Carnegie Mellon University School of Architecture

Thursdays 6:30 – 9:00   9cu   Seminar/Workshop/Design Lab

Thesis Advisors
Dale Clifford
Arthur Lubetz
Mary-Lou Arscott

48497 Thesis 1_ Inquiry/Method/Feedback

"The 'control of nature' is a phrase conceived in arrogance, born of the Neanderthal age of biology and philosophy, when it was supposed that nature exists for the convenience of man."

Rachel Carson

Abstract	**Welcome to Thesis 1**, a course intended to incite the free and ordered play of the imagination. We encourage design experimentation to expand and focus the scope of student architectural research in preparation the production of a thesis. Thesis 1 is a self-directed endeavor where students engage the thesis topic with intensity, inquisitiveness and rigor. Thesis 1 + Thesis 2 demand a heightened work ethic and a mind capable of broad thinking and sharp focus. Along the way, there will be moments in which, through physical and intellectual commitment, we realize that we have shifted our own thinking and have contributed to current thinking in architecture, design and building technology. This is a pathway of design thinking that requires one to observe closely and often suspend interpretation until patterns emerge.
Description	The course is a combination of lecture and workshop and is designed to position the student to successfully undertake an independent project in Thesis 2. Key to this objective is attaining knowledge of the thesis topic through literature review and design research methods; both are viewed as modes of creative inquiry. There is an introductory a '1/3/9' exercise and two primary 'deliverables,' a mid-semester and a final thesis proposal. There will be a minimum of two public presentations.
	The role of the advisors is to provide critique and shape a design research method. Thesis projects emerge from research and experience, and are to be creative and technically competent contributions to the field of architecture. Research methods may be inductive and/or deductive. Projects may be collaborative or individual.
Objectives	Learning objectives are that students demonstrate depth of inquiry, self-direction and ability to undertake design experimentation to advance an architectural prospect.
Structure	Thesis 1 is a lecture/workshop course organized in three parts according to 1) Field survey and 2) research methods, and 3) demonstration of outcomes and proposal. A parallel stream of guest lectures will speak to the core knowledge of their discipline, the edge of their field, the influence of other fields and effective collaboration.

Part 1   INTERESTS_ FIELD SURVEY/TOPIC IDENTIFICATION

- A literature review examines the existing literature to discover strengths, weakness, common assumptions and current thinking. Questions should emerge from the literature review that will be useful in framing your thesis proposal.
- Defining the territory. What do you want to find out? Why is it valuable? So What? How does your project affect the human condition? What is the territory? What assumptions are you challenging? Do you exist in a vacuum?

Part 2   TOOLS/METHOD/FEEDBACK

Students are primarily under the guidance of one advisor that is best fit to forward their project development. Teams are formed within the studio and desks are reconfigured into working pods to foster exchange of information, method and discovery.

- Inductive and deductive work undertaken to increase knowledge and topical understanding of subject matter and advance an architectural prospect.
- Deliverable_ mid-term booklet

method n.
1. The procedures and techniques characteristic of a particular discipline or field of knowledge.
2. A way of proceeding.

tool n.
1. That which enables.

Part 3   RESEARCH PRESENTATION/THESIS PROPOSAL

Entire studio to reconvene and demonstrate their work to the school at large.

- 1/3/9
- Visual presentation
- Final book

Thesis Proposal   A thesis proposal in 8.5 x 11 booklet form is required at mid-semester and the end of Thesis 1 that documents the literature review, research method/feedback and project proposal. A favorable recommendation of the thesis proposal by at least one thesis advisor is required to advance to Thesis 2. Recommendations are based on degree of self-motivation, demonstration of a design method, and thesis content. Final submissions are to made to the server as 1) Indesign file packaged with links folder, and 2) pdf file exported from InDesign as 'Press Quality.'

Committees   Take advantage of the academic resources at CMU and UPITT and the professional/industrial resources in the Pittsburgh region and beyond. Network, and locate individuals or organizations that you can learn from. For each students committee, a minimum of two members is required. One is your primary thesis advisor (primary supervision responsibility) and at least one member with expertise outside of the field of architecture. Other faculty members within the school of architecture are recommended and may be added at your digression and their acceptance. Thesis committee members should be available to meet with students at least three times during the semester. Primary thesis advisors will be assigned after students submit a ranked list stating advisor preference and agreement of the advisor. Grading is the responsibility of the three thesis advisors.

- Committee formation (Suggested for Thesis 1, required for Thesis 2)

M-L. Arscott_ **Critical Reading of Architectures**
My interest is in the exploration of radical design ideas in response to current cultural, experiential and constructional conditions. I am curious about how life intersects with architecture, from the profound to the prosaic. Above all I search for playful leaps of imagination and eccentric thinking to become my source references.

D. Clifford_ **Technology Transfer and Fabrication**
My focus is knowledge transfer between domains, specifically the adaptive strategies of organisms, exploratory materials development, and systems thinking. Given this scaffold, projects range from critical use of technology, computational explorations, soft-robotics and materials research with emphasis on 1:1 scale testing and fabrication.

A. Lubetz_ My focus in architecture is to make the unseen seen and the unknown known to expose hidden aspects of place. The ambiguous aspects of incompletion amplify the embodied experiences of the users and liberate their imaginations.

Grading   50% motivation, participation and self-direction, 50% final thesis proposal

Grading Criteria for the thesis proposal
- Thoroughness
- Quality of Communication (Visual and Written)
- Organizational Logic
- Synthesis
- Provocativeness

Reading   Marcos Cruz http://www.bartlett.ucl.ac.uk/architecture#!prettyPhoto/1/
TBA (Individual Advisor Groups)

Resources   Carnegie Mellon School of Architecture Undergraduate Thesis Digital Library
MIT Thesis Library
Other open access thesis databases

And finally, a note on Thesis Culture:
Thesis culture is at the core of our working process. It is yours to construct. If we do it well, Thesis is a profoundly meaningful experience to both the individual and the wider community.

Course Schedule

DETERMINING INTERESTS

01	8/30	Introduction	Course Intentions + Determining Interests	[P] Advisors	[Thesis Interests]
			[R] http://www.parenthetic.org/mateo.pdf		
02	9/6		Peer Working Groups (IDEO type ideation) Advisor Groups	[P] M. Arscott	[Edges of the Field]

RESEARCH METHODS AND TOOLS

03	9/13		5 minute Presentation		

[1/3/9] Topic Identification and Background Information (What/Why/Who + How)

04	9/20	Workshops with advisor	[P] G. Wildman – Design Processes	
05	9/27	Workshops with advisor	[P] N. Durrant	[Edges of the Field]
			[P] E. Brockmeyer	[Collaboration]
06	10/4	Workshops with advisor [15 students]	[P] C. Utterback	[Collaboration]
07	10/11	Workshops with advisor	[P] D. Clifford	[On Modeling]
			[P] Z. Jacobson-Weaver [On Making]	
08	10/18	Workshops with advisor	[P] G. Levin	[Edges of the Field]

Mid-semester booklet is due by noon 10/20

09	10/25	Workshops with advisor Preliminary recommendations/ Thesis II		
10	11/1	Workshops with advisor	[P] M. Gannon	[Arduino Workshop]
11	11/8	Workshops with advisor		
12	11/15	Workshops with advisor		

DEMONSTRATION/PROPOSAL

13	11/17 (Saturday 11:00-4:00)	Student Presentations
	11/22	No Classes
14	11/29	Proposal Help Session as Required (Make an appointment with your advisor)

12/7   [F] Last day of classes *THESIS PROPOSAL DUE*
12/14   Recommendations given for Thesis 2

*[submit pdf files to the Thesis folder on the server, for the final, also submit an Indesign and lings folder]

[R] Reading
[P] In Class Presentation
[Workshops with advisor] Small format intensive workshops with advisors to develop design research methods/feedback loops. Students will be in groups of 12-15 with a single advisor.

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Thesis 1_ Inquiry

Assignment 1

Fill out questionnaire anonymously. Break into groups of 5/6. Define the depth and relevance of the topics proposed. Outcome for each student is to be a recording of the discussion. One student will record the discussion, though not for his or her own topic. Compile into a word document and post to the server.

Questions (Group)
What do you consider to be the core knowledge specific to your discipline?

Has this knowledge changed over time?

What other fields do you consider relevant to architecture?

How have these fields advanced our own?

Does your field contribute to knowledge advancement in other fields? If yes, give specific examples.

What do you consider to be the fringes of your field?

(Individual)
In terms of architecture, what are your interests?

What topic/question do you think will hold your interest and contribute to knowledge in the field of architecture over the coming year?

*Organize (by group) thoughtful answers for each question. Ex. If there are 5 people in a group, write 5 responses under the question. Make it neat- large-scale for public reading. Submit to the server as a word file.

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Assignment 2 (Complete in class on 9/6)

Part 1
1. Review the questions below in groups.
2. Submit individual files to server by 9 September. (Last Name_Thesis 1_Assignemnt 2)

Questions:

What do you want to find out?

Why is it valuable?

So What?

How does your project affect the human condition?

What is the territory?

What assumptions are you challenging?

What skills do you bring to the table?

How have others approached your topic?

What skills do you want to acquire?

Do you exist in a vacuum?

Identify two examples of work that you find outstanding.

Part 2
1. Identify the current debates within the scope of your interests.
2. Document relevant sources in existing literature.

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Assignment 3 (Present on 9/20)
Present a verbal/visual 1 + 3 + 9 [4-5 minutes]

~ 1 (one line that serves identifies your topic)
+ 3 (three sentences that expand upon -- without repeating -- the original line)
+ 9 (sentences that flesh out the prospect)

Submit individual 1/3/9 files to server by midnight 9/18. (Last Name_Thesis 1_Assignment 3)
Include an **annotated bibliography based on your past/current readings that are relevant to your topic.**

Presentation Suggestions
The 1/3/9 exercise should serve as scaffold for your presentation. Presentations should demonstrate the interest, intellectual content, depth of inquiry and relevance of your thesis study and may be any format of your choosing. Suggestion to keep notes but not read from your 1/3/9 paper.

Presentations should be 4-5 minutes and identify:

What is it?
- Knowledge of the topic
- Questions are you posing
- Why is it interesting to you

Who is working on the topic? (past and present)
- Describe your knowledge of the current and historical context of your topical area
- What other fields do you need to engage to further your knowledge

Why is it valuable?
- Describe the potential relevance of your topic

Examples
- Show two outstanding examples that embody your interests (from any field)

Peer Responsibility
Keep succinct notes on your suggestions for increasing the focus and potential of each project. Submit the notes to the server with A3.

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Assignment 4
Make a Table of Contents for your Thesis book.

Sample Table of Contents (Thesis Proposal)

Title Page [Title, Name, Advisor and Committee]
  I.   Abstract   (300 words)
 II.   Acknowledgements   (1 page)
III.   Background and Motivation   (10 – 15 pages)
       [Outline the historical underpinnings of your topic (whose shoulders are you standing on?), the relevance of the topic to other fields, perceived limitations. State the scope of you work and how your work will address the topic.]
 IV.   Working Hypothesis   (200 words)
       [State your question and how you plan to come to know it better.]
  V.   Method/Results/Feedback   (20 – 30+ pages)
       [Describe the media and design research methods and feedback loops that will inform you process of design.]
 VI.   Annotated Bibliography   (as required)

Note:
- More headings and subheadings can be added. Consider this as an elementary scaffold.
- Make sure your file is LULU compatible.
- Submit mid and final files to the arch server (press quality pdf., Indesign file with packaged links folder) 484972012_Last Name_Mid, 484972012_Last Name_Final

Follow the general formatting procedures on the site below:
http://www.cit.cmu.edu/current_students/graduates/thesis_dissertation_policies.html and
http://www.ini.cmu.edu/ini_files/docs/cur_ThesisGuidelines.pdf

Advisor Request

Dale Clifford _____   Arthur Lubetz _____   Mary-Lou Arscott _____

Choose your first and second preference for a primary advisor. Our intent is to align you with an advisor that is best suited to advance your topic. During both Thesis 1 + 2, you will consult with all advisors as our class has highly porous boundaries and is predicated on the exchange of information. Part of this exercise is to assemble teams that can share research and resources for thesis development.

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