School of Architecture | College of Architecture | Georgia Institute of Technology

**ARCH 1009: Fundamentals of Design and the Built Environment I**

Fall 2016: Tuesday/Thursday*:* 8:30-12:30 or11:30-12:30 + 1-4|4 credit hours | ***studio syllabus***

*By the “discipline of architecture” we mean a collective body of knowledge that is unique to architecture, and though it grows over time, is not delimited in time and space. Trabeated (post and beam) systems and wall and vault construction appeared early in the history of architecture and are still studied in purely technical terms; even when viewed purely technically, such systems are necessary to architecture. When, however, these systems are understood to create opportunities and constraints for the definition of space, the control of circulation, and the play of light, these are issues of the discipline of architecture. To distinguish the surface of a wall from the wall itself and to find in this distinction the opportunity for representation are propositions of the discipline of architecture.* Stanford Anderson*,* “The Profession and Discipline of Architecture”

**TOWARDS CONNECTING THE DOTS, Part I**

Welcome to the School of Architecture’s first-year architecture studio! As a new major, this course will introduce you to the fundamentals of design and the built environment through a year-long pedagogy designed to help you better engage the evolving discipline and profession of architecture and worlds they serve. Its mission is the cognitive, formal, and technical training of communities of individuals like you to design more *resilient, supportive*, and *aesthetic* worlds. Its framework is constructed to help you understand architecture’s evolving nature by exploring five of its key terms—*place, building, dweller, material,* and *drawing*. By situating this within the process of solving real-world design problems you can develop the kind of agile design thinking you’ll need to succeed in the field. Learning to analyze and synthesize things across disciplines and cultures with creative *systems thinking* toward solutions that join *art* and *science*, you can build essential knowledge and skills as you launch your ‘voyage of discovery’—exploring the connectedness of things and your related potential for creativity and influence as a *citizen-architect*.

**student learning outcomes**

Upon completing ARCH 1009: Fundamentals of Design and the Built Environment I, students should be able to do the following at a 1000-level:

1. Demonstrate *ability* to communicate architectural concepts and design intent

2. Demonstrate *ability* to verbally communicate architectural research methods, design process, and spatial concepts at an introductory level

3. Demonstrate *ability* to utilize a range of analog and digital techniques in the design process

4. Demonstrate *ability* to work both independently and collaboratively in teams

5. Demonstrate introductory *understanding* of design precedents and site analysis

**course procedures + organization**|

There are two sections of our studio this fall—one that meets Tuesday & Thursday mornings and the other, the afternoons—each section being team-taught by its own instructor with the studio coordinator. Both sections will share the same pedagogical framework, process/schedule, required readings, presentations, and the same studio space where everyone will have their own desk and locker for storing things. In the investigative process this fall, both sections will pursue three different design problems of increasing length that build systematically on one another, each one explored through the lens of a particular definition of architecture. The process for all 3 design problems is organized in 2 larger phases, each with its own series of steps and deliverables.

In ***phase a,*** teams of 2-3 classmates will engage in the analytic design inquiry phase with given project sites, programs, and precedents.

In ***phase b,*** the synthetic design phase of creative problem-solving, you construct your strongest design response to the material from ***phase a***.

Within both phases you will refine your design thinking and making through a series of iterations and feedback loops that tap into your own personal interests and insights while still employing rational and meaningful methods and communication that others can enter into. To support the process, the entire studio will meet in Room 309, Tuesdays, 11:30am-12:30pm, for presentations by the instructors on topics relating to the current process followed by studio-wide dialogue. We’ll typically meet in Rm 359, Thursdays, 11:30am-12:30pm, for tutorials by the instructors on the various techniques of representation used in the process. Given the studio pace and limits of time, sustained commitment and effective time management are essential for successful performance.

**GT1000 GT Freshman Seminar** is an optional one-credit hour, letter-graded course that may be taken in conjunction with the studio by first-year students in ARCH 1009. It meets weekly on Fridays, 12-1pm, in Room 107 and studio space and covers topics critical to first-year student success. Examples of these include academic success strategies (e.g. time management, work habits), leadership, career and major exploration, team/community building skills, and oral presentation skills as well as issues relating to current studio work. It is taught by the studio coordinator who facilitates group discussion, and also provides mentoring, academic advice, and support. Grading is based on active participation in the seminar discussions and class attendance. The attendance policy is the same as for the studio outlined below under ‘course evaluation + attendance policy.’ Students in the studio not taking the seminar for credit are also encouraged to participate in seminar discussions.

**course requirements + ‘studio rules’**

1. Students need to acquire all the items listed below on the “required course tools and materials” by the second day of class, and have those materials available for use at all times throughout the semester.
2. Students should have their own laptop which they bring with them to each class to use on studio-related work, either with software provided through the CoA vlab or software acquired and loaded on the individual’s laptop.
3. Students must meet the minimum requirements and deadlines for each assignment, understanding that project presentation requirements are only a minimum expectation, and additional documents must be included as needed.
4. Students must have new physical evidence of their process of thinking and making present at each desk crit and pin-up as assigned with hard copies of digital documents always printed out by the beginning of class.
5. Students must attend all studio lectures as shown on the ‘course schedule’. Unannounced quizzes may be given on the content of any these lectures. Powerpoints of lectures are available for reference through our course T-Square site.
6. Required readings are posted on the course T-Square site and must be read and notes taken by the dates shown. Five pop quizzes are given throughout the semester for basic comprehension of the content in these required readings.
7. Students must regularly make public, oral presentations of their design work and engage in class-wide discussion of the design approaches manifested in the work. Participation in these “pin-ups” and "final reviews" is required.
8. Students are responsible for digitally documenting their studio work as **jpegs** and uploading it to their section’s course folder at the end of each exercise. Original work may be retained by the School for accreditation purposes.
9. Attendance at all studio-related activities is required [see specific attendance requirements under ‘policy on absences’ below]. Students must be at their desk working during studio hours, unless permitted to do otherwise.
10. 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.
11. Georgia Tech aims to cultivate a community based on trust, academic integrity & honor. Students must act at all times in accordance with the Georgia Tech Honor Code @ <http://www.catalog.gatech.edu/rules_regulations/#18>
12. For sustained focus, all cell phones must be turned off during class and remain turned off throughout the class. No social media or other electronic media may be used during class unless related to classwork and permitted by your instructor.
13. In case of emergency (i.e. fire, accident, criminal act), call the Georgia Tech Police at 894-2500. Please note that Perry Minyard, IT Support Administrator is also a firefighter and an Emergency Medical Technician (EMT).
14. Access to the Shop facilities is limited to qualified students who have completed the College Materials and Processes class in CoA 1012, at which point students using the CoA Shop must comply with all shop rules at all times.
15. Spraying of any aerosol material in the College of Architecture is prohibited with the exception of the designated spray booth" in the COA Shop. Prohibited areas of use include all exterior stairwells, balconies, and terraces.
16. Studio space is shared with the sophomore studio; noise must be kept to a minimum always. In respect of others, music may be listened to only through headphones, including evenings and weekends. Microwaves and hot-plates are never allowed.

**course evaluation criteria + attendance policy** |

Throughout the term, studio instructors meet and formally review student work that is gathered from both studio-sections for the purposes of comparing learning outcomes and grading consistency. The current work is also gauged in relation to the work of previous years, and in relation to its fulfillment of the ‘courses objectives’ listed on the first page of this syllabus. Performance on each exercise is evaluated for each ***phase*** within it (***phase a*** + ***phase b***), with each being worth 50% of the grade for each of the exercises. The performance is evaluated in terms of three larger criteria, each of which is then divided into the two equally important and equally-weighted sub-criteria shown below that roughly correspond to quantitative and qualitative measures. It’s important to remember that grades are not given but earned: ‘A’-quality work requires that its ‘excellence’ be clearly demonstrated for all six of these sub-criteria within the larger process *creativity.* ‘B’-quality work must be at least ‘good’ in all sub-criteria, ‘C’-quality, ‘average,’ and so on.

***effort*** [quantity of time + self-driven process/time management] = 33.3% of the grade for each step

***findings*** [quantity of discovery/invention + clarity/depth of thought] = 33.3% of the grade for each step

***communication*** [quantity of work product + visual/verbal craft of work] = 33.3% of the grade for each step

Students in all 1000- and 2000-level course receive a progress grade [*Satisfactory/Unsatisfactory*] October 25th, and students in this course also receive a written evaluation and letter-grade for their work after completing each exercise, and a letter-grade for the course at the end of the term in which performance for the semester is evaluated and ‘weighted’ as follows:

probe 1a + b = 25%

probe 2a + b = 30%

probe 3a + b = 35%

notebook = 5%

4-5 pop quizzes on required readings = 5%

optional: brief synopses of five of the Fall SoA public lectures = 5-point bonus

Class attendance throughout the entire studio is an essential part of the studio learning experience. General announcements addressing issues that impact each studio-section are made at the beginning each session of class; attendance is also taken at the same time. Arriving 5-15 minutes late to class is counted as a tardy with 3 tardies being counted as one unexcused absence. Arriving later than this and/or leaving studio before class is over are both counted as unexcused absences. Three unexcused absences result in the lowering of the final grade by a letter grade. Please let your instructor know if you know in advance that you will have to miss a class. If the reason for an absence is Institute-approved, then documentation must be provided to your instructor as soon as possible. Importantly, students must assume full responsibility for finding out all the information given out while they are away from studio, even when absent for excused absences.

**course required readings**

The readings that support the studio process are at course T-Square website/*resources.*

**course schedule of process** | The following outlines the studio process and may adjust as needed along the way

p r o b e 1

*week 01* 08/23 tu reading 1-2 [Banathy, Parcell]; *presentation: Mapping Practice Types I*

08/25 th readings 3-5 [von Meiss, Corner, de Certeau]; *presentation: Mapping Practice Types II*

*week 02* 08/30 tu reading 6 [Aristotle]; *presentation: Mapping Practice Types III*

09/01 th reading 7 [Deplazes]; *presentation: Plinth + Earthwork Types*

*week 03* 09/06 tu *tutorial: Model-Building* as *Systems with Technē*

09/08 th *tutorial: Orthographic Projection Systems with Technē*

*week 04* 09/13 tu

09/15 th **final review: *probe 1***

p r o b e 2

*week 05* 09/20 tu readings 8-9 [Parcell, Hugh St Victor]; *presentation: Architecture + Place* as *Mechanical Arts*

09/22 th reading 10 [McClellan]; *tutorial: SketchUp Modeling*

*week 06* 09/27 tu reading 11-12[Loos, Klose]; *presentation: Architecture + Place* as *Body Support/Mechanical Arts*

09/29 th reading 13 [Deplazes]; *tutorial: SketchUp > Illustrator Plans + Sections* [s/u progress grades due 9.30]

*week 07* 10/04 tu *presentation: Architecture + Place* as *Prefabricated Settlement/ Mechanical Arts*

10/06 th *tutorial: SketchUp Rendering*

*week 08* 10/11 tu FALL BREAK

10/13 th *tutorial: InDesign presentations*

*week 09* 10/18 tu

10/20 th **final review: *probe 2***

p r o b e 3

*week 10* 10/25 tu readings 14-15 [Parcell, Vasari]; *presentation: Architecture + Place* as *Math Systems/Disegno*

10/27 th readings 16-17 [Smithson, Calabuig]; *tutorial: AutoCAD*

*week 11* 11/01 tu readings 18-19 [Bacon, Bejan/Lorente]; *presentation: Architecture/ Place* as Constructal Law/*Math Systems/Disegno*

11/03 th reading 20 [Deplazes]; *tutorial: SketchUp Modeling* continued

*week 12* 11/08tu *presentation: Architecture + Place* as Architectural Promenade/*Disegno*

11/10th *tutorial:* *math/modular system studies*

*week 13* 11/15tu *tutorial:* *SketchUp/Kerkythea/Photoshop Rendering/presentation formatting + techniques*

11/17th

*week 14* 11/22tu

11/24th THANKSGIVING BREAK

*week 15* tba **final review: *probe 3***

tba portfolio event

**course bibliography |** highlighted items on course reserve shelf at Architecture Library desk

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