

# WELCOME TO MSTU 5003 | Fall 2018

Theory and Programming of Interactive Media I  
Teachers College, Columbia University

## Information

Duration: 09/05/18 - 12/21/18

Dates: Thursdays 4-7pm. Lecture 5-7pm followed by a lab 7-8pm.

Location: TH 422

Instructor: Zhenzhen Qi, [zq2145@tc.columbia.edu](mailto:zq2145@tc.columbia.edu)

Teaching Assistant: Shuai Yuan, [sy2729@tc.columbia.edu](mailto:sy2729@tc.columbia.edu)

Feel free to approach us before/after class or through email any time.

## Overview

Theory and Programming of Interactive Media I is the introductory course of a two course sequence (Theory and Programming of Interactive Media II). This course satisfies part or all of the programming requirements for several tracks within CMLTD. By the end of this course, students will be able to design and develop basic multimedia and interactive web-based applications backed by a rationale rooted in learning theories.

No prior knowledge of computer programming is necessary although it is highly advisable for students to be competent with the basics of computer systems (e.g. navigating file structures, working with different operating systems, etc.)

The primary language that we will use for the programming aspect of the course is JavaScript in conjunction with HTML/CSS. Note that this class is NOT a Flash programming language class as formerly known.

This course is concerned with three areas of software development:

1. Understanding and utilizing concepts of computational thinking and programming theory
2. Apply said thinking to design and build interactive learning experiences
3. Web Development through hands-on assignments and projects

## Textbooks

### *Theory*

A curated list of media theories will be selected from the following Publications:

Manovich, L. (2001). *The language of new media*. Cambridge, Mass: MIT Press. (Access book from [here](#))

(Access book from [here](#))

### *Programming*

A curated list of content will be selected from the following learning platforms:

[Lynda](#) (Free video tutorial resources for TC Students)

[W3schools](#) - Unofficial but concise and beginner-friendly documents with tutorials

[P5.js](#) and [p5.play](#) - accessible interactive web coding framework for artists, educators, and beginners

## **Additional Learning Resources**

[Codepen](#) & [jsbin](#): interesting html, css, javascript code snippets

[Mozilla Developer Network](#) - Official, detailed, 'orthodox' document

[CSS-Tricks](#) - Fantastic css knowledge and tricks

Importing 3D Model in Web: <http://threejs.org/>

SVG.JS: <http://svgjs.com/test/>

Paper.js: <http://paperjs.org/>

Backend Database: <http://jekyllrb.com/>

[Unity](#), gaming develop environment. Can export web-embed JS Canvas.

## **Grades**

Final grades will be calculated based on the following formula:

- Participation, attendance, contribution to class environment 30%

- Weekly Assignment 20%
- Blog Reflection 20%
- Final Project, Presentation and Documentation 30%

## Attendance

Participation in class is required. Irregular attendance not only hurts a student's coursework, but it weakens the class as a whole and is not permitted. Since this course has frequent in-class coding exercise, missing class will also affect your progress in the course. Attendance is recorded prior to every lecture, and students with excessive absences will be officially dropped from the course in accordance with College rules. Arriving late interferes with other students' learning and is not acceptable. Repeated Late attendance will be counted absent. All cellphones and other electronic devices are encouraged for the purpose of looking up references and note taking during lecture. From time to time, you will also be asked to go on the computer to experience certain web based interactive artwork as well.

## Course Synopsis

	<i>Date</i>	<i>Lecture</i>	<i>Homework</i>
1	9/6/2018	Course Overview. Editor Setup.	Review Course Syllabus. Technical Setup
2	9/13/2018	HTML Overview. Github Setup	Formatting a resume with html tags
3	9/20/2018	CSS Overview	Add CSS Styling for resume
4	9/27/2018	Bootstrap	Project One: Responsive Web Resume
5	10/4/2018	JS Overview. Variables. Functions.	Set up static elements for clock
6	10/11/2018	Dom elements manipulation	Animate Clock with CSS+JS
7	10/18/2018	Events Handling	Speed typing app
8	10/25/2018	Working with loops	Using for loop to auto resize images
9	11/1/2018	Data Handling	Posting to a message board
10	11/8/2018	JS based Web App - Session One	Set up static elements for your app
11	11/15/2018	JS based Web App - Session Two	add digital interactivity for your app

	11/22/2018	Canceled Due to Thanksgiving	
12	11/29/2018	JS based Web App - Session Three	Project Two: Interactive Web App
13	12/6/2018	Final Project Workshop One	Final project prototyping
14	12/13/2018	Final Project Workshop Two	Final project prototyping
15	12/20/2018	Final Project Critique	Final Project

### **Academic Integrity**

Students who intentionally submit work either not their own or without clear attribution to the original source, fabricate data or other information, engage in cheating, or misrepresentation of academic records may be subject to charges. Sanctions may include dismissal from the college for violation of the TC principles of academic and professional integrity fundamental to the purpose of the College. – From TC Student Misconduct Policy

### **Written Work**

Specifically all writing assignments must follow APA style for citations, including any code examples, technical diagrams, etc. If it is determined that you have plagiarized any portion of a writing assignment, including and especially your portfolio, you will receive an F for the assignment, and other possible charges may result as outlined above.

### **Source Code**

No portion of your homework should be copied from another student, book, or electronic resource. You are expected, though, to consult with your peers, reference materials, and instructors while working on your coding assignments. Programming is seldom a solo activity and it is often best done in the company of others. If you choose to use existing, third party code in your assignment, it should be including according to the licensing guidelines if it is open source, and should be noted in a comment if it is in the public domain. If it is determined that you copied code directly into your program and represent it as your own creation, you will receive an F for the assignment.