ARCH 610   Architectural Analysis and Research
FALL 2021   Monday 1:00-4:00 pm, Main Lecture Hall

Instructors: Anne Bordeleau and Anwar Jaber
with faculty and guest contributions

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Is it thus *possible* to create a tradition that is held together by strict rules, and that is also successful to some extent? But is it *desirable* to support such a tradition to the exclusion of everything else? Should we transfer to it the sole rights for dealing in knowledge, so that any result that has been obtained by other methods is at once ruled out of court? And did scientists ever remain within the boundaries of the traditions they defined in this narrow way? These are the questions I intend to ask in the present essay. And to these questions my answer will be a firm and resounding NO.

Paul Feyerabend

Course Description

The intention of this course is to support graduate students in the development of a master's thesis in Architecture. Throughout the course, we will question what might constitute a thesis in architecture and how one engages in architectural research. We will cover conventions and methods of research within the discipline of architecture, as well as methods of research which may be generated outside the discipline, all while questioning what the disciplinary boundaries might be or might mean. The consideration of precedents, case studies, relevant literature and other design research methods is intended to assist students as they position their ideas within a larger conceptual discourse. The purpose of the course is to expose students to epistemological questions, research methodologies, as well as analytical and explorative strategies, so as to guide them in their research and design thesis.

Throughout the term, we will consider the history of the discipline; the construction of architecture as an object of research; the intention and foundations of such research; the notion of truth, objectivity or science in architectural research; as well as the shifting boundaries of architecture as a practice and research activity.

Another objective of Architectural Research and Analysis is to expose students to the range of disciplinary methods and approaches that architectural research and analysis can take from social sciences and humanities, geography and science and others.

Finally, we intend in this course to deepen your research and analytical skills, from the production of a research proposal, to creating a table of contents, as well as through visual analysis, the use of GIS and the preparation required to conduct interviews as part of research.

Course Objectives:

- ✓ Strengthen critical thinking skills.
- ✓ Gain proficiency in research skills (data collection & analysis; impact on program and design).
- ✓ Strengthen students' ability to select and use appropriate means of graphic representation for analysis and presentation.
- ✓ Strengthen ability to speak and write effectively about their architectural thesis.
- ✓ Develop the ability to consider human behavior in relation to architecture and the environment.
- ✓ Get the students to appreciate, understand and consider the diversity of needs, norms, values, as well as social and spatial patterns in an architectural project.
- ✓ Strengthen awareness of the history and theory of the different topics investigated.
- ✓ Understand different ways of analyzing and evaluating precedents.
- ✓ Gaining an understanding of the different disciplines involved in the development and implementation of architectural projects.
- ✓ Gaining an understanding of some of the ethical issues involved in architectural research and practice.
- ✓

Students Performance Criteria (CACB):
B1. Critical Thinking and Communication
B3. Architectural Theory
B4. Cultural Diversity and Global Perspectives

Course Structure:

The course is structured in two main parts. The first section focuses on the problem of architectural knowledge or epistemology. In this part, students will consider the relationship between their chosen research topic and the discipline of architecture. The second section highlights methods of gathering data commonly used within the discipline of architecture

and outside it in adjacent fields. In this part, the students will reflect on the relative advantages and liabilities of different methods.

Every week, there will be a presentation by two or three different guests on a specific theme. These presentations will also be interspersed with some training and information sessions, namely on library research, GIS, ethics, or referencing.

The students are required to develop a research proposal, table of contents as well as a visual analytical project related to their thesis. They will also be required to present these outcomes during the term, as well as work with their colleagues on a workshop to discuss research proposals.

Course Requirements and Assessment:

There will be three main assignments throughout the term (70%), as well as your ability to formulate questions for our guest speakers (30%). The intent of these assignments is to ensure that you have a grasp of the essential parts of graduate research in architecture.

Assignment		Grade %	Due date
Assignment 1			
1.1	Submit research Proposal (3 to 5 pages) + 3 presentation slides	20%	October 8th 2021
1.2	90 second presentation of research proposal + workshop	10%	October 18th
Assignment 2			
2.1	Table of Content with short descriptions	10%	November 8th
2.2	Visual analytical project (A3 sheet)	10%	November 8th
Assignment 3			
3.1	Submission of revised proposal and presentation slides		November 29th
3.2	3-minute Presentation of proposal, table of content & visual analytical project	20%	December 5th
Assignment 4			
4.1	Participation – Submission of one question to speakers on weekly basis	15%	Ongoing – before 1pm every Monday
4.2	Discussants – groups	15%	Ongoing

Assignment Guidelines:

Assignment 1: Submission of Research Proposal + Presentation Slides

The intention of this assignment is to get the students to think about and write a research proposal and share it with the class. The aim is enhancing the students' logical thinking, methods and approaches to research and their academic writing skills. This assignment includes:

- Submitting a research proposal of your thesis (3-5) pages (Oct 8th)
- Submitting presentation slides (3 slides) (Oct 8th)
- Presenting in class for 90 seconds (Oct 18th)
- Participating in a workshop in class (Oct 18th)

Research Proposal:

Students are expected to submit a proposal of their intended research project (thesis) early in the course. The proposal should include the following sections:

a. **Introduction/ context:** this includes a brief description of the context/site and the problem. Citations are needed and references to precedents (if applicable) should be mentioned here. Students need to give the reader enough information about their intended research project.

b. **Research question:** thinking spatially and architecturally, try to formulate a research question that you will answer in your thesis.

c. **Methods/Approach:** this should include the methods you will use to answer the question above. Examples include: mapping, visual analysis, collage, interviews … etc. you should state what method/approach you are using and how each one will benefit your research (why are you using this method? What is the expected outcome and how are you going to benefit from it to answer your question?)

d. **Figures:** In this section, you should include all the figures that you are using in your proposal. Figures should be captioned, numbered, and referred to in the text.

e. **Bibliography:** which includes a list of resources/references you already looked at, including any visual material you collected. At least 50% of the proposed references should be from academic references (books and/or journal papers).

Please note that:

a. The wordcount for the proposal is **1500-2500 words**. It includes the main text, footnotes, and citations in the text. It does not include captions of images and does not include the bibliography. The proposal should be no longer than 3-5 pages.

b. The students will receive detailed feedback on their work.

c. In your referencing, never cite a Wikipedia link in academic work! You could use Wikipedia as a tool to familiarize you with the topic and get you quick access to resources. You should then refer to these resources, check them and cite them. See the link below on 'why I can't use Wikipedia for my assignments?': https://onesearch.library.utoronto.ca/faq/can-i-use-wikipedia-my-assignments

d. You should be referencing weblinks, movies and other sources properly, just like you cite books. Depending on your referencing style (Harvard, MLA...etc.), please look up how to reference each source you use.

Presentation slides and presenting:
1. Students are required to submit 3 PowerPoint slides that explain their proposal. Only PowerPoint slides are accepted. <u>Submission of slides is on October 8th.</u>
2. Students are then expected to present their slides to the rest of the class <u>on October 18th</u>.
3. Presentations are only 90 seconds long. Each student is expected to present their proposal idea within this timeframe.

Workshop on October 18th :
After the class presentations on October 18th, the students will be divided into of groups of 4-6. Students in the same group will discuss each other's proposals. At the end of the class, each group will give a brief summary of their discussion.

Assignment 2: Submission of a Table of Content + Visual Analytical Project

The intention of this assignment is to translate the research proposal into a table of content for the final thesis, as well as applying visual analytical methods. The aim is to get the students to think practically about their final thesis in terms of chapters, as well as develop their visual analytical skills in relation to their research. This assignment includes:

- Submitting a table of content of the thesis with descriptions (Nov 8th)
- Submitting a visual analytical project (A3 sheet /11x17) (Nov 8th)

Table of content:
Students are expected to submit a table of content of their final thesis, based on their proposal and the feedback they receive. The table of content includes the title of each chapter as they envision their thesis. With every title to each chapter, students are required to write a short description (100 words) describing the content of the chapter and how it will benefit the thesis.

The aim of this assignment is to help the students envision their thesis as a written piece and think about the flow of their work in an ordered way. As they develop their table of content, the students may want to ask: what aspects of my research should be explained first in my written work? How do the chapters connect with each other?

Visual analytical project (A3 sheet/ 11x17)
Using A3 paper, students are asked to choose <u>one aspect of their thesis</u> and analyze it visually. They could choose to analyze a building, an urban project, or a city through a collage of images, mapping, drawings, or any other useful method that will help them better understand their research. The aspect they choose should be directly <u>linked to their research proposal and their thesis</u>. The students will be introduced to a selection of methods and approaches to visual presentation in the course and are thus highly encouraged to choose any method that will help them complete this assignment.

Project Technicalities:

a. The paper size is A3 /11x17.
b. You are asked to be creative and use different methods to show you work. Examples include (but are not limited to): storytelling, illustrations, drawings, mapping, text, collage …etc.

     c. Possible software to use: Photoshop, Illustrator, or any other software that will help you produce visual content, including as PowerPoint!

Assignment 3: Submission of revised proposal + final presentation

The goal of this assignment is for the students to have a complete research project by the end of the course that they could later develop into a full thesis. The project includes the revised proposal, the table of content and the visual analytical project. This assignment includes:

- Submitting a revised version of the research proposal (Nov 29th)
- Submitting presentation slides for the final presentation (Nov 29th)
- Presenting for 3 mins in class (Dec 5th)

Submission of revised proposal:
Based on the feedback they receive on their first assignment; the students are required to submit a revised version of their research proposal.

Presentation slides and presenting:
1. Students are required to submit PowerPoint slides on <u>November 29th</u>. The slides should be the base of their 3-minute final presentation, which should include the revised proposal, table of content & visual analytical project and how the three connect to each other. PowerPoint slides are accepted.
2. Final presentations will take place on <u>December 5th</u>. Each student will present for 3 minutes only.

Assignment 4: Participation

In this course, the students' attendance is a must, and their participation is part of their assessment. Students are required to ask questions to the guest speakers and make comments during the class. Please note that in addition to submitting your assignments, you must attend all the classes on this course. (The students are expected to have their microphones and cameras ready if attending online).

Free pass: students are required to submit only 8 questions throughout the term.

Participation – Submission of one question to speakers on weekly basis
Before each class, the students are required to submit one question to the guest speakers. It is the students' responsibility to look up the guest speakers, find about their area of expertise before each class and then formulate a question. Questions should be submitted on Learn.

Discussants – Groups
The students will be divided into groups. Each group is expected to be a discussant for the week and lead the discussion after the lecture of every guest speaker. To facilitate the discussion, The group should prepare questions to the guest speakers (one question per group member) and be prepared to discuss these questions with the speakers on that week.

Topics and Schedule

1. Architectural Epistemology

Sep 13 | Week 1 | Introducing the discipline and the researcher

Questioning the Discipline and the Researcher – Architectural Epistemology & Positionality
Anne Bordeleau / Anwar Jaber

1.1 What is the discipline of architecture? Epistemology, Methodology, Research and Analysis
1.2 Positionality and Reflexivity

Sep 20 | Week 2 | Theory & Research + Library Resources
Adrian Blackwell / Anwar Jaber / Christine Moffat and Carmen Peters

2.1 Theoretical framework
2.2 Urban conflicts: approaching difficult contexts
2.3 Finding sources: systematic and advanced literature searching

Sep 27 | Week 3 | Siting your Research / Researching your Site + Academic Integrity
Jane Hutton / Lola Sheppard / Amanda McKenzie

3.1 Academic Integrity
3.2 Defining a thesis site, land-based research and field work
3.3 Site Documentation: Video, photography, diagrams, measurements

October 4 | Week 4 | Historical Research + Literature Review / Methodologies
Anne Bordeleau + Christine Moffat and Carmen Peters

4.1 Research in Architecture: moving within and across disciplines and modes of investigation
4.2 Methodologies, biases and assessing sources

October 11 | Reading week | No Class

October 18 | Week 5 | STUDENT PRESENTATIONS + Workshop
Anne Bordeleau / Anwar Jaber

2. Methodologies and Analytical Approaches within and Beyond the Discipline

October 25 | Week 6 | Digital and Geographical Research + GIS Workshop
Maya Przybylski / Marie-Paule Macdonald / Markus Wieland

6.1 Visualizing Big Data: Quantitative Data, Statistics, Diagramming Data
6.2 Documenting social, political and economic conditions and concerns
6.3 GIS and other forms of Mapping

November 1 | Week 7 | Design as Research + Research Ethics
Jonathan Enns / John McMinn + Karen Pieters and & Vanessa Buote

7.1 Research Ethics
7.2 Design-build as methods
7.3 Human-centered design

November 8 | Week 8 | Iteration: Design as Research + Drawing as Research Presentation
Philip Beesley / David Correa / Fiona Lim Tung

8.1 Living architectures
8.2 Scales of working, design methods and priorities / Bio-inspired design and material architecture.
8.3 Drawing as research presentation

November 15 | Week 9 | Design Research
Mohamad Araji / Elizabeth English / Val Rynnimeri

9.1 Climate Resilience: How cities and buildings establish high-performance environmental systems.
9.2 Design for climate change
9.3 Urban Ecosystems

November 22 | Week 10 | Scientific Research + Funding Opportunities
Terri Boake / John Straube / Ashley Hannon

10.1 Investigating materials and techniques
10.2. Analyzing and testing structures
10.3 Research funding

November 29 | Week 11 | Working with History and Theory
Rick Haldenby / Tracey Eve Winton / Robert Jan van Pelt

11.1 Archaeology
11.2 Historical, theoretical and archival research
11.3 Architectural Forensics

December 6 | Week 12 | Final Presentations
Anne Bordeleau / Anwar Jaber

Course Delivery Platforms & Communication

We will be using additional platforms to deliver, organize and share course content, learning and work. Here is a breakdown of tools we will use in this course:

LEARN will be used to post all readings and course material. All official communication will be coming through and from LEARN, and all assignments must be handed in to a LEARN dropbox. LEARN will also be used for grade recording and release.

MS TEAMS will be used as the virtual hub for the course. All classes will be streamed on Teams.

In-person Activities Planning

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.

Course Time Zone

All dates and times communicated in the document are expressed in Eastern Time. Eastern Standard Time (EST, UTC−05:00) applies November to March and Eastern Daylight Time (EDT, UTC−05:00) applies from March to November.

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.

Student Notice of Recording

The course's official Notice of Recording document is 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. For your convenience, a copy of this notice Is included on the last page of the document.
All live lectures, seminars and presentations including questions and answers will be recorded and made available through official course platforms (LEARN and/or MS Teams). Students wishing not to be captured in the recordings have the option of participating through the direct chat or question and answer functions in the meeting platforms used.

Late Work

Please note that unless you have sought accommodation or have a justified medical or personal reason, no late work will be accepted in this class. Assignments that are handed in late will receive a grade of 0%. We will only grade late work if you have a justified medical or personal

reason, but only if these have been officially submitted to the Graduate Program and Research Co-Ordinator and accepted by the Graduate Office. Please make sure you reach out promptly to the graduate office if you are seeking accommodation for medical or person reasons.

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).

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. 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.

The Writing and Communication Centre: The Writing and Communication Centre (WCC) works with students as they develop their ideas, draft, and revise. Writing and communication specialists offer one-on-one support in planning assignments, synthesizing and citing research, organizing papers and reports, designing presentations and e-portfolios, and revising for clarity and coherence. To book an appointment, visit uwaterloo.ca/wcc. **Please note** that communication specialists guide you to see your work as readers would. They can teach you

revising skills and strategies, but will not change or correct your work for you. Online appointments are available. Please see the WCC website for dates and times.

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