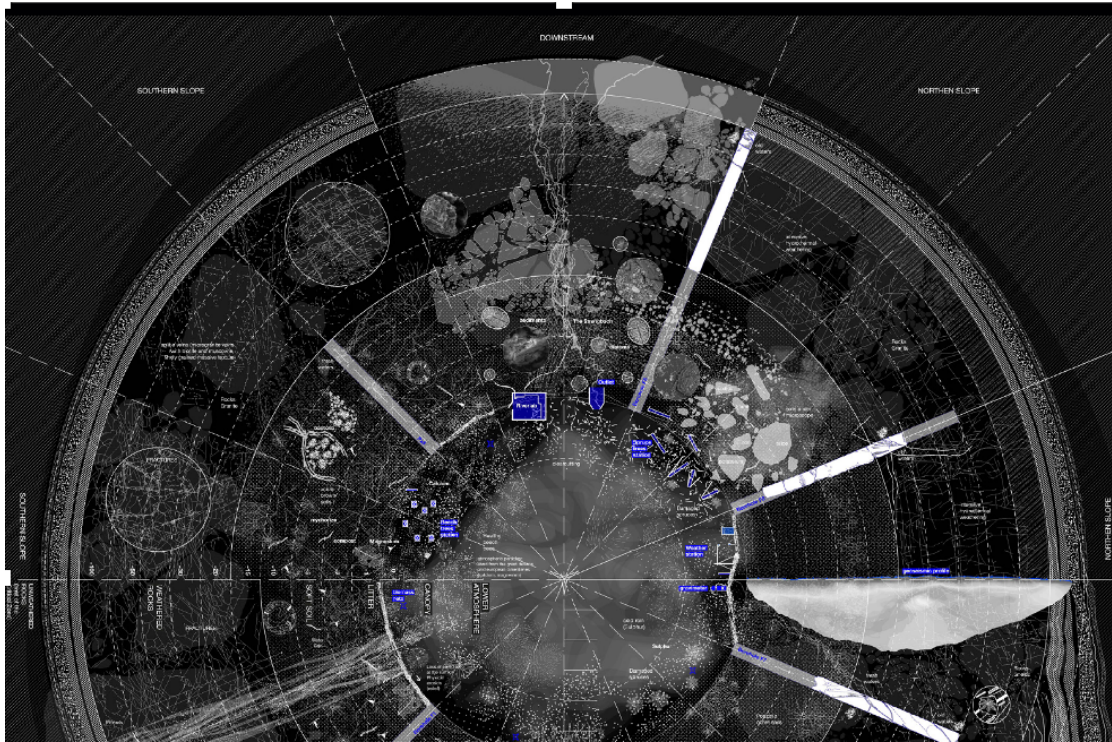# COURSE SYLLABUS

ARCHA6927-1
Monday 11-13h, Fall 2025
Architecture, Technology and the Environment: Cosmopolitical Experiments
Professor Albena Yaneva: aky2113@columbia.edu

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COURSE DESCRIPTION

The course aims at exploring the technological and environmental entanglements in contemporary cities. Inspired by anthropology, Science and Technology Studies (STS), and ethnomethodology, the course invites the students to conduct experiments to investigate various everyday situations in cities. It provides unique analytical and narrative tools to make sense of urban life in the "new climatic regime" (Latour 2018).

Tailored especially for architecture students, the experiments will question commonplace considerations that shape our design and urban choices. They will capture various spatial practices in a reflexive way through a range of visual and writing tools. While they will vary in scope, duration and scale, the experiments will all share one key characteristic: to get students out of the rut of conventional thinking.

The course welcomes students:

a) with an interest in technological and environmental changes at different scales.

b) willing to engage in reflection on their own experiences as designers and urban dwellers and to experiment with different visual and writing techniques.

c) curious about relational perspectives to design and cities.

FORMAT

The course includes 2 types of sessions:

1. <u>Theory/Reading Sessions</u> will typically consist of a presentation by the Professor followed by discussion organized around thematic readings. These sessions will prepare the ground for experiments.

2. <u>Discussions of Experiments</u>: all students in class will conduct an experiment and will bring visual or textual evidence in class for discussion. Each experiment will be based on secondary materials (images, texts, archives, news reports) and first-hand data gathered by the students accompanied by original sketches, photographs or interviews. They could take the form of a short story, ethnographic account, interactive mapping, video, or PowerPoint presentation.

LEARNING OUTCOMES

Upon successful completion of this course, you will:

⇒ become familiar with the tools of Science and Technology Studies (STS) and Anthropology and their analytical vocabularies. You will be able to confidently discuss these insights and put them in dialogue with Architecture and Urban Studies.

⇒ advance your understanding of current social and ecological dynamics of urban life through a range of methods that inspire careful observation, tracing and description.

⇒ gain extensive knowledge about technological and ecological changes in cities which will inform further your research agenda and design practice.

⇒ develop and fine-tune your writing and critical thinking skills through the experiments and the presentation of results in visual and written form.

The sessions will be organized in 3 thematic clusters:

- **Theme 1: Technical Mediations** [2 experiments]
- **Theme 2: Environmental Entanglements** [2 experiments]
- **Theme 3: Urban Life** [2 experiments]

Each Cluster will begin with a Theory/Reading session, followed by Experiments session.

ASSIGNMENTS AND GRADING

Participation in weekly discussions and analysis of the experiments will be essential to the success of this course. The final submission will be presented in the form of *Experiments Portfolio* (10-15 pages) that will gather all 6 experiments. Students will receive feedback after each experiment, and will update the work, then compile a final portfolio, and write an accompanying statement of 1,500words on the basis of the results.

DEADLINE for the final project: **December 2025**.

SCHEDULE

Week 1 (8 Sept): INTRODUCTION & PRESENTATION OF THE COURSE

Introduction to the Course and to the methodology of the experiments. Please, prepare 1-2 slides to introduce yourself, your interests, and expectations from this course

Readings

Latour, B. (2017) *Facing Gaia. Eight Lectures on the New Climatic Regime*. Translated by C. Porter. London: Polity Press.

Jaque, A. (2020) *The Superpower of Scale*. New York: Columbia University Press.

Optional:

Becker, H. S. (1998) *Tricks of the trade*. Chicago: The University of Chicago Press (Chapter 2 "Imagery")

Yaneva, A. (2021) "Architectural Anthropology: six methodological suggestions". In *Architectural Anthropology: Exploring Lived Spaces*, ed. M. Stender, C. Bech-Danielson, A.L. Hagen, UK: Routledge.

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======== THEME 1: TECHNICAL MEDIATIONS ========

Week 2 (15 September): STS: EPISTEMOLOGICAL OFFERINGS

This session will outline the key insights of STS for Architecture and Urban Studies. It will discuss their relevance and limits for the analysis of cities and architectural design. We will present, in particular, key arguments from the work of Bruno Latour (one of the founding figures of STS): We Have Never Been Modern, There is no Society, Follow the Actors, Give me a Gun and I will Make All Buildings Move, The New Climatic Regime.

2nd lecture: TECHNICAL MEDIATIONS [Theory Session]

This session will discuss the socio-technical approach to innovation and will focus on the Social Constructivist and Actor-Network-Theory perspectives. A range of technologies – from ordinary bicycles, through to Bakelite, bulbs, and advanced technologies – will be discussed, and the process of innovation scrutinized.

Readings

Compulsory:

Latour, B and Yaneva, A. (2008) 'Give me a Gun and I will Make All Buildings Move: An ANT's View of Architecture', In Geiser, Reto (ed.), *Explorations in Architecture: Teaching, Design, Research*, Basel: Birkhäuser, pp. 80-89.

Bijker, Wiebe E. (1995) *Of Bicycles, Bakelite, and Bulbs: toward a Theory of Sociotechnical Change,* Cambridge: MIT Press; Chapter 2, 'King of the Road: The Social Construction of the Safety Bicycle', pp. 19-100 [focus on 'relevant social groups' pp. 19-53]

Optional:

Yaneva, A. (2022) *Latour for Architects*, Oxon and New York: Routledge. OA: https://www.routledge.com/Latour-for-Architects/Yaneva/p/book/9780367348632

Akrich, M, Callon, M. and B. Latour (2002) 'The Key to Success in Innovation, Part I: The Art of Interessment', In *International Journal of Innovation Management* Vol. 6, No. 2 (June), pp. 187–206.

Latour, B. (1993) 'Ethnography of a "High-tech" Case: About Aramis', In Pierre Lemonnier (editor) *Technological Choices -Transformations in Material Culture since the Neolithic*, Routledge and Kegan Paul, pp.372-398.

Week 3 (22 September): MUNDANE ARTEFACTS [Experiment 1]

This session will advance knowledge on the socio-technical approach by focusing on the role of objects and artefacts in social life. We will explore the concept of 'mediation' and 'delegation' of action.

<u>Assignment</u>: A writing experiment on the agency of objects and technologies, unpacking the difference between 'mediator', 'intermediary', 'script', 'prescription', 'affordance', 'program of action' and 'anti-program'. [See the Instructions - Experiment 1]

<u>Readings</u>

Compulsory:

Latour, B. (1991) 'The Berlin Key or How to Do things with Words', In P.M. Graves-Brown (ed) *Matter, Materiality and Modern Culture*, Routledge, London pp. 10-21.

Winner, L. (1980) "Do Artifacts have Politics?", in *Daedalus*, Vol. 109, No. 1 (Winter), 121-36.

Optional:

Gibson, J. (1979) 'The Theory of Affordances'. *The Ecological Approach to Visual Perception*, Boston: Houghton Mifflin (focus on 'affordance' pp. 127-128, pp.133-134)

Akrich, M. (1992) 'The De-scription of Technical Objects', In *Shaping Technology/Building Society: Studies in Sociotechnical Change*, eds. W.E. Bijker & J. Law, pp. 205– 224. Cambridge, MA: MIT Press (focus on 'script' pp201-211)

Week 4 (29 September): TECHNICAL FAILURE [Experiment 2]

This session will discuss failure in design. It will draw on studies in cognitive science, psychology and history of technology to explore the diversity of objects and unpack issues of bad design and the psychopathology of use.

<u>Assignment:</u> A photographic experiment on technical failure and bad design [See the Instructions - Experiment 2]

<u>Readings</u>

Compulsory:

Norman, D. (1990) *The Design of Everyday Things*, New York: Doubleday; Chapter 1 'The Psychopathology of Everyday Things', pp. 1-34. Optional Chapter 4 'Knowing What to Do', pp. 81-105.

Optional:

Petroski, H. (1994*) Design Paradigms: Case Histories of Error and Judgment in Engineering*, Cambridge: Cambridge University Press, Chapter 10, pp.166-180.

Petroski, H. (1992) *The Evolution of Useful Things*, NY: Vintage Books, A division of Random House, Inc.; Chapter 2 'Form Follows Failure' and Chapter 14 'Always Room for Improvement'.

Gibson, J. (1979) "The Theory of Affordances," *The Ecological Approach to Visual Perception*, Boston: Houghton Mifflin. (pp. 127-128 and pp.133-134)

Blake, P. (1977) *Form follows fiasco: Why modern architecture hasn't worked*. Boston: Little, Brown.

Wolfe, T. (1981) *From Bauhaus to our house*. New York: Washington Square Press: Pocket Books.

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======== THEME 2: ENVIRONMENTAL ENTANGLEMENTS ========

Week 5 (6 October): ENVIRONMENTAL ENTANGLEMENTS [Theory Session]

This session will discuss the "New Climatic Regime" and the visual language used to communicate environmental issues like the massive stores of pollution, the rapid degradation of landscapes, or the threats to biodiversity. It will reflect on the difficulties to represent environmental issues that often lead to climate change skepticism and denial.

Readings

Compulsory:

Latour, B. (2019) "We don't seem to live on the same planet" — A Fictional Planetarium, initially given as the Loeb Lecture at the Graduate School of Design (GSD), Harvard University   http://www.bruno-latour.fr/sites/default/files/downloads/162-SEVEN-PLANETS-DESIGN.pdf

Optional:

Ghosn, R. and Jazairy, E. (2018) *Geostories: Another Architecture for the Environment*. NYC: Actar Publishers.

Ghosn, R. and Jazairy, E. (2023) *Climate Inheritance*. NYC: Actar Publishers.

Latour, B. (2018) *Down to Earth: Politics in the New Climatic Regime*. Translated by C. Porter. London: Polity Press.

Aït-Touati, F., Arènes, A. and Grégoire, A. (2022) *Terra Forma: FORMA*. A Book of Speculative Maps, Cambridge, MA: MIT Press.

Tresch, J. (2007) "Technological World-Pictures. Cosmic Things and Cosmograms", in *Isis,* 98 (1), 84–99.

Ohanian, M. & J. C. Royoux (eds.), (2005) *Cosmograms,* New York: Lukas and Sternberg: 67-76.

"Cosmopolitical Practices", Albena Yaneva in conversation with Andrés Jaque, Mireia Luzárraga, Alejandro Muiño, Fuminori Nousaku, and Mio Tsuneyama, in *A+U Magazine, More-Then-Human Architecture,* Issue 2025: 04, April. https://au-magazine.com/shop/architecture-and-urbanism/au-202504/

Week 6 (13 October): HOW FORESTS THINK/HOW DOGS DREAM [Experiment 3]

This session will discuss the importance to make explicit the connection of humans to a variety of entities with differing ontologies (rivers, species, air, pollution, materials, divinities) and design in a cosmopolitical way.

Assignment: A writing experiment on symmetrical and multivocal narratives involving other species. [See the Instructions – Experiment 3]

Readings:

Compulsory:

Haraway, D. (2016) *Staying with the Trouble: Making Kin in the Chtulucene*. Duke University press. Chapter 2 "Tentacular Thinking. Anthropocene, Capitalocene, Chthulucene." Available also here: https://www.e-flux.com/journal/75/67125/tentacular-thinking-anthropocene-capitalocene-chthulucene/

Kohn, E. (2013) *How Forests Think. Toward an Anthropology Beyond the Human*, University of California Press. Introduction pp. 1-25.

Kohn, E. (2007) "How Dogs Dream: Amazonian Nature and the Politics of Transspieces Engagement", *American Ethnologist*, vo. 34. No. 1, pp. 3-24.

Optional:

Stengers, I. (2005) "The Cosmopolitical Proposal", in *Making Things Public: Atmospheres of Democracy*, edited by B. Latour, P. Weibel. 994-1003.

Stengers, I. (2014)"Gaia, the Urgency to Think (and Feel)"

https://osmilnomesdegaia.eco.br/wp-content/uploads/2014/11/isabelle-stengers.pdf

Latour, B. (2010) An Attempt at Writing the Compositional Manifesto, http://www.bruno-latour.fr/sites/default/files/120-NLH-finalpdf.pdf

Week 7 (20 October): LIVING WITH OTHER SPIECES [Experiment 4]

This session will problematize the role of other species in urban life. We will debate: How is the agency of other species considered in design? How can we give voice to nonhumans in our design? How can we take into account not only their capacity to affect us, but also their *capacity to be affected*, and 'to respond' to human agency?

Assignment: A diagraming experiment to imagine the city with/without specific species [See the Instructions – Experient 4]

Readings

Compulsory:

Tsing, A. "Unruly Edges: Mushrooms as Companion Species: For Donna Haraway." *Environmental Humanities* 1, no. 1 (2012): 141–154.

Optional:

Jerolmack, C. (2013) "Feeding the Pigeons: Sidewalk Sociability in Greenwich Village" in *The Global Pigeon*, Chicago: Chicago University Press, pp. 235-250.

Jaque, A. The Transspecies Kitchen, https://officeforpoliticalinnovation.com/work/the-transspecies-kitchen-an-antwerphagia/

Cronon, W. 1991. *Nature's Metropolis: Chicago and the Great West*. W. W. Norton.

Week 8 (27 October): URBAN LIFE [Theory Session]

This session will discuss a pragmatist approach for the study of cities. We will argue that a better understanding of cities could be gained by literally keeping our compass sights on the paths through the city, following the routes that link humans with the material and natural world, the subjective with the objective, the built with the unbuilt, the small with the big.

Readings

Compulsory:

Sennett, R. (2019) *Building and Dwelling: Ethics for the City*, Penguin Books, Chapter 7, "The Competent Urbanite", pp 171-204, focus on "Street-Smarts", pp. 171-178.

Calvino, I. (1974) *Invisible Cities*, New York: Harcourt Brace Jovanovich. ["Cities and Memory" n.3, pp. 10-11 (The City of Zaira), "Cities and Signs" n.7, pp. 13-14 (The City of Tamara), "Cities and Signs" n.5, pp. 61-62 (The City of Olivia), "Trading Cities" n.4, pp. 76 (The City of Ersilia), "Trading Cities" n.5, pp. 88-89 (The City of Esmeralda), "Continuous Cities" n.1, pp. 114-116 (The City of Leonia), "Hidden Cities" n.2, pp. 148-149 (The City of Raissa).

Optional:

Benjamin, W. (1999) "P [The Streets of Paris]," in The Arcades Project. Ed. Rolf Tiedemann. Cambridge and London: The Belknap Press of Harvard University Press.

Sorkin, M. (2009) *Twenty Minutes in Manhattan*. New York: Reaktion books. "The Block", pp.79-99 (focus on "walking" pp. 80-86) or 'The Stairs' pp. 9-67 (focus on pp. 9-29) or 'The Stoop', pp. 67-79.

Czarniawska, B. (2007) *Shadowing: and Other Techniques for Doing Fieldwork in Modern Societies*. Frederiksberg: Copenhagen Business School Press. Chapter 1: "A Call for A Symmetric Ethnology", pp. 7-20, and chapter 2: "Shadowing, or Fieldwork on the Move", pp. 20-59.

Week 9 (10 November): STREET LIFE. THE INFRA-ORDINARY [Experiment 5]

This session will emphasize how everyday urban life is typically maintained. It will shift the attention from the functionalist concept of 'use'/'user' to inhabitation as a process. We will explore ordinary spatial practices and will develop an understanding of dwelling as the process of active settling in, transforming, appropriating, adjusting, and living with the varying materiality and programs of architectural/urban environments.

Assignment: An observational ethnographic experiment on how people dwell in urban space [See the Instructions – Experient 5].

Readings

Compulsory:

Ingold, T. (2000) 'Building, dwelling, living: How animals and people make themselves at home in the world', In P*erception of the Environment: Essays on Livelihood, Dwelling and Skill,* London: Routledge, pp. 172-188. (focus on what Ingold calls the

"dwelling perspective" – pp. 176-178; the concept of Umwelt from Jakob von Uexküll, the example of the oak tree; read also the last section "The House as Organism" pp 187-188.)

Perec, G. (2008) "The Street", in *Species of Spaces and Other Pieces,* London: Penguin Classics, pp. 46-49. (optional "The Rue Vilin", pp. 212-221).

Perec, G. (2008) *Infra-ordinaire* (1989) and on the *Attempt at Exhausting A place in Paris* https://iitcoa3rdyr.wordpress.com/wp-content/uploads/2014/09/perec_readings.pdf

Optional:

Brand, S. (1994) *How Buildings Learn: What Happens after They're Built*, New York: Viking; Chapter 'The Study of Buildings in Time', pp. 427-450.

Strebel, I. (2011) 'The living building: Towards a geography of maintenance work', In *Social & Cultural Geography*, 12(3), pp. 243-262.

Week 10 (17 November): TRACING CITIES. BREACHING ROUTINES [Experiment 6]

The session will question implicit social interactions and actions in cities, as well as the rules we impose on ourselves in the name of common sense and professional wisdom. It will assess how individuals engage daily in building up "rules" for social life that often remain invisible. We will explore the hidden patterns and spatial practices in urban life, and will raise awareness of the importance to consider everyday social exchanges in cities

Assignment: A video experiment recording the effects of "breaching" a key rule of urban life, after gaining familiarity with a particular part of the city [See the Instructions – Experient 6].

Readings

Compulsory:

Garfinkel, H. (1967) *Studies in Ethnomethodology*. USA: Polity Press (Chapter 2 "Studies of the routine grounds of everyday activities", pp. 35-76; read pp.41-44 (p.41 3rd paragraph "For the purposes of *conducting their everyday affairs*…" to pp. 44)

Latour, B. & E. Hermant (1996) Paris, Invisible City, Paris: Les empêcheurs de penser en rond. ["Distributing", pp 62-71; http://www.bruno-latour.fr/virtual/index.html

Optional:

Kärrholm, M (ed) (2015) *Urban Squares, Spatio-temporal studies of design and everyday life in the Öresund region*, Nordic Academic Press: Lund, pp. 7-15.

Week 11 (24 November) – FINAL PRESENTATIONS

Students will gather all experiments from the three thematic clusters ("Technical Mediations", "Environmental Entanglements" and "Urban Life") in one *Experiments Portfolio* (10-15 slides max). They will prepare a vision statement to comment on the findings from all experiments and produce a transversal and "tentacular" design statement. Understanding how to capture and account the technical and environmental entanglements in cities as well the everyday expectations of future users will make students more skillful designers.