ARC 552 Summer 2014
Graduate Design Thesis Project

School of Architecture – Master of Architecture Studies
6 credits - SIU Online URL: http://ctesiu.adobeconnect.com/arc552/
Instructor: Dr. Michael Brazley, Ph.D., AIA, NCARB
Office Hours: 6:00pm to 9:00pm Central Standard Time, Monday & Wednesdays or By appointment
Dr. Brazley cellphone: 618 559-5112 or Email: mdbraz7@siu.edu

This material borrows heavily from a syllabus and course description prepared by Professor Craig Anz in 2009, Walter Wendler in 2012, 2013, and official documents of the School of Architecture and Southern Illinois University

Please make sure to read this whole document and ask questions if anything lacks clarity.

ARC 552 Graduate Architectural Design/Thesis I
Catalog Description: Initial development of individual design/thesis project in a studio setting. The studio will consist of a design project or an individual student thesis project as developed in ARC 500, and in concert with graduate committee member(s). Approval of thesis project by graduate faculty is required. Prerequisite: 551 and 500.

Statement of Purpose: As an extension of the research components, the purpose of this studio is to develop an architecture that effectively and critically engages ongoing research and its role in design endeavors. Students will extend foundations for research, basic issues, concepts, methods, and programming to their design of the thesis project. The culmination of previous work on your thesis project will indicate, through a program and subsequent design, the pragmatic understanding of architecture that is generally expected of graduates and entry-level professionals.

The goal is to have a total architectural project that consciously denotes formal inquiry and critical thinking, connecting one’s creative endeavors within a greater body of knowledge, also to connect the essential reasoning for architectural artifacts. The thesis product will be presented to class and committee member(s) at scheduled review times where recommendations will be made toward fulfillment of final requirements. The student will prepare for these reviews a defined set of criteria and significant questions to present to their reviewers for input.

These series of reviews are intended to foster interaction and co-tutoring, thus building collective and critical knowledge bases, but also to guide effectively through the processes. Class activities will also include lectures and discussions focused around pertinent topics and recommended readings from both the instructor and students. In addition, special care will be taken to foster planned and integrative pedagogical interaction with corresponding core seminars. While developing a comprehensive
graduate thesis, you are encouraged to extend your horizons and seek the diversity of viewpoints through outside, formal peer-review and possible professional and/or organizational presentation.

**Course Objectives:**

Upon completion of this course, the student will:

1. Create a strategy for the development and preparation of your thesis research, programming, project proposal, and design implementation.

2. Develop a schedule of work that will allow timely completion of the graphic and written documentation that comprise your thesis project.

3. Apply basic standards for research quality, responsibility, judgment, and ethical practice as well as the basic premise of "do no harm," extended into responsible design.

4. Prepare reasoned and responsible informed design initiatives through formal research of allied design disciplines and convey their strategy through effective verbal, graphic, and written skills.

5. Produce an architectural thesis-design project formed by a comprehensive program, from schematic design through detail development of programmatic spaces, structural and environmental systems, life-safety provisions, wall sections, and building assemblies, as may be appropriate; and to assess the completed project with respect to Graduate program design criteria.

6. Develop a project and corresponding documentation into thesis format to meet university requirements and NAAB criteria for professional degree. As such, the work also must meet or exceed architectural master’s thesis work at other peer institutions.

**Supplies/Equipments:** All pertinent materials required to work toward meeting deadlines, and reviews, and/or the completing final project

**Attendance Policy:** This section will work independently with their respective faculty and possible committee members. In order for the course and your own experience to be fully developed, each individual needs to be available and working during scheduled hours and at other times as well. Two meetings per week for a progress check and feedback on weekly discussion board will be required of each student.
Student Conduct: Please review Chapter 7 Student Conduct Code in the SIU UNDERGRADUATE/GRADUATE CATALOG regarding University policy regarding Acts of Academic Dishonesty. In particular to this course, students are to do their own work. Do not trace, lift, sample, or copy, including electronic copies, of any other’s work unless specifically cleared with your instructor and properly cited/sourced. If there is any question, do not hesitate to ask. Additional NOTE: This class will be conducted in a professional manner and as such will also be considered a ‘zero tolerance’ atmosphere. Any discrimination towards another person or otherwise will be acted upon accordingly.

Special Concerns: If there is any problem or concern that you have which might impact your performance in the class, please inform the instructor the first week of class. To be registered for this class, you must satisfy the prerequisites for the class. If this is not the case or you are uncertain, you must contact your instructor, advisor, or Chair immediately. NOTE: The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the appropriate campus department involved with services for students with disabilities.

The Studio culture policy in force for this class is posted on the web at http://emarch.architecture.siuc.edu/studio-culture-policy/.

Grading Policy: Projects are due on the hour and date specified for submittal or presentation. Late projects will be considered for evaluation only with prior approval by the instructor and thesis committee.
- Each student will be working individually and shall be completely responsible for his or her own work.
- Each project will have associated with it a set objectives or expected behavioral outcomes. The purpose of attaching these outcomes to the projects is to insure that a range of awareness and understanding are developed, expanded and tested. Areas of interest will form the basis for grading on each project. These criteria are adopted for the NAAB accrediting requirements for professional programs in architecture (listed below). All grades for thesis work are Pass/Fail.
Calendar - School of Architecture - Summer 2014

Thesis Studio

*This calendar is subject to change.*

This calendar is intended to provide for coordination of due dates for design projects, papers, tests, lectures and other activities central to the life of the students in our Master of Architecture program. Our collective adherence to it will provide the highest and best educational opportunities for our students by allowing focus and reducing unnecessary conflict in schedules.

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Notes:

Summer Classes Begin Monday, June 9, 2014
Independent Day Holiday, Friday, July 4
Final Presentation, Friday, August 1
Commencement held in May and December

*All Breaks begin officially at 10:00 p.m. the night before and end at 7:30 a.m. the morning after the respective beginning and ending dates listed, unless otherwise noted.*
STUDENT PERFORMANCE --EDUCATIONAL REALMS & STUDENT PERFORMANCE CRITERIA

Understanding—The capacity to classify, compare, summarize, explain and/or interpret information.

Ability—Proficiency in using specific information to accomplish a task, correctly selecting the appropriate information, and accurately applying it to the solution of a specific problem, while also distinguishing the effects of its implementation.

Realm A: Critical Thinking and Representation:

Architects must have the ability to build abstract relationships and understand the impact of ideas based on research and analysis of multiple theoretical, social, political, economic, cultural and environmental contexts. This ability includes facility with the wider range of media used to think about architecture including writing, investigative skills, speaking, drawing and model making. Students’ learning aspirations include:

- Being broadly educated.
- Valuing lifelong inquisitiveness.
- Communicating graphically in a range of media.
- Recognizing the assessment of evidence.
- Comprehending people, place, and context.
- Recognizing the disparate needs of client, community, and society.

A.1. Communication Skills: Ability to read, write, speak and listen effectively.
A.2. Design Thinking Skills: Ability to raise clear and precise questions, use abstract ideas to interpret information, consider diverse points of view, reach well-reasoned conclusions, and test alternative outcomes against relevant criteria and standards.
A.3. Visual Communication Skills: Ability to use appropriate representational media, such as traditional graphic and digital technology skills, to convey essential formal elements at each stage of the programming and design process.
A.4. Technical Documentation: Ability to make technically clear drawings, write outline specifications, and prepare models illustrating and identifying the assembly of materials, systems, and components appropriate for a building design.
A.5. Investigative Skills: Ability to gather, assess, record, apply, and comparatively evaluate relevant information within architectural coursework and design processes.
A.6. Fundamental Design Skills: Ability to effectively use basic architectural and environmental principles in design.
A.7. Use of Precedents: Ability to examine and comprehend the fundamental principles present in relevant precedents and to make choices regarding the incorporation of such principles into architecture and urban design projects.
A.8. Ordering Systems Skills: Understanding of the fundamentals of both natural and formal ordering systems and the capacity of each to inform two- and three-dimensional design.
A. 9. Historical Traditions and Global Culture: Understanding of parallel and divergent canons and traditions of architecture, landscape and urban design including examples of indigenous, vernacular, local, regional, national settings from the Eastern, Western, Northern, and Southern hemispheres in terms of their climatic, ecological, technological, socioeconomic, public health, and cultural factors.

A. 10. Cultural Diversity: Understanding of the diverse needs, values, behavioral norms, physical abilities, and social and spatial patterns that characterize different cultures and individuals and the implication of this diversity on the societal roles and responsibilities of architects.


**Realm B: Integrated Building Practices, Technical Skills and Knowledge:**

Architects are called upon to comprehend the technical aspects of design, systems and materials, and be able to apply that comprehension to their services. Additionally they must appreciate their role in the implementation of design decisions, and the impact of such decisions on the environment. Students learning aspirations include:

- Creating building designs with well-integrated systems.
- Comprehending constructability.
- Incorporating life safety systems.
- Integrating accessibility.
- Applying principles of sustainable design.

B. 1. Pre-Design: Ability to prepare a comprehensive program for an architectural project, such as preparing an assessment of client and user needs, an inventory of space and equipment requirements, an analysis of site conditions (including existing buildings), a review of the relevant laws and standards and assessment of their implications for the project, and a definition of site selection and design assessment criteria.

B. 2. Accessibility: Ability to design sites, facilities, and systems to provide independent and integrated use by individuals with physical (including mobility), sensory, and cognitive disabilities.

B. 3. Sustainability: Ability to design projects that optimize, conserve, or reuse natural and built resources, provide healthful environments for occupants/users, and reduce the environmental impacts of building construction and operations on future generations through means such as carbon-neutral design, bioclimatic design, and energy efficiency.

B. 4. Site Design: Ability to respond to site characteristics such as soil, topography, vegetation, and watershed in the development of a project design.

B. 5. Life Safety: Ability to apply the basic principles of life-safety systems with an emphasis on egress.

B. 6. Comprehensive Design: Ability to produce a comprehensive architectural project that demonstrates each student’s capacity to make design decisions across scales while integrating all SPC’s.

B. 7. Financial Considerations: Understanding of the fundamentals of building costs, such as acquisition costs, project financing and funding, financial feasibility, operational costs, and construction estimating with an emphasis on life-cycle cost accounting.
B. 8 Environmental Systems: Understanding the principles of environmental systems’ design such as embodied energy, active and passive heating and cooling, indoor air quality, solar orientation, daylighting and artificial illumination, and acoustics; including the use of appropriate performance assessment tools.

B. 9. Structural Systems: Understanding of the basic principles of structural behavior in withstanding gravity and lateral forces and the evolution, range, and appropriate application of contemporary structural systems.

B. 10. Building Envelope Systems: Understanding of the basic principles involved in the appropriate application of building envelope systems and associated assemblies relative to fundamental performance, aesthetics, moisture transfer, durability, and energy and material resources.

B. 11. Building Service Systems: Understanding of the basic principles and appropriate application and performance of building service systems such as plumbing, electrical, vertical transportation, security, and fire protection systems.

B. 12. Building Materials and Assemblies: Understanding of the basic principles utilized in the appropriate selection of construction materials, products, components, and assemblies, based on their inherent characteristics and performance, including their environmental impact and reuse.

Realm C: Leadership and Practice:

Architects need to manage, advocate, and act legally, ethically and critically for the good of the client, society and the public. This includes collaboration, business, and leadership skills. Student learning aspirations include:

- Knowing societal and professional responsibilities.
- Comprehending the business of building.
- Collaborating and negotiating with clients and consultants in the design process.
- Discerning the diverse roles of architects and those in related disciplines.
- Integrating community service into the practice of architecture.

C. 1. Collaboration: Ability to work in collaboration with others and in multi disciplinary teams to successfully complete design projects.

C. 2. Human Behavior: Understanding of the relationship between human behavior, the natural environment and the design of the built environment.

C. 3 Client Role in Architecture: Understanding of the responsibility of the architect to elicit, understand, and reconcile the needs of the client, owner, user groups, and the public and community domains.

C. 4. Project Management: Understanding of the methods for competing for commissions, selecting consultants and assembling teams, and recommending project delivery methods.

C. 5. Practice Management: Understanding of the basic principles of architectural practice management such as financial management and business planning, time management, risk management, mediation and arbitration, and recognizing trends that affect practice.

C. 6. Leadership: Understanding of the techniques and skills architects use to work collaboratively in the building design and construction process and on environmental, social, and aesthetic issues in their communities.
C. 7. Legal Responsibilities: Understanding of the architect’s responsibility to the public and the client as determined by registration law, building codes and regulations, professional service contracts, zoning and subdivision ordinances, environmental regulation, and historic preservation and accessibility laws.

C. 8. Ethics and Professional Judgment: Understanding of the ethical issues involved in the formation of professional judgment regarding social, political and cultural issues in architectural design and practice.

C. 9. Community and Social Responsibility: Understanding of the architect’s responsibility to work in the public interest, to respect historic resources, and to improve the quality of life for local and global neighbors.
MASTER OF ARCHITECTURE - 2009 NAAB STUDENT PERFORMANCE CRITERIA

REALM A: CRITICAL THINKING & REPRESENTATION
1. Communication Skills
2. Design Thinking Skills
3. Visual Communication Skills
4. Technical Documentation Skills
5. Investigative Skills
6. Fundamental Design Skills
7. Use of Precedents
8. Ordering Systems Skills
9. Cultural Diversity Skills
10. Historical Traditions & Global Cultures Skills

REALM B: INTEGRATED BUILDING PRACTICES, TECHNICAL SKILLS, & KNOWLEDGE
1. Pre-Design
2. Accessibility
3. Sustainability
4. Site Design
5. Life Safety
6. Comprehensive Design Skills
7. Financial Considerations
8. Environmental Systems
9. Structural Systems
10. Building Envelope Systems
11. Building Service Systems
12. Building Materials and Assemblies

REALM C: LEADERSHIP & PRACTICE
1. Collaborative Skills
2. Human Behavior
3. Client Role in Architecture
4. Project Management
5. Practice Management
6. Leadership
7. Legal Responsibilities
8. Ethics and Professional Judgment
9. Community & Social Responsibility

CORE

TITLE
Regional Studio
Research Methods & Programming
Architectural Systems and Environment
Comprehensive Professional Practice I
Architectural History III: Global Traditions
Graduate Architectural Design / Thesis I
Architectural Professional Practice II
Elective
Architectural Design/Thesis

COURSE
ARC 550
ARC 500
ARC 541
ARC 551
ARC 591
ARC 532
ARC 552
ARC 592
ARC 554

CREDITS
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Semester Work Requirements

First Review: All students in this studio should have developed during the spring semester the framework for your thesis project. You should have addressed:

1. Thesis Statement
2. Challenges and issues from the building type or project that you have identified, including but not limited to physical, social, economic, aesthetic, and cultural implications
3. Precedent studies
4. A preliminary design program
5. Initiated preliminary site identification and selection criteria
6. Compiled a bibliography representing an understanding of the project type and its parameters.

For the first review of work this semester the following is expected in presentation format to be complete by June 16:

1. A detailed preliminary architectural program that includes all space requirements, five significant problem statements related to the work completed in the spring semester in ARC 500, in digital format.

2. A written and graphic site analysis that demonstrates a clear rationale for the selection of the site you have chosen and is accompanied by graphic analysis that identifies key issues that must be addressed in the building design. This material will be presented in digital format.

3. Preliminary building and site plans that are responsive to the preliminary architectural program. These plans should be presented in digital format.

4. Preliminary assessment of appropriate materials, structural systems, HVAC systems, and other material aspects you are contemplating for the project. These should be presented in digital format.

5. Preliminary massing studies, there should be at least five that are responsive to the form giving and order generating requirements and analyses identified above. These massing studies should be presented in digital format at scales appropriate to your project.
The work identified above should be compiled and delivered to me on or before the first scheduled ‘Due Date’ (presentation of your work).

**Second Review**: The requirements for the second presentation will be discussed during the first month of class. The second review will essentially be a preliminary presentation of your entire project, in the format in which you intend to eventually present it.

**Third Review**: A dry run of the completed work in the final format and with substantial completion of drawings and all supporting documentation to allow for finished development to be complete by the end of the summer session.

We have been engaged in such work for a long time, and that gives us the experience to be able to help you schedule your work so that it meets timing and quality requirements that are consistent with your aspirations and our expectations.

**An Important Note**: This class is graded pass/fail. Students will be assigned a passing grade if you complete the very modest requirements laid out herein.

You will be getting advice from your chair (and committee members). Michael Brazley is the instructor of record for the class and your Chair; these due dates and project requirements are generally consistent with what your committee would expect. Your chair (or committee members) may require more, less, or different standards for presentation that is acceptable. If you receive prior approval the requirements can be adjusted to fit the needs of your project. That should be determined before the first week in July.

The goal is for you to have a strong result for your final project, meeting rigorous professional standards. If there is any part of this syllabus that you do not understand please contact me the first week of class.