Fairfax Collegiate

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Intro to Web Development 5-6 Syllabus

Course Goals

1 Computer Programs
Students gain a basic understanding of how computer programs work

2 Programming Problems
Students solve simple programming problems, using all of teacher direction, working with classmates, and individual problem solving skills.

3 Project Planning and Execution
Students plan and execute an individual or team programming project.

4 JavaScript Programming Language
Students learn parts of the JavaScript programming language, one of the most popular and widely used programming languages.

Course Topics

1 Calling Functions
Students call functions from their programs in order to facilitate input and output.

2 Variables
Students use variables to store different values in their programs.

3 Conditional Statements
Students use if, elseif, and else statements to create conditional logic.

4 Loops
Students use for and while loops to create code that executes multiple times.

5 Arrays
Students store multiple similiar values using arrays.

6 Creating Functions
Students create functions to allow them to encapsulate and reuse code.

7 Drawing Pictures
Students create images and render them to the screen.

8 Animations
Students animate pictures by causing them to move around the screen.

9 User Input
Students create programs that respond to keyboard input, including moving pictures around the screen.

10 Final Project

Students plan, execute, and present a project that they will be able to keep.

Course Schedule

Day 1
Ice Breaker and Introduction
Students are introduced to the instructor and the course.

Hello World!
Students create their first program that displays "Hello World." This program is a rite of passage for all programmers.

Variables
Students are introduced to variables and put them to use in their programs.

Day 2
Computer Math
Students learn how to do math in their programs.

Fahrenheit to Celsius
Students learn to input numbers and store them in variables as well as how to solve equations.

Day 3
Mad Libs
Students create a program to output silly mad libs stories.

Secret Message
Students learn to use if statements to print a secret message for only the right person.

Let's Count!
Students learn how to use for loops to solve problems.

Day 4
Hailstone Numbers
Students learn to use while loops and play with a famous unsolved math problem .

Arrays
Students apply their knowledge about arrays in their programs.

Day 5
Get Excited!
Students use functions to create someone who is always excited.

Guessing Game
Students use all of their learned knowledge to make a game where players can guess a number.

Day 6

Pictures at an Exhibition
Students create digital art and write a program that displays it.

Moving Pictures
Students create a picture that moves across the screen.

Day 7

You are in Control
Students learn how to make images collide.

Final Project Planning
Students create a plan for their final project.

Day 8

Final Project, Part 1
Students work on their final projects.

Day 9

Final Project, Part 2
Students continue to work on their final projects.

Day 10

Final Project Fair
Students demonstrate their final projects for their peers.

Final Quiz
Students take a written test to demonstrate their knowledge. Teachers use this quiz to give the students suggestions about what to study in the future

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