

Major Assessment Findings and Curricular Improvements School of Architecture and Planning

Programs accredited by NAAB

M.Arch2: Master of Architecture 2 (after preprofessional undergraduate)
M.Arch3: Master of Architecture 3 (after non-preprofessional undergraduate)

Programs NOT accredited by NAAB

M.A.S.: Master of Architectural Studies (post-professional)
M.C.R.P.: Master of City and Regional Planning
M.S.S.D.: Master of Science in Sustainable Design

Joint Programs

M.Arch2 – M.S.S.D.
M.Arch3 – M.S.S.D.
M.Arch2 – M.C.R.P.
M.Arch3 – M.C.R.P.

AY2008-09 through AY2012-13

Context

In the study period, the School of Architecture and Planning had a very wide range of graduate offerings that included professional and post-professional architecture, planning, and sustainable design. Each had a thesis capstone experience taught by its own faculty to meet its own learning objectives. In addition, there were several joint degree options in which students completing two of these degrees did only a single thesis for both programs.

For better or worse, only two variants of the thesis sequence were used by all of the students in all of the multiple programs, almost all involving the development of a proposal rather than the research of data. They were:

- For theses involving graphic proposals: Thesis Research (ARCH 600 or ARCH 700) or Thesis Preparation (ARCH 721) leading to Thesis Design (ARCH 609 or ARPL702)
- For theses involving textual proposals: Thesis Preparation (ARCH 761) leading to Written Thesis (ARCH 606, ARCH 607 or ARPL704)

The differences in course names and numbers listed above are evolutionary, with the designations changing over time. They do not indicate the existence of different courses for students of the different programs.

As a consequence, the data for these courses in the study period were inadequately segregated for anything but aggregate assessment. The school is now starting to consider a way to manage the curricula, perhaps by assigning course numbers specific to each program or joint offering in such a way that, in the future, information can be gathered separately for each program.

Within the limits of these constraints, consider the following assessments.

Assessment Measures

The School of Architecture and Planning uses the following measures to assess student learning outcomes:

Direct assessment measures include:

- Evaluation of theses by each student's Thesis Advisory Group (3 or more faculty members). The findings below document the following measures:
 - **Enrolled**: Number of students who registered to take the course
 - **Below** expectations: Project received a 'Fail' or student withdrew from the course
 - **Met** expectations: Project received a 'Pass'
 - **Exceeded** expectations: Project received a "Commend"
- Evaluation of the best theses by invited "superjurors". The findings below document the following measures:
 - **Average Juror Score (1-5)**: The average score submitted by a "superjury" composed of invited external professionals and faculty members (from other schools of architecture) who critique and evaluate just the commended projects – those that exceeded expectations – following final reviews each semester. The superjurors use the following scale: 1-Fail, 2-Low Pass, 3-Pass, 4-High Pass and 5-Commend (Exceptional).
- Ability of students to complete the Thesis Sequence (Thesis Research/Thesis Preparation and Thesis Design/Thesis Written)
 - **Completion Rates**: Number and percent of students who complete in two semesters (Fall and Spring or Spring and Fall).

Indirect assessment measures include:

- **Course evaluations** (completed by the students at the end of each semester) are reviewed by the faculty and administration
- **Focused discussion groups** with students through the CUA chapter of the American Institute of Architecture Students (AIAS) and faculty occur at the end of each semester to discuss what can be improved or needs to be revised for the following semester

Other Measures

Architectural Accreditation

Though not directly or exclusively measuring student outcomes, the National Architectural Accreditation Board (NAAB) reviews professional architecture programs (at CUA, the M.Arch2 and M.Arch3 degrees) every six years. The most recent site visit to CUA, 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 Certification:

A small number of students opt to take certification exams that certify competence in a specific knowledge area within the real estate, design, and construction professions. The United States Green Building Council (USGBC)'s Leadership in Environment and Energy Design (LEED®) program offers the LEED® Accredited Professional (LEED AP) certification. The Construction Specifications Institute (CSI) offers the Certified Documents Technologist (CDT) certification. Anecdotally, we know that passage rates for CUA students and alumni are quite high but they are not tracked by the school and are therefore not cited here.

Planners are certified by APA, the American Planning Association, through the AICPs, the American Institute of Certified Planners. Eligibility requires two years of experience after completing a graduate degree accredited by PAB, the Planning Accreditation Board. Since our planning program is relatively new, we have not yet been able to track passage rates on the AICP exam.

So far as we know, there are no certificates issued related to the content matter of the M.A.S. or M.S.S.D. degrees.

Professional Licensure

For future architects, a 5,600 hour internship and passage of a seven-part examination (Architect's Registration Examination, or A.R.E.) are required for professional licensure. Since most students do not complete, or even start, this examination until at least three years after graduation (and often longer), after further building on their education through professional practice, passage rates for alumni are not tracked or cited here. The only earlier review conducted by the

architecture profession is the one conducted by NAAB, noted above, that reviews academic programs rather than individual students.

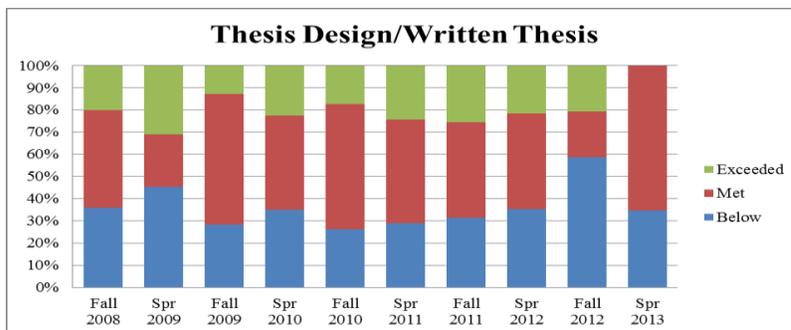
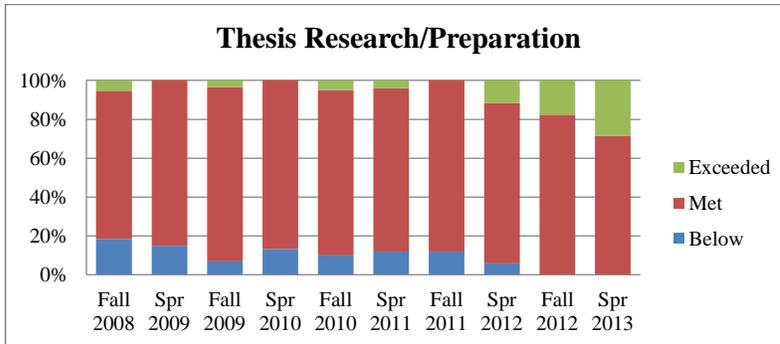
States do not license the competencies taught in the M.C.R.P, M.S.S.D, or M.A.S. programs, although, as noted above, planners are certified by AICP.

Assessment Data and Findings

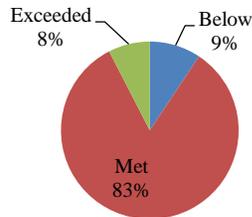
Direct Assessment Data

Based upon the direct assessment measures listed above, the School of Architecture and Planning found the following data:

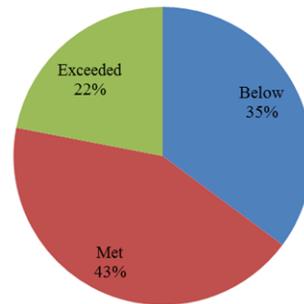
	Student Performance												Completion Rates					
	Thesis Research/Preparation (ARCH 600/700, ARPL721)						Thesis Design/Written Thesis						Thesis Design	Whole sequence in 1 year				
	Total		Below		Met		Exceed		Total		Below				Met		Exceed	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%		
Fall 2008	38	18.4	7	18.4	29	76.3	2	5.3	25	36.0	11	44.0	5	20.0	16	9	56.3	
Spr 2009	20	15.0	3	15.0	17	85.0	0	0.0	42	45.2	10	23.8	13	31.0	23	18	78.3	
Fall 2009	29	6.9	2	6.9	26	89.7	1	3.4	39	28.2	23	59.0	5	12.8	28	13	46.4	
Spr 2010	15	13.3	2	13.3	13	86.7	0	0.0	40	35.0	17	42.5	9	22.5	26	22	84.6	
Fall 2010	40	10.0	4	10.0	34	85.0	2	5.0	23	32	26.1	13	56.5	4	17.4	17	10	58.8
Spr 2011	25	12.0	3	12.0	21	84.0	1	4.0	45	24	28.9	21	46.7	11	24.4	32	29	90.6
Fall 2011	25	12.0	3	12.0	22	88.0	0	0.0	35	24	31.4	15	42.9	9	25.7	24	16	66.7
Spr 2012	17	5.9	1	5.9	14	82.4	2	11.8	37	12	35.1	16	43.2	8	21.6	24	18	75.0
Fall 2012	17	0.0	0	0.0	14	82.4	3	17.6	29	31	58.6	6	20.7	6	20.7	12	8	66.7
Spr 2013	14	0.0	0	0.0	10	71.4	4	28.6	41	10	24.4	19	46.3	12	29.3	31	18	58.1



Thesis Research/Preparation Fall 2008 - Spring 2013



Thesis Design/Written Thesis Fall 2008 - Spring 2013



Direct Assessment Findings

For thesis research/thesis prep, these data show a recent increase in the number of projects receiving commends and a corresponding drop in the number falling below expectations. ~~That suggests that either students are growing in competency or that critics are lowering their standards.~~ For thesis design and written thesis, the number of projects being evaluated as demonstrating competency, at each level, has been quite erratic from year to year. ~~This appears to suggest an inconsistency in the quality of the students, or in the critics, or lack of consistency or clarity in the way that project evaluation criteria are documented, communicated, or applied.~~

The Direct Assessments noted in this report are a correlation of the three possible student outcomes in connection with each of the thesis courses. Each course is evaluated on a 'Pass', 'Fail' or 'Commend' basis by the faculty evaluators. A student who receives a commendation is considered to have exceeded the expectations, a student who passes the course without commendation is considered to have met the expectations and a student who receives a failing grade, withdrawals from the class or continues to develop their thesis in a subsequent semester is considered to be below the expectations for the course.

As Thesis Research/Preparation is the initial course in the thesis sequence, instructors are typically much less likely to award commendations in this semester. Failing rates have been consistently low in this course as there is not a clear line in the development of an architectural thesis between research and design. Therefore, students who are slightly behind in their research may still be able to move on to the next course, where they can continue their research concurrently with their design.

Thesis Design outcomes typically fluctuate in coordination with the fluctuation of enrollments. This is due, in large part, to the number of students who enroll in Thesis Continuation. Approximately half of the students who take an additional semester to complete their thesis do so to avoid failing the course. The other half of students taking Thesis Continuation, do so in the hopes of exceeding the course expectations. These variations between students in their first and students in their second or third semester of project development are likely the cause of the highly variable outcomes from semester to semester.

Indirect Assessment Data

Quantitative data were collected from course evaluations of thesis research/preparation only. That is because course evaluations have traditionally been used only when an instructor has at least 5 students, and each thesis student assembles his or her own unique committee. They show instructor ratings holding fairly steady while course ratings have been trending generally upward, from 7.17 out of 10 in fall 2010 to 8.60 out of 10 in spring 2012. Sample comments included the following:

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“This course was structured well, the first part of the course was very helpful, maybe if there was a discussion based on each thesis as a group during the class where each person got to present and talk about their thesis the class would help receive group feedback. Class was great and very helpful all together.”

“The thesis preparatory class was very clear and straight forward when it came to its objectives. I think most of the work or learning in the class happened at the beginning of the semester and waned down as the semester progressed. I almost wish the course would have just introduced us to our committee sooner and stopped meeting after the 80% deadline. That time was spent just re-capping the semester and I thought it would’ve been a time for me to work on personal work.”

“The teacher was very knowledgeable on how to begin to develop a thesis topic and idea. His expectations from his students were always high, asking for good quality and well developed work.”

“Overall this course was a large disappointment. The content was helpful but the course should be divided into two 3 unit classes. Most students did not get the most out of the course because too little of the time was given to methodology and critical analysis.”

“The course was very well organized and emphasized the importance of writing skills as well as research methods. The structure of the course worked well, however sometimes my own writing/research was not at that point. I do understand that the course has to move and cover various points, and I found it helpful that the instructor was willing to discuss any issue I had at the time. I feel that without this course I would not be able to have produced my thesis paper.”

“Overall, I liked that larger deadlines happened/started earlier in the semester – kind of set the tone and allowed me to get into and maintain a research / writing routine.”

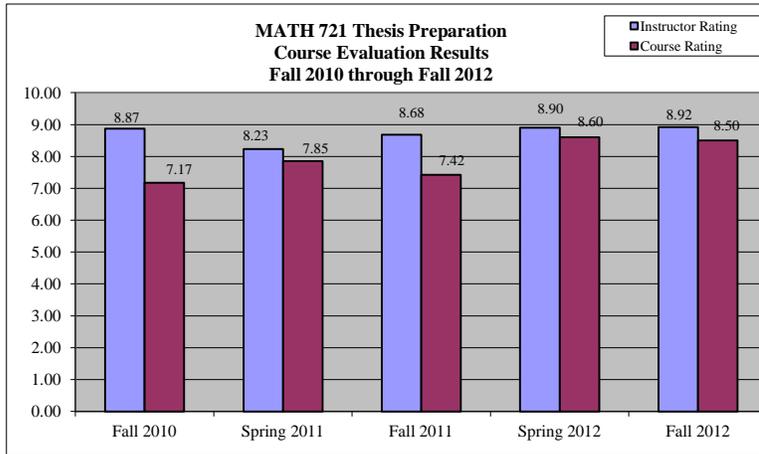
Per these examples, qualitative data (comments) gathered in course evaluations and focused discussion groups were generally positive. Students appreciate the opportunity to research and develop their designs or research methodologies in an independent setting. Students feel that the thesis sequence is successful as capstone coursework as it builds upon most all of the previous program curriculum, including the earlier undergraduate work done by M.Arch2 students.

Students in the initial courses of the thesis sequence did not feel that general instruction regarding research methodologies was valuable to the success of their own thesis proposal. Students wanted to be allowed to begin researching topics and information relevant to their proposals from the very beginning of the thesis sequence.

Students also felt that there were issues with the Thesis Advisory Groups, including that the quality and quantity of feedback and evaluations provided by advisory groups or to students could vary widely. Students expressed a desire for an increased level of consistency in Advisory Group evaluations, the institution of formal mid-term evaluations from Advisory Groups to eliminate surprises at the conclusion of the semester, and more specific guidance in course syllabi to clarify expectations for both students and the Advisory Group faculty.

**COURSE SUMMARY DATA: SCHOOL OF ARCHITECTURE AND PLANNING
ARPL 721 Thesis Preparation**

Term	Course Evaluation Results					
	Course Eval.		Instructor Rating		Course Rating	
	#	%	Avg.	StDev.	Avg.	StDev.
Fall 2010	12	33%	8.87	0.78	7.17	1.75
Spring 2011	13	68%	8.23	1.01	7.85	1.21
Fall 2011	19	76%	8.68	1.63	7.42	2.14
Spring 2012	10	59%	8.90	1.20	8.60	0.97
Fall 2012	12	71%	8.92	1.38	8.50	1.73



Indirect Assessment Findings

Quantitative data indicate that... Please complete this sentence [the instructor rating remained fairly consistent throughout the time covered by this report. Overall, students have been satisfied by the quality of instruction in the course. During the same period, student satisfaction with the quality of the course was slightly lower than that of the instructor but showed gradual improvement from Fall 2010 to Spring 2012 before dipping slightly in the Fall 2012 semester.](#)

Qualitative data indicate that... Please complete this sentence [similar satisfaction of the students with the course instruction but lower satisfaction with the quality of the course. Through the collection of the qualitative data, comments regarding the course itself were increasingly positive from year to year due to increased organization of the course and increased communication between the faculty and the students.](#)

Progression Data

Master's Programs: All

	Cohort Size	Returned To CUA in Fall 2009		Returned To CUA in Fall 2010		Returned To CUA in Fall 2011		Returned To CUA in Fall 2012		Returned To CUA in Fall 2013		Graduated in 1 Year		Graduated in 2 Years*		Graduated in 3 Years*		Graduated in 4 Years*		Graduated in 5 Years*	
		No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.								
Fall 2008	46	40	87.0%	21	45.7%	7	15.2%	1	2.2%	1	2.2%	2	0.0%	20	43.0%	35	76.0%	41	89.0%	41	89.0%
Fall 2009	55			49	89.1%	30	54.5%	6	10.9%	1	1.8%	3	5.0%	22	40.0%	45	82.0%	49	89.1%		
Fall 2010	55					47	85.5%	31	56.4%	10	18.2%	5	9.0%	19	30.0%	39	71.0%				
Fall 2011	34							32	94.1%	17	50.0%	0	0.0%	13	38.2%						
Fall 2012	50									48	96.0%	0	0.0%								

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Master's Programs: below 40 Credits (M.S.S.D., M.A.S)

	Cohort Size	Returned To CUA in Fall 2009		Returned To CUA in Fall 2010		Returned To CUA in Fall 2011		Returned To CUA in Fall 2012		Returned To CUA in Fall 2013		Graduated in 1 Year		Graduated in 2 Years*		Graduated in 3 Years*		Graduated in 4 Years*		Graduated in 5 Years*	
		No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Fall 2008	3	3	100.0%	2	66.7%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	33.3%	2	66.7%	0	0.0%	0	0.0%
Fall 2009	11			11	100.0%	7	63.6%	1	9.1%	0	0.0%	0	0.0%	4	36.4%	5	45.5%	4	36.4%		
Fall 2010	11					7	63.6%	4	36.4%	0	0.0%	1	9.1%	3	27.3%	4	36.4%				
Fall 2011	9							9	100.0%	1	11.1%	0	0.0%	7	77.8%						

Fall 2012	0					0	0						
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Master's Programs: 40 to 60 credits (M.Arch1.5, M.Arch2, M.C.R.P.)

	Cohort Size	Returned To CUA in Fall 2009		Returned To CUA in Fall 2010		Returned To CUA in Fall 2011		Returned To CUA in Fall 2012		Returned To CUA in Fall 2013		Graduated in 1 Year		Graduated in 2 Years*		Graduated in 3 Years*		Graduated in 4 Years*		Graduated in 5 Years*	
		No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.								
Fall 2008	28	23	82.1%	6	21.4%	2	7.1%	1	3.6%	1	3.6%	2	7.1%	16	57.1%	5	17.9%	1	3.6%	0	0.0%
Fall 2009	29			26	89.7%	11	37.9%	2	6.9%	0	0.0%	1	3.4%	15	51.7%	9	31.0%	1	3.4%		
Fall 2010	28					25	89.3%	13	46.4%	2	7.1%	3	10.7%	10	35.7%	11	39.3%				
Fall 2011	12							10	83.3%	4	33.3%	0	0.0%	6	50.0%						
Fall 2012	23									23	100.0%	0	0.0%								

Master's Programs: more than 60 credits

(M.Arch3, M.Arch2/M.S.S.D, M.Arch3/M.S.S.D., M.Arch2/M.C.R.P., M.Arch3/M.C.R.P.)

	Cohort Size	Returned To CUA in Fall 2009		Returned To CUA in Fall 2010		Returned To CUA in Fall 2011		Returned To CUA in Fall 2012		Returned To CUA in Fall 2013		Graduated in 1 Year		Graduated in 2 Years*		Graduated in 3 Years*		Graduated in 4 Years*		Graduated in 5 Years*	
		No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Fall 2008	15	14	93.3%	13	86.7%	5	33.3%	0	0.0%	0	0.0%	0	0.0%	1	6.7%	8	53.3%	5	33.3%	0	0.0%
Fall 2009	15			12	80.0%	12	80.0%	3	20.0%	1	6.7%	2	13.3%	0	0.0%	9	60.0%	2	13.3%		
Fall 2010	16					15	93.8%	14	87.5%	8	50.0%	1	6.3%	1	6.3%	5	31.3%				
Fall 2011	13							13	100.0%	12	92.3%	0	0.0%	0	0.0%						
Fall 2012	27									25	92.6%	0	0.0%								

*Two to five years of graduation rates are cumulative.

Note: A particular cohort is defined as the combination of the students first enrolled in consecutive sessions of one year: the summer session or the fall semester. For example, cohort 2008 consists of students first enrolled in summer 2008 or fall 2008.

Progression Findings

These data show that, in the last five year period, trends regarding student enrollment and continuation ~~...~~ Please complete this sentence have fluctuated from year to year and from the Fall to Spring semesters. The Spring semester typically results in fewer students continuing for an additional semester as these students are typically enter the semester in sequence whereas students entering Thesis Design or Thesis Written in the Fall are typically out of the regular graduation sequence.

Further, these data show that, in the last five year period, trends regarding time taken to complete their degrees and rates of graduation ~~...~~ Please complete this sentence have corresponded with the fluctuation in continuation rates noted above. The implementation of joint degree programs (which typically require an additional semester of coursework) have produced even more fluctuation in enrollment and continuation rates for Thesis Design and Thesis Written.

Curricular Improvements

Improvements to the thesis program already implemented

Based upon the assessment findings listed above, the School of Architecture and Planning implemented the following curricular improvements:

In the fall of 2010, the School of Architecture and Planning faculty voted to revise the Thesis Program from a three course, 12 credit (Research Methodologies – 3 credits, Thesis Research – 3 credits, Thesis Design – 6 credits) sequence, to a two

course, 12 credit (Thesis Preparation – 6 credits, Thesis Design – 6 credits) sequence. This change was based primarily on the determination that students were not adequately engaged in the Research Methodologies course due to the generalized information covered in the course. The new Thesis Preparation course was developed as a hybrid of Research Methodologies and Thesis Research which provided students with an introduction to the means and methods of research but allowed for individual thesis proposal development by each student. This format also allowed the faculty to engage students much earlier in the process of the development of their thesis proposal. Additional benchmarks were added to the syllabi for Thesis Preparation and Thesis Design to provide clear expectations for the students and faculty involved in the program.

Following the period of assessment covered by this report, in the fall of 2013, the School of Architecture and Planning faculty voted to revise the Thesis Program to a Capstone Studio format. With the change in program, it was the desire of the faculty to reduce the amount of faculty load involved with the thesis program and to accept that the majority of students in the thesis program were not producing the level of research required of a true graduate level thesis.

The Capstone Sequence begins with ARPL 696A, Capstone I (3 credits) and concludes with ARPL 696B, Capstone Studio II (6 credits). The new program reduces the expectation from thesis level research to project based research mimicking the Pre-Design phase of the architectural profession. Capstone Studio II is taught in a studio format with a single instructor and provides the students with a dramatic increase in contact hours with their critic.

Students who still desire to complete a research based thesis proposal may apply to enter the Thesis Program which includes ARPL 696C, Independent Thesis I (3 credits) and concludes with ARPL 696D, Independent Thesis II (6 credits). Only about 5-10% of students are accepted into this program which operates similarly to the original Thesis Program where students work independently on developing their thesis with a group of faculty who oversee the process.

The new Program, while still in its early implantation phase, provides the upper level students with the same opportunities of the old program but provides much more structure and support for students that typically struggled with independent research and design. The program is already seeing a dramatic increase in the number of students completing the sequence within a single academic year.

Planned future improvements

We intend to develop course evaluations specifically for thesis that ask only about the course but not the instructor, so that the problem of unique committees does not prevent us from getting feedback about the course itself. At this point, with capstone just getting started, it is too early to say what other changes we may make.