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

**ARCH 1010: Fundamentals of Design and the Built Environment II**

Spring 2017: Tuesday/Thursday*:* 8:30-12:30 or11:30-12:30 + 1-4|4 credit hours| ***studio syllabus***

*instructors:* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ + Frederick Pearsall, *studio coordinator*

*graduate teaching assistants:* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |office hours by appointment

*How could we reconnect the head to the body, how could we join science and technology with human values? How could we agree upon common projects while respecting the singularity of individual positions? By what means, in the current climate of passivity, could we unleash a mass awakening, a new renaissance? Will fear of catastrophe be sufficient provocation? …Emphasis must be placed, above all, on the reconstruction of a collective dialogue capable of producing innovative practices. Without a change in mentalities, without entry into a post-media era, there can be no enduring hold over the environment. Yet, without modifications to the social and material environment, there can be no change in mentalities. Here, we are in the presence of a circle that leads me to postulate the necessity of founding an "ecosophy" that would link environmental ecology to social ecology and to mental ecology. Félix Guattari, “Remaking Social Practices”*

*In conclusion, it should be understood that the three ecologies originate from a common ethico-aesthetic discipline, and are also distinct from the point of view of the practices that characterize them. Their different styles are produced by what I call heterogenesis, in other words, processes of continuous re-singularization.\* Individuals must become both more united and increasingly different. The same is true for the re-singularization of schools, town councils, urban planning, etc.*

*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Félix Guattari, The Three Ecologies*

*\* resingularization, noun: the process of singularizing again; a return to the* [*singularity*](https://en.wiktionary.org/wiki/singularity) *or* [*uniqueness*](https://en.wiktionary.org/wiki/unique) *of things*

**TOWARDS CONNECTING THE DOTS, Part II**

Welcome to Part II of *Fundamentals of Design and the Built Environment* with its continuing mission of training you how todesign more *resilient, supportive,* and *aesthetic worlds* through *systems-thinking and -design.* We will continue to understand architecture’s evolving nature related to our recurring terms—*place, building, dweller, material,* and *drawing*. We will continue *engaging* real-world problems, *evolving typologies* with systems design*,* *structuring process* between team analysis/research and individual synthesis with precedent-based methodologies, and *guiding the development/communication* of these with textual and visual representations. Connecting physical and digital model-building will be key to our research/design process this semester as we continue exploring and developing the larger connectivity of things with creative *systems thinking* as you continue to develop your potential for *singularizing* creativity and agency as a *citizen-architect*.

**student learning outcomes**

Upon completing ARCH 1010: Fundamentals of Design and the Built Environment II, Students should be able to do the following at a 1000-level:

1. Demonstrate *ability* to communicate architectural concepts and design intent using discipline‐specific techniques including:

a. orthographic projections (plans, sections, elevations)

b. paraline projections (axonometrics, isometrics)

c. physical models using variable techniques and materials

d. combined representational strategies

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

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 *understanding* of design precedents and site analysis

6. Demonstrate *introductory understanding* of design thinking as responsive to and shaping of social, cultural, and ecological systems

7. Demonstrate *introductory understanding* of architecture within different historical and theoretical contexts

**course procedures + organization** |

There will continue to be two sections of our studio again this spring—one that meets Tuesday and Thursday mornings and the other, afternoons—each section being team-taught by two instructors and our graduate teaching assistant, who will work approximately two hours a day with each of the studios. As with the fall studio, both sections will continue to share the same pedagogical framework, process/schedule, required readings, presentations, and the same studio space but this time moving to the other side. In the investigative process this spring, both sections will pursue two different design problems of equal length that build systematically on one another, each one explored through the lens of its particular definition of architecture. The process for both design problems—articulated in written briefs—will continue to be 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 will construct your strongest design response to the material from ***phase a***.

Within both phases you will refine your ‘design thinking and making’ through serial 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 fully enter into. You will meet with your section at the start each class in the studio space for process-related Q&A’s, then, meet with your instructors for feedback as you execute the investigation steps. To support the process, the entire studio will meet this semester in Room 258, Tuesdays/Thursdays, 11:30am-12:30pm for presentations on topics related to each probe and Rm 359 for tutorials on 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.

**Mike Rice Awards |** An endowment fund was established in 1989 in memory of Michael Rice, BS Arch ’78. Friends and family member raised funds to create an endowment that would generate income to fund a yearly award for outstanding work by freshman architecture students during the last project of the semester. Following the final review for probe no. 5, a panel of experts from the Institute and local profession will meet to set the categories and criteria for evaluating student work, then, they will ‘blind jury’ the final presentation documents and determine the recipients of this year’s Mike Rice Awards.

**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 [08.20], 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
15. Use of Shop facilities must always be in strict compliance with all of the safety rules and regulations of the Shop at all times and with no exception.
16. 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.
17. 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 will continue to 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 semesters and 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 continues to be 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 continue 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- & 2000-level course still receive a progress grade [*Satisfactory/Unsatisfactory*], and students in this course will also continue to 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 4a + b = 45% of final grade

probe 5a + b = 45% of final grade

notebook = 5% of final grade

4 pop quizzes on required readings = 5% of final grade

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

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*week 01* 01/10 tu syllabus + probe 4 orientation; CoA Shop orientation; GT Archive orientation; team formation/assignments

01/12 th common hour presentation, crits + work-time

*week 02* 01/17 tu common hour presentation, crits + work-time

01/19 th common hour presentation, crits + work-time

*week 03* 01/24 tu common hour presentation, crits + work-time

01/26 th common hour presentation, crits + work-time

*week 04* 02/31 tu **mid-point review: *probe 4a***

02/02 th common hour presentation, crits + work-time

*week 05* 02/07 tu common hour presentation, crits + work-time

02/09 th common hour presentation, crits + work-time

*week 06* 02/14 tu common hour presentation, crits + work-time

02/16 th common hour presentation, crits + work-time

*week 07* 02/21 tu crits + work-time

02/23 th **final review: *probe 4a+b***

*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

*week 08* 03/08 tu probe 5 orientation

03/02 th common hour presentation, crits + work-time

*week 09* 03/07 tu common hour presentation, crits + work-time

03/09 th common hour presentation, crits + work-time

*week 10* 03/14 tu common hour presentation, crits + work-time

03/16 th common hour presentation, crits + work-time

*week 11* 03/21 tu SPRING BREAK

03/22 th SPRING BREAK

*week 12* 03/28tu **mid-point review: *probe 5a***

03/30th common hour presentation, crits + work-time

*week 13* 04/04tu common hour presentation, crits + work-time

04/06th common hour presentation, crits + work-time

*week 14* 04/11tu common hour presentation, crits + work-time

04/13th crits + work-time

*week 15* 04/18tu crits + work-time

04/20th **final review: *probe 5a+b***

*week 16* 04/24 m classes as usual; End-of-Year Show Prep from 2:00 - 6:00pm

04/25tu classes as usual; End-of-Year Show Prep continues

04/27th End-of-Year Show Installation Complete at Midnight

04/29 f **Mike Rice Award Jury**; SoA Awards 4:00 - 6:00pm

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

Bachelard, Gaston. 1964. *The Poetics of Space.* New York, Orion Press

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. 1983. *Water and Dream: an Essay on the Imagination of Matter.* Dallas: The Pegasus Foundation.

Bánáthy, Béla H. 1997. “A Taste of Systemics,” conference paper [http://www.newciv.org/ISSS\_Primer/asem04bb.html]

Bateson, Gregory. 1972. *Steps to an Ecology of Mind*. Chicago: University of Chicago Press.

Corner, James. 1999, “The Agency of Mapping, *Mappings* Denis Cosgrove (ed). New York: Reaktion Boods.

Cooke, Catherine. 1995. *Russian Constructivism: Theories if Art, Architecture and the City.* London: Academy Editions.

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Forman, Richard T.T. 1995. *Land Mosaics: The Ecology of Landscapes and Regions.* Cambridge: Cambridge University Press.

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Low, Bobbi, et al. 1999.**“**Human–ecosystem interactions: a dynamic integrated model.” *Ecological Economics,* 32.

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\_\_\_\_\_\_\_\_\_\_\_\_\_. 1971. “Mappings and Transformations.”

\_\_\_\_\_\_\_\_\_\_\_\_\_ and [Philip Steadman](http://www.amazon.com/Philip-Steadman/e/B001H9PC10/ref=dp_byline_cont_book_2). 1974. *The Geometry of Environment.* Cambridge, MA” MIT Press.

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Mostafavi, Mohsen/Gareth Doherty (eds). 2010. *Ecological Urbanism*. Lars Muller Publishers, 2010.

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\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. 2015. *Mind in Architecture,* Pallasmaa/Robinson (eds). Cambridge: MIT Press.

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**course-related websites**

Radical Cartography <http://www.radicalcartography.net/>

architectural model-making <https://www.pinterest.com/explore/architecture-model-making/>

AskNature/biomicry website<http://www.asknature.org/>

*The Trumpeter* / Journal of Ecosophy http://trumpeter.athabascau.ca/index.php/trumpet

Lydia Kallipoliti / Eco-Redux website <http://www.ecoredux.com/>

Stockholm Resilience Center website <http://www.stockholmresilience.org/>

Whole Building Design Guide website <https://www.wbdg.org/>

Georgia Wetlands State Resources Locator <http://www.envcap.org/statetools/swift/swift2.cfm>

Georgia Tech Center for GIS / National Wetlands Inventory <http://www.cgis.gatech.edu/projects/wetlands-toolkit-georgia>

Georgia Dept of Natural Resources / Coastal Resources Division <http://coastalgadnr.org/cm/wet>