

# Course Syllabus

## Cross-Species Test Sites

Columbia University | GSAPP | 115 Avery | Spring 2019

Tuesdays, 7-9pm (office hours on request)

Instructor: Chris Woebken [hello@chriswoebken.com](mailto:hello@chriswoebken.com)

## Course description

In this course, students will focus our investigations on the complex relationships between humans and non-human urban inhabitants. We will study urban animal wildlife, indicator species, and microbial communities and work with biologists and ecologists to identify new design opportunities for the built environment. Through the process of building and testing design interventions, we aim to create a reflective space for deeply considering the details of these new interactions, and to discover unforeseen opportunities, twists and challenges. Project outcomes will be physical devices to facilitate new cross-species interactions in the form of infrastructure interventions, bio-receptive materials, and interfaces.

## Learning Objectives

By the end of this course, students will be able to:

- Introduce speculative thinking as well as rigorous experimental design to their practice
- Materialize concepts with new strategies for rapid product prototyping
- Explore new roles for design and new forms of critical engagement through collaborative work across disciplines
- Introduction to fabrication strategies at 1:1 product scale
- Draw on aesthetic innovations developed in fields of fine art and tactical media
- Critical evaluation and design iteration

## Schedule

Activity	Assignment
Wk 1 (1/22) Speculative Design Intro Design Sprint	Reading: <a href="#">Speculative Everything: Design, Fiction, and Social Dreaming by Anthony Dunne and Fiona Raby (Chapter 1-3) (Links to an external site.)</a>
Workshop - Sourcing from Biology Journals	Sketch a concept habitat, perch, or interface that would allow for bio-monitoring and enable a cross-species communication.
Wk 2 (1/29) Sourcing original research from biology journals: <a href="https://www.arenna.com/hello-woebken/biology-journals">https://www.arenna.com/hello-woebken/biology-journals</a> (Links to an external site.)	Readings: <a href="#">A stroll through the worlds of animals and men by Jakob von Uexküll (1934), pp.320-328 (Links to an external site.)</a> <a href="#">What Is It Like to Be a Bat? by Thomas Nagel (1974), pp. 435-450 (Links to an external site.)</a>
Wk 3 (2/5) Share-out of original research and concept sketches Assignment: ‘Cross-species interactions’	Readings: <a href="#">Invisible Inhabitants by Elizabeth Hénaff (Links to an external site.)</a> , The Journal of Design and Science (JoDS)
Guest speaker: Dr. Elizabeth Hénaff, NYU Tandon	
Wk 4 (2/12) Project 1 - Iteration 1 Roundtables	Project iteration: Prepare for pin-up review
Wk 5 (2/19) Project 1 - Iteration 2 Pin-up	Project refinement

Wk 6 (2/26)	<p>Guest speaker: Christine Kim, NYC Mayor's Office, works at the intersection of human and animal welfare</p> <p>Project 1 - Iteration 3</p>	Project refinement/iteration
Wk 7 (3/5)	<p>Tutorials / Roundtables</p> <p>Communication Strategies: Photo in Situ and Functional Illustrations</p>	Prepare physical prototypes for review
		<p><b>Project 1 due: 'Cross-species interface #1'</b></p>
		<p><b>Deliverables:</b></p>
	Mid-term Crits	<p>1. Physical Prototype</p> <p>Design it as an architectural device in 1:1 scale. I'd recommend designing a module if it is a bigger system.</p>
	Guests:	
Wk 8 (3/12)	<p>Brian House</p> <p><a href="https://brianhouse.net/">https://brianhouse.net/</a> (Links to an external site.)</p>	<p>2. Photos of Prototype in Situ</p> <p>Please document your project with an intriguing photo of the physical prototype in situ.</p>
	<p>Mitch Joachim</p> <p><a href="http://terreform.org/">http://terreform.org/</a> (Links to an external site.)</p>	<p>3. Functional Illustration</p> <p>Create an illustration that describes the functional aspects of the new interactions and relationships between human and non-human.</p>
		<p>4. Research paper reference or record of a conversation with an expert</p>

Wk 9 Spring Break

Wk 10  
(3/26) Project 2 Implementation - Iteration 1

Project #2 'Cross-species interface #2'

Wk 11  
(4/2) Project 2 Implementation - Iteration 2

Project iteration: Prepare for pin-up review

Wk 12  
(4/9) Project 2 Implementation - Iteration 3

Prepare physical prototypes for review

Wk 13  
(4/16) Project 2 Implementation - Iteration 4

Prepare documentation / communication

Documentation and Synthesis

**Project #2 due 'Cross-species interface #2'**

1. Physical Prototype

Design it as an architectural device in 1:1 scale. I'd recommend designing a module if it is a bigger system.

2. Photos of Prototype in Situ

Please document your project with an intriguing photo of the physical prototype in situ.

3. Functional Illustration

Create an illustration that describes the functional aspects of the new interactions and relationships between human and non-human. Consider an animated gif.

Wk 14 Review  
(4/23)

4. Research paper reference or record of a conversation with an expert

## **Class Rules**

### Attendance

Everyone does their best to show up to class on time. If you're going to be late, let me know in advance. If you need to miss a class for a real reason, you must also let me know in advance.

### Readings

Everyone does the readings. For the most part, they're short, fun, and useful. You're expected to be prepared and ready to participate in the discussion.

### Assignments

All assignment work is due at the beginning of class. Everyone gets a free pass for one late assignment. After that, any assignments not ready for the start of class will be counted as incomplete. Assignments must be posted to our shared Google Drive in the appropriate folder (your name), along with the documentation.

### Materials

We will be making things and building objects. Expect to spend \$200 on physical fabrication and prototyping materials.

### Critiques

Every student is expected to participate in critiques and class discussions. Critiques are essential to the design process inside and outside of this class. You are expected to apply critical thinking, ask questions, and formulate and explain your opinion. The more active the discussions we have the more rewarding and ultimately fun the class will be.

### Grading

The assignments in this class will include two multiple week deliverable focused projects. All work assigned in this class will have the potential to be portfolio work. Student's overall grades will be a mixture of assignments (30%), two project presentations (50%) and participation (20%).

### Responsibility

Students are responsible for all assignments, even if they are absent. Late assignments, failure to complete the assignments for class discussion and/or critique,

and lack of preparedness for in-class discussions, presentations and/or critiques will jeopardize your successful completion of this course.

### Participation

Class participation is an essential part of the class. To fulfill the Participation requirement (20% of final grade) students must be active in class discussions and group work, asking or responding to questions. For participation to be meaningful, it is important to keep up with reading, assignments, project development, and actively participate in group work, as well as come to class on time.

### Electronic Devices

Use of electronic devices (phones, tablets, laptops) is permitted when the device is being used in relation to the course's work. All other uses are prohibited in the classroom and devices should be turned off before class starts.

### Inclusive environment

I am 100% dedicated to an inclusive, harassment-free experience for everyone regardless of gender, race, sexual orientation, disability, appearance, or religion. I will not tolerate harassment of class participants in any form.

### Inspiring Readings

- cj Lim, "Devices: A Manual of Architectural + Spatial Machines" Routledge, 2005.
- Manaugh, Geoff, "Landscape Futures: Instruments, Devices and Architectural Inventions", Actar, 2013.
- Bartlebooth Magazine, "Más allá de lo humano" (Beyond the human) pp. 212-241, 2018.
- Dunne, Anthony & Raby, Fiona "Speculative Everything: Design, Fiction, and Social Dreaming" MIT Press, 2013.
- Tsing, Anna, & others, "Arts of Living on a Damaged Planet: Ghosts and Monsters of the Anthropocene" University of Minnesota Press, 2017.
- Peter Godfrey-Smith, "Other Minds: The Octopus and The Evolution of Intelligent Life", Farrar, Straus & Giroux. 2016.
- Hughes, Howard C. "Sensory Exotica A World beyond Human Experience", MIT Press, 2001.
- Jeremijenko, Natalie. "[Milgram's Mice: bioinformatics in the wild](#)" ([Links to an external site.](#))
- Hénaff, Elizabeth "[Invisible Inhabitants \(Links to an external site.\)](#)", The Journal of Design and Science (JoDS), 2017.
- Von Uexküll, Jakob. "[A stroll through the worlds of animals and men](#)" ([Links to an external site.](#)), 1934.

- Nagel, Thomas. “What Is It Like to Be a Bat?” *The Philosophical Review*, vol. 83, no. 4, Oct. 1974.
- Shanahan, Murray. “From Algorithms to Aliens, Could Humans Ever Understand Minds That Are Radically Unlike Our Own?” *Aeon Magazine*, Oct. 2016. <https://aeon.co/essays/beyond-humans-what-other-kinds-of-minds-might-be-out-there> (Links to an external site.).
- Ursula K. Le Guin Keynote Talk at the Anthropocene Conference: "Arts of Living on a Damaged Planet", 2014 <https://vimeo.com/97364872> (Links to an external site.)
- Tsing, Anna. “The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins”, New York: Princeton University Press, 2015.
- Sanderson, Eric. “Mannahatta: A Natural History of New York City” Harry N. Abrams, 2009.
- Shotwell, Alexis. “Against Purity: Living Ethically in Compromised Times” University of Minnesota Press, 2016.
- Cabinet #25, “Insects”, 2007.
- Sullivan, Robert. “Rats: Observations on the History and Habitat of the City’s Most Unwanted Inhabitants”, 2005
- Gissen, David. “Subnature: Architecture and Other Environments”. New York: Princeton Architectural Press, 2009.
- Kirksey, Eben. “Emergent Ecologies”. Duke University Press, 2015.
- Morton, Timothy. “Dark Ecology: For a Logic of Future Coexistence”. New York: Columbia University Press, 2016.
- Zacks, Stephen “[Other Voices, Other Worlds \(Links to an external site.\)](#)” ArtInAmerica, 2018.
- Gould, Stephen Jay. “An Evolutionary Perspective on Strengths, Fallacies, and Confusions in the Concept of Native Plants.” *Arnoldia* 58, no. 1 (1998): 2–10.
- Kimmerer, Robin Wall. *Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge and the Teachings of Plants*. Milkweed Editions, 2015.
- Keim, Brandon, “The Eye of the Sandpiper”, Cornell University Press, 2017.
- Dion, Mark “Bureau of the Centre for the Study of Surrealism and Its Legacy”, Book works, 2018

## Further Resources

Research repository on [are.na \(Links to an external site.\)](#)

Course presentation [slides \(Links to an external site.\)](#)

[Sourcing original research from biology journals \(Links to an external site.\)](#)

iNaturalist App - <https://www.inaturalist.org/>