

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

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

Course Outline

Unit 1 (Weeks 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 (Weeks 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)
- 📖 Layouts (position, float, flexbox, grid)
- 📖 Designing for the digital canvas (how big is a browser?)

Unit 3 (Weeks 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 (Weeks 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

CD & 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

Materials

- 🔧 Laptop
- 🔧 Camera
- 🔧 Software
 - 🔧 Git/GitHub
 - 🔧 VS Code
 - 🔧 Figma

Project: Harmonic Collection

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:

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 document that explains your collection's theme so far and explains three other avenues you can explore for the remaining weeks of the semester.

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| <i>Week 1</i> | <i>Working Methods</i> |
| Lecture | Computers, files, and networks |
| Design Skills | 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. |

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

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

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| <i>Week 4</i> | <i>Working Methods</i> |
| Lecture | Putting a website online (hosting, Github pages, custom domains), |
| Design Skills | 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 |

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

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

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| <i>Week 7</i> | <i>Digital Canvas</i> |
| Lecture | Responsive Units and Media Queries |
| Design Skills | 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. |

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

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

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

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| <i>Week 11</i> | <i>Designing for interaction</i> |
| Lecture | JavaScript Libraries |
| Design Skills | Generative art, patterns |
| Technical Skills | What are JavaScript libraries? How and when to use them |
| Homework | Harmonic Collection Entry 9 |

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

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| <i>Week 13</i> | <i>Networks</i> |
| Lecture | Accessibility, Metadata (search, social), Finishing Touches |
| Design Skills | Cropping images; Describing images with words |
| Technical Skills | Alt text, sharing images, favicons, selection colors |
| Homework | Harmonic Collection Entry 11 |

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| <i>Week 14</i> | <i>Networks</i> |
| Lecture | Networks |
| Design Skills | Group question and answer session |
| Homework | Review and refine Harmonic Collection entries; prepare for presentation. |

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| <i>Week 15</i> | <i>Networks</i> |
| Lecture | Harmonic Collection final presentations |

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.