

# PUCD 2035

## Core 1: Interaction

Last Updated: 240814

<b>Program</b>	School of Art, Media, and Technology: Communication Design
<b>CRN</b>	13048
<b>Semester</b>	Fall 2024
<b>Meeting Day</b>	Tuesday
<b>Meeting Time</b>	4:00pm - 6:40pm
<b>Building/Room/ Zoom</b>	Parsons 2 W 13th Room 711
<b>Instructor &amp; Email</b>	Divya Mehra mehrd061@newschool.edu
<b>Class Website</b>	cif24.divya-mehra.com

## Course Description

Core 1: Interaction is designed to introduce students to programming as a creative medium—as a way of making and exploring. The coursework focuses on developing a vocabulary of interaction design principles which can then be applied across a range of platforms. Students are encouraged to experiment with various media, tools, and techniques, ultimately producing a portfolio of interactive and visual projects designed for the screen. An emphasis is placed on typography as it applies to a screen context, research-based problem solving and a learning-through-making approach to technical skill building. Historical and current interaction design precedents will be discussed.

## Readings

1. Paul Ford, What is Code, 2015
2. Mindy Seu, Making Spaces in Online Archive, 2017
3. Nicole Fenton, Words as Material, 2015
4. Sue Breakell, Perspectives: Negotiating the Archive, 2008
5. Natalie Cecire, Apple's Modernism, Google's Modernism, 2015
6. Taeyoon Choi, What is Poetic about Computation?
7. Shannon Mattern, Things that Go Beep, 2018
8. Peter Middleton and James Spinney, Notes on Blindness, 2014 video
9. Lens Culture, How AI Sees Us
10. David Reinfurt, 2018, "Muriel Cooper" video
11. Meg Miller and Ilaria Parogni, The Hidden Image Descriptions Making the Internet Accessible, 2022
12. 3 heads, [closeup]!!! detailed painting 4K with AUTHENTIC & Erik Carter, video, 2023

# Course Outline

## Unit 1 Week 1-4: Working methods

The first segment of Core Interaction will focus on the tools and concepts required for building interactive experiences. We'll use the languages of the web because they're accessible and immediately open up new modes of communication for designers, but the concepts will be transferable to any screen-based or interactive media.

In weeks 1-4 we will focus on:

- File management (naming, organization, file paths)
- Setting up and starting a new project
- Tools (code editor, inspector, git/github)
- HTML/CSS basic concepts and syntax
- Figma (components, prototyping, grids, canvas sizing)

## Unit 2 Week 5-8: Digital canvas

In our second segment, we'll investigate how designing for the digital canvas differs from other media. We will aim to understand the inherent complexities and how to use them to create compelling digital experiences.

In weeks 5-8 we will focus on:

- Typography with HTML/CSS
- CSS selectors (cascades, combining, parent/child, pseudo)
- HTML structure (box model, dissecting a web page)
- Layouting (position, float, flexbox, grid)
- Designing for the digital canvas (how big is a browser?)

## Unit 3 Week 9-11: Designing for interaction

Thinking about a website as a series of linked pages, we'll take the concepts we used to make individual web pages and apply them to larger systems. We'll explore how our systems can be designed to flex, rather than break, under a wide range of variables while still maintaining the original intent of the design.

In weeks 9-11 we will focus on:

- Multi-page systems
- Programming basic user interactions (:hover, basic JS click, etc.)
- Time-based design (interactive states, storyboarding, prototyping)
- User models (entering and receiving data, user flows, UX patterns, ways of navigating)

## Unit 4 Week 12-15: Networks

Because a website lives in a larger network of apps, websites, devices, and contexts, our final segment will explore how our website lives online. We'll take the work we've done this semester and explore self-publishing and making our work public by putting our work on the internet.

In weeks 12-15 we will focus on:

- Putting a website online (hosting, Github, custom domains)
- Accessibility
- Asset creation (video, image optimization, WebGL)
- Metadata (search, social)
- Connecting to other web services

## Learning Outcomes

*By the end of the semester, students will be able to:*

1. Use a basic vocabulary of interactive media to both give and respond to critique productively.
2. Create compelling interactive experiences through more careful and inspired interpretation/translation of content (i.e. develop great design concepts)
3. Demonstrate an understanding of the iterative making process in interaction design, using incremental methods such as prototyping, user research and evaluation to build toward more advanced work.
4. Conceptualize a product, object, or experience for the web and realize it through coding.
5. Evaluate the difference in designing interfaces for different kinds of devices, their limitations and specific user situations including responsive websites and apps for mobile.
6. Evaluate how typography and its variables are applied to interactive systems to facilitate orientation, support usability and create consistency.
7. Research historic and current design precedents to contextualize your own work.
8. Be able to archive and document work that is printed, on screen or time based in a reflective manner for learning portfolio.
9. Combine your artistic creativity with technology related to the internet.
10. Demonstrate a comprehension of skills, methods, techniques and processes to realize interactive systems, particularly systems for dealing with unpredictable, variable, and ever-changing content.

## Assessment Criteria

25%	Attendance & Peer Critique
25%	Weekly entries and participation
25%	Midterm edit and written summary
25%	Final collection

## Attendance, Grading and Work Submission Standards, Program Policies, Making Resources, and University Policies

All CD classes adhere to the same program and university policies:

[https://docs.google.com/document/d/1u358io8doX\\_SVVMGqIM\\_oH5V00lccneYu4Ww-uE55QM/edit?usp=sharing](https://docs.google.com/document/d/1u358io8doX_SVVMGqIM_oH5V00lccneYu4Ww-uE55QM/edit?usp=sharing)

## Class Project: Harmonic Collection

## **TLDR**

You're going to pick a theme to explore visually for the duration of the semester. Each week, you'll design and code an entry to a collection that explores this theme. At the end of the semester, you'll deliver a website that houses 10 programmed entries. The website container is part of the design, as well.

## **Project Description**

In mathematics, a sequence is defined as a series of numbers arranged in a predictable pattern. It's a type of number set which follows specific, definite rules. When translated to design, sequencing is a natural part of systems — each individual item has unifying elements that when looked at as a whole, tells a larger story.

In this class you'll create a Harmonic Collection that explores a theme of your choice. Each week, you'll design and code an entry into your collection that makes use of the design focus and HTML, CSS, and JavaScript skills we're developing. First, you will pick a theme of your choice (think of it as the overarching concept you'll explore through a series of sketches). Your theme should be open-ended enough to encourage a range of content, but specific enough to inspire an idea each week for twelve weeks. (Example themes: Your daily commute, songs you heard while walking around New York, interesting words you came across in articles this week). In the final weeks of the semester, you'll refine your 10 entries so that they communicate a clear exploration and deliver a website that houses all of them together. You might need to re-organize or add additional content to your container or entries to fully realize your idea.

## **Minimum Requirements**

- The website and all the entries must be responsive (work on a variety of screen sizes).
- While each entry will be unique, there should be unifying visual components between them
- All hyperlinks must be functional
- Each week's entry will make use of that week's design focus
- You will make use of a combination of HTML, CSS, and JavaScript to communicate a story

## **Midterm Edit**

For Midterms, we will have a one on one meeting. At that time, you will present a refined iteration of your current collection. Prior to this meeting, you'll chat with your fellow classmates about the following questions:

1. What is your theme? Has it evolved from the initial description?
2. How is the content communicating the theme? What about the design?
3. How would you describe the pacing of the collection so far? Does it feel considered?  
Can there be a moment for a dramatic break, or an acceleration?
4. Are there opportunities to establish a template or system to the design — if so, when, where, and how? Can we break the system mindfully to add interest?

You will also prepare a short written doc (one paragraph) that explains your collection's theme so far and explains three other avenues you can explore for the remaining weeks of the semester.

## Sample Schedule

<b>Week 1</b>	<b>Working Methods</b>
Lecture	Computers, files, and networks
Design Focus	Project Organization
Technical Skills	Using a text editor, locating files on your computer, difference between local and online. Introduce Figma as a design tool.
Homework	Come to class with three ideas for your Harmonic Collection's theme.

<b>Week 2</b>	<b>Working Methods</b>
Lecture	What is HTML?
Design Focus	Hierarchy with limitations; Narrative flow
Technical Skills	HTML basic syntax, hyperlinks, elements, structure
Homework	Harmonic Collection Entry 1

<b>Week 3</b>	<b>Working Methods</b>
Lecture	HTML/CSS basic concepts and syntax, web typography intro
Design Focus	Typographic hierarchy
Technical Skills	CSS overview, colors, background images, image filters, stylistic changes. Sketching out ideas in Figma.
Homework	Harmonic Collection Entry 2

<b>Week 4</b>	<b>Working Methods</b>
Lecture	Putting a website online (hosting, Github pages, custom domains),
Design Focus	Color theory
Technical Skills	Hover states, interactivity with CSS, CSS animations, CSS selectors (cascades, combining, parent/child, pseudo), web typography continued
Homework	Harmonic Collection Entry 3

<b>Week 5</b>	<b>Digital Canvas</b>
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Lecture	HTML structure (box model, dissecting a web page)
Design Focus	Layering, Collage
Technical Skills	Positioning with HTML and CSS, structuring a page, Flexbox Intro
Homework	Harmonic Collection Entry 4

<b>Week 6</b>	<b>Digital Canvas</b>
Lecture	Layouting continued
Design Focus:	Grids and Composition
Technical Skills	Position, float, flexbox, CSS grid
Homework	Harmonic Collection Entry 5

<b>Week 7</b>	<b>Digital Canvas</b>
Lecture	Responsive Units and Media Queries
Design Focus	Designing for Multiple Devices
Technical Skills	Viewport units, percentages, media queries
Homework	Harmonic Collection Entry Midterm Edit – Review and revise all of your entries so that they are responsive and beginning to create a coherent story.

<b>Week 8</b>	<b>Digital Canvas</b>
Lecture	Midterm presentations
Technical Skills	Review responsive units and media queries, In class midterm activity
Homework	Harmonic Collection Entry 6

<b>Week 9</b>	<b>Designing for interaction</b>
Lecture	Programming basic user interactions (:hover, basic JS click, etc.)
Design Focus	Gestalt Principles and Interaction Design (proximity, similarity, continuity, etc.)
Technical Skills	JavaScript introduction and overview
Homework	Harmonic Collection Entry 7

<b>Week 10</b>	<b>Designing for interaction</b>
Lecture	Time-based design and randomness
Design Focus	Symmetry, Asymmetry
Technical Skills	Interacting with the DOM, interactions with JavaScript (clicking, hovering, time based)
Homework	Harmonic Collection Entry 8

<b>Week 11</b>	<b>Designing for interaction</b>
Lecture	JavaScript Libraries
Design Focus	Generative art, patterns
Technical Skills	What are JavaScript libraries? How and when to use them, showcase p5.js or library of instructor's choice
Homework	Harmonic Collection Entry 9 Bring in questions for the group question and answer session

<b>Week 12</b>	<b>Networks</b>
Lecture	Group question and answer session
Technical Skills	<i>TBD</i>
Homework	Harmonic Collection Entry 10

<b>Week 13</b>	<b>Networks</b>
Lecture	Accessibility, Metadata (search, social), Finishing Touches
Design Focus	Cropping images; Describing images with words
Technical Skills	Alt text, sharing images, favicons, selection colors
Homework	Harmonic Collection Entry Revision

<b>Week 14</b>	<b>Networks</b>
Lecture	Group question and answer session
Technical Skills	<i>TBD</i>
Homework	Harmonic Collection Final Edit

<b>Week 15</b>	<b>Networks</b>
Lecture	Harmonic Collection final presentations
Technical Skills	
Homework	Happy holidays!

## Materials

Laptop

Camera

Software: Git/GitHub, VS Code, Figma

## Fair use disclaimer about using ChatGPT

Learning a new skill is a challenging and iterative process. At times messy, it's in these moments of frustration that we allow ourselves to grow and have a new experience. Do not rob yourself of the opportunity to do that.

That being said, students are allowed to use ChatGPT as a supplementary tool to enhance their learning experience during this class. ChatGPT is a powerful learning aid that can be used to:

1. Proofread code you already wrote
2. Add an explanation to why the code is or isn't working so that you can understand it better
3. Debug and catching typos

It is important to maintain a philosophy of learning, critical thinking, and independent problem solving throughout the class and to open ourselves up to the mental space of being challenged. ChatGPT can help you understand your code better and help you identify typos, however, it is not a substitute for learning how to code yourself, or developing creative solutions to the projects. Hands-on coding, visual experimentation, and diligence are all important skills in becoming a designer, and we should commit to developing these skills in the classroom and beyond. Using ChatGPT to complete your entire project is not permitted, nor can it be used for generating ideas. If you choose to do this, the person you're disadvantaging is yourself.