School of Architecture | Georgia Tech | Fall 2016
ARCH 3404: Architectural Design Studio (4 credits)
ARCH 3404 and 4404 is a vertical design studio with both junior and senior undergraduate students.
The syllabi for ARCH 3404 and ARCH 4404 mirror each other.

Course Description

This course aspires to leverage a new pedagogical paradigm for the design studio, cutting across disciplines and scales, to provide a platform for interdisciplinary collaboration. The studio framework is designed to support the students' abilities to flex their creative muscle and to operate across multiple scales.

Each of the vertical design studios are interdisciplinary with a clearly defined research agenda and defined outcomes. Interdisciplinary collaboration will occur with other schools in the College of Architecture as well as across the Institute. The topics of the design studio will vary each term. The studio topics are deliberately open-ended but will be guided by the consistent set of learning outcomes to ensure an excellent education for our undergraduate students. Chair and the Director of Undergraduate Studies will review the topics each term to ensure relevance to the trends in the current profession.

Examples of topics could include the following: discrete architectural problem on an urban site; discrete architectural proposal on a rural site; material research and fabrication; net-zero design; landscape and architectural design problem; etc.

This studio explores collaborative design and team management, simulating architectural practice with interdisciplinary team structures. Students are challenged to include conceptual and technical aspects of site/landscape, architectural form and the integration of the various building assemblies and systems. Each student is expected to bring the knowledge, skills, and understanding gained from all previous coursework and experiences to the development of a conceptually coherent, comprehensive, integrative, and buildable architectural design proposal. Studio work will include predesign, programming, schematics, integrating sustainable strategies with design at a conceptual level shown in conceptual drawings and models; design development: using large scale models and drawings to test initial ideas and the integration of these ideas; studying materials and details of assembly; and presentation: with final models and drawings of site plan, plans, sections, and elevations.

Learning Objectives

The objective of this design studio is to introduce students to issues, skills/techniques, design methodologies and texts fundamental to an understanding of architecture and the process of design. Through a series of abstract and analytical exercises, as well as architectural design problems, students will learn to see and record the physical environment, develop basic research and presentation skills and explore visual, compositional and spatial sensibilities. Assignments will foster thorough consideration and understanding of the value and meaning of the work, the methodology and the lessons learned. Studio pedagogy presents synthetic and analytic exercises in which issues of abstraction, composition, problem solving, and historic precedent are explored. In addition, research, writing and oral and graphic presentation skills are incorporated into the curriculum to promote architectural literacy.

Each student will achieve the following learning objectives:

1. Demonstrate *ability* to verbally communicate architectural research methods, design process, and spatial concepts
2. Demonstrate *ability* to utilize a range of analog and digital techniques in the design process
3. Demonstrate *ability* to work both independently and collaboratively in teams
4. Demonstrate *understanding* of design method as an iterative/incremental process of research, synthesis, and feedback
5. Demonstrate *understanding* of design thinking as responsive to and shaping of social, cultural, and ecological systems
6. Demonstrate *understanding* of architecture within different historical and theoretical contexts
7. Demonstrate *understanding* of materiality and construction in architectural design
8. Demonstrate *understanding* of the basic principles involved in the appropriate selection and application of building envelope systems relative to fundamental performance, aesthetics, moisture transfer, durability, and energy and material resources.
9. Demonstrate *understanding* of the basic principles used in the appropriate selection of interior and exterior construction materials, finishes, products, components, and assemblies based on their inherent performance, including environmental impact and reuse.

Term Overview

The term will consist of several aspects and phases of work that are designed to lay the foundation for future academic and professional development. During each phase, several layers of work that include the program, analysis of precedent, site analysis, design, and presentation methods will progress simultaneously. These elements are consciously referred to as layers as they will not be developed in a strictly sequential manner. Neither research nor design is a linear process. You must give yourself time to create multiple iterations, to backtrack, to (re)search, to test and re-test in order to develop a complex and meaningful project. You should anticipate the possibility of a pin-up on any given day. Your work should always be in a state that is conducive to communicating your ideas to others. If it is not, then it is probably not communicating to

you either.

The course consists of a series of lectures, projects, readings, research activities, field trips, studio work, and review sessions requiring the development of skills in each of these interconnected activities. Students will have direct contact with their faculty member during class meeting times. Architecture is a rigorous and demanding program of study requiring dedication and personal commitment from those who come to learn. Unlike other fields, the study of architectural design is indeterminate, with no explicit boundaries except the amount of time allotted and that students are willing to commit to it. The reward for this dedication is found in the pleasure of creativity and personal accomplishment. The projects and lectures that will comprise this studio course have been devised to introduce students to a series of conventions and principles that are seen as fundamental to and necessary to architectural design. These projects will emphasize the development of skills and introduce students to the tools necessary for the study of architectural design. Students will be introduced to both the concepts of abstraction and representation by studying the role that these notions play in the process of analysis and design. It is held that architecture is simultaneously an art of abstraction and representation - that one informs and regulates the other. The projects this semester will introduce these concepts and the means for their manipulation.

Throughout the semester each project will address a series of specific lessons concerning fundamental concepts, ideas and principles of architectural design and representation. The projects are designed to build upon the experience and lessons learned from the previous project(s). In some cases the projects will deal with issues that have apparent application to the making of buildings and in an equal number of cases the projects will deal with more abstract, architectonic issues that have been selected to engage particular issues or principles. Students should at all times understand the goals of each project and the parameters defined in the project description. It is paramount that students understand what they are being asked to do. Questions and discussions are actively encouraged in studio.

Assignments

NOTE: Because studio topics and program sizes will vary, this assignment breakdown is included as a proposed guideline to the structure of assignments and weighted percentages.

Research, Data Gathering, Precedent Analysis	15%
Site and Programming Analysis	15%
Main Project Execution	60%
Benchmark 1 @ week 7	
Benchmark 2 @ week 10	
Benchmark 3 @ week 12/13	
Other: (16 weeks)	10%

While projects will be primarily evaluated using the jury/review system and focused on a set of criteria (different for each phase/project), final grades will also consider the level of inquiry (breadth, depth, method, logic and creativity) that the student's effort demonstrated during the design process. Other pedagogic dimensions such as student growth (i.e., improvements in skills, knowledge, attitude, questioning, etc.) as well as your participation, collaborative practice, citizenship and/or committed effort throughout the semester will count toward the remaining 10% of the grade.

Required Readings

There will be readings distributed over the course the semester. Some may come from selections listed under Recommended Readings.

Recommended Readings

A.D. (Architectural Design) #139. Aspects of Minimal Architecture II (Academy Press 1999)
A.D. (Architectural Design) #110 Aspects of Minimal Architecture (Academy Press 1994)
Antonelli, Paola. *Design and the Elastic Mind* (New York: Museum of Modern Art; London: Thames & Hudson, 2008)
Bachelard, Gaston The Poetics of Space (Boston, MA: Beacon Press, 1964)
Benedikt, Michael. For an Architecture of Reality (New York: Lumen Books, 1987)
Campo Baeza, Alberto. The Built Idea (Philadelphia, PA: Oscar Riera Ojeda Publishers, 2011)
Colomina, Beatriz. *Enclosed by Images: The Eameses' Multimedia Architecture.* Grey Room (2001): 7 - 29
Eames, Charles and Ray. *Powers of Ten: About the Relative Size of Things in the Universe*. Scientific American Library, 1982
Elgin, Duane. Voluntary Simplicity (New York: William Morrow Co. 1993)
Frampton, Kenneth. Modern architecture: a critical history (London: Thames & Hudson, 2007)
Habraken, N.J. *The Structure of the Ordinary*. MIT Press, 1998.
Heidegger, Martin. Poetry, Language, Thought (New York Harper & Row Publishers, 1971)
(focus on chapter: Building, Dwelling, Thinking)
Hertzberger, Herman. *Space and the Architect: Lessons for Architecture 2.* 010 Publishers, 2001.
Holl , Steven. Color Light Time (Lars Muller Publishers 2012)
Holl, Steven. "Archetypal Experiences of Architecture", A+U: Questions of Perception (1994), pp.121-135
Kahn, Louis. Conversations with Students (New York: Princeton Arch Press 1998)

McLuhan, Marshall. *Inside the Five Sense Sensorium* (from The Empire of the Senses, edited by David Howes)
Pallasmaa, Juhani The Eyes of the Skin (Chichester, UK: John Wiley, 2005)
Pawson, John (1998) Minimum. London, England: Phaidon Press Ld.
Perez Gomez, Alberto. Built Upon Love (Cambridge, Mass: MIT Press, 2006)
Rasmussen S.E. Experiencing Architecture. (Cambridge, MA: The MIT Press. 1962)
Ruby I &A., Sachs A., and Ursprung P. Minimal Architecture (New York: Prestel:2003)
Zumthor, Peter. Atmospheres (Berlin: Birkhauser Publishers, 2006)
Zumthor, Peter. Thinking Architecture (Berlin: Birkhauser Publishers. 1998)

COURSE POLICIES

Attendance

Attendance at all class meetings is mandatory and crucial to successful completion of this course. If you do not present your work or participate in class your course grade will be affected. Attendance will be taken at the beginning of each class period and punctual arrival is required. Late arrivals or departures from class will be counted as absences; **more than two unexcused absences or three total absences will be grounds for reduction of your course grade by one full letter grade**. Absences will be excused only for medical or family emergencies documented in writing. Don't jeopardize your overall performance and course grade by skipping class. You are not allowed to work on assignments for other courses during class meeting times for this course.

Your grade for this course will be determined based upon the quality of the work you produce, your improvement over the course of the semester, completion of required course assignments, quality of class participation, and attendance, attitude and ethical conduct.

Grading

Your grade for this course will be determined based upon the quality of the work you produce, your improvement over the course of the semester, completion of required course assignments, quality of class participation, and attendance, attitude and ethical conduct. Other factors impacting your grade include attendance, participation, timely completion of work, the depth of engagement in studio issues, and on demonstrating progress throughout the semester. Craftsmanship and competent and consistent execution of models and drawings is also important and it is factored into your grades. Remember, grades are earned by you – not given by your instructor.

- A grade of "F" indicates a failure to meet the studio requirements, including attendance, minimum requirements concerning presentation and fulfillment of studio requirements. In case of an "F", the studio will need to be repeated.
- A grade of "D" means that you have significant attendance problems, your studio performance is poor, including failure to meet deadlines, the basic requirements of the studio, and/or your project is not plausible.
- A grade of "C" means that you have not met the basic requirements of the studio, but your project is plausible, even if substantially undeveloped.
- A grade of "B" means that you have met the basic requirements of the studio and that your project is developed to the point where evaluation can be made according to the studio's themes and criteria.
- A grade of "A" means that your project clearly represents both a clear understanding of studio themes and criteria, and a self-motivated exploration beyond the basic course requirements. Projects that receive grades of "A" are exemplary projects in terms of concept, production, and craft.

Evaluation of a student's performance in each course is the responsibility of the instructor for that course. If the grade is disputed, a student may appeal to the instructor for a review. If, after the review, the student still believes that a grade has been assigned unfairly, the student may submit a written request for a grade appeal to the School Chair. The petition must clearly state the reasons for the appeal. A committee of faculty and students will convene to review the work and make a decision as to whether the grade will stand or be changed. Petitions must be settled and a final grade submitted to the registrar no later than three weeks after the end of the term in which the course was completed. The School Chair will inform the student of the committee's decision regarding the grade appeal, and their decision is final.

A student may receive a grade of incomplete (I) by requesting permission from the instructor prior to the date of the final examination or presentation. Permission will be granted only under extraordinary circumstances and usually for medical reasons.

Academic Integrity and Conduct

Georgia Tech aims to cultivate a community based on trust, academic integrity, and honor. Students are expected to act according to the highest ethical standards. All Georgia Tech students should familiarize themselves with and abide by the Georgia Tech Honor Code: http://www.honor.gatech.edu./content/2/the-honor-code#.

Student work that presents the ideas or words of others as the student's own adversely impacts the whole school and may lead to immediate

dismissal. Academic dishonesty, including cheating, plagiarism, commissioning academic work by others, or performing academic work on behalf of another student, is strictly prohibited. All persons in the classroom are expected to behave with courtesy towards others and in a way that does not interfere with the regular conduct of the class. Cell phones are to be turned off when students enter the classroom and should remain off for the duration of class: http://www.catalog.gatech.edu/rules/19d.php.

Accommodations for Students With Disabilities

Any student with a disability, that may require accommodation, should contact Office of Disability Services at 404-894-2563 or visit http://disabilityservices.gatech.edu to make an appointment to discuss his or her special needs and obtain an accommodations letter. He or she should also schedule an appointment to speak with the course instructor.

Emergencies

In case of emergency (e.g., fire, accident, or criminal act), please call the Georgia Tech Police at 404-894-2500. Please note that Perry Minyard, IT Support Administrator for the College of Architecture, is also a firefighter and an Emergency Medical Technician (EMT) certified in performing CPR.

Ownership

Physical copies of student work submitted to the school to satisfy course requirements—including, but not limited to digital files, papers, drawings, and models—become the property of the school. It is assumed as no obligation to safeguard such materials and may, at its discretion, retain them, return them to the student, or discard them.

Archiving

In some courses, selected students may be required to submit physical examples of their work or digital examples (on a clearly labeled CD), no later than one week after the end of term, to their instructors or administration for archiving. By enrolling, each student grants a license to reproduce and display his or her work. This is a chance for students to have their work shown online and potentially featured in forthcoming publications.

COA Facility Rules and Guidelines

Please consult the Georgia Tech Student Handbook regarding the use of facilities and all Institute policies. Aerosol sprays of any kind are strictly banned from the studio and surrounding areas. A new spray painting booth is now in operation in the COA shop, on the ground floor of the East Architecture Building.

Shop Use: All students using shop facilities must first have completed an orientation. Safety first, always! Noise should be kept to a minimum. Music may be listened to only through headphones, including evenings and weekends.

Studio Housekeeping: Students should feel free to organize their space creatively and expressively, but with respect to others around them. Try to prevent clutter from becoming a nuisance, distraction, or a hazard. The cleaning staff makes every effort to determine what is and is not trash, but their job can be made easier if you keep drawings filed and models off of the floor.

Communication

At the start of each studio meeting time at 2pm, I will use that time to make announcements and share general information. If you are late, it is your responsibility to follow up with one of your classmates. If you are consistently late, this could have an adverse affect on your grade.

I will send you emails as a main means of communication over the term. I will try to keep emails to a minimum, but please do make sure you read them.

Course Folder

We have a course folder for you to retrieve information as well as upload your work, per the guidelines noted above.
To access the file shares on our network on a Windows system,
1 Open My Computer & paste in one of the addresses below into the address bar & hit Enter.
1 Log in with format AD\GTusername and your password

On a Mac,
2 in Finder, select Go...Connect to server, put in the address
below, Click + to save for later and click Connect.
3 Log in with format AD\GTusername and your password

Course Folders

WIN: \\ad.gatech.edu\gtfs\coa\Courses
Mac: smb://ad.gatech.edu/gtfs/coa/Courses

The Studio Course Information is where I'll store the syllabus, schedule, assignments, and readings. Please check it for the latest information.
The Work-Area folder will be where you can store your individual work. I have created sub-folders for each of you.
The Submissions folder will be where you will submit work following critical benchmarks and reviews. I have created sub-folders for each of the critical benchmark submissions.

Class Schedule

See attached annotated class schedule. Please note: this schedule is subject to periodic revisions over the course of the term. Updated schedules will always be posted on the shared course folder.