Department of Architectural Technology   **Fall 2021**

ARCH 5112   Architectural Design IX- Pre-Thesis Preparation: Design Research
                        1 Discussion hour and 8 lab/9 studio hours, 5 credits

                        Course coordinator, academic year 2021-22
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Course Description: Design IX is the first semester of a yearlong thesis studio working closely with a faculty advisor. Students assemble comprehensive research on a pre-approved topic. Research includes user needs, precedent studies, site analysis, along with social, cultural, historical and technical implications of a proposed architectural intervention. Thesis research clearly focuses on the selected area of study presenting well-formed arguments to advance student approaches to architectural design and methodology. Students will prepare a comprehensive document that includes their research and analysis, a written project statement along with all design methodology as part of their final presentation.

Course context: The thesis documentation should include: a project statement that clearly outlines the problem to be addressed, its architectural implications, and its projected material results along with all research and analysis to be used to fully develop the design of the project during Design X – the following semester. It is essential that the proposal present a concept, design methodology, site, and program for the project.

Prerequisites: ARCH 4812 or ARCH 4830 with a grade of C or higher

Course Structure: This is a hybrid course and uses the following digital interfaces.
Discussions and group discussions / reviews will be in-person on Mondays with a meeting of the entire class. Wednesdays and Fridays will be desk reviews with your thesis adviser, which will be scheduled individually. We will be using Zoom, Miro and Blackboard as the primary means of interaction online.
1.   Zoom: Start of the class, all in-class activities.
                        Link: Zoom Link
                        Meeting ID: 844 9339 4581
                        Passcode: Thesis

2. MIRO: Discussions, small-group activities, work sessions, assignment progress
3. Blackboard: Main channel for announcements, syllabus, project brief, Discussions, and video recordings. All final submissions for assignments, project, and portfolio must be uploaded to Blackboard. All submissions will be graded on Blackboard, including midterm progress and final grades.

Course Goals and Objectives:

- To develop Knowledge from the range of architectural disciplinary perspectives presented in the course.
- To Utilize Skills and demonstrate knowledge needed to facilitate communication and critical thinking.
- To Integrate knowledge and work productively to communicate ideas through oral, graphic and written media.

NAAB Performance Criteria Addressed:

PC.2   Design
PC.5   Research

Required Texts: Per Individual advisor

Recommended Text: Clark, Roger H. (2004) *Precedents in Architecture: Analytic Diagrams, Formative Ideas, and Partis*. John Wiley & Sons; 3rd edition [ISBN # 0471479748]

Suggested Reference: Varies depending upon the subject of the course

CLASS PARTICIPATION POLICY

Class will start promptly at the scheduled time and will end when the students are dismissed. If absent for a class, it is entirely the student's responsibility to obtain notes and assignments for the next class. The student is expected to attend each class and participate in discussions, reviews, Discussions, presentations, and juries. Students will be required to perform research, readings, design and construction documentation external to class time as required by the assignments.   No more than 10% absences are permitted during the semester. For the purposes of record, two late arrivals are considered as one absence. Exceeding this limit will expose the student to failing at the discretion of the instructor due to lack of class participation and mastery of class material.

SPECIAL REMOTE LEARNING PARTICIPATION CONDITIONS

All students will be participating in the class through remote technologies. All classes will meet on Zoom, at the same location (**ZOOM Link**) during class time. Students are expected to have access to a computer with audio output and video capabilities, an internet connection allowing for video streaming and the software that will allow for modeling, drawing, editing and presentation. NOTE: if any student is unable to meet these conditions they must contact the Professor as soon as possible.

All classes will require the student to attend the full meeting time unless the Professor explicitly allows a student or group to be absent. NOTE: when a student is presenting or in desk reviews, they will be required to turn on their video and audio stream - no exceptions. It is critical to have human interaction during discussions. In addition, the discussions with other students over Zoom are valuable for everyone in the class, and therefore students are encouraged to pay attention to all desk reviews. Students should mute their connection when they are not active, and are allowed to turn off the video stream as well to save bandwidth.

ACADEMIC INTEGRITY POLICY

Students and all others who work with information, ideas, texts, images, music, inventions, and other intellectual property owe their audience and sources accuracy and honesty in using, crediting and citation of sources. As a community of intellectual and professional workers, the college recognizes its responsibility for providing instruction in information literacy and academic integrity, offering models of good practice, and responding vigilantly and appropriately to infractions of academic integrity. Accordingly, academic dishonesty is prohibited in The City University of New York and is punishable by penalties, including failing grades, suspension, and expulsion.

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Grading:
- 20% Typology research
- 20% Precedent studies
- 20% Site analysis
- 20% Program development
- 25% Final Thesis Documentation and Presentation
- 5% Class Participation

General Education Learning Outcomes / Assessment Methods	
Learning Outcomes	**Assessment Methods**
Upon successful completion of this course the student shall be able to:	To evaluate the students' achievement of the learning objectives, the professor will do the following:
1. Develop **Knowledge** from the range of architectural disciplinary perspectives presented in the course.	1. **Review** student observations of site visits and Discussions and assess written, graphic and oral reports.
2. Utilize **Skills** and demonstrate knowledge needed to facilitate communication and critical thinking.	2. **Assess** student research and critical thinking abilities by monitoring weekly progress of lab work and readings.
3. **Integrate** knowledge and work productively to communicate ideas through oral, graphic and written media.	3. **Assess** the students' ability to integrate and communicate through peer and juried review of student presentations.

National Architectural Accrediting Board (NAAB) Performance Criteria (PC)/ Assessment Methods	
Learning Outcomes	**Assessment Methods**
Upon successful completion of this course the student shall be able to:	To evaluate the students' achievement of the learning objectives, the professor will do the following:
1. (PC.2) **Design** ABILITY to prepare a comprehensive program for an architectural project that includes an assessment of client and user needs; an inventory of spaces and their requirements; an analysis of site conditions (including existing buildings); a review of the relevant building codes and standards, including relevant sustainability requirements, and an assessment of their implications for the project; and a definition of site selection and design assessment criteria.	1. **Review** student process and final documentation of the design methodology based on
2. (PC.5) **Research:** of the theoretical and applied research methodologies and practices used during the design process.	2. **Analyze** the final presentation and documentation of the students research in a variety of aspects to guide their final thesis decisions.

Course Specific Learning Outcomes / Assessment Methods	
Learning Outcomes	**Assessment Methods**
Upon successful completion of this course the student shall be able to:	To evaluate the students' achievement of the learning objectives, the professor will do the following:
1. **Observe** with a critical eye and engage in discussion on the subject of the course. (Skill)	1. **Review** student observations and **Assess** the quality of critical thinking and contributions to discussions during oral and graphic presentations.
2. **Synthesize and Apply** what is learned to synthesize understanding and to complete assignments given in the class. (Skill)	2. **Assess** the students' ability to synthesize apply what is learned from lab work and through the grading of assignments.

Weekly Course Outline:

1. August 25, 2021: Zoom - Introduction
Discussion 1: What Is a Thesis? Preparing a Thesis Abstract – 300 words

1. What is a thesis; why do BArch students undertake a year-long thesis project?
2. Anatomy of a thesis abstract:
    a. Clear statement of intent – one to two sentences max
    b. What issues are you investigating, that is, what problem do you want to solve or question do you want to answer?
    c. How is your proposal important in today's cultural-scientific milieu?
3. (Approach and methodology do not need to be addressed here.)
4. Students should remember that their project at the end of the second semester should reinforce their thesis statement – did your project conclude what you stated in your abstract? As they research, they gain knowledge, and in doing so, the assumptions they made in their abstract may evolve and change. They should periodically return to their abstract and make appropriate changes as they build their argument.
5. Examples of thesis abstracts

2. August 27, 2021: Zoom - Review of Thesis Ideas

3. August 30, 2021: In-Person
Discussion 2: Thesis Methodology - What is the process to investigate and prove your thesis?
1. Process
    a. Annotated bibliography to enumerate literature available on selected topic issues.
    b. Prepare a complete set of notes summarizing the key points within the literature that relate to your thesis and issues.
    c. Support readings that indirectly affect your research. For example, if you are proposing supportive housing in East New York, faculty can direct you to resources on how programs are implemented and paid for by foundations or the municipal government.
2. Outline in writing, with faculty support, how you intend to pursue your research.

4. September 1, 2021: Zoom

5. September 10, 2021: Zoom

6.September 13, 2021: In-Person
Discussion 3: Site / Context Selection / Inventory / Site Analysis

1. How does your site choice reinforce your thesis and the issues you want to address?
2. Boiler plate inventory/analysis: It is common for students (and architects) to fill their presentation with "boiler plate" analyses, e. g., sun angles, wind direction, etc. that have no direct bearing on the issues they are addressing. While this should be considered and documented, you must make sure that your analysis emphasizes the issues you identify in your abstract. For example, if you are looking to achieve LEED Platinum, you will want to do a careful (quantitative) analysis of public transportation, or availability of locally-sourced building materials.

7. September 17, 2021: Zoom
8. September 20, 2021: In-Person
Discussion 4: Precedent Study
      1. Summary of precedents relevant to Thesis and how they will be documented / analyzed and how they are graphically presented and summarized.
            a. A case study / example of a thesis precedent study
            b. Faculty to assist in precedent selection: do your choices address similar issues/problems you state in your thesis?

9. September 22, 2021: Zoom
10. September 24, 2021: Zoom

11. September 27, 2021: In-Person
Discussion 5: Supplemental Readings:
 1. At this point students must have a firm grasp on the thesis and issues. This would be the time to make any refinements to the thesis statement and issues if research and analysis have opened the student to a new avenue of research.
      2. Abstract finalized
      3. Faculty should direct students to other resources to help finalize (or challenge) their thesis.

12. September 29, 2021: Zoom
13. October 1, 2021: Zoom

14. October 4, 2021: In-Person
 Discussion 6: Student presentations of abstracts, site selection, analysis, and precedents
15. October 6, 2021: Zoom
16. October 8, 2021: Zoom
17. October 13, 2021: Zoom
18. October 15, 2021: Zoom

19. October 18, 2021: In-Person
Discussion 7: Project specific research on aspects of your project - sizes, materials, standards, codes...Phillip

      1. Setting parameters for materials, sizes, quantities selection
      2. Discussion of codes and code research for selected site (code review)
      3. Methods of research documentation

20. October 20, 2021: Zoom
21. October 22, 2021: Zoom
22. October 25, 2021: In-Person
Discussion 8: Bibliography and Appendices Discussion and formats: How to list and document sources

23. October 27, 2021: Zoom
24. October 29, 2021: Zoom
25. November 1, 2021: In-Person

Discussion 9: Site Strategy Diagram + Documentation based on Site, Readings, references, precedents
1. Types and methods of diagramming
2. Summing up and presenting research findings

26. November 3, 2021: Zoom
27. November 5, 2021: Zoom
28. November 8, 2021: In-Person

Discussion 10:Parti Development

Introduction to development of conceptual ideas using a variety of methods. Individual desk critiques. Assignment: Working with the design concept and program requirements, students will continue to develop their concepts. Continuation of manipulation of models, through expansion of ideas, combination of models and subtraction of elements.

29. November 10, 2021: Zoom
30. November 12, 2021: Zoom
31. November 15, 2021: In-Person

Discussion 11: Parti Continuation

Continuation of manipulation of models, through expansion of ideas, combination of models and subtraction of elements.

32. November 17, 2021: Zoom
33. November 19, 2021: Zoom
34. November 22, 2021: In-Person

Discussion 12:Project Schedule for remaining semester 1 and all of 2
1. Expectations for second semester
2. Parameters for preparing schedule for second semester

35. November 24, 2021: Zoom
36. November 29, 2021: In-Person

Discussion 13:Student dry run presentations of thesis problem and research backup

37. December 1, 2021: Zoom
38.. December 3, 2021: Zoom
39. December 6, 2021: In-Person

Discussion 14: Progress evaluation and review
1. Review of the process of the students progression. What items were successful and where can more research be done to supplement the thesis. What needs to be completed before design can begin?

40.. December 8, 2021: Zoom
41. December 10, 2021: Zoom
42. December 13, 2021: In-Person

Discussion 14: REVIEW
43. December 15, 2021: Zoom
44. December 17, 2021: Zoom: **FINAL REVIEWS**
45. December 20, 2021: **Design Narrative Documentation due**