

**Annual Key Graduate Assessment Findings and Curricular Improvements**  
**School of Architecture and Planning**  
**M. of Arch Program in Architecture**

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**Key Assessment Findings Fall 2009/Spring 2010 Academic Year**

***Specialized Accreditation Data***

**Architectural Accreditation:** The National Architectural Accreditation Board (NAAB) reviews the school every six years. The most recent site visit, in February 2009, resulted in renewal of full accreditation. Of the 34 academic criteria used by NAAB, the visiting team found that thirteen were “well met” (exceeded expectations) and only three were “not met”, one of which was dropped as a criterion in the revised criteria approved in July 2009. This is an unusually favorable outcome.

**Professional Licensure:** A multi-day examination (the ARE) is required for professional licensure in architecture. Since most graduates do not take this examination for at least three years after graduation, and often longer, passage rates for alumni are not cited here.

**Certification:** A small number of students opt to take certification exams to become LEED® APs (LEED® Accredited Professionals) or CDTs (Certified Documents Technologists). The former is a program of the United States Green Building Council (USGBC) while the latter is conducted by the Construction Specifications Institute (CSI). Passage rates are quite high for those who take the exams.

***Thesis***

A thesis is a well prepared, thoroughly researched, original work which contributes to the body of architectural knowledge/scholarship. It is the final evaluation of students in the graduate program and it is comprised of three semesters’ coursework – research methodologies, thesis research, and thesis design. Thesis is carried out independently with the assistance of consulting advisors.

The consulting advisors (the thesis committee) are typically comprised of a base group of two faculty members that are a set team, and another person that is either a faculty member or a professional that has knowledge of the particular subject. The thesis student also chooses one of the advisors to be an advocate and meets with that person weekly, while only meeting with the thesis committee on structured dates throughout the semester roughly amounting to every two to three weeks. This overall body of advisors or thesis committee is chosen by the student, and is not limited in number.

The expectation of a thesis student is that they should be able to propose a thesis question of academic and/or practical significance, to pursue that thesis through appropriate means and methods of research, and to finally defend the thesis orally. They should also either graphically or textually present the project.

There are five Concentrations in the graduate program- Cultural Studies/Sacred Space, Design Technologies, Digital Media, Urban Design/Conservation, and Real Estate. The thesis project in

each Concentration is broken down into four distinct thesis categories- each of which can be steered by the individual towards a focus on PROCESS or PRODUCT.

1. Building Design Thesis
2. Theoretical / Methodological Thesis
3. Research Thesis
4. Urban Design Thesis

**Thesis Research (Studio: ARCH 774, 3 credits)**

Thesis Research is the first required course of the Thesis Program. The first few weeks focuses on research methodologies. Students learn what constitutes a thesis, how to conduct research and available research tools, the difference between methodology (quantitative and qualitative) and how to translate research into design inquiry. They also learn how to formulate research questions, hypothesis, and processes for investigations. In the end, they learn to formulate an argument (selecting written and graphic evidence) and how to present that research with organizational clarity. Thesis Research incorporates the selection of a significant hypothesis involving challenging design issues (subject to faculty approval), followed by extensive research.

**Thesis Design (Independently Directed Studio: ARPL 702, 6 credits)**

The Thesis Design semester involves the testing of a thoroughly developed thesis. With input from the advocate and advisory group, students outline goals and objectives at the beginning of the semester. As projects and processes typically vary widely from student to student, the student is expected to work closely with the thesis faculty to develop an appropriate means for testing the concepts and ideas initially put forth during the Thesis Research semester.

One caveat to the sequence is the stop/go review at the end of the thesis design semester. At that point, if a student is not ready to defend the thesis orally to a group of invited jurors, they may opt to stay an additional semester or more, only needing to sign up for one extra credit for that extra time. Hence, during thesis design, more students that previously stopped themselves might end up joining a group of students in the sequence if they are ready to present at that time.

## ***Thesis Categories***

### **Building Design Thesis**

A building design thesis is one in which a student wishes to explore an architectural question which relates directly to a particular building type, use or adaptive reuse (for example a firehouse, courthouse, hotel, recreation center).

Required minimum deliverables for assessment include:

1. Thorough research of the building typology, systems, and construction methods,
2. Thorough research of site and applicable zoning and building code,
3. Thorough investigation of conceptual posture,
4. Identification and analysis of applicable case studies/precedent projects and technologies,
5. A clear, complete and transparent design process
6. Applicable documentation in diagram form illustrating design variables / parameters, criteria, logics and how they contribute to the conceptual, analytical and/or functional aspects of the proposed work,
7. Complete documentation of proposed building in appropriate architectural drawings (plan, section, elevation etc.) at a scale appropriate to the project,
8. Experiential graphics exterior and interior (digital or conventional perspective) which are rendered so as to communicate an understanding of the occupation of the architecture,
9. Documentation of proposed active/passive systems, materials and methods and detail as appropriate to the project,
10. Physical model of site at an appropriate scale illustrating sufficient contextual and urban conditions,
11. Physical model of the building at an appropriate scale illustrating spatial conditions / relationships, construction methods, tectonics and enclosure,
12. Documentation of proposed active/passive systems, materials and methods and detail as appropriate to the project.

### **Urban Design Thesis**

An urban design thesis is one in which a student wishes to explore an architectural question which relates directly to the design or adaptation of public space at the urban scale (Proposal for the Redesign of Baltimore's Market Square, A New Town in French Guiana, Linking Nodes through Pedestrian Paths in Pittsburg). This thesis category steers towards a PRODUCT deliverable (a building).

Required minimum deliverables for assessment include:

1. Thorough historic and analytic research of subject city, or in the case of a new city – its regional context,
2. Thorough research of geographic, geological and climatic information,
3. Thorough research of cultural context,
4. Identification and analysis of applicable case studies,
5. A clear, complete and transparent design process,
6. Applicable documentation in diagram form illustrating design variables / parameters, criteria, logics and how they contribute to the conceptual, analytical and/or functional aspects of the proposed work,

7. Complete documentation of proposed urban plan in appropriate architectural drawings (figure-ground, sections, analytic, etc.) at a scale appropriate to describe human occupation,
8. Experiential graphics (digital or conventional perspective) which are rendered so as to communicate an understanding of the occupation of public space,
9. Physical model of site at an appropriate scale illustrating sufficient contextual and urban conditions.

### **Theoretical / Methodological Thesis**

A theoretical thesis is one in which a student wishes to explore a particular architectural idea and or methodology, which may or may not apply directly to a particular building or urban design type (for example Algorithmic Design Methodologies, Transparency in Architecture, Critique of Assessment of Architectural Representation). Required minimum deliverables for assessment are more particularly specific to the subject undertaken than in other categories requiring an understanding between student and advisory body about the intended scope. Students wishing to undertake a theoretical/methodological thesis should obtain permission in advance from the committee and provide a schedule of research and production.

Required minimum deliverables for assessment include:

1. Thorough research in the area of theory/methodology being explored in architecture and other disciplines,
2. An annotated research bibliography,
3. A clear, complete, and transparent design,
4. Applicable documentation in diagram form illustrating design variables/parameters, criteria, logics and how they contribute to the conceptual, analytical and/or functional aspects of the proposed work,
5. Ability to orally defend the theoretic proposal made using citation to research,
6. A set of deliverables appropriate to the subject agreed upon with the thesis committee.

### **Research Thesis**

A research thesis is one in which a student wishes to study a particular architectural subject in order to contribute meaningful knowledge to the body of architectural scholarship (for example Tolerance in Computer Controlled Prefabrication in Architectural Design, Computational Design Methodologies, Impact of Wood Species in Timber Frame Construction, Analysis of Southern Maryland Passive Solar Potential). A research thesis should be formatted in both written and presentation form for final jury presentation.

Required minimum deliverables for assessment include:

1. Thorough research in subject area,
2. Appropriate originally-obtained data collection,
3. Appropriate second-party data collection,
4. Clear definition of research parameters and methods of observation,
5. Case studies of like research,
6. Definitive contribution of new knowledge,
7. Positive assessment by committee for publishing potential.

**Thesis Research (Studio: ARCH 774)**

In fall 2009, 36 students completed thesis research, while in spring 2010, 15 students did. Students are required to make a final presentation to their advisory group. In addition to the final presentation, students are required to submit a Thesis Research Document. The document is approximately 15-20 pages in length (not including analytical or diagrammatic content) and should contain the following information:

- Acknowledgements
- An Abstract (a one page document clearly describing the thesis)
- An Introduction (the thesis statement and brief supporting information)
- A Body (the research and summation of the translation of that research)
- A Conclusion (summary and introduction of the thesis design)

**Thesis Design (Independently Directed Studio: ARPL 702)**

In fall 2009, 15 students completed the Thesis Sequence, while in spring 2010, 40 students did. Students are judged simply on a pass/fail basis. However those students exceeding expectations receive a letter of Commendation from the Dean for exceptional work in Thesis Design. Given the results, we need to address the number of students falling below expectations.

Upon completion of thesis design, students submit a final thesis documents to the Thesis Committee and Thesis Coordinator, that includes the original Thesis Research Document with any required revisions and amendments, complete documentation of the Thesis Design – including process and product, formatted according to University guidelines, and a one to two page summary of the evolution of the thesis from research to design.

|                           | <b>Exceeding Expectations<br/>(3 pts)</b> |     | <b>Meeting Expectations<br/>(2 pts)</b> |     | <b>Below Expectations<br/>(1 pt)</b> |     | <i>Mean</i> | <i>SD</i> |
|---------------------------|---|-----|---|-----|--------------------------------------|-----|-------------|-----------|
| <b>Thesis Sequence</b>    |   |     |   |     |                                      |     |             |           |
| Thesis Research (Fall 09) | 1   | 3%  | 26                                      | 90% | 2                                    | 7%  | 1.97        | 0.33      |
| Thesis Design (Fall 09)   | 5   | 13% | 23                                      | 59% | 11                                   | 28% | 1.85        | 0.63      |

|                         | <b>Exceeding Expectations<br/>(3 pts)</b> |     | <b>Meeting Expectations<br/>(2 pts)</b> |     | <b>Below Expectations<br/>(1 pt)</b> |     | <i>Mean</i> | <i>SD</i> |
|-------------------------|---|-----|---|-----|--------------------------------------|-----|-------------|-----------|
| <b>Thesis Sequence</b>  |   |     |   |     |                                      |     |             |           |
| Thesis Research (Sp 10) | 0   | 0%  | 13                                      | 87% | 2                                    | 13% | 2.07        | 0.26      |
| Thesis Design (Sp 10)   | 9   | 23% | 17                                      | 43% | 14                                   | 35% | 1.88        | 0.76      |

- Notes: 1) The mean is the average of all scores across the levels within the trait.  
 2) The standard deviation (SD) is a measure of the variability of the data set, indicating how "spread out" these data are from the mean value.

## Curricular Improvements

### *Recent improvements to the Thesis program*

**Evaluation of student work:** In previous semesters we addressed the wide variance in quality between thesis committees and between thesis students. Thesis projects on the whole now are more similar in their intentions if not end result. Allowing a student to tailor thesis committee more to research topics gives students more sense of responsibility and allows faculty to work more closely with only the students they are directly involved with.

This past academic year, we incorporated the three credit Research Methodology class into Thesis Research and made it a six credit class giving the students a more intense thesis research semester. We found that because of the time off between semesters in the summer in a three semester sequence, there was a disconnect between a students' knowledge of general research methodologies and application of their own individual research and analysis. While we felt the research methodologies course helped to raise the quality of the thesis design, merging methodology in with research, and requiring more intense work and time in a six credit class addressed this concern.

### *Future improvements to the Thesis program*

Students are required to take two six credit classes at the same time with other electives – research (incorporating methodology) and a concentration studio. This has proved to be very taxing on students and more evaluation is needed to determine whether changes are necessary.