PUCD 2035
Core 1: Interaction

Last Updated: 250901

Program	School of Art, Media, and Technology: Communication Design
CRN	13048
Semester	Fall 2025
Meeting Day	Tuesday
Meeting Time	7:00-9:40pm
Building/Room/ Zoom	Building: Parsons 2 W 13th Room: 801 Zoom: https://newschool.zoom.us/my/riegerj
Instructor & Email	Jack Rieger riegerj@newschool.edu
Class Website	https://jackrieger.github.io/core-1-interaction/

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. Olia Lialina, A Vernacular Web, 2005
2. Paul Ford, What is Code, 2015
3. Justin Bakse and students, Creative AI, 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:

- Setting up a project in the folder
- Setting up workspace in code editor
- Writing a basic HTML page, knowing the basic <head> and <body> structure
- Connecting a stylesheet, using CSS selectors to write basic styles
- Opening an HTML page in a browser, making and seeing real-time edits
- Figma Units:
    - Setting up projects and files
    - Differing modes: Design, draw, dev, prototype
    - Toggling views and setting up layout guides

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:

- Writing for typography using HTML text elements and CSS text styles
- Selecting classes, ids, and pseudo classes in CSS
- Writing nested HTML elements
- Creating layouts using CSS positions, grid and flexbox
- Writing media queries for responsive styles
- Using responsive view in browser inspector
- Knowledge of common breakpoints
- Writing image alt texts for web accessibility
- Writing webpage metadata for search and social purposes
- Figma units:
    - Resizing artboards
    - Using artboard constraints for responsive designs

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:

- Creating shared styles, elements and layouts for a multi-page website project

- Writing transitions for CSS properties
- Writing CSS animations with keyframes and animation properties
- Writing basic arithmetic operations in browser console
- Printing console logs in browser console
- Creating an alert window
- Figma units:
    - Creating prototyping by connecting boards and adding animation

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:

- Setting up a GitHub repository and workspace
- Enabling GitHub Pages
- Writing in document JavaScript or connecting a script file
- Writing JavaScript variables and different types of data
- Accessing DOM elements using querySelector() /querySelectorAll() /getElementById() /getElementByClassName() /getElementByTagName()
- Using classList() to create interactive states
- Creating event listeners to basic mouse and window events
- Analyzing user models, creating Figma prototype for user flows and navigating
- Employing web services for media management

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 care- ful 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 inter- active 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_oH5V0OIccneYu4Ww-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.

Schedule

Weekly Schedule subject to change.

Week 1	**Working Methods**
Lecture	Computers, files, and networks
Design Focus	Project Concept + Organization, Tools
Technical Skills	Introduce Figma as a design tool + text editor. Difference between local and online, starting a new project, locating files on your computer.
Homework	Come to class with three ideas for your Harmonic Collection's theme.

Week 2	**Working Methods**
Lecture	What is HTML?
Design Focus	Working with limitations; Typographic hierarchy
Technical Skills	Using text editor and dev tools in the browser. Opening an HTML page in a browser. HTML basic syntax, page structure, hyperlinks and elements. Figma for organizing research and references.
Homework	Harmonic Collection Entry 1

Week 3	**Working Methods**
Lecture	HTML/CSS basic concepts and syntax, web typography intro
Design Focus	Developing design references. Narrative and visual flow.
Technical Skills	Setting up a project in Figma, looking at different modes (design/dev/draw/prototype). Connecting a stylesheet. CSS overview: colors, selectors, images, stylistic changes.
Homework	Harmonic Collection Entry 2

Week 4	**Working Methods**
Lecture	Layout + structure on screens, thinking about color
Design Focus	Typescale. Color theory + accessibility
Technical Skills	Web typography continued. Figma: grids, layout guides, setting text styles.
Homework	Harmonic Collection Entry 3

Week 5	**Digital Canvas**
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

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

Week 7	**Digital Canvas**
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.

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

Week 9	**Designing for interaction**
Lecture	Visual and behavioral consistency for design systems
Design Focus	Gestalt Principles and Interaction Design (proximity, similarity, continuity, etc.)
Technical Skills	CSS transitions and animations.
Homework	Harmonic Collection Entry 7

Week 10	**Designing for interaction**
Lecture	Programming basic user interactions I
Design Focus	User flow and interactivity
Technical Skills	JavaScript introduction, data types, browser console, alert window
Homework	Harmonic Collection Entry 8

Week 11	**Designing for interaction**
Lecture	Putting a website online (hosting, Github pages, custom domains)
Design Focus	Consistency and systems
Technical Skills	Figma prototype, setting up Github repo, enabling GH Pages
Homework	Harmonic Collection Entry 10

Week 12	**Networks**
Lecture	Programming basic user interactions II

Design Focus	User models, UX
Technical Skills	Accessing DOM elements, event listeners, class manipulation
Homework	Harmonic Collection Entry Revision

Week 13	**Networks**
Lecture	JavaScript libraries and APIs (optional)
Design Focus	Generative art / JS libraries
Technical Skills	JS libraries or API showcase of P5 or any resource of instructor's choice
Homework	Harmonic Collection Entry 9 Bring in questions for the group question and answer session

Week 14	**Networks**
Lecture	Group question and answer session
Technical Skills	*TBD*
Homework	Harmonic Collection Final Edit

Week 15	**Networks**
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.