

## # UNIT PLAN NAME Introduction to HTML and JavaScript

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### ## General Overview

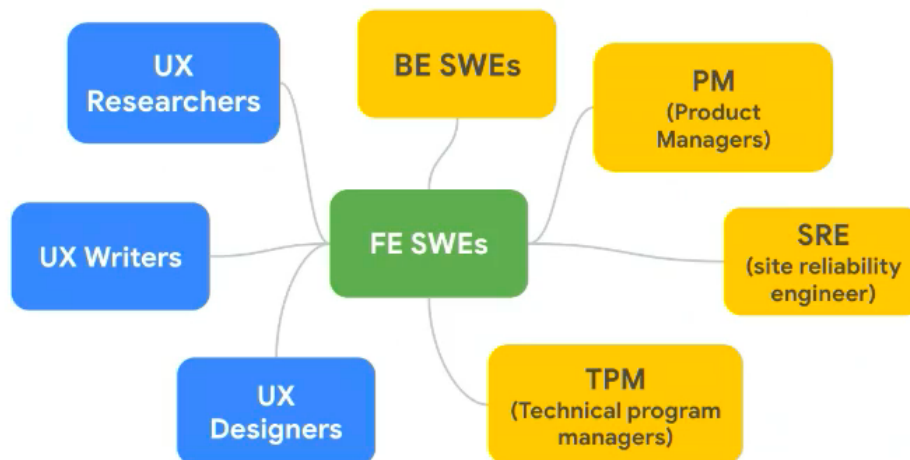
(include here description of the unit, what class(es) it fits into, when...)

Introduction to HTML and JS unit is part of the Web Development course that introduces students to what we call front end programming. This unit includes the base foundation of HTML and beginning JavaScript concepts that will culminate in a project from a menu of options.

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### What is front end web development?

Frontend devs work across disciplines



### ## Motivation for Unit

(why have you decided to make this?)

Some of the reasons are :

- To develop students' interest in web development professional field
- To allow students to use and extend their previous programming knowledge gained from AP CSA
- To engage students in further programming and testing their own projects

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### ## Standards Referenced

(select one of the standards sets reviewed in class (CSTA, NY, MA, RI), include a link and a brief explanation as to why you selected that set)

9-12.CT.4 Abstraction and Decomposition

Implement a program using a combination of student-defined and third-party functions to organize the computation.

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## ## Tools Used

(include programming language(s), specific programs/environments, and other tools (digital or otherwise) if necessary)

This unit includes an intro to HTML and JavaScript. After this intro unit, students will become proficient in using CSS, git, github, shell scripting as well as combining all the tools in culminating projects.

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## ## Resources

(include any links/books/readings to be used during this unit)

<https://dzone.com/articles/software-design-principles-dry-and-kiss>

<https://www.geeksforgeeks.org/7-common-programming-mistakes-that-every-beginner-must-avoid/>

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## ## Lessons

Total length: 2 Weeks

(list each lesson with main topic(s))

The lessons are doubled.

1. The anatomy of a web page and HTML structure
2. Intro to Javascript: basic functions, basic events, and variables
3. Elements as objects and relationship between HTML and JavaScript
4. Conditional statements and basic strings
5. SQA (Software Quality Analysis)

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## ## Assessments

(list summative and/or formative assessments used)

## **End of unit PROJECT**

### **Project testing and peer feedback**

Student can select from a menu of choices to create a project

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## **Standards:**

### **Algorithms and Programming**

9-12.CT.9 Systematically test and refine programs using a range of test cases, based on anticipating common errors and user behavior.

The emphasis is on perseverance and the ability to use different test cases on their programs and identify what issues are being tested in each case.

9-12.CT.10 Collaboratively design and develop a program or computational artifact for a specific audience and create documentation outlining implementation features to inform collaborators and users.

The focus is on the collaborative aspect of software development, as well as the importance of documenting the development process such that the reasons behind various development decisions can be understood by other software developers.