

**OTHER TECTONICS**



“How to become modern and to return to sources: how to revive an old civilization and take part in universal civilization...” “There is the paradox.”

Paul Ricoeur in conversation with Kenneth Frampton

**Studio Information:**

Studio days are Mondays and Thursdays 9am-5pm at Undergrad Studios 3103, Section 005

University of Waterloo  
School of Architecture 7 Melville Street South  
Cambridge ON N1S 2H4

Telephone: 519 622 4567 X27602

Fax Number: 519 622 3525

Email: [delnaz@alephbau.com](mailto:delnaz@alephbau.com)

Cell: [416.953.2004](tel:416.953.2004)

Student counseling hours: to be arranged upon request.

## Course Description

### Summary

As the world celebrated the modern movement in art and architecture, artists around the world found ways to relate to the global movement and stay connected to their geographical or historical context. Among them are a group of modernist Iranian and other Middle Eastern artists whose work reflects and constructs their cultural environment. Artists such as Monir Farmanfarmayian or Jazeh Tabatabai have established their individual processes using historical/traditional methods of making -“material processes” -while situating themselves in the modern movement. They create unique spaces that make the historical narratives of a culture accessible to us today and to future generations. They create spaces that expand the boundaries of the modernist experiment.

#### *From material process to space*

In the process of materialization of architecture, standard application of industrial products, brings a generic culture of design. With the industrial revolution came standardization, with standardization came the new culture of design. “Sole aim of mechanization is to make copies as cheaply as possible.” (Giedion, 1948)

To challenge the limits imposed by this process, the studio takes inspiration from the work of the artists mentioned above. In learning from artists’ methods and processes, the studio experiments with architecture as an assembly of material parts. Established industrial material processes, production and assembly methods are questioned and manipulated to achieve new spatial experiences.

#### *Metal*

To further focus the experiment, the studio is composed of multiple “making” projects using metal as the material to experiment with. “According to architect Annette LeCuyer, metal is inextricably linked with modernity” (Brownell) as the language of modern architecture relied heavily on the advent of the steel frame. On the other hand, metal has played a significant role in the history of architecture in general and specifically in the Middle East both as ornament (mosque interiors, dome claddings) and as reinforcing (such as iron connectors in masonry construction). The sensory experience of different metals, their weathering process and their strength, makes them an integral part of architectural design. Today this material is entering a new transition. As renewable and lighter materials become more desirable in construction, new metal technologies shift from the heavy steel frame to light and smart lattices.

## **Course objectives**

The objective of the studio is to explore alternative processes to standard mechanized modes of material assemblies in order to create new architectural expressions. Bridging the split between expression and construction, the studio is an exercise in creating affects in various scales; from objects, furniture, details to architecture and landscape.

In a period between 1920s and 1930s what was understood as the new vision in art (such as Piet Mondrian paintings) was brought to the design of furniture (such as Rietveld's furniture) and architecture (such as Gropius's architecture). This continuity was made possible by the invention of new material processes and assemblies. This clarity of the transition of the same ambiance and affects through different scales is what we explore in the studio with an outlook to modern art in the Middle East.

Modern art and architecture of the Middle East and specifically Iran offers precedents in connecting local and historical heritage to a global modern movement. Learning from these precedents will open new windows to innovation.

## **The studio process**

The studio will start with the study of the artists' processes. These explorations analyze and react to the artists' work through small hands-on experiments in forming and shaping materials. The fabrication projects, look into historical treatment of the material and explore integration of such methodologies with modern mechanized processes in forming materials and connections and creating details, components or parts of a building. At a larger scale, an extension to the Agha Khan Museum in Toronto will be designed and finally a part of this extension will be designed in detail and built for the final presentation.

This process will take place in the four stages below:

- *Analysis, documentation and transformation of or reaction to artists' work.*

Students will document, analyze and explore artists work and create small scale projects in reaction to, or as a transformation of the work.

- *Hands on experiments with materials*

The above study will result in exercises in built form, from small objects to larger installations that can be done individually or in pairs. Fabrications will be done in metal. At the end of the research a catalogue of metal methodology will be created.

- *Application in architectural space*

The museum extension will be designed following the principals learned in earlier assignments.

- *Back to Details and Materials*

A selected part of the previous project will be designed in detail and built at a 1:1 scale for final presentation.

Field Trip: The studio will visit the Agha Khan Museum in Toronto and the surrounding landscape on Oct 4<sup>th</sup>.

**Expectations and Requirements of the Students**

Students will be graded on the work performed during the course. Grading will be based on the degree to which submitted work satisfies the requirements and objectives of each assignment. In addition, grading will reflect student participation, commitment, effort and improvement over the 14 weeks of the course. The weighing of the projects throughout the term is as follows:

Assignment 1A: Research and Documentation-10%

Assignment 1B: Research Materialized in a Transformation or Response Piece (possible to do in pairs/groups) -10%

Assignment 2: Material research- at the end of which we will have the material process catalogue (possible to do in pairs/groups) - 10%

Assignment 3: Museum Revision/ Intervention/ Extension-20%

Assignment 4: Detail Design and Construction (possible to do in pairs/groups)-50%

Other work: Participation, contribution, and growth- bonus 5%

Late submission: There will be penalty of 10% reduction of grade per each day of late submission.

**Course Schedule and Deadlines**

0	Thurs	6	Studio Presentation
1	Mon	10	Research/ Documentation/ Intro to Metal
	Thurs	13	Desk Crits
2	Mon	17	Assignment 1 Presentation
	Thurs	20	Desk Crits
3	Mon	24	Desk Crits
	Thurs	27	Desk Crits
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4	Mon	1	Assignment 2 Presentation
	Thurs	4	Site Visit
5	Mon	8	Thanksgiving-University Closed
	Tues	9	Fall Study Day-No Classes
	Wednesday	10	Fall Study Day-No Classes
	Thurs	11	Tuesday Class Schedule- Paths to Practice
	Fri	12	Wednesday Class Schedule

6	Mon	15	Desk Crits (Arch Design)
	Thurs	18	Desk Crits
7	Mon	22	Desk Crits
	Thurs	25	Desk Crits
	Fri	26	Toronto Co-op Interview Day
8	Mon	29	Desk Crits-Cambridge Interviews
	Tues	30	Cambridge Interviews
	Wednes	31	Cambridge Interviews

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	Thurs	1	Assignment 3 Presentation
9	Mon	5	Desk Crit- Design/Build
	Thurs	8	Desk Crit- Design/Build
10	Mon	12	Desk Crit- Design/Build
	Thurs	15	Desk Crit- Design/Build
11	Mon	19	Desk Crit- Design/Build
	Thurs	22	Desk Crit- Design/Build
12	Mon	26	Desk Crit- Design/Build
	Thurs	29	Desk Crit- Design/Build

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13	Mon	3	Last Day of Classes- Reflection on Presentation
	Thurs	6	
	Fri	7	Final Reviews

**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 alternate assignment.

## Readings:

Below is a bibliography of books that touch upon many of the issues will be discussing this term. In addition, a list of more specific readings and references will be distributed as required with each project handout. Reference material will be held on reserve in the *Musagetes Library* for use by the class, or will be provided in pdf form and posted to ACE. We encourage all students to actively use the *Musagetes Library* collection and the recommended readings

- Giedion, Sigfried. *Mechanization Takes Command*. University of Minnesota Press, 2013
- Benjamin, Walter. *The Work of Art in the Age of its Technological Reproducibility*. Cambridge, MA: Harvard University Press, 2008.
- Eddie Paul. *Sheet Metal Fabrication, Techniques and Tips for Beginners and Pros*. Minneapolis: Quatro Publishing Group USA, 2008.
- Frampton, Kenneth. *Modern Architecture*. Thames and Hudson, 2007.
- Frampton, Kenneth. *Studies in Tectonic Culture: The Poetics of Construction in Nineteenth and Twentieth Century Architecture*. Graham Foundation for Advances Studies in the Fine Arts, 1995.
- Moussavi, Farshid. *The Function of Form*. Actar Publishers, 2009.
- Moe, Kiel and Smith, Ryan E. *Building Systems*. Routledge, 2012.
- Kim, Henry S. et al. *Pattern and Light*. Skira Rizzoli Publications, Inc., 2014.
- Blaine, Brownell. *Transmaterial Next*. New York: Princeton Architectural Press, 2017
- Tanavoli, Parviz. *Lion Rugs: The Lion in the Art and Culture of Iran*. USA: Transbooks, 1985
- Fischman, Lisa et al. *Parviz Tanavoli*. Davis, 2015
- Tanavoli, Parviz. *Fifteen Years of Bronze Sculpture*. New York: Grey Art Gallery and Study Center, 1976.
- Shahroudy Farmanfarmaian, Monir. *Monir Sharoudy Farmanfarmaian: Mosaics of Mirrors*. Nazar Publishers, 2008.
- Ardalan, Nader. *Monir Shahroudy Farmanfarmaian: Cosmic Geometry*. Damiani/Third Line, 2011
- Sadegh, Mina et al. *Contemporary Persian Art: Expression of Our Time*. Pacific Asia Museum in California, 1984.