

University of Waterloo School of Architecture

ARCH 285-002 / 684-002 - Design Build Elective Course - Spring 2018

Waterloo Architecture Design Build Program 2018

Course instructors - John McMinn and Paul Dowling

COURSE DESCRIPTION

The architect Douglas Cardinal has said, 'Cultures are based in harmony as a way of being.' And the indigenous meaning was very close to that of the Greeks or of Leibniz or Shaftesbury. Harmony was a concept of the whole and of a balance that went far beyond mere humans. What's more, in their negotiations among themselves and with Europeans, Aborigines invariably placed themselves and their argument within the concept of harmony. It was an all-inclusive view of the natural order of things, an order in which humans were merely a part. It related to their complex balancing of individualism and group and place, each existing at the same time apart, in complex relationships of cooperation and as nodes 'in an interconnected web.' There are myriad Aboriginal expressions for this. One well-known Cree concept is Witaskewin, or harmonious living, which means living together on the land, that is, an agreement to live together in peace. You could translate it today as democratic federalism or practical environmentalism.

John Ralston Saul

Despite our shared history and common geography, reconciliation and direct connections with First Nations culture remains elusive from everyday experience for many of us. The Waterloo Architecture Design Build program offers a form of collective experiential learning linked to the idea of embodied knowledge, intrinsic to First Nations culture and the means of passing on knowledge and skills from generation to generation. Design Build allows us to explore the possibilities of architectural design and community infrastructure building, in in the Grand River Basin where the School of Architecture is situated.

The Spring semester design build elective is focused on hands on making, for the construction of a new Pow Wow Arbor in a sacred oak grove at the heart of the Mississaugas of the New Credit First Nation, near Hagersville Ontario, south-east of Cambridge. The pow wow ceremony is the largest celebration of culture and communal gathering held in many First Nations communities each year, and is part of a renewal of First Nations culture in the last few decades, after the profound traumas faced by Indigenous peoples in Canada through government policies of colonization and assimilation.

First Nations communities in southern Ontario hold their pow wow celebrations in sequence, making for what known as *the pow wow trail* that involves community members, performers and vendors travelling from community to community each week throughout the summer, enabling diverse cultural exchanges across the region, as well as throughout the larger regions of Turtle Island (North America). The Mississaugas of the New Credit have held their Three Fires Homecoming Pow Wow for two days in late August, on same site for the last 32 years.

The Spring semester design build elective involves the final construction documentation and fabrication of structural elements of the pow wow arbor in the School of Architecture workshop, followed by on-site construction and assembly of the full-scale permanent structure, for the New Credit pow wow grounds at the heart of their community. The course provides students an opportunity to work directly with First Nations

community members, by engaging with the cultural history of the Grand River valley and the relationships to land, natural habitat and heritage of the Anishinaabe people whose traditional territory extends throughout this entire region. The Design Build program allows us to explore what role the process of architectural design and building can play in understanding and enhancing the growth and goals of First Nations communities and culture.

COURSE STRUCTURE

The course takes place throughout the Spring semester with scheduled classes on alternate Saturdays throughout the term focused on fabrication of structural elements of the arbor frame in the School of Architecture workshop, followed by a 10 day on site build session after the Spring semester exam period from August 9th - 18th. Given limitations on use of major workshop tools to weekdays, some work during weekdays will be required for groups using table saws, the planer, jointer and CNC milling machine.

The class will be divided in task groups of 2-4 students, responsible for specific tasks in completion the project:

Task groups/sequence:

Construction drawings/ details	1 group with TA assistance	1 group of 2
Structural model completion		1 group of 2
Dressing wood for inner and outer rings		1 group of 4
Bases for outer ring – framing, laminating blocks, layout – 2 bases		1 group of 3
Gluing and clamping of outer rings		2 groups of 3 each
Base for inner ring – CNC milling, assembly of foam blocks		1 group of 3
Gluing and clamping of inner ring		1 group of 3
Blocks and wedges, both rings		1 group of 3
Sanding and finishing laminated pieces		1 group of 3
Steel fabrication		1 group of 3

Once the term-time workshop sessions are complete, and we begin on site build portion of the course, the class will assemble at 9:00 am each day at the Grove site within the Mississaugas of the New Credit community at 2789 Mississauga Road, Hagersville ON. Work days will run till around 4:30 pm each day. We will work in conjunction with community members and volunteers for the on-site assembly of the pow wow arbor structure. Work will be collectively organized with small groups each responsible for specific on site construction tasks.

LEARNING OBJECTIVES

Working with facilities in the School of Architecture workshop, students will produce building components that will be integrated into the larger whole building assembly and its final construction assembly on site, for a pow wow structure at the Mississauga of the New Credit community.

1. Engage in critical evaluation of the role of architecture in response to First Nations cultural awareness through community programming, community development initiatives, building form and material expression over time.
2. Explore a variety of options for the design, technical development and detailing of a small scale public building, with consideration of an integrated and holistic relationship between concerns of environmental occupation, the judicious deployment of natural and manufactured materials, and the means of fabrication within a specific context.

- Experience the processes of collaboration and consensus building, working with First Nations communities, consultants, fabricators, material and product suppliers, and each other.

SCHEDULE

The course schedule will be structured in two part, with term time bi weekly class meeting, followed by an on site 10 day building program running from August 9th - 18th.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		1 MAY First Day of Classes 285 1stClass	2	3	4	5
6	7	8	9	10	11	12 285 Workshop day
13	14 293 P1.1 Interim Pin up	15	16	17	18	19
20	21 University Closed	22 Monday Schedule of Classes	23	24 293 P1 Due	25 276 Assignment 1 Due	26 You@Waterloo Day 285 Workshop day
27	28	29	30 225 Assignment 1 Due	31	1 JUNE	2
3	4	5	6	7 293 P2 Due	8	9 285 Workshop day
10	11	12	13 225: Assignment 3 Draft Due	14	15	16
17	18 Co-op Postings Open	19	20	21	22	23 285 Workshop Day
24	25	26	27 Co-op Postings Close 225 Assignment 2 Due	28	29 276 Midterm	30
1 JULY	2 University Closed	3	4	5 293 P3.1 Due	6	7 285 Workshopday
8	9 Co-op day – Toronto	10 Co-op Day – Cambridge	11 Co-op Day – Cambridge 225: Assignment 3 Due	12	13	14
15	16	17	18	19	20 276 Assignment 2 Due	21 285 workshop day
22	23	24	25 Last Day of Lectures Monday Schedule of Classes	26	27	28
29	30	31 293 Final Review	1 AUGUST	2	3	4

5	6	7	8	9 285 On site work	10 285 On site work	11 Final Day of Exams 285 On site work
12 285 On site work	13 285 On site work	14 285 On site work	15 285 On site work	16 285 On site work	17 285 On site work	18 285 On site work
19	20	21	22	23	24	25 MNCFN Pow wow
26 MNCFN Pow wow						

EVALUATION

Grading will take place with class members assigned to small groups, responsible for developing expertise in the specific assigned tasks during the workshop portion of the course. The on-site portion of the course will happen as a collective building process, visiting the site each day over the ten day duration of the build program.

The course will be divided into 3 sections for grading purposes:

- P1. Preliminary set-up and construction documents completion - 15%
- P2. Workshop fabrication of the pow wow arbor structural elements – 30%
- P3. On site building assembly at the MNCFN– 55%

Assessment is based on the studio instructors’ comparative review of each student’s contribution to the work of the group they are involved as well as the effectiveness of the group and the contribution of their part of the building to the larger whole building assembly. Assessment is gauged by; the ambition, clarity and appropriateness of contribution; quality and technical resolution of the work; effectiveness and the completeness of the element of the building the group is responsible for in development and construction of the elements of the whole building assembly. Participation within the overall group structure of the course is a critical element of the design build process, and a portion of the grade for each project will be based on the course instructors’ assessment of the visible participation of each individual’s participation and contribution to their group’s work.

REVIEWS

Given the nature of the design/build course, reviews of student work will be carried out by the course instructors during scheduled workshop sessions, as well as with client representatives, determining if work done meets practical needs and technical requirements for the final pavilion assembly. There will be regular meetings for planning purposes to discuss the integration of the various component elements of the project, to ensure all aspects of the project are coordinated.

HAND-IN AND SUBMISSIONS

Students and the groups they are working within must complete building components to an acceptable level and obtain a passing average in order to receive credit for this course. As the course is based on collective work, active participation and engagement with the larger group for the purpose of completing the project will be the benchmark for successful participation in the course. In this sense grading is not the ideal measure of success of each students’ participation and success in the studio, but grading is the required currency of university course work, so we will endeavor to bridge these two reference points without the grading becoming a distraction to the larger goals and ambitions of the course.

Documentation of the process and all aspects of the course, is important for a number of reasons: including students' portfolios, communication about and promotion of the design build program, and fundraising for the ongoing program requirements. This is considered a part of the course deliverables. We suggest that one or two members of the class take on the role of coordinating documentation of the work done in the studio, as well as keeping an up to date storage/ file system for managing photographic materials as well as other graphic material including the working drawings, and images of the completed project. Completion of this requirement will be assessed as part of the course grade.

LATE WORK

All the work of the various groups will need to be completed in a timely manner, to ensure necessary coordination of the production of the course deliverables. Requests for extensions of agreed upon deadlines must be made as early as possible to the course coordinators and must be made in advance of the given completion phase.

SCHEDULE AND COURSE ATTENDANCE

The course runs alternate Saturdays during the semester from 9:30 am – 4:30 pm as well as during the ten day onsite building process in mid-August.

COMMUNICATION WITH COURSE INSTRUCTORS

During the course of the term, the course coordinators will need to send communications to studio participants. It is required that each student confirm their current active email address with the Undergraduate Student Service Coordinator during the first week of class. Any official correspondence that must be addressed to the studio coordinators at the following email addresses:

pdowling@uwaterloo.ca

jcmcminn@uwaterloo.ca

RECOMMENDED READINGS

Recommended readings may be distributed at various stages throughout the term and as applicable will be held on reserve in the *Musagetes Library* for use by the class, or will be provided in pdf form. All students are encouraged to actively use the *Musagetes Library* collection and *recommended* readings.

ACADEMIC INTEGRITY AND AVOIDANCE OF ACADEMIC OFFENSES:

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 www.uwaterloo.ca/academicintegrity/ 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, www.adm.uwaterloo.ca/infosec/Policies/policy70.htm. 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 [check www.uwaterloo.ca/academicintegrity/] to avoid committing an academic offence, and to take responsibility for his/her actions. 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, www.adm.uwaterloo.ca/infosec/Policies/policy71.htm. For typical penalties check Guidelines for the Assessment of Penalties, www.adm.uwaterloo.ca/infosec/guidelines/penaltyguidelines.htm.

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)
www.adm.uwaterloo.ca/infosec/Policies/policy72.htm.

Note for Students with Disabilities: The Office for Persons with Disabilities (OPD), located in Needles Hall, Room 1132, 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 the OPD at the beginning of each academic term.