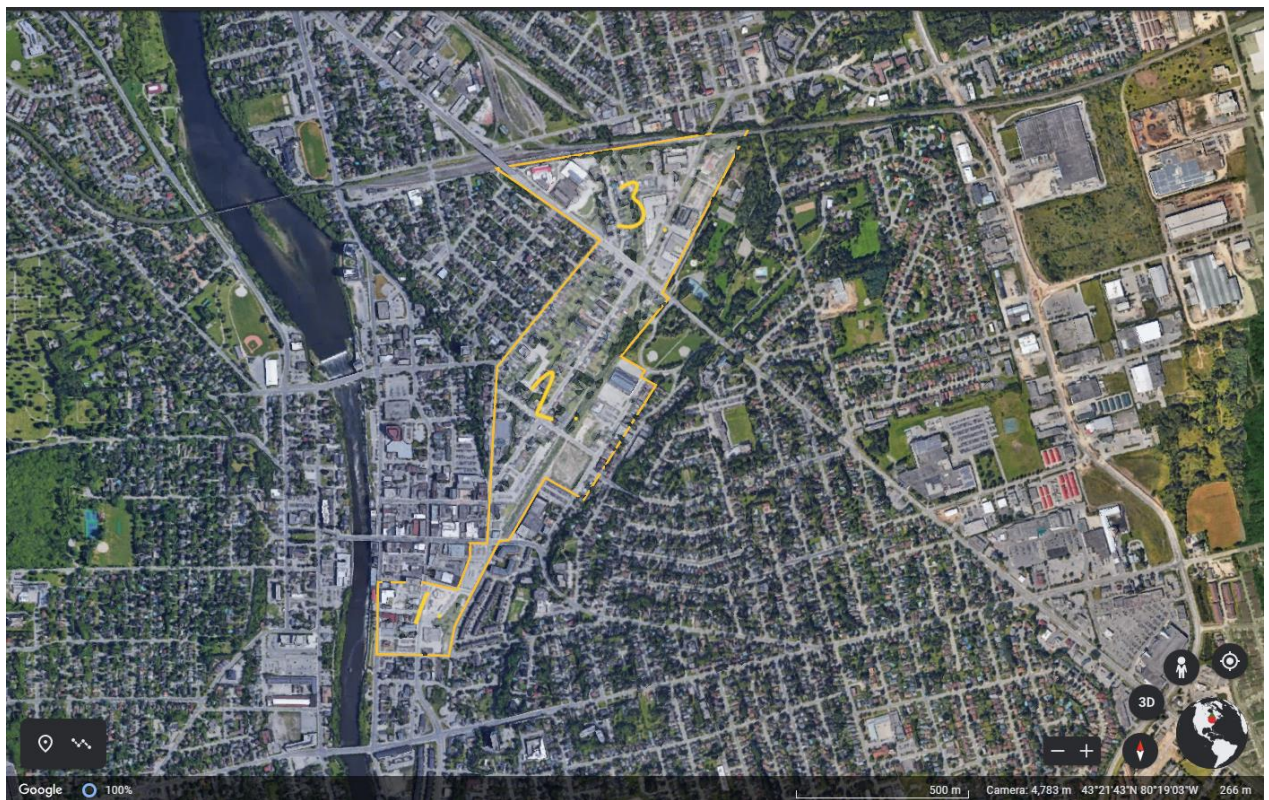
In Project 1 (and later Project 2) of this three project studio, you will examine the urban design potential of the historical corridor and examine in groups of four students, three of its sectors:

1. The Galt downtown and the buried access to the Grand River
2. The Mill Creek industrialized channel and its neighbourhoods
3. The industrial triangle bisected by the old rail corridor



The Galt City Centre in the City of Cambridge

Three Site Areas along the Mill Creek Corridor



Project 1 (P1) Mill Creek Urban Area Analysis

3 weeks, group work, 25% of final grade, due 30th January 2023 for reviews

A Group Urban Analysis of One of the Three Areas of the Mill Creek Urban Corridor

This is a very important task in your design work and is the part of the studio work where you can start the process of creating the sites for your P3 individual studio work. Do not under-think this part. As a member of a group of four students, you have been assigned one of three parts of the Mill Creek Corridor, where you will undertake an urban analysis leading to a group report.

P1 Urban Analysis Presentation Requirements

Urban Analysis Report Structure

- acknowledgements
- table of contents
- executive summary **[1-2 pages]**
 - what is in the report and what are its conclusions
 - a "walk through" or précis to navigate the bigger document
 - a "map" to the overall report
- **the report itself (see below)**
- any references and appendices

The Main Report Content

Layered Analytical Mapping and Sections

- underlying natural ecosystem factors
- public recreation and open space systems and buildings
- land use and building function
- urban morphology analysis
- community building typologies
- significant architectural buildings
- urban planning maps
- existing and anticipated transportation infrastructure
- property structures and boundaries
- any anticipated projects by private actors

Statistics, Descriptions, Narratives and Conclusion: circa 6 to 8 pages

- any regulations affecting urban projects such as possible speculative statistical programmes and economic development goals, city guidelines, and zoning and code restrictions
- geographic and natural ecosystem sections
- relevant street section rights of way (showing framing buildings)
- future ion LRT working sections and right of way on sight
- any municipal or provincial urban planning social policies or goals affecting urban design and housing in re-urbanized areas
- conclusion

All work must be fully labeled, captioned and submitted digitally for grading as a PDF or PowerPoint report file. The presentation to the class will be digital using projectors or screens. Printed panels are not required.

Project 2 (P2) Group Urban Design Development

3 weeks, group work, 25% of the final grade

The second P2 project will build on the P1 urban analysis and develop urban design initiatives and interventions based on a re-urbanization approach. The details of this project will be released closer to the completion of P1. P3 below is developed in more detail to give an idea of where the urban design will be focused, on what kind of public space network, what kind of urban morphology, and what kind of urban typologies.

Project 3 (P3) The Urban Residential Building(s)

Individual Work, 6 weeks, 50% of the final grade, hand-in/review dates TBD

To go back to design, it is my impression that an era has come to an end. New problems are reaching maturity. And they are not at all the same as the old ones. The new era requires the ability to produce stable codes, many stable codes, many compartments of that matrix on which the new majority is based."

Andrea Branzi, in *Domestic Animals*

Cohousing Neighbourhoods... Some people call them a return to the best of small-town communities. Others say they are like a traditional village or the close-knit neighbourhood where they grew up, while futurists call them an altogether new response to social, economic and environmental challenges of the 21st century. Each holds a piece of the truth. Cohousing is a concept that came to North America in 1988 from Denmark where it emerged in the early 1960's. It describes neighbourhoods that combine the autonomy of private dwellings with the advantages of shared resources and community living.

Residents usually own their individual homes, which are clustered around a "common house" with shared amenities. These amenities may include a kitchen and dining room, children's playroom, workshops, guest rooms, home office support, arts and crafts area, laundry and more. Each home is self-sufficient with a complete kitchen, but resident-cooked dinners are often available at the common house for those who wish to participate. In some communities, participants will join a cooking team once or twice a month – then sit and enjoy meals cooked by fellow residents the remaining evenings of that month.

Cohousing residents participate in the planning, design, ongoing management and maintenance of their community, meeting frequently to address each of these processes. Cohousing neighbourhoods tend to offer environmentally sensitive design with a pedestrian orientation. They typically range from 10-35 households emphasizing a multi-generational mix singles, couples, families with children, and elders.

from [The Canadian Cohousing Network](http://cohousing.ca/about-cohousing/what-is-cohousing/)
<http://cohousing.ca/about-cohousing/what-is-cohousing/>

Also..... Go to a TED talk by architect Grace Kim at
<https://www.youtube.com/watch?v=mguvTfAw4wk>

Cohousing Community for the Mill Creek Corridor Urban Neighbourhood

The building complex that you will be designing for the P3 building project this term is a cohousing community on one of sites that your P2 urban design group work has outlined in the Mill Creek Corridor. Such a cohousing community is well suited for an urban building course and as a natural extension of the development of a re-urbanized neighbourhood. Cohousing requires you to interpret a complex mix of programme elements and internally has a variety of spaces ranging from large meeting and activity areas to smaller more private quiet areas. This is true for both inside and outside activities.

In addition to the cohousing community, you will also have the opportunity to provide market housing in the building complex for a mixture of singles, young couples, seniors, and families. The mixture will be determined by you in the programming work of the first part of the project work. There will also be retail at grade, parking requirements, and community and building services included in the building programme, again to be determined in detail for each of the studio sites and for each student.

The overall detailed building programme will be developed by you independently and is broadly outlined in a section which follows. It has been left open-ended at this stage to allow you the chance to choose the scale and composition of the building activities and to establish the appropriate sizes for those activities asked for in relation to your urban design work in P2, and to develop sites in P2 with desirable anticipated building sizes.

You will make your eventual detailed building design your own and establish your personal vision for the project at an early stage. The same is true of the expanded and more detailed site analysis elaborating the P2 project work, a work which you should begin immediately once the programme has begun to gel in your mind.. Documents will be provided for you in PDF form outlining those

An important role for sustainable building siting, materials and building systems and construction is also to be part of the design work. As in MA, opportunities also may arise for varied structural systems both those spanning large volumes, a development of a wall and skin that encourages light penetration and a wall system that encourages occupation with activities.

To keep in line with the green strategies for building in the future, there is only one studio proviso regarding structure. That is a requirement for wood construction even for tall buildings. This is beyond the Ontario building code that allows six stories but you worked taller with last term and there are buildings in BC and Quebec stretching that limit up to 18 stories. You may use concrete for below grade foundations, basement and garage construction, and for elevator and exit stair cores. You may also bring the concrete up to one floor above grade.

A Working Programme for the P3 Building

Following is a broad draft set of goals, and a list of rooms and spaces to be considered for your Cohousing Community building project. Most are required. The purpose of your individual programme development is to find best role that the design of a Cohousing Community can play in framing multi-generational living in today's world, as well as in the particular area of the Mill Creek Corridor in which you will be siting it.

Questions which come to mind are, what are the complex social options offered by a design and how are they needed to get by and thrive in your vision of a community? How much of your work is a "marketplace" dwelling and how much will be mediated by the ability to experiment with individual standards of living amenity, and to what degree is the collective body of the dwelling a major factor in determining the lifestyle of the occupants. Included as a secondary broad goal is to create access to a walkable community, one with travel to workplaces via walking, bicycle or public transit. During your programme phase, please attach nominal room sizes to each room and a cultural, functional and physical space description that best fits your idea of an eventual design approach and possible building or project parti.

Approximate Project Statistics and Desired Numerical Goals

The starting point of your Cohousing Community is a mix of approximately 1/3 seniors, 1/3 families, and 1/3 singles or childless couples. The seniors will be independent but have access to community-based care and call for off site nursing services. The goal is to house six families, twenty seniors and twenty singles or young couples in a shared communal living arrangement that will still be affordable and buildable by marketplace standards. These numbers can vary a bit in relative proportion according to how you organize your programme but should not be reduced in overall number.

Required General Organizational Elements of Large Scale

- Community Room, a large double height place for daily activities and/or large-scale public meetings for the Cohousing group or the even the community at large. The Cohousing community dining area and kitchen should be part of, or adjacent, to this space as should a community recreational space (TV, games, conversation).
- Appropriate dwelling spaces for each group in the mix described above. As well, the six families (at least) should have easy, as direct as possible, access to open spaces on the ground for use by their children. How big are individual dwelling units? How much amenity, like the size of individual dwelling unit kitchens for example, would be appropriate in your concept of collective living. What is shared and what is private?
- Reading room/library for community with quiet reading or small conversation niches, digital resources, media area, computers, games.
- Office space for use by community administration organizations or by home-based workers.
- Outdoor space... an open courtyard (if possible) or rooftop with a garden that could offer food growing, or maybe your choice of building and open space type, with some potential for active connection to the interior programmes, e.g. walking and conversation, seclusion and meditation, reading and education, open play areas for children, collective ritual areas, group activities that are building community, and more. Consider rooftop food growing as part of a green

roof approach but do not let it replace a ground level space where it's possible in an urban setting.

- Parking space for one community vehicle. Bicycle storage inside the buildings.
- Garbage storage for once a week pickup for recycling and once every two weeks for general non-recyclable garbage. Composting strategies as well?

Smaller Elements that can be Integrated into your Concept (Use at least three)

- Café, or community restaurant, or large open kitchen (open to the broader community), maybe combined/double serving with a lunch/snack area for families using the library or day care. This space also needs a washroom.
- Spaces for possible social interaction with local seniors from nearby homes or broader outreach to Midtown faith-based community seniors in local churches, mosques and temples.
- Small gym facility for local fitness programmes and sports-based activities for students, seniors and older children.
- Workshop for hobby wood and metal working. General house repair and maintenance shop.
- A dedicated childcare facility for a combination of 20-25 community and local area children. This facility must be separate and secure since it brings in children from the broader Midtown community. This means separate washrooms. You might consider a childminding facility which is strictly used by only the cohousing group and is part of that residence.

Final Reviews and Grading of Work

The final reviews of the completed P3 work will be in early April and will be coordinated with other Waterloo studios. Those review, however, is not where the final grade for the P2 work will be established. There will be a submission later in the term to allow you to adjust the work after considering the review comments.

- The P1 and P2 parts of the studio work completed by end of the term's sixth week just before Reading Week will offer a grade worth 50% of the term work, 25% for each of P1 and P2.
- The final P3 project will be worth 50% of the terms work.
- Your submitted P3 studio folio after the final review of your complete P3 work (revised if needed) will be graded as will the work submitted at the review itself. Both the work submitted at the review work and that in the final folio will be graded each with a weight of 25% of the final grade each, the sum adding to the 50%total for P3.

Arch 690 Schedule W2023

	Monday	Thursday	Notes
1 J09	09	12	
	Studio and Project 1 Introduction Walk the Cambridge site corridor	Presentations by students of MA work and previous undergraduate work... Lecture on Waterloo Region, Cambridge, and the studio sites urban district	
2 J16	16	19	
	Urban Analysis group discussions Urban Design Lecture	Urban Analysis group discussions Urban Design Lecture	
3 J23	23	26	
	Urban Analysis group discussions Urban Design Lecture	Urban Analysis group discussions	
4 J/30	30	Feb 02	
	Urban Analysis group presentations/ Project 2 Introduction	Urban design parti group discussions, first quick draft iteration	
5 F06	06	09	
	Urban design parti group discussions on Public space and infrastructure systems	Urban design parti group discussions on urban morphology and typologies	
6 F13	13	16	
	Urban design parti group discussions general finalizing discussions	Urban design parti group P2 presentations. Project 3 Building Design Introduction	
7 F20	20	23	
	Reading week, no classes	Reading week, no classes	

	Monday		Thursday	Notes	
8 F27		27		Mar 02	
	P3 Group discussions of individual project partis		P3 Group discussions of individual project partis		
9 M06		06		09	
	P3 individual discussions		P3 individual discussions		
10 M13		13		16	
	P3 individual discussions		P3 individual discussions		
11 M20		20		23	
	P2 workshop... redo of P2 designs by original groups based on new individual work		P3 redo individual discussions		
12 M27		27		30	
	P3 individual discussions		P3 individual discussions		
13 A03		03		06	
	Final project development pre-review discussions		Final project development pre-review discussions Last day of classes		
14 Final Reviews		April -- Final Reviews TBA		April -- Final Reviews Final Arch 690 Submission is on the last day of exams, on LEARN by 11pm.	

CACB Student Performance Criteria

The BAS/M Arch program enables students to achieve the accreditation standards set by the Canadian Architectural Certification Board (CACB). The Arch 690 studio course addresses the CACB criteria and Student Performance Criteria (SPC) standards that are described on the SPC list provided by the School of Architecture as part of its accreditation process. SPCs that are required for architectural accreditation in the Arch 690 studio course are as follows:

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.

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.

A5: The student must demonstrate an ability to analyze and respond to local site characteristics, including urban, non-urban, and regulatory contexts; topography; ecological systems; climate; and building orientation in the development of an architectural design project.

A6: The student must demonstrate an ability to analyze and respond to the larger urban context where architecture is situated; its developmental patterning and spatial morphologies; the infrastructural, environmental, and ecological systems; to understand the regulatory instruments that govern this context; the broader implications of architectural design decisions on the evolution of cities; and the impact of urbanism on design.

A7: The student must demonstrate an ability to assess, as an integral part of design, the appropriate combinations of materials, components, and assemblies in the development of detailed architectural elements through drawing, modeling, and/or full-scale prototypes.

B5: The student must have an understanding of the broader ecologies that inform the design of buildings and their systems and of the interactions among these ecologies and design decisions.

Studio Culture and Policies

The Centrality of Studio Culture:

Usually unless otherwise indicated, teaching in Arch 690 is studio-centred and takes place in your Waterloo Architecture design studio. Participation in a healthy studio culture involves intensive design, drawing, building, and crafting, as well as a critical and speculative dialogue with your peers about your own work and the work of others. The participation in this evolving dialogue is proven in practice to be essential to a student's success. A student's presence also contributes to the success of the larger body of students in the studio. Each student's capacity as a critic of the work of others is also a fundamental architectural and academic skill that must be developed. Given our experience, the presence of the student and the contribution to all aspects of the studio discourse will be noted and evaluated by studio faculty during the term.

Designing your project in isolation at home inevitably undermines the potential for the more informal learning available in the collective environment of the studio. By our experience, such self-imposed isolation away from a studio culture is typically detrimental to the quality of a student's work. There will also be occasional scheduled lectures and the location of these classes will be most likely be in the studio classroom, or in the main lecture hall, the upper loft area, and any other room or area that has been designated for presentations and project reviews. These areas will be posted in advance in the course LEARN website, and also announced in class.

U Waterloo Teams and LEARN

My preference for class communication and delivery of materials is UW Teams (with LEARN used for submissions and back up emails if necessary) as the class forum for dissemination of materials and announcements. LEARN is the digital learning environment and course delivery framework for the overall Waterloo university but Teams has become the go to platform over the pandemic years. Teams is an extremely useful communication tool for teaching and administration of courses and you all have access to it as UW students. We will be using the two systems extensively so you should become familiar with them if you are not so already. You are responsible for keeping up with course notifications on Teams, and you can link to LEARN from:

<https://learn.uwaterloo.ca/>

As well, if you are comfortable with it, please place your personal pictures on both the Teams and LEARN "class lists" so I can start to become familiar with your names and faces. Just face shots are best.

Studio Policies

Now, some basic UW architecture studio policies:

- Students are required to arrive punctually and be working in the studio during class hours even if they do not have a personal scheduled review with the professor. Occasionally studio hours may differ from the hours listed in the calendar, but this will be posted in the course outline or announced by e-mail the days before a class begins.
- Students are required to attend and participate in all scheduled reviews, group or individual. They are expected to attend all guest lectures and other events. Repeated absence from studio and missing design review appointments of any type constitutes sufficient reason to request withdrawal from the course.
- Students are encouraged to continue working in the design studio in the studio off-hours as they complete their work. The School of Architecture building is open 24 hours a day, seven days a week, a privilege which allows students to undertake most if not all of their design in the studio working among their peers.
- The quality of the studio environment itself is also of extreme importance. The studio must be a safe and inclusive environment in which all students can work without unnecessary distraction or disruption. Headphones or earbuds must be used if a student wishes to listen to music or other electronic media. The student lounge, gym, and outdoor basketball court (ball hockey rink in fall/winter) are available to any student who wishes to engage in physical and social activities unrelated to studio work and are a good resource for dissipating the tension and stress attendant on studio work. As well, they are a good place to meet other masters and undergraduate students. You will be welcomed. That's our way.

The Iterative Design Process... a Reminder

Collective and individual design work leading to urban and building development is central to your future UW education, and your career as an architect. As you already know from previous experience, giving physical shape to a design is a project-based iterative process which typically moves forward in successive steps and cycles of activity. Below is a brief reminder of the steps taken to work through this process:

- **create** an initial design that generates further inquiry
- **carry** that developing design discourse forward
- **outline** a broader theoretical framework for the design
- **initiate research** on any necessary background information
- **expand or sharpen** the boundaries of the broader design universe of your ideas
- **initiate** a design narrative to guide and carry your research forward and to make your project presentation clear and focused
- **continuously review or critique** the results with your peers and the faculty
- **and begin again as above** until the work has developed to a level of satisfaction

Do not fall in love with an initial design concept and do not wait until late in the process to commit to a design approach. You will learn to analyze and evaluate a given situation asking for a building design, and then draw your proposal over and over. Students' initial design work full of untested good ideas will evolve and get more confident and complex leading to the final development of the design project. This complexity, of course, is not just about the building design itself but also about increasing confidence in its broader design discourse, its information background, place in architectural theory, and in its developing detailed technical solutions in support of the design goals.

This project work will be initiated by you, and you will have the time to watch it grow into something you could probably not conceive of at first impulse. It will also be a study incorporated a growing knowledge of the material and cultural world relevant to architecture. You will then be able to critically evaluate your design's success over a range of criteria from material construction, functional utility, personal and social meaning and even, to eventually have the skill to see beauty.

Teaching and Faculty Contact Time

Teaching in the Architecture design studio is built on an ongoing process of individual desk reviews of student design work and continuing critical discussions and is one of the most contact-intensive programmes in graduate studies at the University of Waterloo. In any studio design curriculum at Waterloo Architecture, the role of the studio professor will be to guide the student's more individualized design and research process both in a group context and individually.

Architectural design teaching moves forward by conversations. This will also be done in the broader context of lectures, seminars, and other group work during the term of the Arch 690 class. Given the frequent weekly one-to-one communication with faculty and any guests typical of studio desk critiques, there will be no additional traditional academic "office hours" unless personally requested by you. Your individual studio desk reviews fulfill that aspect of university learning in a much larger way than the limited discussions of a typical "office hours" of an academic University of Waterloo class.

Completion of Work, Term Grades, and Late Work Submissions

The standard minimum passing grade in studio courses is 60%. Students must complete all projects and assignments at an acceptable level and obtain a passing average in order to receive credit for this course. Failure to earn a passing grade in final term individual building design project will result in an overall failing grade for the entire term, notwithstanding the cumulative mark from aggregate term group projects.

The General Basis for Evaluation of Design Projects

The measure of success of architectural design work is not subjective as many outside the field like to believe. There is a framework of objective criteria which will be used by the faculty to evaluate the student work. Each assignment throughout the term will be assessed on the following bases:

- Ambition, clarity and appropriateness of the ideas addressed within the work.
- Architectural quality and the technical resolution of the proposition.
- Resourcefulness in research and ability to analyze and synthesize precedents in your work.
- Integrity in the development of the project from initial to final phase.
- Precision and craft of the physical artifacts such as models and drawings produced.
- The effectiveness and the completeness of project documentation, and
- Its capacity to communicate the project's intentions in the author's absence (i.e. without you being present to explain it)

The specific basis for the evaluation of each project will be identified for individual project assignments in project statements and desk reviews as the project develops, and in the public design reviews both interim and final. Grades will be posted on Waterloo LEARN.

Deadlines, Extensions and Late Work

Students must complete all projects and assignments. Late submissions without approved extensions will not be accepted for full grades. Grades will be penalized by 3% points per day late. Extensions can be granted in cases of illness or other incapacity. Requests for such extensions must be made before the project deadline as soon as is possible using the request for extension form available from the Graduate Student Services Coordinator Tina Davidson. This must be accompanied by a medical certificate when necessary and submitted to the Arch 690 faculty.

If there is a larger issue involving student privacy between a student and a UW counselor, then such an application for extension can be made directly to the Graduate Student Services Coordinator and the Graduate Affairs Officer who will evaluate the situation with the counselor and notify the Arch 690 faculty.

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

COVID-19 Special Statement

Given the on-going 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.

Student Need for Counseling

Often due to the critical intensity of design studio, issues and difficulties arise that often need further discussion and even counseling. Office hours to discuss academic issues beyond the normal work of the design studio are by appointment and will be available for students who wish to review their overall academic progress individually. Such discussions will be encouraged. Should issue require the assistance of UW counselors these are available at the School in the counseling office to all students independently of the studio and course faculty. **See the section below.**

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 at (<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 (DirectorArchitecture@uwaterloo.ca). 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 (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 and Appeals

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](#).

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.

A 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.

Additional Notes on Studio Work and Reviews

Project Reviews in Relation to Grading of Student Work

The most important form of teaching and learning in design studio is the public review, or crit, of pinned-up work such as drawings, digital presentations, and models. Reviews are held publicly so that all may benefit from the topics and ideas of diverse discussion and take lessons which are relevant to everyone. In a school of architecture, criticism has always been the most effective tool to provide students with a better understanding of their own work and that of their peers. You will soon become accustomed to the fact that your work will be openly discussed in front of the class. This criticism is intended to be constructive and educational.

Project reviews are instructive and not evaluative. Reviews or pin-up critiques are not meant for project grading, but rather are open-ended investigations, and often critical debates. The tone of a review is also not necessarily a reliable indication of the project's final grade. Grading evaluation for studio work will take place in confidential sessions undertaken by the studio faculty working as a group, a situation in which all critical aspects of each project will be considered as well as its development.

It is extremely important for each student to participate not only in the review of their own work, but also in the reviews of the work of fellow students. Participation throughout class reviews and seminars is expected for all students.

Individual or group desk crits in the working stages of a project are also not objective debates or evaluations but conversations about ideas, and opportunities to receive advice specific to each student and each project. The project and the decisions made are ultimately the student's responsibility. To cite desk crit advice as the reason for problems in the work is

an evasion of this responsibility.

All students must have work in the form asked for in the brief present at a desk crit. The studio faculty will not provide answers to a design problem; they will only offer comments on the work that the student presents. Faculty may refuse to provide a crit to a student who does not present new work.

Finally, permission needs to be requested to take either video or audio recordings of a review session. Photography is fine. Students are encouraged to keep notes of the criticism they receive from faculty members and guest critics. This notetaking is best done through the assistance of a classmate who can take the notes on one's behalf during the crit conversation.

Grading Fairness and the Desk Crit

Informal discussion sessions in studio are quite different from formal crits. They should be understood more as private consultations where faculty or a tutor offers advice on your work and procedure and works with you to further the project. Such discussions are not objective debates or evaluations, but opportunities for you to get individual tutoring and design advice specific to you and your scheme.

The comments in such sessions will tend to reflect more personal and candid views and should be respected as such. You are quite likely to get differing, and sometimes conflicting, opinions from different tutors. This should not be a problem for you. Your project and the design decisions you make are your responsibility, as is what you do with the advice given in studio discussions and how skillfully you apply it. You cannot evade your primary responsibility for your project work and cite some advice from a desk or studio discussion with faculty or a tutor as the reason for problematic work.

Often the positive tone of a faculty member in a desk review is not to be interpreted as a carte blanche to finish a project design by a student. The student should remain self-critical and self-aware enough to realize that simple encouragement is often the best way to override a perceived lack of confidence or a negative viewpoint that may be hampering a student from progressing on their work. As in the above paragraph, the average student should usually be a good judge of where their project really is if they retain a critical attitude to their work, the work of their colleagues, and that of the broader local, regional and global architectural discourse.

Communication with and from Studio Faculty

During the term, faculty may need to send communications to Arch 690 students. It is required that each student confirms their current active email address with the Graduate Student Service Coordinator during the first week of class. You are responsible for ensuring that we have your correct contact details, and for adding studio faculty email addresses to your email contacts.

From time to time each student will receive general communications from the coordinator regarding studio business. It is expected that students check their University of Waterloo email address regularly, and that once material has been sent, it has been officially received. Copies of all official correspondence will be archived for future reference.

Email correspondence directed to individuals will be sent to their individual UW accounts, whereas formal class-wide correspondence will normally be sent through Teams and/or LEARN. Students will have to ensure that their Teams and LEARN accounts are active and monitor them regularly. Over the course of the

term, students may also receive follow-up correspondence from individual faculty members regarding various issues pertaining to individual projects, crit schedules etc. that have come up in working discussions.

We ask that students try to use UW email addresses if possible as a means of communicating with faculty members regarding their studio projects. It's expected, however, that discussions concerning individual projects or any other matter requiring direction, confirmation or advice from faculty should mainly occur during scheduled studio hours.

Should students have the need to speak to the studio coordinator regarding other academic issues in the term, it is easiest in these situations to send an e-mail if they cannot do it during studio time. Any official correspondence that must be addressed to the studio coordinator in an emergency situation can be sent to Prof. Val Rynnimeri at the email address below.

Contact Numbers and Addresses

The office address and phone number for studio coordinator Professor Val Rynnimeri is Room 3006. Professor Rynnimeri's e-mail address is listed below:

Prof. Val Rynnimeri: vrynnime@uwaterloo.ca

Faculty is generally in the class design studio during studio days. Outside studio hours, email is the most effective way to reach and communicate with faculty in this course. Avoid phoning the office to avoid getting to voicemail.

Studio Fees

There is a \$25.00 studio fee for this course. This fee must be paid in the front office within the first two weeks of classes. Failure to pay this fee will result in the withholding of grades.

Some Studio Notes (from Prof. Brian Hunt, retired)

The following notes are a slightly edited repeat of the very useful project review descriptions and studio tips written (or assembled) for first year studio by now retired Professor Brian Hunt. They are probably the kind of studio intro text as built-up community knowledge, an accumulation of good practice authored with many hands over many years. The notes do represent a kind of distillation of studio lore and plain good advice gathered over generations of students. It would be wise to read them over a few times.

Useful Studio Tips

- Obtain a binder to hold all studio printed material and to collect your term research. Maintain a sketchbook to record your design ideas as they develop. Take this with you everywhere. Start drawing your design ideas to scale early.
- Know when to keep working and avoid useless distractions. Ensure that others respect this.
- Exchange ideas with your classmates. Attend as many of your classmates' formal reviews as you possibly can.
- Talk to the other TRD grad students about your work and inquire about theirs. Attend their reviews as time permits.
- Attend all guest lectures. You never know when you may find a kindred voice or simply a good idea to useful to pass up.
- Spend time in the library. Familiarize yourself with the wider world of architecture, its history, its fashions and trends, its cast of characters, and what the contemporary debates are about. If someone suggests you study a specific building and/or the work of a particular architect, go and look it up.
- Take notes during studio lectures. What will be discussed contains useful material for your design work as well as for your general education.
- Take notes during, or immediately after an informal review. Always enlist a classmate to take notes for you during a formal review. You will remember only parts of what was said and wonder.
- Here are a few very simple but very useful don'ts. Don't skip classes. Don't be late for studio or your scheduled reviews. Don't make all-nighters a habit.

Finally.... Do the project; maybe it will not be the perfect one at the start, but that will come. Best to have a "bad" or only "good enough" early draft than to have nothing and wait for perfection to strike you.

I remember. for example, two small, black, cast-iron radiators, which stand in two corresponding corners of a small room. The symmetry alone of the two black objects in the light room gives a feeling of well-being! The radiators are so flawless in their proportions and in their precise, smooth, slender form, that it was not noticeable when Gretl used them after the cold season as a base for one of her beautiful art objects. One day when I was admiring these radiators, Ludwig told me their story and of his own difficulties, and how painfully long it had taken until the precision which constitutes their beauty had been reached. Each of these corner radiators consists of two parts, which stand precisely at right angles to each other, and, between them, calculated down to the millimeter, a small space has been left; they rest on legs upon which they had to fit exactly. At first models were cast, but soon it turned out that the kind of thing that Ludwig had in mind could not be cast in Austria. Consequently, ready-made castings for individual parts were imported from abroad, although it seemed impossible to achieve with these the kind of precision which Ludwig demanded. Entire sets of pipe sections had to be rejected as unusable, others had to be exactly ground to within half a millimeter. The placing of the smooth plug, too, which were produced in accordance with Ludwig's drawings by a quite different process from the conventional products, caused great difficulties. Under Ludwig's direction, experiments often went on into the night until everything was exactly as it should be. As a matter of fact, a whole year passed between the drafting of the seemingly so simple radiators and their delivery. And yet, I consider the time well spent when I think of the perfect form which arose from it.

Hermine Wittgenstein speaking about her brother
Ludwig's design for her sister Gretl's house.

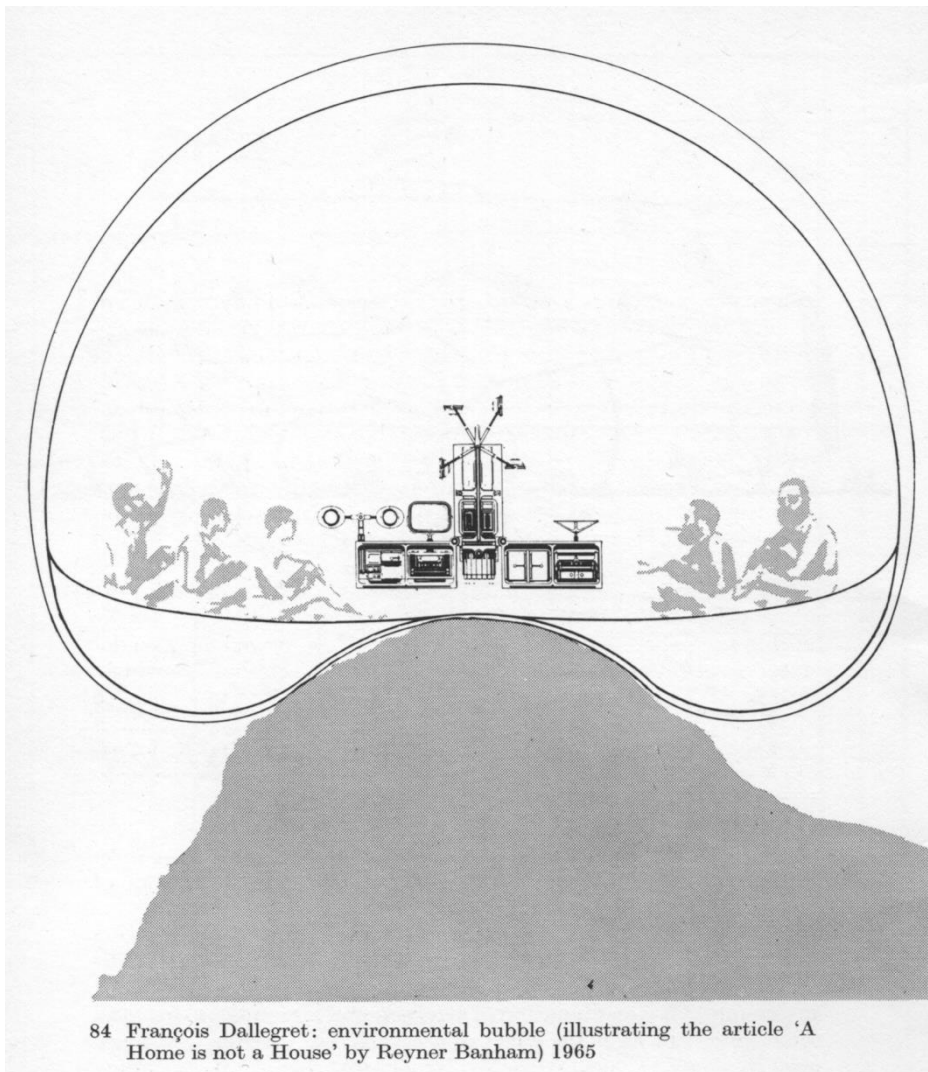
This idea, that the realization of a chosen emotional situation depends only on the thorough understanding and calculated application of a certain number of concrete techniques, inspired this "Psychogeographical Game of the Week" published, not without a certain humor, in Potlatch #1:

"In accordance with what you are seeking, choose a country, a more or less populated city, a more or less busy street. Build a house. Furnish it. Use decorations and surroundings to the best advantage. Choose the season and the time of day. Bring together the most suitable people, with appropriate records and drinks. The lighting and the conversation should obviously be suited to the occasion, as should be the weather or your memories.

"If there has been no error in your calculations, the result should satisfy you."

Guy Debord

Were all in this together.
Welcome and let's begin.



84 François Dallegret: environmental bubble (illustrating the article 'A Home is not a House' by Reyner Banham) 1965