New York University  
Arthur L. Carter Journalism Institute  
Programming for Journalists  
JOUR-UA 204.001  
Professor: Johnson, Paul

To contact professor: me@pauljohnson.com

Course Description
This class covers the fundamentals of Javascript as an introduction to programming with the needs of journalists in mind. Javascript is one of the most versatile and popular languages with applications spanning from the web, mobile, and even game development. Although we will learn the technical fundamentals of programming, the class is organized around four creative projects. The objective of the syllabus is to provide the student with a solid technical foundation while emphasizing creative thinking and observation skills. In creating computer applications we are making judgments, searching, composing, capturing, and exploring for ourselves and the world.

Students will be expected to cultivate their own ideas. Although there will be ongoing exercises, course projects are about the freedom to explore ideas.

Learning Objectives
In this course, students will:
• Demonstrate awareness of journalism’s core ethical values
• Demonstrate critical thinking, independence, and creativity appropriate to the role of journalism in a democratic society
• Work ethically in pursuit of truth, accuracy, fairness, and diverse perspectives
• Use technological tools and apply quantitative concepts as appropriate
• Developing an understanding of how to write javascript code and basic web mechanics
• Learn how dynamic web programming can be used to support your own projects

Course Structure
This class consists of seminar, exercises, and in-class work. The exercises build, one upon the other, so it is extremely important not to fall behind. The programming exercises will be both online and offline. It is not possible to complete the assignments,
with a good understanding of the concepts involved, without working outside of class time.

Each class will begin with a review of weekly exercises. The exercises are designed to be straightforward, not time consuming, and relatively simple. The second half of the class will usually include a brief lecture and technical demonstration. Any remaining time can be used for questions, discussions, and working in class.

**Readings**
The required text for the course is:

*Head First JavaScript Programming*, 1st Edition, by Eric T. Freeman and Elisabeth Robson

- [https://www.amazon.com/Head-First-JavaScript-Programming-Brain-Friendly/dp/144934013X](https://www.amazon.com/Head-First-JavaScript-Programming-Brain-Friendly/dp/144934013X)

Free online resource we may use include:

MDN JavaScript Reference

You-Dont-Know-JS series is free and open-sourced on Github:
[https://github.com/getify/You-Dont-Know-JS](https://github.com/getify/You-Dont-Know-JS)

Eloquent JavaScript is another great free resource:
[http://eloquentjavascript.net](http://eloquentjavascript.net)

**Requirements**

- Students must bring their laptops to class and participate in course learning activities.
- Exercises are short and must be submitted by the beginning of the next session.
- Coding is authorship. Any borrowed code must be properly annotated!

**Grading**
Work is evaluated on the following criteria:

- Technical execution, time and effort
- Aesthetic and conceptual quality of finished work. Programming is more than a technical activity. We will aspire to beautiful and elegant code which also happens to work.
- Grades will be based on: Participation in class, class discussions, exercises, and projects.
  - Participation: 5% - Students are encouraged to ask “stupid” question and help each other in class. Please be on time and ready at the start of the class.
  - Exercises: 25% - Exercises are part of the reading. They will also be reviewed / previewed in class. Individually, they are not especially time consuming or difficult. Students will be grading on their ability to complete exercises in a timely manner.
• Projects: 70%. Each of the four projects are weighed the same. There is room for exploration and invention in the projects. Students will be evaluated not only by how well their code functions, but by the quality of their ideas. Especially creative concepts may compensate for modest technical ambition and vice versa. The final project may approach a professional interactive element or reflect the beginning of a big idea.

Course Outline (subject to change depending on class interests)

Section 1 : The Basics
Section 1 Project - Let’s Hack the New York Times..! (not really)

5/28/2019   Introduction
             Reading: Intro

5/30/2019   Overview of the javascript environment, variables and expressions
             Reading: Chapter 1, “Getting your feet wet”

Section 2 : The Javascript Language
Section 2 Project - Plan a little, you’ll be glad you did... or how to spy on people.

6/4/2019    A look at control structures, conditionals, and application logic
             Reading: Chapter 2, “Going further”

6/6/2019    Functions and scope
             Reading: Chapter 3, “Getting Functional”

6/11/2019   Arrays and data structures
             Reading: Chapter 4, “Arrays”

6/13/2019   Objects
             Reading: Chapter 5, “A trip to Objectville”

Section 3 : Javascript and the Behavior of Web Pages
Section 3 Project - Find the missing jetliner.

6/18/2019   Making web pages behave
             Reading: Chapter 6, “Getting to know the DOM”

6/20/2019   Types
             Reading: Chapter 7, “Serious types”

6/25/2019   Putting it all together
Reading: Chapter 8, “Building an app”

6/27/2019  Interactivity
Reading: Chapter 9, “Handling events”

Section 4: Javascript Libraries and Advanced Applications
Section 4 Project - Get in over your head

7/2/2019  Advanced Topics and the Javascript Multiverse
Reading: Chapter 10, “Liberated Functions”

7/4/2019  Review

Accommodations
Students with disabilities that necessitate accommodations should contact and register with New York University’s Moses Center for Students with Disabilities (CSD) at 212-998-4980 or mosescsd@nyu.edu. Information about the Moses Center can be found at www.nyu.edu/csd. The Moses Center is located at 726 Broadway on the 2nd floor.

Diversity & Inclusion
The Institute is committed to creating an inclusive learning environment. The Institute embraces a notion of intellectual community enriched and enhanced by diversity along a number of dimensions.