

PLANETARY MEDIA

Instructor: Amelyn Ng (arn2135@columbia.edu) / Office Hour: Tu 5-6 ([signup](#))

Course #: ARCH6982-1

MMDDYY: FALL 2026

Time/Place: 11am–1pm, 408 Avery Hall

COURSE OVERVIEW

This Representation seminar is a deliberate and focused space for conceptualizing, making, and projecting a large-scale digital-physical architectural drawing about the space 1 kilometer above and below the ground. Heeding Bruno Latour’s call to bring climate change politics “down to earth,” we will attend to this “critical zone” by exploring the representation of various thematic environmental layers: *geo*, *hydro*, *bio*, *atmo*. In working groups pertaining to these themes, students will collectively develop “deep sections” of a material or site, drawing together space, material, environment, and history into a single drawing/model space to be test-projected at the [Barnard Movement Lab](#).

This seminar is for students seeking intellectual and creative exchange surrounding architectural representation in a time of planetary crisis. Considering drawings and models as planetary records and immersive spaces, we will explore how the precision (and subversion) of the architectural section across various temporalities might offer critical new ways of reading the planet.

The course will immerse students in Blender animation techniques, architectural drawing composition, timeline editing, and hands-on media testing workshops in collaboration with the Movement Lab. The course also introduces key readings and creative projects as a shared conceptual basis for *planetary media*. Students are expected to weave both theory and practice together, and will come away with understandings of how the environment might be conceptualized as and through media.

COURSE STRUCTURE

SEPTEMBER	RESEARCH	_Initiate working groups _Readings and research discussions _Blender + AfterEffects crash-course!
OCTOBER	TEST	_Prototype media at Barnard Movement Lab (test large-scale projection, audio, space) _Quick and fast weekly iterations
NOVEMBER	BUILD	_Developing narratives and representation techniques _Desk crits in working groups
DECEMBER	ACTIVATE	Public screening of work @ Movement Lab!

SOCIAL CONTRACT

This course requires three commitments of its students:

(1) **BE A MINDFUL COLLABORATOR**

All students must sign up to participate in one of the following working groups: *terra*, *hydro*, *bio*, *atmo*. While the final product involves and highlights students' own individual work, there will be times when you have to participate in your working group to make decisions about research and how different parts of the project come together. Please show up for each other and make an effort to communicate and interact with each others' work.

(2) **CONCEPTUALIZING BY DOING**

This course is about creative research; about making a committed series of tests that build as ideas grow. Through a structured framework, the course asks students to invest in the process of developing concepts through drawing, and investigating the role of representation itself. For this reason, we will prototype at the Movement Lab in October rather than only at the end. Media is not only a noun or object for show, but a verb: for workshopping, testing formats, and roughing out work in progress that feeds back into your practice.

(3) **D.I.Y. PRACTICE**

This course does not require nor demand virtuosity in technical skills – but it asks students to *practice* certain ways of seeing, in *and* outside of class hours. This means: staying with the discomfort of learning new software, tinkering, making rough drafts, and taking a chance to figure something out. NOTE: This 2-hour class is not designed to not spoonfeed or handhold students in software, but will lower the bar of entry through fun workshops.

FINAL ASSIGNMENT

This “script” outlines how we might orchestrate our final assignment.

THE ENTIRE CLASS MAKES 1 IMMERSIVE SCREENING AT THE MOVEMENT LAB...

1 video installation that takes up the entire length and height of the 3-walled Movement Lab. Consider video as a surface for drawings. You may also consider building physical artifacts or embodied performance into the screening.

... MADE UP OF 4 WORKING GROUP VIDEOS...

Each working group (*geo*, *hydro*, *bio*, *atmo*) makes a video that takes up a section of wall, or the full wall. The 4 videos are stacked. Consider playing with datum (tracking horizontally or vertically) and scale (including 1:1 scale).

... MADE UP OF INDIVIDUAL RESEARCH SHORTS (min 1, max 2 minutes)

Each student/ pair will produce a video about their own site or material research. These shorts will be stitched together side-by-side into the larger working group video. A barcode of sections!

MEDIA MATTERS:

ABSTRACTION, GRAPHICS, AESTHETICS

Research is not exempt from aesthetic, representational, and material concerns! In other words, media matters. Even if the entire earth could be modeled in Blender, realism is not a given. The section is an important architectural mode of abstraction, of seeing a system and relationships between parts. What does it mean to draw a *deep section* of a planetary concern?

Students are invited to develop their own unique graphical and curatorial approach to research, one that goes beyond the typical infographic genre. Some examples to trigger ideas (and remember we will be working closely with the section drawing as a way of seeing):

Faux technical CAD drawing / stratigraphic chart or geological timescale / 3D scanned asset library / point-cloud 'atmosphere' or forest / hand-rubbed frottage of real-world surfaces / sectional collage of legal documents or found footage / Blender 3D physics simulations / Blender Grease Pencil 1:1 scribbles / a very long and narrow hand-drawing to scale, scanned / mining quarry drawing / drawing the time it takes for water to re-enter a water body / stop motion with a physical model core sample / transects of satellite imagery ...

RESOURCES

- Movement Lab directions and use <https://movement.barnard.edu/using-our-space>
- List of additional readings: [next tab](#)

I. RESEARCH

This initial phase exposes us to the concepts of *critical zone*, *elemental media*, and deep section, and workshopping research methods. We will ask how representation might allow us to consider materials in architectural, planetary, and computational terms. We will also quickly get into working groups to kickoff research.

*Think expansively about these "spheres" not just as a pristine natural environment, but as implicated in many scales of the climate crisis. e.g. silico (technologies), internet signals, mines, and landfills are all part of the picture.

September 8: Introduction: Architecture Mediates

IN CLASS

Course introduction

Sketching the critical zone: *geo*, *hydro*, *bio*, *atmo* exercise

September 15: Critical zone, deep section

REQUIRED READING

1. Jerome Gaillardet, "The Critical Zone, a Buffer Zone, the Human Habitat," in *Critical Zones, The Science and Politics of Landing on Earth*, eds. Bruno Latour and Peter Weibel (ZKM and MIT Press, 2020), 118-129.
2. Daniel Jacobs, "Introduction," in *Architecture as Environmental Media: Rendering the Planetary* (Routledge, 2026).

Possibility for Guest Talk by Dan Walsh, Lamont-Doherty Earth Observatory (TBC)

BLENDER WARMUP (BYO laptop with Blender downloaded)

Navigation, cam setup, 4 quick animation tests (geo / hydro / bio / atmo)

GET INTO INITIAL WORKING GROUPS

WORKSHOP: CORE SAMPLE AS RESEARCH MAP

Share research interests, rough out a "core sample" of possible concepts, materials and sites on a long strip of trace paper. Consider depth, time, spatial relation in where you place your words or sketches. Mark datums of high interest on the sheet.

[AFTER CLASS] HOMEWORK: Meet as a group for an hour.

Expand those datums of interest with a bit more desktop brainstorming. Come up with 3 urgent questions that the group should address as representatives of that sphere in the climate crisis. Add more annotations to your "core sample" during your meetup, scan, and bring this to class.

September 22: Elemental media (media is material!)

REQUIRED READING

1. Nicole Starosielski, "The Elements of Media Studies," *Media+Environment* 1 (1), 2019, [link](#).
2. Lisa Moffitt, "Model Environments," in *Architecture's Model Environments* (UCL, 2023), [link](#).

WORKING GROUPS:

SHARE YOUR DISCUSSIONS + 3 QUESTIONS

LOOK AT PROJECT REFERENCES

BLENDER TUTORIAL

September 29: Timeline

REQUIRED READING

1. Alenda Y. Chang, "Scale," in *Playing Nature: Ecology in Video Games* (Minnesota Press, 2019), 69-105.
2. James Bridle, "Server Farm," <https://serverfarm.jamesbridle.com/>.

WORKSHOP

Drawing time: wall-height ribbon of trace paper per student.

Sequential narrative, video, considering the very long drawing.

Imagine how videos might sync at the start and end of the timeline (e.g. ground line)

BLENDER + AFTEREFFECTS TUTORIAL /// TIMELINE CONTROL

Photograph your core-section. Warmup by animating this strip as a slow section.

Editing concepts: scrolling / long take, jump cutting, zooming in and out, time-stretch, moving between detail and diagram

HOMEWORK: 1-2 hours. Try roughly animating one of your own research assets in Blender. Add to Google Drive (mp4).

II. TEST

As you delve deeper into your subject matter, we will plug into the Movement Lab and get our hands dirty with large-scale projection testing. This is a way to start cooking your research, media, and technique of choice together. Each week in October we will meet directly in the Movement Lab, 11am sharp.

October 6: Movement Lab / Space Workshop

INTRO TO MOVEMENT LAB SPACE AND EQUIPMENT

MEASURE UP SPACE TOGETHER, DISCUSS VIDEO DIMS

How to sync, order, relate the groundlines and storylines to each other in space?

IMPORT / EXPORT / SCENES WORKSHOP

IMPORT OBJECTS INTO 1 BLENDER FILE PER WORKING GROUP, TEST-PROJECT HOMEWORK ON WALL

HOMEWORK: Make a **still vertical collage** in aftereffects. It can be very rough, abstract, and placeholder-y, but it should contain an idea for your deep section related to scale.

October 13: Movement Lab / Narrative Workshop

TEST PROJECTIONS + “LAB CRIT” YOUR HOMEWORK IN THE SPACE

- BYO Laptop with homework + bring trace paper and pencils
- AS A CLASS: Combine work into 1 AE file > big screen

What’s missing from or central to the narrative? What do the works say individually vs collectively?

HOMEWORK: Develop your **section collage, export rough cut**. Imbue with more research questions and site specificity. Edit in aftereffects your idea about time. Think of it as drafting a movie that happens to be the height of the wall.

October 20: Movement Lab / Time Workshop

TEST PROJECTIONS + “LAB CRIT” YOUR HOMEWORK IN THE SPACE

12-1: GUEST ARTIST TALK: [JAZSALYN](#) (SEE ALSO [BLACK BEYOND](#))

HOMEWORK: Develop your research through the section collage, export rough cut.

October 27: Movement Lab / Free Play

Last chance to test and feel out your work in the space!

Class planning for final screening / install

III. BUILD

November 3: Election Day (No Class)

HOMEWORK: Develop your research through the lens of your section collage.

November 10: Blender Rendering

TAILORED BLENDER WORKSHOP - BYO LAPTOP [hybrid online TBD]

November 24: Project Crits + install planning

WORKING GROUP CRITS - BYO LAPTOP

[Thanksgiving Break Wed 11/25 - Fri 11/27]

IV. ACTIVATE

December 1: Last Class / Collective Editorial Session

HANDS-ON GROUP EDITING - BYO LAPTOP

December 8: No Class

December 15: Public Screening + Final Submission

[Final Review Week Mon 12/7 - Wed 12/16]

Live public screening – invite your friends and colleagues!

Venue: Barnard Movement Lab

Photo and video documentation due on Drive next day by **December 16th, EOD (5:00PM)**.
You must complete this in order to receive grades.

Student work will be selected for submission to the GSAPP archive online.



Non-Exhaustive Deeper Readings on Planetary Media

This is a working document. Students are welcome to bring new readings to this archive and for their peers!

Bruno Latour and Peter Weibel, eds., *Critical Zones, The Science and Politics of Landing on Earth*, eds. Bruno Latour and Peter Weibel (ZKM and MIT Press, 2020).

Bruno Latour, "Visualization and cognition: Drawing things together," in H. Kuklick (ed.), *Knowledge and Society Studies in the Sociology of Culture Past and Present* 6 (1986): 1-40.

Elisa Iturbe, "Architecture And the Death of Carbon Modernity," *Log 47: Overcoming Carbon Form* (Fall 2019), 10-23.

Lisa Moffitt, *Architecture's Model Environments* (UCL, 2023).

John Durham Peters, "Introduction: In Medias Res," in *The Marvelous Clouds: Toward a Philosophy of Elemental Media* (University of Chicago Press, 2015). [Link](#)

Keller Easterling, *Medium Design* (Strelka, 2018).

Tega Brain, *Code as Creative Medium* (MIT Press, 2021).

Scott Frickel and James R. Elliott, *Sites Unseen: Uncovering Hidden Hazards in American Cities* (Russell Sage Foundation, 2018).

Jason Moore, *Capitalism and the Web of Life* (Verso, 2015).

Anthropocene Curriculum website, <https://www.anthropocene-curriculum.org/>

SCALE

Eames, *Powers of Ten*, 1977, <https://www.youtube.com/watch?v=0fKBhvDjuy0>

Alenda Y. Chang, "Mesocosm," in *Playing Nature: Ecology in Video Games* (Minnesota Press, 2019), 17-67.

Alenda Y. Chang, "Scale," in *Playing Nature: Ecology in Video Games* (Minnesota Press, 2019), 69-105.

Sarah Nichols, "Bringing the Anthropocene Down to Size, or, How Can We Understand a Gigaton?," *Journal of Architectural Education* 78:2 (2024), 506-511.

ATMO

Eva Horn, "Air as Medium," Grey Room 73, Fall 2018, 6-25.

Nicole Starosielski, *Media Hot and Cold* (Duke University Press, 2021).

Vittoria Di Palma, "Google Earth and Global Intimacy," in *Intimate Metropolis: Urban Subjects in the Modern City* (Routledge, 2009), 239-70.

Tung-Hui Hu, *A Prehistory of the Cloud*, 2015. [link](#)

Cleaning Up? series, *Urban Omnibus* (NY-specific). <https://urbanomnibus.net/series/>

BIO

Jennifer Gabrys, "Becoming Planetary," e-flux Architecture, October 2, 2018, [link](#).

Sam Bloch, "Shade," *Places Journal*, April 2019, <https://placesjournal.org/article/shade-an-urban-design-mandate/>

James Bridle, *Server Farm*. <https://serverfarm.jamesbridle.com/>

James Bridle, *Ways of Being: Animals, Plants, Machines: The Search for a Planetary Intelligence* (Picador, 2023).

Anna Tsing, *Mushrooms at the End of the World: On the Possibility of Life in Capitalist Ruins* (Princeton University Press, 2015).

City Habitats series, *Urban Omnibus* (NY-specific). <https://urbanomnibus.net/series/>

HYDRO

Dilip da Cunha, *The Invention of Rivers*, University of Pennsylvania Press, 2019.

Anthony Acciavatti, *Ganges Water Machine: Designing New India's Ancient River*, 2015.

Mél Hogan, "Data Flows and Water Woes, The Utah Data Center," *Big Data and Society* 2015, <https://journals.sagepub.com/doi/full/10.1177/2053951715592429>.

Max Liboiron, "An Anticolonial Pollution Science," in *Pollution Is Colonialism* (Duke University Press, 2021), 113-156.

Macarena Gómez-Barris, "'A Fish-Eye Episteme: Seeing Below the River's Colonization,'" in *The Extractive Zone: Social Ecologies and Decolonial Perspectives* (Duke University Press, 2017),

GEO

Jussi Parikka, *A Geology of Media*.

Stephanie LeMenager, "The Aesthetics of Petroleum, after Oil!," *American Literary History* 24, no. 1, Spring 2012, pp. 59-86.

Siobahn Angus, *Camera Geologica: An Elemental History of Photography* (Duke, 2024).

"How to: mind the moon: A perverted material library by Lev Bratishenko, Francelle Cane, Anastasia Kubrak, Jane Mah Hutton, Marija Marić, Amelyn Ng, Bethany Rigby, and Fred Scharmen," Canadian Centre for Architecture, part of the exhibition *Down to Earth*, 2023 Luxembourg Pavilion, 18th Venice Biennale, <https://www.cca.qc.ca/en/articles/90055/how-to-mind-the-moon>.

Kenneth O'Reilly, "Before Blacktop," in *Asphalt: A History* (University of Nebraska Press. 2021)

Laurence Lumley, "The Invisible Bituminous Desert," in *Log: Overcoming Carbon Form* (Fall 2019), pp. 24-30. <https://www.jstor.org/stable/26835027?seq=7>

Charles and Ray Eames, *Blacktop*, film, 1977, 1952.

<https://www.eamesoffice.com/the-work/blacktop/>

Ed Ruscha,

Shannon Mattern, *Code and Clay, Data and Dirt: Five Thousand Years of Urban Media* (University of Minnesota Press, 2017).

Rania Ghosn and El Hadi Jazairy, "Geographies of Trash," *Journal of Architectural Education* 68, no. 1 (March 2014), 68-81.

María Puig de la Bellacasa, "Soil Times: The Pace of Ecological Care," in *Matters of Care: Speculative Ethics in More Than Human Worlds* (University of Minnesota Press, 2017).

Robin Nagle, "To Love a Landfill: The History and Future of Fresh Kills," in *Handbook of regenerative landscape design* (Boca Raton: CRC Press, 2008), 3-16.