

Waterloo Architecture

## **ARCH 692 Thesis Development Studio and Seminar LIVING ARCHITECTURE SYSTEMS**

**Philip Beesley**

September 2022

### **Studio days**

Tuesday 9:30-12:30 & 1:30-5:30 pm

Thursday seminar 9:30-12:30 online, excepting Thursdays following reviews 9:30-5:30

Variable programming may also occur Thursday 1:30-5:30 pm

### **Contacts**

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Availability: via appointment by Zoom Mondays-Fridays 9 am-6 pm

### **Summary**

Arch 692 Living Architecture Systems supports development of your architectural thesis. The course will be framed by the research of the Living Architecture Systems Group <[lasg.ca](http://lasg.ca)> and by readings in contemporary complex systems, especially oriented to the natural world. You will be asked to develop your own work in relationship to that material.

The course will be organized in three stages, moving from an investigation of a broad collection of literature and precedents, through documentation of a selected site and design projections related to that site, and finally to an integrated research outline that proposes your own thesis approach. This sequence of development is designed to help you to produce key ingredients of your thesis. It will be supported by templates and workshop sessions where early drafts can be developed and progressively refined. You will be encouraged to reach substantial depth and focus in your own work. Design and experiments will be emphasized alongside text-based work. I will tend to encourage a wide range of architectural exploration that includes projections into the future and past, employing personal contemplation, cultural history, and technical development. Practical support will be provided for the specialized crafts of creation-based research and scholarly writing. We will include the crafts of rhetoric and argument, and of design research including orthography and modeling, information systems, and form and material based manipulation.

At the end of the course, you will be asked to produce an outline formatted as a small book and unified by a common graphic format for dissemination. Alongside the formal LEARN online tool, we will use an online pin-up space where your accumulating work can be easily adjusted and organized, and the discussion space of the online tool Basecamp for class discussions and worksharing.

### **Theory Seminar**

Supporting your individual thesis development, a theory seminar will be maintained that offers readings and studies drawn from new and traditional research sources. This seminar will also offer practical thesis workshops in writing, rhetoric, and citation.

Readings will be offered providing reflection on the relationship of nature with the human-made environment. The contemporary study of transitions between inorganic and organic life forms, provides potent material that can be applied to contemporary architecture, seeming to question the stable world of Vitruvian architecture. We will follow a set of readings and design

explorations related to dynamic form-languages and interacting systems, seeking understanding of how materials could interact in a dynamic, constantly evolving and self-organizing world. By focusing on geometries and spatial relationships for architecture, new hybrid relationships within multiple interconnected and interdependent systems may be revealed. These relationships can guide emerging paradigms for design.

## **Thesis Development Assignments**

### **Assignment 1 Catalogue**

Assigned: Thursday, Sept. 8

Due: Monday, Oct. 3

Review: Tuesday, Oct. 4

Create an illustrated catalogue of texts and precedent projects that can support development of your thesis topic. Select and quote one or more sample texts or illustrations from each reference. Organize this material into groups identified with topics of your choosing, framing general themes and disciplines that can support your long-term thesis research. Use a standard format that permits evolving organization of these samples. Compose expository introductions to each topic group, surveying the ingredients and indicating the general nature and approaches offered by the references.

Compose an introductory essay to the catalogue that surveys the material and identifies particular research allied with your own interests. Quote specific authors within this essay. Choose one or more references for substantial investigation. Provide detailed summaries of key parts of these selections accompanied by your own commentary. Accompany this material with your own diagrams and illustrations, expressing key relationships that relate to your thesis.

Demonstrate your control of academic writing and rhetorical knowledge-creation crafts through integration of citation and commentary within this essay.

### **Assignment 2 Site and Project**

Assigned: Thursday Oct. 6

Due: Monday Oct. 31

Review: Tuesday Nov. 1

Document a site. Explore dynamic systems that are active within and around this site. Include plan and section-elevation documents. Express a 'lexicon' of elements and organizational systems related to the site. Scale, situation of your choosing. Consider complex relationships and subtle qualities. Increase your depth of examination of the chosen site by documenting specialized qualities.

Develop a proposal for changing the site. Express this in the form of a *project*. Scale, material, systems of your choosing. Produce rendered illustration supported by orthography. Include summary diagrams that express underlying relationships. Show multiple scales. Compose a model and graphic panels that present key qualities of this exploration. The balance of model and graphics is for you to choose.

### **Assignment 3 Research Outline**

Assigned: Thursday Nov. 3

Draft due: Tuesday Dec. 7

Review: Wednesday and Thursday Dec. 8 & 9

Final Submission due Thursday Dec. 16

Present an individual thesis outline, integrating material from your preceding studies and extending this with further personal exploration. Present this material in the form of a compact book. Assignment 3 represents the complete synthesis of your term work, and carries an additional requirement: in addition to the final grade average, in order to achieve a passing grade for the term, Assignment 4 Research Outline must receive a passing grade.

## **Final Book Contents**

Organize using the traditional craft of a scholarly thesis. Format the book following a standard graphic template, to be provided you.

Produce an abbreviated thesis outline that demonstrates formal structures of knowledge-creation, including

- Abstract: condensed summary describing key aspects including topic identification, terms of reference and scope, draft argument
- Table of Contents
- Introduction to thesis outlining key issues, including historical and theoretical context
- Design studies
- Analysis: summarize the position demonstrated by your project and discuss implications
- Review of literature: an annotated reading list, accompanied by discussion of existing scholarship and preceding approaches
- Conclusion: evaluate and propose further development
- Appendix: propose a sequence of research for completion of your thesis, including a schedule and work plan

## **A Note on Abstracts**

Abstracts are used by researchers searching for reference material. Abstracts should be written in a manner that efficiently conveys information other researchers need for judging whether your work might be relevant to their own searches. While an abstract normally appears as a preface to a thesis, it should be written as a compact, self-sufficient document that can also appear separate from that work. Abstracts normally include a precise indication of what your thesis contains. This should include a precisely defined topic with contents and scope that you cover, the disciplines that are involved, particular writers and precedents where those are relevant, and your principal argument. Effective abstracts often use a compressed, distilled expository rhetoric. Abstracts may repeat text appearing within the introduction and body of your thesis.

While abstracts can have a variable length, a first paragraph may sometimes be quoted alone and therefore primary ingredients of the thesis should appear within the first few lines of your abstract text. Journal and conference publications will often require a limit of 150-250 words and a single-paragraph format for the entire abstract.

An abstract can be distinguished from an introductory essay for a thesis. Introductory essays do not have the length constraints of an abstract. These introductions can take an extended form, surveying the text ingredients of the body of the thesis and acting as a comprehensive review that summarizes review of literature and precedents, analysis, synthesis, and conclusions. Visual documents produced within the thesis may likewise be summarized and repeated within the introduction. It may be effective to consider different sections for an introductory essay, supporting varying treatments of specialized topic material and addressing organization and scope of the study.

## **GOVERNING DETAILS**

### **Evaluation**

In addition to verbal evaluation provided via reviews of the assignments, each assignment will be individually graded. Assignments will be evaluated based on clarity of ideas and creative approach, depth and ambition, and quality of documents. General criteria include completeness, and participation in the class. These may affect the total grades assigned.

Each evaluation will be recorded in the form of numeric grades calculated by assessing three criteria, weighted equally:

- Conceptual quality: clarity, precision, demonstration of insight and analysis
- Depth and Ambition: substance and range of high quality research and creation
- Craft quality: quality of communications including text, visual documents and design

### **Proportion of final grade**

Assignment 1 Catalogue 20%

Assignment 2 Site & System 20%

Assignment 3 Research Outline 60%

In addition, in order to achieve a passing grade for the term, Assignment 3 Research Outline must receive a passing grade.

### **Your Availability**

Keep your schedule clear of conflicting commitments during scheduled studio periods. Maintain availability for individual and group meetings. Be in full attendance for studio from 9:30-12 a.m. and 1-5:30 p.m. on studio days as indicated in this outline and subsequent detailed schedules. Class focus is required: no external work during meetings and lectures. Attend all scheduled lectures and meetings.

### **Seminar Form**

The course will be organized as a seminar that involves active discussion and exchange between member students. This approach asks for active participation.

### **Class Meetings**

Lectures and class meetings will be held throughout the term, scheduled in advance and programmed in response to the evolving progress of the group. Specific dates will be established as the term evolves, responding to class progress. Meetings will often called for 9:30 am at the beginning of studio days. Be punctual: arrive shortly before the meeting time. Check your email late evening on the day before or early morning on studio days for updates on meeting times and locations.

### **Class Communication and Organization**

Organize the class with a class representative. This structure can be used for providing critical feedback and for coordinating evolving details through the term.

### **Submissions and Online Communication**

The course will use the ARCH 692 Living Architecture Systems section of LEARN for formal course submissions. Enter the LEARN site by using your 'UWDir' ID and password. You will be asked to make digital submissions of assignments on that site.

Informal group discussion will be administered using an online 'Basecamp' space. This software will be demonstrated during the startup phase of the studio. Each individual will be provided an individual login.

### **Late Work and Absence**

A doctor's note is required to excuse absence or lateness because of illness. In the case of illness or other special circumstance, notification should be given to the instructor and the Program Office as soon as possible and before the deadline in question.

Submit your work on time. Assignments are due at the specified time and date. All assigned parts of the work must be completed. For submissions administered with evening deadlines, grade

penalties for lateness would be assessed at 5% up to midnight, and 5% next day and each day afterward. 'Days' begin at midnight each day, and include weekends and holidays.

### **University Standards**

**Academic Integrity:** To create and promote a culture of academic integrity, the behaviour of all members of the University of Waterloo is based on honesty, trust, fairness, respect and responsibility. Waterloo standards include the following:

**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,  
<http://www.adm.uwaterloo.ca/infosec/Policies/policy70.htm>

**Discipline:** A student is expected to know what constitutes academic integrity, to avoid committing academic offenses, and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offense, or who needs help in learning how to avoid offenses (e.g., plagiarism, cheating) or about "rules" for group work/collaboration should seek guidance from the course professor, academic advisor, or the Undergraduate Associate Dean. When misconduct has been found to have occurred, disciplinary penalties will be imposed under Policy 71 – Student Discipline. For information on categories of offenses and types of penalties, students should refer to Policy 71 - Student Discipline,  
<http://www.adm.uwaterloo.ca/infosec/Policies/policy71.htm>

**Appeals:** A student may appeal the finding and/or penalty in a decision made under Policy 70 - Student Petitions and Grievances (other than regarding a petition) or Policy 71 - Student Discipline if a ground for an appeal can be established. Read Policy 72 - Student Appeals, <http://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. Once registered with OPD, please meet with the professor in confidence to discuss your needs.