

ARCH UN 3201 ADVANCED ARCHITECTURAL DESIGN I

Barnard and Columbia Colleges, Architecture Department
Fall 2020 B, M/W 9:00-11:50 F 9:00-12:50 | Diana 404 + Zoom
Ignacio G. Galán (Studio Coordinator), Joeb Moore, Irina Verona
igalan@barnard.edu, <https://calendly.com/igalan>
jmoore@barnard.edu, office hours by appointment
iverona@barnard.edu, office hours by appointment



Cooking Sections, Climavorer: On Tidal Zones

A. THE CLIMATE JUSTICE OBSERVATORY

Advanced Architectural Design I explores the critical relations of architecture and design with environmental phenomena and climate justice. We will analyze and intervene in the manifold manifestations of such relations, including the material definition of building systems, buildings' relations to the ecosystems and communities that surround them and those they are connected with far away, their entanglement with diverse infrastructure networks and diverse forms of resource management, as well as the aesthetic regimes mobilized.

We will explore how architecture can create more just agreements between diverse communities and non-human beings, while we will also analyze that it many times exacerbates social differences, results in uneven distribution of resources and racism, and effects irreversible transformations of ecosystems that provide critical habitats to both humans and non-humans.

B+C | A

Barnard and Columbia Architecture

Architecture's relationship with environmental processes is entangled with cultural, social, and political concerns, that we will study and into which we will intervene. We will pursue new imaginations for this relationship with projects that lead to new forms of being together among humans and non-humans in the multiversal condition of the shared world: We will seek new spaces of coexistence among you and me and mosquitoes and ivy; between wood beams and their sites of extraction; between the food we eat and the shit we flush; between the sound of the wind hitting the roof and the birds that nest in the area; between water treatment plants and the neighborhoods affected by the pollution they create...

About the exercises:

Different from previous studios, this semester you will work on a single project: a Climate Justice Observatory. The Observatory will consist of a series of spaces that seek to record, expose, and transform the environmental processes of a site, making them available for public discussion and intervention. The Observatory will operate between facts and sensations, between material processes and socio-cultural practices, between known realities and unknown ones.

While this project will frame our efforts throughout the semester, we will guide you through small exercises leading to its completion. These exercises will move from analysis to synthesis back and forth, and will rehearse different techniques of inquiry and speculation, from cartographies to material experimentation. Along with environmental processes, we will learn to scale up and down, to read and intervene in architecture at different scales, to explore and transform sites as they engage chemical processes, planetary phenomena, the material compositions, and community concerns.

About the site:

Different from previous studios, we will not all work on the same site, but on dispersed locations that you will be asked to locate: sites in which environmental controversies have manifested in the last years. You will be invited to choose your site close to you, either geographically near where you will be or close to your interests and concerns. Throughout the semester, you will work with your critic to frame the problem, define the site, and set the necessary constraints to intervene within it. In selecting your site, you will have many opportunities for design exploration this semester. As liberal arts students in an advanced design studio, we expect that you will bring unique perspectives related to your own particular research interests.

About architecture and climate justice:

Architecture and related fields have a significant role to play in considering the future of our built environment and in addressing the equity of our social and built infrastructure. It is widely cited that buildings consume 40% of the energy in the U.S. annually, and that they emit almost 50% of carbon dioxide through their construction processes and in burning of fossil fuels, thus being a major contributing factor to climate change.

Around the world, extreme weather events are projected to continue to increase in frequency and intensity due to climate change and global warming. New York City, like other urban and waterfront locations, faces the urgent need to address the adaptation and resilience of the built environment. The New York City Panel on Climate Change (NCCP) looks at climate extremes such as extreme heat and humidity, rainfall and heavy downpours, drought, wind, extreme cold spells, sea level rise and coastal flooding in their 2019 report. They note how

these future events have already had an uneven impact on communities with a high level of social vulnerability and will continue to adversely and exponentially affect neighborhoods of lower income levels and greater African American and Hispanic populations.

Recent reporting on the public perception of climate change notes that while seven of ten (69%) Americans believe that climate change is happening, only 54% believe that others believe this. The authors of these studies also report that people self-silence themselves in talking about climate change, and while 69% are concerned about climate change, only 9% speak about it regularly. Additionally, only 12% of those polled (in 2015) correctly estimate that the consensus among scientists is 90% or higher (currently 97% of scientists). There is also evidence that belief in the consensus among scientists that climate change is human-caused is a "gateway belief" – meaning that as public perception of the scientific consensus increases, so does the belief that climate change is occurring, is human-caused, and is a significant problem, which then influences support for public action.

The purpose of the Climate Justice Observatory is to address the relationship between climate change, social and environmental justice, public opinion and collective action.

About process:

The studio method requires a commitment to the design process – an iterative process with an expectation for risk taking and experimentation. There are no "correct" answers for many of the questions that arise during desk crits – only suggestions for ways to approach research. We expect you to establish your own research question(s) based on the project and to develop a graphic argument to support it. The development of your project, the rigor of your research, the clarity of your representation, the presentation of your design are all significant parts of the evaluation of your work – not just the final product.

In Architectural Design I you will work with one critic while also engaging in group projects, presentations, and discussions that will cross all three sections. Mondays and Fridays will be dedicated to work with your section (desk crits and pin-ups) while Wednesdays and an additional hour on Fridays will be dedicated to group activities (presentations, collective discussions, workshops and lectures).

You are expected to seek out the input of all your peers in the class, offer your insights on your colleagues' work, and observe/absorb the differences in approaches that you may see across the studio over the semester. The studio will set up online platforms to share and discuss the work. Exposure to different teaching methodologies is an integral part of this studio experience.

This studio will be taught in a hybrid and flexible format. Although we understand most students will be working remotely, students on campus will be able to use the studio space. For both, we will be using online platforms as "live" pin-up spaces to share and discuss work throughout the semester.

B. COURSE ORGANIZATION

1) CARTOGRAPHY

Each group of students will select a controversy related to climate justice that is close to them, and will produce a multi-scalar representation of the architectures, territories, agents, technologies, and processes that participate in it.

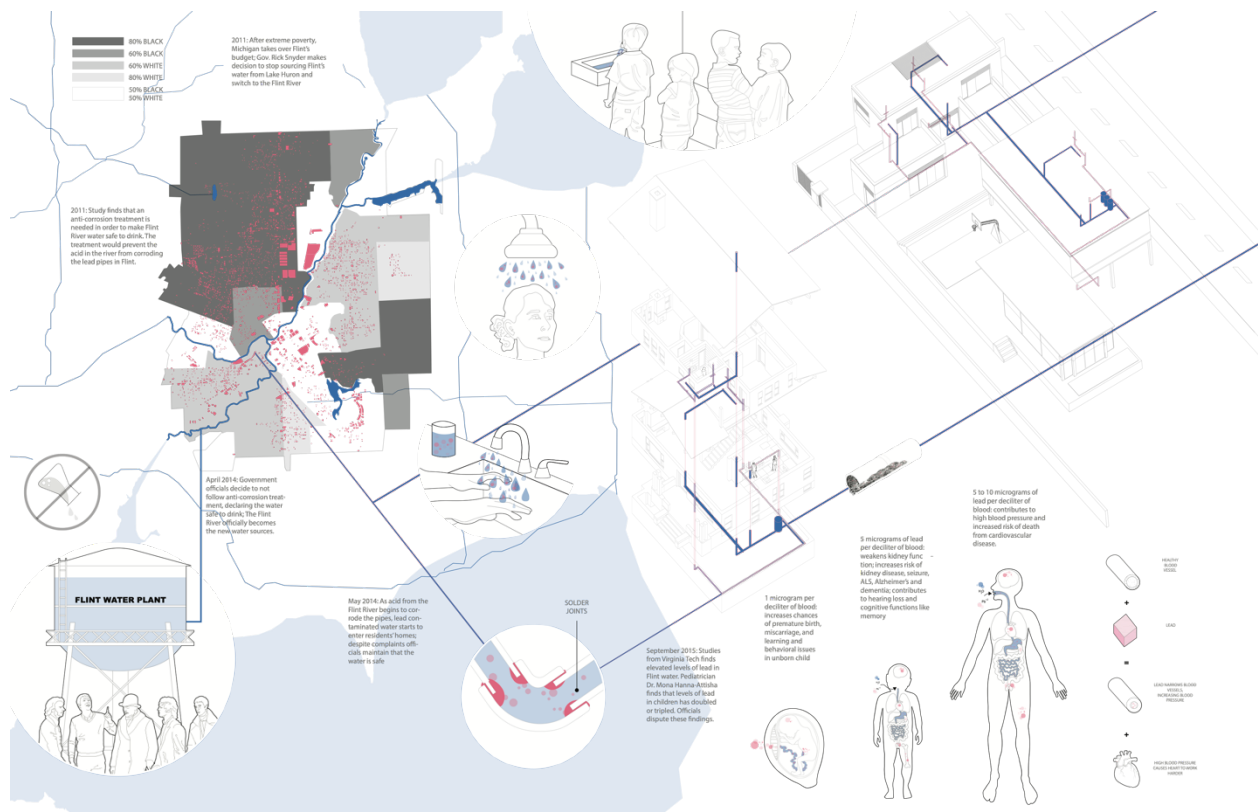
Exercise developed in groups of 2-3 students (2 weeks)

Presentation: Monday October 26th

Review: Monday November 9th

Deliverables:

-(2) 22*34" digital boards with multiscalar information



Ravipa Ramyarupa, Sam Velasquez, Nikolas Tucker, Study of the Water Crisis in Flint, MI

2) MATERIAL ARCHIVE

Each student will experiment with the capacity of materials to record and display different processes and interactions related to the controversy that they have studied. The experiment should be developed at 1:1 scale and should be thoroughly documented both through photo and drawing.

Individual exercise (1 week)

Presentation: Wednesday November 11th

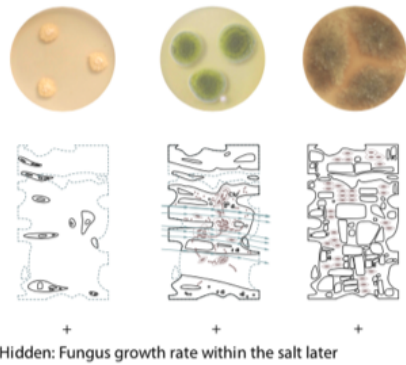
Review: Monday November 16th

B+C | A

Barnard and Columbia Architecture

Deliverables:

- 1:1 Material Archive mock up
- (1) 22*34" digital board including photographic documentation of the mock up and graphic analysis
- Documentation of its performance as a stop motion video, both as GIF file and laid out in a 22*34" board



Hannah Mayer Baydoun, A dissolving landscape

3) FORUM

Each student will develop a congregation space in which the logics of the controversy can be made public, discussed, and socialized. The forum might mobilize the material archive either as construction material, as formal analog, or as aesthetic inspiration. The logics of social interactions should be of particular concern to students in this next step.

Individual exercise (2 weeks)



Andrés Jaque and Office of Political Innovation, Cosmo

Presentation: Wednesday November 13th

Review: Monday November 30th

Deliverables:

-(2) 22*34" digital boards including a collage, a site plan, an axonometric drawing, and a sequence of 3 perspectives narrating different encounters or events within the Forum.

4) OBSERVATORY

Gathering the work of the semester, students will produce a comprehensive design of a Climate Justice Observatory, that can learn from the Forum or might directly include it as its main space. The Observatory can be a compact building or a dispersed infrastructure, operating along the logics of the controversy it aims to expose and transform.

Individual exercise (3 weeks)

Presentation: Wednesday December 2nd

Review: Monday December 22nd

Deliverables:

-(3) 22*34" digital boards including one or more collages/renders, a site plan, plan(s), section(s) and an axonometric drawing, and a sequence of 3 perspectives describing the performance of the Observatory

-Program:

Forum	4,000sf (a single space or a distributed series of spaces)
Support spaces	1,000sf (storage and other)
Observatory workshops	2,000sf (approx. four labs 500sf)
Administration	1,000sf (approx. four offices 250sqf)
Bathrooms	1,000sf
Circulation	3,000sf

B+C | A

Barnard and Columbia Architecture

Provisional calendar

M 26 Oct.	9:00-11:50 PRESENTATION
W 28 Oct.	9:00-11:50 GROUP SESSION: CARTOGRAPHY
F 30 Oct.	9:00-11:50 DESKCRITS: CARTOGRAPHY
F 30 Oct.	12:00-12:50 WORKSHOP/LECTURE: CARTOGRAPHY
M	NO CLASS
W 4 Nov.	9:00-11:50 GROUP SESSION: CARTOGRAPHY
F 6 Nov.	9:00-11:50 DESKCRITS: CARTOGRAPHY
F 6 Nov.	12:00-12:50 WORKSHOP/LECTURE: CARTOGRAPHY
M 9 Nov.	9:00-11:50 PIN-UP: CARTOGRAPHY
W 11 Nov.	9:00-11:50 GROUP SESSION: MATERIAL ARCHIVE > PRESENTATION
F 13 Nov.	9:00-11:50 DESKCRITS: MATERIAL ARCHIVE
F 13 Nov.	12:00-12:50 WORKSHOP/LECTURE: MATERIAL ARCHIVE
M 16 Nov.	9:00-11:50 PIN-UP: MATERIAL ARCHIVE
W 18 Nov.	9:00-11:50 GROUP SESSION: MATERIAL ARCHIVE + FORUM
F 20 Nov.	9:00-11:50 DESKCRITS: FORUM
F 20 Nov.	12:00-12:50 WORKSHOP/LECTURE: FORUM
M 23 Nov.	9:00-11:50 DESKCRITS: FORUM
W	NO CLASS
F	NO CLASS
M 30 Nov.	9:00-11:50 PIN-UP: FORUM
W 2 Dec.	9:00-11:50 GROUP SESSION: FORUM + OBSERVATORY > PRESENTATION
F 4 Dec.	9:00-11:50 DESKCRITS: OBSERVATORY
F 4 Dec.	12:00-12:50 WORKSHOP/LECTURE: OBSERVATORY
M 7 Dec.	9:00-11:50 DESKCRITS: OBSERVATORY
W 9 Dec.	9:00-11:50 GROUP SESSION: OBSERVATORY
F 11 Dec.	9:00-11:50 DESKCRITS: OBSERVATORY
F 11 Dec.	12:00-12:50 WORKSHOP/LECTURE: OBSERVATORY
M 14 Dec.	9:00-11:50 DESKCRITS: OBSERVATORY (LAST DAY OF CLASSES)
TBD	FINAL REVIEW

C. LEARNING OBJECTIVES

Students in Advanced Architectural Design 1 & 2 should be able, at an advanced level, to:

1. Visually communicate architectural concepts and design intent using discipline-specific techniques including:

- orthographic projections (plans, elevations, sections),
 - paraline projections (axonometrics, isometrics),
 - physical models using various techniques and materials,
 - multiple media and/or combined representational strategies
2. Verbally communicate architectural research methods and spatial concepts
 3. Demonstrate an understanding of precedent and site analysis
 4. Demonstrate an understanding of design method as a step-by-step, iterative and incremental process of research, synthesis and feedback
 5. Demonstrate an understanding of design thinking as responsive to and shaper of social and cultural context
 6. Demonstrate the ability to work independently and collaboratively
 7. Demonstrate an understanding of the historical and theoretical contexts for architectural representational conventions
 8. Utilize both analog and digital techniques in the design process
 9. Demonstrate an understanding of program, use and activity
 10. Demonstrate an understanding of material and fabrication
 11. Utilize a range of analog and digital techniques in the design process

D. COURSE REQUIREMENTS AND ASSESSMENT CRITERIA**Prerequisites**

Architectural Representation: Abstraction and Architectural Representation: Perception are both prerequisites for this course. It is recommended that the lecture course, Perceptions of Architecture is completed before enrolling in this class. Priority for this course is given to Architecture Majors. All students accepted into the class must present their past studio work to their critic during the first week(s) of the semester. This can be as a digital or print portfolio or collection of images. If digital, all images should be in one PDF. If print, then the collection is to be clipped together and not larger than 11x17. In all cases, it should be a (highly) edited and organized collection of images that document the work you have done to date in preparation for this course.

Attendance

Attendance is mandatory at all scheduled classes, field trips, and reviews. Studio is held Monday and Wednesday beginning promptly at 9:00 AM. Any student arriving after 9:20 AM will be considered late and anyone that arrives after 10:00 AM will be marked absent. Absences due to acute illness, a personal crisis (e.g. a death in the family), religious observance, or for other reasons of comparable gravity may be excused. In all such cases, students must promptly email their instructor to communicate the reason for their absence and to arrange an opportunity to review any important information they may have missed. Students who know they will miss a scheduled class due to religious holidays should email their instructor during the first week of classes with a list of dates for their anticipated absences.

B+C | A

Barnard and Columbia Architecture

Unexcused absences, late arrivals, or early departures from class will reduce your course grade. Three non-consecutive absences will result in a grade reduction by one-third (1/3) of one letter grade (e.g., A- to B+). Three consecutive absences or four nonconsecutive absences will adversely affect your final grade and may be considered grounds for failing the course.

Special considerations for the online version of this class will be communicated at the beginning of the semester and accommodations for students in incompatible time zones should speak to the studio instructors.

Grading

Each Studio Project will be graded with a letter grade and a written evaluation. Your work will be evaluated by the following criteria: (1) research and thesis; (2) conceptual and material development and design process; (3) final execution. Sketchbooks will be reviewed periodically by your critic and may be required for grading. The instructors recognize learning and improvement as important factors in determining your final grade.

Project 1_25%

Project 2_15%

Project 3_20%

Project 4_40%

Students are required to present their work in all Interim and Final Reviews. Failure to do so will reduce the grade of the exercise by a minimum of one letter grade (e.g. B to C). Project grades will be based on the work you present at your Final Review. Work not presented at the designated time will not be reviewed at a later date. Required work that was not completed at the Final Review must be completed in time for grading to receive a passing grade.

Additional work completed after the Final Review and before grading will not be considered at the grading session unless otherwise stated by the Studio Critics. NO INCOMPLETES will be given at the end of the course except for situations of gravity that have been cleared with the appropriate Deans, Advisers, and Faculty Members.

Security

Students on campus will be granted 24-hour access to the studios and the DAL through your school ID. It is crucial that the doors to these spaces remain closed and locked at all times for your personal safety and for the security of your belongings. Please do not prop open the door and do not leave any valuables unattended at your desk. The studios and the DAL are open to all students in approved courses; please respect other critics and students that are using the space. Barnard and Columbia Security officers do periodically check the studio but security is a responsibility that we all share; please help us maintain a safe and productive environment. If your personal belongings are stolen (or go missing) please notify your instructor and Barnard Public Safety (for rooms in the Diana Center) or Columbia Public Safety (for 116 Lewisohn).

Studio Work Practices

General studio rules:

- You must provide your own lock for the locker.
- The studio must remain locked at all times.
- Use the spray hood in the model building room for spray paint or fixative.
- Use headphones for listening to music.
- You are responsible for keeping your desk and your storage area clean and organized. If you use an empty desk adjacent to your assigned seat, it is also your responsibility to keep this area free of debris.
- 100% of the work surface of your desk space should be covered with 3-ply chipboard or vinyl board cover. Do not cut, carve, glue or otherwise destroy the plywood desktop.
- Please help us recycle and reuse extra materials by donating anything you don't need to our recycling locations in the studios.

Materials

No books are required for this course. Readings will be available on Canvas. Materials for drawings and models will be required and can be purchased locally or online. Please see the Architecture Department website for some supply stores:

<https://architecture.barnard.edu/resources-current-students>