A4146-1
Spring 2024
412 Avery

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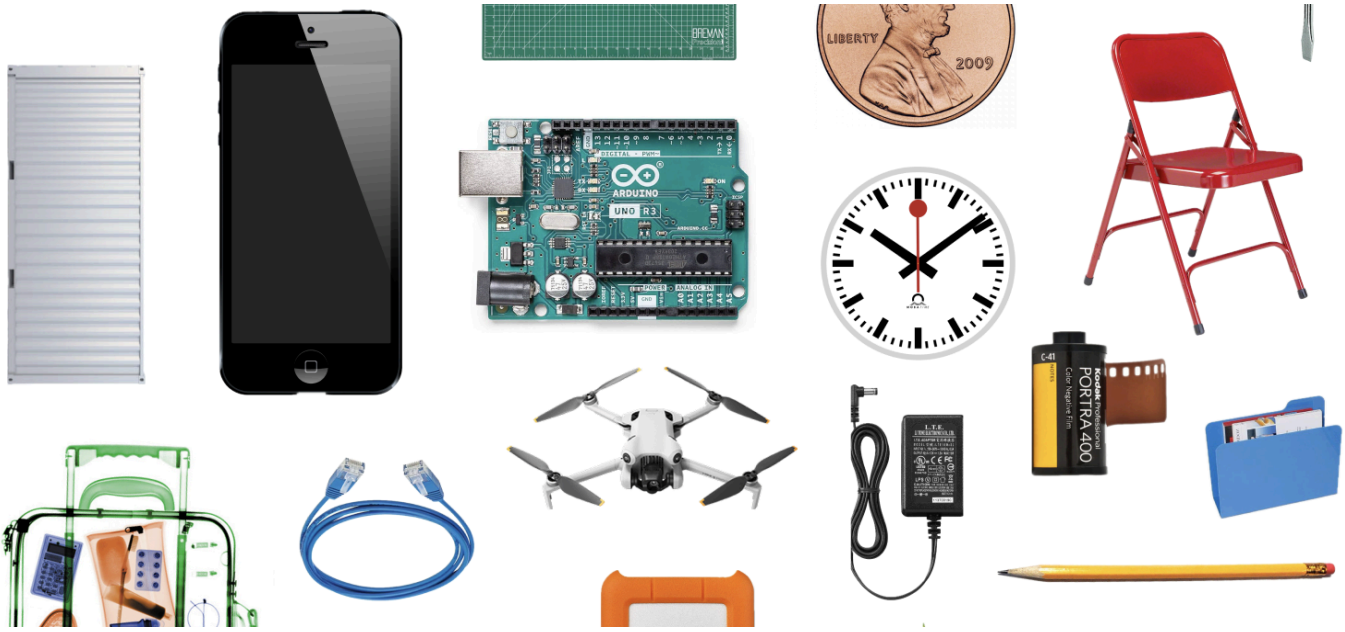
Design in Action Syllabus



In his seminal 1987 text *Science in Action*, Bruno Latour posited that the best way to understand how scientific knowledge is constructed is to study scientists at work. In doing so, he sought to break down the *black boxes* that conveniently turn messy social and technical processes into established truths that can be taken for granted and relied upon.

This course will study design computation in action by following the trajectory of the designer and the lifecycle of the design project. From Latour, we know that a great deal about design computation can be learned by putting it into practice; and simultaneously, that design work can never escape the circumstances of its production. Rather than look at the design project as the outcome of a particular brief, problem, or provocation, this course will peer inside the *black box* of computational design to interrogate how designers conceive, organize, and structure their projects; their studio environments, tools, and software; the means by which they perform, facilitate, or automate design labor; and the social circumstances of collaboration, criticism, pedagogy, and practice.

This course seeks to follow the path of its own making. In tandem with studying the practice of design through readings and discussions, you will apply your learnings to your own design process by developing a capstone project over the course of the

semester. These diverse projects will all share a common awareness of their own conditions of production. Through research, laboratories, collaborative work, and group reviews the class will attempt to synthesize a shared understanding of design computation in action. Ultimately, you should be equipped to continue pursuing your interests and develop a unique mode of practice that carries you through the conclusion of the course and the degree program and far into the future.

Course Structure

Mondays, 2-6pm	*Wednesdays, 2-6pm*
Desk Crits (20 min)	Lecture (1 hr) Discussion (1 hr) Workshop/Pin-up (2 hrs)

On Mondays, you will meet with the instructor in studio for individual desk crits to review progress on your project. You will only need to be present for your 20 minute discussion slot.

On Wednesdays, the entire class will meet for a lecture and discussion of readings, along with a workshop or group pin-up of progress on the capstone project.

Outside of class, you will also have regular meetings with your advisors to discuss topics specific to your projects, research, and areas of interest.

Capstone Project

You will be expected to make continuous, iterative progress on your capstone project, culminating in midterm and final reviews.

Moving beyond research, prototype, and experimentation, your project should present a thorough and comprehensive response to your original interest and inquiry. The final outcome should demonstrate your proficiency with a set of methodologies, tools, and technologies and situate your work within a chosen mode of practice.

The medium, format, and components of your final project will be varied, based on your individual proposals and the consensus of your advisor and the course instructor. Project deliverables may include, but are not limited to: models, drawings, software, games, smart devices, websites, data visualizations, maps, archives, publications, interactive exhibitions, startup products, and public interventions.

This class has a special emphasis on design *in action*. Of particular importance is the way that you design the encounter between your project and its audience or constituency. The final review will begin with an interactive, participatory session where you will be able to share your projects directly with critics and guests, through the format of your choosing. Your final project should include a plan for how you will design this encounter. This action may be a hands-on demo (such as a video game playthrough or a software product demo), a participatory workshop (such as a set of activities for viewers of a data visualization or dataset), a public intervention, a

performance, or another creative means of engaging the audience on your project's own terms.

Schedule

Jan 17

Introduction

Due Jan 24
Project statement, 500 words, submitted by email
Write a statement that describes your capstone project, including its context, motivation, scope, and methodology. This text can be adapted from your final presentation last semester.

Jan 24

Mapping Systems & Design Processes
Project beginnings; design processes; diagramming; Medium Design; systems thinking

Workshop 1
Designing a Capstone Project Plan

Reading
Susan Jahoda and Caroline Woolard, "Lifecycle Phases & Framework," *Making & Being* (2019)
Ben Fry, "Learning from Lombardi" (2003)

Jan 31

Tools & Visualizations
Designing tools; experimentation; automation; evaluating technologies; visualization strategies; rapid feedback

Reading
Bret Victor, "Up And Down the Ladder of Abstraction" (2011)
Robin Sloan, "An App Can Be a Home-Cooked Meal" (2020)

Feb 7

Prototyping & Debugging
3 types of prototypes: roles, implementation, look and feel; the practice of debugging; iteration; minimum viable product

Workshop 2
Prototyping

Pin-up

Reading
Stephanie Houde and Charles Hill, "What do Prototypes Prototype?" (1997)

Feb 14

Pitching & Validating
Elevator pitches; validating ideas; funding & grants; value propositions; "lean" methodology

Due Feb 21
Format your project statement as a simple Markdown document. Add images or media to the essay, such as research, process photos, diagrams, or illustrations. Fork the CDP Archive, add your project archive to the projects directory, and open a PR on GitHub.

Feb 21

Publication
Media; formats; audiences; criticism; platform strategies; graphic design

Workshop 3
Web Publishing I

Reading
Michael Warner, "Publics and Counterpublics" (2002)

Feb 28

Midterm Review

2-6:30pm

Location
TBD

Mar 6

Kinne Week

No class

Mar 13

Spring Break

No class

Mar 20

Constituencies & Collaboration
Users, constituencies & publics; participatory design & codesign; ethical design; ethnography; stakeholders

Workshop 4
Your project & its constituencies

Reading
Sherry Arnstein, "Ladder of Citizen Participation" (1969)
Shannon Mattern, “Post-It Note City” (2020)

Mar 27

Action
Direct action; interventions; workshops; engagements; performance

Workshop 5
“Computational Design” as a Verb

Reading
Astra Taylor, "Against Activism" (2016)
Georgeen Theodore, “Advocacy? Three Modes of Operation for the Activist Architect” (2009)

Due Apr 3
List of final project deliverables, submitted by email
Request for hardware, equipment, or special conditions for final review demonstration (optional), submitted by email

Apr 3

Presentation & Launch
Narrative; presentation formats; exhibition; launch checklists; scaling; public audiences

Workshop
Work session and discussion of End of Year Show

Reading
Zoë Ryan, "Taking Positions: Making Architecture and Design Exhibitions," *As Seen* (2017)

Apr 10

Guest Lecture: PROPS SUPPLY
PROPS SUPPLY is a multi-hyphenate creative team working across architecture, art and design that specialize in storytelling, spatial experiences and world building for collectives and like-minded individuals.

No Workshop or Pin-up

Apr 17

Departure / Practice Review
Departure; maintenance; sunsetting; recycling; practice

Pin-up

Due Apr 23
Final project and presentation at final review

Reading
Giovanna Borasi (Ed.), The Other Architect: Another Way of Building Architecture (2015)
Christina Xu, "Your Project Deserves a Good Death" (2015)

Apr 23

Final Review

10am-12:30pm
Interactive, participatory demonstrations

12:30-6pm
Presentations

Location
Ware Lounge

Due Apr 30
Final project documentation
Update your Markdown project descriptions with documentation (images, text, video, and external links) and open a PR on the main repository. This documentation is required for grading

Policies

This course is graded on the following scale: HP (high pass), P (pass), LP (low pass), or F (fail).

Grades will be based on the following factors: 10% attendance,

20% class participation and discussion, 20% assignments, and 50% final project.

Final projects will be evaluated based on their execution, creativity, and overall effort, balanced with the amount of risk taken and the growth demonstrated through the overall process.

For complete policies, please refer to the GSAPP student resources.

Reading

Barry Allen, "The Ethical Artifact: On Trash" (2007)
Ahmed Ansari, *Decolonizing Design Through the Perspectives of Cosmological Others* (2019)
Eli Altman, *Run Studio Run* (2018)
Giovanna Borasi (Ed.), *The Other Architect: Another Way of Building Architecture* (2015)
Bureau d´Études, *An Atlas of Agendas* (2019)
Patricio Davila, *Diagrams of Power* (2019)
Dubberly Design Office, *Data Authoring Environments* (2018)
Dubberly Design Office, *How do you design? A Compendium of Models* (2008)
Keller Easterling, "A losing game: harnessing failure," *The Architectural Review* 1458 (2019)
Julia Evans, "The Pocket Guide to Debugging" (2022)
Ben Fry, "Learning from Lombardi" (2003)
Tony Fry, "Design Education in a Broken World"
Amy Gallick, "Think" in *The World of Charles and Ray Eames* (2016)
ann haeyoung, "How to work within power structures that don't work for you," *The Creative Independent* (2019)
Nabil Hassein, "Computing, Climate Change, and All Our Relationships" *Deconstruct Conf* (2018)
Stephanie Houde and Charles Hill, "What do Prototypes Prototype?" *Handbook of Human-Computer Interaction* (1997)
Susan Jahoda and Caroline Woolard, *Making and Being* (2019)
Kevin Kelly, *Cool Tools* (2013)
Silvio Lorusso, *What Design Can't Do* (2024)
Judith Leemann, "Observations on forms and patterns of critique" (2004)
Kyna Leski, *The Storm of Creativity* (2020)
Afonso Matos, *Who can afford to be critical?* (2022)
Shannon Mattern, "Post-It Note City" (2020)
Elliott P. Montgomery and Chris Woebken, *Extrapolation Factory Operator's Manual* (2016)
Helen Pritchard, Eric Snodgrass and Magda Tyżlik-Carver (Eds.), Executing Practices (2018)
Zoë Ryan, "Taking Positions: Making Architecture and Design Exhibitions," As Seen (2017)
John Sharp & Colleen Macklin, "Iteration" from *Iterate: Ten Lessons in Design and Failure* (2019)
Robin Sloan, "An App Can Be a Home-Cooked Meal" (2020)
SPACE10, "Representation Guidelines: Thinking Critically About Visual Storytelling" (2022)
Astra Taylor, "Against Activism" (2016)
Edward Tufte, "The Cognitive Style of PowerPoint" (2003)
Bret Victor, "The Humane Representation of Thought" (2014)
WBYA?, *Who Builds Your Architecture? A Critical Field Guide* (2017)
Christina Xu, "Your Project Deserves a Good Death" (2015)