

## Fundamentals of Web-Based Multimedia Communications: Imagining the Internet's Interface

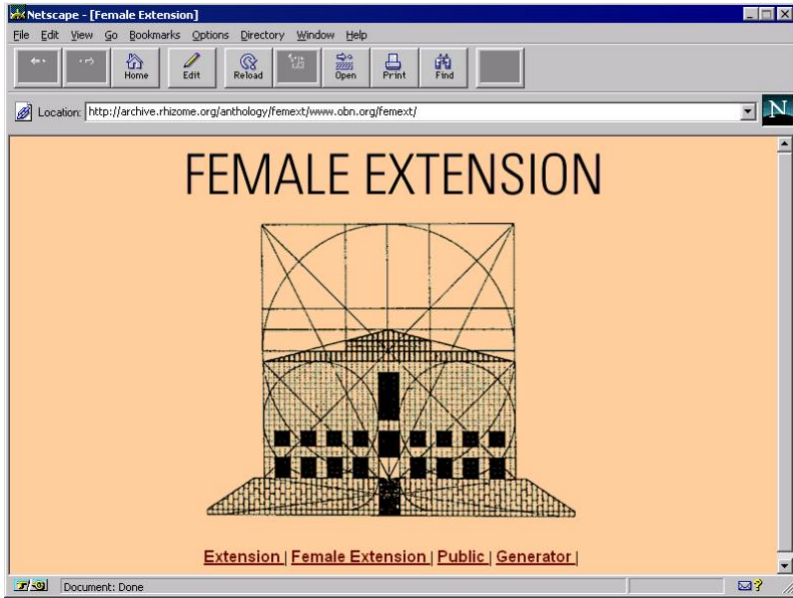
Instructor: Kelsey Brod, She/They

Wednesday and Friday, 1:45-3:00pm

Smith Warehouse Bay 12 A228

CMAC 240L, CMAC 740L, ISS 240L, ISS740L, VMS288L, VMS788L

Availability: office hours after class or by appointment; expect 48hrs for email response



Female Extension, Cornelia Sollfrank, net art, 1997



*Choreographic Analytics*, [Joana Chicau](#), search engine design, 2019

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### **I. THE COURSE!**

#### **A. Description of “Fundamentals of Web-Based Multimedia Communications: Imagining the Internet’s Interface”**

Catalog description: Multimedia information systems, including presentation media, hypermedia, graphics, animation, sound, video, and integrated authoring techniques; underlying technologies that make them possible. Practice in the design innovation, programming, and assessment of web-based digital multimedia information systems. Intended for students in non-technical disciplines. Graduate version of undergrad course also includes higher-level exploration of Javascript topics and frameworks, WebGL/3D, and data visualization and a more substantive final project than undergrad section.

Imagining the Internet’s Interface: This course is a creative coding course using HTML, CSS, and JavaScript designed to encourage both technical skills and critical design. We will spend significant time looking at the history of internet art and design as well as current

practices. We will also develop the skill of art critiques—perceiving and theorizing the style of, function of, and statements made by web interfaces. How do we imagine the internet when we build it? What possibilities do we open and what do we foreclose? In what (or whose) image of the world is this imagination?

## **B. Course Objectives**

1. Learn the fundamentals of HTML, CSS, and JavaScript
2. Think creatively and critically about the art, design, and function of internet interfaces
3. Expand course material into a self-motivated final project

## **C. Attendance**

Class attendance is mandatory. You are permitted one unexcused absence. Any other unexcused absences will result in a two-step reduction of your final grade (from B+ to B-).

**Please get in touch with me as soon as possible in case of emergencies. In other unusual but non-urgent cases, please talk with me to agree to attendance arrangements.**

## **D. Grading**

There are 6 projects in this course totaling to 600 graded points in the course. Each project's final grade is weighted by:

1. Timely submission of assignments leading up to final project (check marked): 30%
2. Demonstration of technical skills learned: 30%
3. Project's concept, creativity, and craft: 30%
4. Attendance and participation in class discussion and critiques: 10%

Grade cutoffs:

A+:97%

A:93%

A-:90%

B+:87%

B:83%

B-:80%

C+:77%

C:73%

C-:70%

D:60%-70%

If your final course grade is on the border of a higher grade, consistent class engagement may bump the grade up.

## **E. Syllabus (may be subject to minor changes)**

	Wednesday	Friday
Week 1: 8/31, 9/2	<p>Introductions and go through syllabus</p> <p>To do: download <a href="#">Visual Studio Code</a>, <a href="#">Sublime Text</a>, or another text editor of choice</p>	<p>Lecture: text editors and HTML</p> <p>To do: 1) <a href="#">HTML Essential Training</a> sections 1-4, 2) create HTML index using text as content (credit an author or use your own writing)</p>
Week 2: 9/7, 9/9 (Drop/Add ends)	<p>Critiques of HTML Text Part 1</p> <p>Lecture: early internet art</p> <p>To do: finish <a href="#">HTML Essential Training</a> sections 5-10, add links and images to index page</p>	<p>Critiques of HTML Text Part 2</p> <p>Lecture: internet and access</p> <p>To do: 1) <a href="#">Accessibility for Web Design</a>, 2) create an html website inspired by early internet art that follows current accessibility protocol and contains pages, external links, and images. How is accessibility also an aesthetic tool? 3) bonus: Read <a href="#">id vs class</a></p>
Week 3: 9/14, 9/16	<p>Critiques of Early Internet Art: Accessible Surfing Part 1</p> <p>Lecture: inline CSS</p> <p>To do: change font colors and background colors of multiple page HTML website using inline CSS</p>	<p>Lecture: using CSS style sheets</p> <p>To do: 1) <a href="#">CSS Essential Training</a> sections 1-4, 2) connect an external CSS stylesheet to your website and stylize!</p>
Week 4: 9/21, 9/23	<p>Critiques of CSS stylesheet, Early Internet Art Part 2</p> <p>Lecture: CSS, access, animations, and art</p> <p>To do: finish <a href="#">CSS Essential Training</a> sections 5-8, add more CSS styles and begin layout to your website</p>	<p>Lecture: responsive layouts and wireframing</p> <p>To do: 1) <a href="#">CSS Layouts from Float to Flexbox and Grid</a>, 2) finish layout to Early Internet Art Homage: Accessible Surfing</p>
Week 5: 9/28, 9/30	<p>Critiques of final Early Internet Art: Accessible Surfing Part 3.</p> <p>Lecture: hosting content, collaborating on sites, and using <a href="#">GitHub Pages</a></p> <p>To do: upload your projects to GitHub pages</p>	<p>Due: Early Internet Art Part 4 (uploaded to GitHub)</p> <p>Lecture: multimedia and interactivity on the web</p> <p>To do: create responsive designs, make an information website both telling and demonstrating how the</p>

		CSS Box Model works, and how to use Floats, Flexbox, and CSS Grid to create responsive designs. How can you make this website conceptual? Can you make it a game or a statement of something? Wireframe this idea for the website to go over in class.
Week 6: 10/5	Critiques of Laying out Layouts Part 1 wireframes. Studio day.	<b>Fall Break—No Class!</b>
Week 7: 10/12, 10/14	Critiques of final Designing Response: Laying out Layouts Part 2.  Lecture: intro to JavaScript, returning to DOM	To do: 1) <a href="#">Javascript for Web Designers</a> , 2) wireframe two different website ideas that use JavaScript to do a certain task (i.e. get time, location, respond to user behavior, access data). Be prepared to pitch wireframe proposals next class.
Week 8: 10/19, 10/21	Critique of JavaScript: Simple Task Part 1 website wireframes To do: work on simple website using JavaScript	Lecture: JavaScript continued To do: finish JavaScript: Simple Task
Week 9: 10/26, 10/28	Critiques of final JavaScript: Simple Task Part 2. Lecture: personal websites, branding, and artist websites To do: find a personal website or a branding website that inspires you to present in class.	Presentations of website inspirations. Upload to Sakai under Part 1. To do: 1) wireframe a personal website that will showcase the content you made in class. Make sure this website is responsive to different display sizes! 2) create personal websites and host on GitHub Pages. Personal websites should use HTML, CSS, and some JavaScript.
Week 10: 11/2, 11/14	One-on-one meetings of Personal Website: To Brand or Not to Brand? wireframes. (upload to Sakai under Part 2) Studio workday.	Lecture: contemporary internet art, website design, and introduction to final project: Re-Imagining the Internet To do: create wireframe proposals for a final project.

Week 11: 11/9, 11/11	<p>Critiques of final Personal Website: To Brand or Not to Brand? Part 3</p> <p>Lecture: contemporary internet art, website design, and introduction to final project, Re-Imagining the Internet</p> <p>To do: begin final project</p>	<p>Lecture: Incorporating media into website</p> <p>To do: create a wireframe and work on final project</p>
Week 12: 11/16, 11/18	One-one-one meetings to talk about Re-Imagining the Internet wireframes	One-on-one meetings to talk about Re-Imagining the Internet wireframes
Week 13	<b>Thanksgiving Break—No Class!</b>	<b>Thanksgiving Break—No Class!</b>
Week 14: 11/30, 12/2	Studio day	Studio day
Week 15: 12/7, 12/9	First day of final class presentations!	Second day of final class presentations! Hand in final portfolio of work using GitHub links.

**F. Introductions—who is in the course? How would you like to be addressed?**

Space for notes:

**G. Discussing Political (and Personal) Work**

The success of our classroom and the topics discussed completely depends on the inclusion of all voices no matter what gender, sexuality, race, or nationality they come from. My goal is to create a space where all individuals who enter this classroom feel comfortable to express themselves and their ideas freely.

Additionally, artwork and other web projects discussed in class may deal with politics, violence, identity, and difference. Let us cultivate an atmosphere of openness and gentleness when discussing these works.

**H. Resources**

The software recommended for the course is either freely available to all or free to you as a Duke student. We will use:

- [Chrome](#) or [Firefox](#) web browser
- [Visual Studio Code](#), [Sublime Text](#), or [Brackets](#), text editors designed for web development and available for Mac, Windows, and Linux systems. [But yes, you can use your text editor or IDE (integrated development environment) of choice here.]
- [GitHub Desktop](#) - This is highly recommended if you are new to Git, and we will eventually host our projects on [GitHub Pages](#).
- Adobe Creative Cloud (optional) - All Duke students are eligible for a [free subscription to Adobe Creative Cloud through the OIT Software portal](#). It is also available in the [Bryan Center Studios](#).

Other links:

- [Codepen.io](#)—great way to test code in an online text editor
- [caniuse.com](#)—great way to check code
- [w3Schools](#)—great resource for learning web code
- [Net Art Anthology](#)—archive of web art
- Wayback Machine plugin—get the plugin for your browser to see websites' histories
- [Web Design Museum](#)—archive of websites

## II. BEHAVIOR AND HEALTH

### A. Behavior and Community Standards

#### **Duke Community Standard**

All students must adhere to the [Duke Community Standard](#) (DCS): Duke University is a community dedicated to scholarship, leadership, and service and to the principles of honesty, fairness, and accountability. Citizens of this community commit to reflect upon these principles in all academic and non-academic endeavors, and to protect and promote a culture of integrity.

Citations:

All work submitted must be your own and produced exclusively for this course. Anytime you incorporate an idea, quotation, image, or text created by someone else into your written or visual work you must identify the source. <http://library.duke.edu/research/citing>

**Using past code written by yourself or others is typical in programming. Just make sure to give credit!**

### B. Mental Health and Wellness Resources

### **Mental Health and Wellness Syllabi Statement**

Student mental health and wellness are of primary importance at Duke, and the university offers resources to support students in managing daily stress and self-care. Duke offers several resources for students to seek assistance on coursework and to nurture daily habits that support overall well-being, some of which are listed below

- **The Academic Resource Center:** (919) 684-5917, [theARC@duke.edu](mailto:theARC@duke.edu), or [arc.duke.edu](http://arc.duke.edu).
- **DuWell:** (919) 681-8421, provides Moments of Mindfulness (stress management and resilience building) and meditation programming to assist students in developing a daily emotional well-being practice. To see schedules for programs please see <https://studentaffairs.duke.edu/duwell>. All are welcome and no experience necessary.

If your mental health concerns and/or stressful events negatively affect your daily emotional state, academic performance, or ability to participate in your daily activities, many resources are available to help you through difficult times. Duke encourages all students to access these resources.

- **DukeReach.** Provides comprehensive outreach services to identify and support students in managing all aspects of well-being. If you have concerns about a student's behavior or health visit the website for resources and assistance: <http://studentaffairs.duke.edu/dukereach>
- **Counseling and Psychological Services (CAPS).** CAPS services include individual and group counseling services, psychiatric services, and workshops. CAPS also provides referral to off-campus resources for specialized care. (919) 660-1000 <https://studentaffairs.duke.edu/caps>
- **TimelyCare (formerly known as Blue Devils Care).** An online platform that is a convenient, confidential, and free way for Duke students to receive 24/7 mental health support through TalkNow and scheduled counseling. [bluedevilscare.duke.edu](http://bluedevilscare.duke.edu)
- **Two-Click Support.** Duke Student Government and DukeReach partnership that connects students to help in just two clicks. <https://bit.ly/TwoClickSupport>

### **C. Academic Support Resources**

The Academic Resource Center (the ARC) offers services to support students academically during their undergraduate careers at Duke. The ARC can provide support with time management, academic skills and strategies, unique learning styles, peer tutoring, learning consultations, learning communities, and more. ARC services are available free to any Duke undergraduate student, in any year, studying in any discipline.

(919) 684-5917, [theARC@duke.edu](mailto:theARC@duke.edu), or [arc.duke.edu](http://arc.duke.edu).

## **III. OTHER DOMAINS**



## A. Tech Assistance and Course Costs

### 1. Technology Accommodations

Highly aided students who have limited access to computers may request loaner laptops through the [DukeLIFE Technology Assistance Program](#). Please note that supplies are limited.

### 2. Course Materials Costs

*Materials needed: access to a computer and the internet (World Wide Web ☺)*

If you are having difficulty with textbook and supply costs associated with this course, here are some resources:

- [Contact the financial aid office](#) (whether or not you are on aid). They have loans and resources for connecting students with programs on campus that might be able to help alleviate these costs.
- DukeLIFE offers [course materials assistance](#) for eligible students. Please note that students who are eligible for DukeLIFE benefits are notified prior to the start of the semester; program resources are limited.
- Duke Libraries offers textbook rentals through the [Top Textbook Program](#), where you can rent out a textbook for 3 hours at a time.
- For course-specific technology needs such as Digital Voice Recorder, HD Video Camera, TI-84 Plus CE, DSLR camera kit, Tripod, Shotgun Mic, iPad Mini 4, a Handheld Projector, or a GoPro, [you can reserve rental equipment](#) from the Link.

## B. Accessibility

### 1. Academic Accommodations

[The Student Disability Access Office \(SDAO\)](#) is available to ensure that students are able to engage with their courses and related assignments. Please either come to me to discuss any needed accommodations I have not accounted for or contact the Student Disability Access Office to [request or update accommodations](#). We all learn differently, and I welcome any input in how to help increase the accessibility of course material.

## C. Inclement Weather and Attendance Policies

### 1. Inclement Weather Policy

In the event of inclement weather or other connectivity-related events that prohibit class attendance, I will notify you how we will make up missed course content and work. Asynchronous catch-up methods may apply.

### 2. Attendance Policy Related to COVID Symptoms, Exposure, or Infection.

Student health, safety, and well-being are the university's top priorities. To help ensure your well-being and the well-being of those around you, **please do not come to class if you have tested positive for COVID-19 or have possible symptoms and have not yet been tested.** If any of these situations apply to you, you must follow university guidance related to the ongoing COVID-19 pandemic and current health and safety protocols. If

you are experiencing any COVID-19 symptoms, [contact student health \(dshcheckin@duke.edu, 919-681-9355\)](mailto:dshcheckin@duke.edu). Learn more about current university policy related to COVID-19 at <https://coronavirus.duke.edu/>.

To keep the university community as safe and healthy as possible, you will be expected to follow these guidelines. Please reach out to me and your academic dean as soon as possible if you need to quarantine or isolate so that we can discuss arrangements for your continued participation in class.

#### **D. Technical Support and Video Recording Rules**

##### **1. Assistance with Sakai or Zoom**

For technical help with Sakai or Zoom, contact the Duke OIT Service Desk at <https://oit.duke.edu/help>. You can also access the self-service help documentation for Zoom [here](#) and for Sakai [here](#).

##### **2. Rules for Video Recording Course Content**

Student recording of lectures must be permitted by the instructor and shall be for private study only. Such recordings shall not be distributed to anyone else without authorization by the instructor whose lecture has been recorded. However, the instructor may arrange through the Office of Information Technology to make recorded lectures available to students enrolled in the class on such terms and conditions as he or she prescribes.

Unauthorized distribution is a cause for disciplinary action by the Judicial Board. The full policy on recoding of lectures falls under the Duke University Policy on Intellectual Property Rights, available here (p. 15):

[https://provost.duke.edu/sites/default/files/FHB\\_App\\_P.pdf](https://provost.duke.edu/sites/default/files/FHB_App_P.pdf)

#### **E. Religious Accommodations**

Students are permitted by university policy to be absent from class to observe a religious holiday. Accordingly, Trinity College of Arts & Sciences and the Pratt School of Engineering have established procedures to be followed by students for notifying their instructors of an absence necessitated by the observance of a religious holiday. Please submit requests for religious accommodations at the beginning of the semester so that we can work to make suitable arrangements well ahead of time. You can find the policy and relevant notification form here: <https://trinity.duke.edu/undergraduate/academic-policies/religious-holidays>

#### **IV. Assignments (refer to Sakai for updated versions)**

##### **HTML TEXT**

Assigned: 9/2

Part 1 Due: 9/7

After working through the [HTML Essential Training](#) sections 1-4, create your own index HTML page. For content, select a few paragraphs of text either using your own writing or the writing by someone you admire. Format the text creatively and functionally, as you define it. Challenge yourself to use HTML elements such as paragraphs, headlines, bold and italics, lists, quotes, dates and times, code, pre, and br, etc. Make sure to credit the author if you are using someone else's written work.

Part 2 Due: 9/9

Finish [HTML Essential Training](#) sections 5-10, add links and images to your index page.

### **Early Internet Art Homage: Accessible Surfing**

Assigned 9/9

Part 1 Due: 9/14

After working through [Accessibility for Web Design](#), create a new html website inspired by early internet art that follows current accessibility protocol and contains pages, external links, and images. How is accessibility also an aesthetic tool? What associations can be made by controlling a user's clicking? What is the embodied state of "surfing the web"?

Bonus: Read [id vs class](#)

Part 2 Due: 9/21

After working through [CSS Essential Training](#) sections 1-4, connect an external CSS stylesheet to your website and stylize your website to fit its concept.

Part 3 Due: 9/28

After working through [CSS Essential Training](#) sections 5-8 and [CSS Layouts from Float to Flexbox and Grid](#), add additional CSS and a responsive layout to your website using your mode of choice.

Part 4: Due 9/30

Upload the HTML Text and Early Internet Art Homage: Accessible Surfing to GitHub Pages.

### **Designing Response: Laying out Layouts**

Assigned: 9/30

Part 1 Due 10/5:

Now that you have learned various ways to create responsive designs, make an information website both telling and demonstrating how the CSS Box Model works, and how to use Floats, Flexbox, and CSS Grid to create responsive designs. How can you make this website conceptual? Can you make it a game or a statement of something? Wireframe this idea for the website to go over in class.

Part 2 Due: 10/12

Execute your wireframe plans for Designing Response: Laying out Layouts. Upload website on GitHub Pages.

### **JavaScript: Simple Task**

Assigned: 10/14

Part 1 Due: 10/19

After working through [JavaScript for Web Designers](#), design a website that uses JavaScript to do a certain task—get time, location, data. Then think about how you format and aesthetically conceptualize the task. Wireframe the idea.

Part 2 Due: 10/26

Execute the JavaScript: Simple Task wireframe. It's fine if it is not exactly as pre-designed! Upload the work to your GitHub and post the link here.

### **Personal Website: To Brand or Not to Brand?**

Assigned: 10/28

Part 1 Due 10/28:

After researching different personal websites or websites about personal branding, choose one or two websites to discuss in class. Post a link here with some bullet points of what you will discuss.

Part 2 Due: 11/2

After researching different personal websites or websites about personal branding, wireframe a website that showcases your talents and the work that you have done in class. You are welcome to fully embrace the professional pressure to brand oneself in a field of interest as equally as you are welcome to make an anti-self-branding website. We will have one-on-one meetings to discuss the wireframe.

Part 3 Due: 11/16

Execute the Personal website: To Brand or Not to Brand? wireframe. It's fine if it is not exactly as pre-designed! Upload the work to your GitHub and post the link here.

### **Final Project: Re-Imagining the Internet**

Assigned: 11/9

Part 1 Due: 11/11

Incorporate all the skills you have learned in class to re-imagine a platform, site, or other interface of the internet. Think social media platforms, search engines, Wikipedia, etc. What are the functions and services of these websites and how do their designs open and foreclose possibilities? Bring in some possibilities for re-imagining. Be prepared to present a website that exists today and talk about its design and what you might do differently.

Part 2 Due: 11/16

Be prepared for one-on-one meetings to talk about the final project and wireframes.

Part 3 Due: 12/7 and 12/9

Class presentations of final projects! Hand in final portfolio of work using GitHub links.