Course Goals

This course aims to introduce students to front and back end web programming. At the end of the course students should be able to build websites using HTML, CSS, and JavaScript and host them on a Linux server. They should also be able to create a MySQL database, and query and serve the data to the client using PHP.

Student Learning Objectives/Outcomes

The topics that will be covered are:

1. **Linux and Servers**
    a. Basic Linux Commands
    b. Setting up and configuring the LAMP stack
2. **HTML**
    a. Layout and Structure of an HTML document
    b. Usage of HTML tags (Head, Body, and Footer, ect.)
    c. General use tags (p, h*, ect.)
3. **CSS** – Content styling
    a. How to use and include CSS files in an HTML file
    b. How to style a document using CSS
    c. How to change the layout of a document using CSS
    d. Selecting elements using CSS
    e. Changing elements using CSS
4. **JavaScript**
    a. How to use and include JS files in an HTML document
    b. Getting tags in the document using JS
    c. Modifying HTML content using JS
    d. Loops and Statements in JS
    e. Datatypes
    f. Operators
    g. Data structures (Stacks, Queues, Arrays)
    h. Functions
    i. Event Listeners
5. **PHP**
    a. Loops and Statements
    b. Datatypes
    c. Operators
    d. Arrays
    e. Variable Scope
    f. Functions
    g. Connecting to and querying using MySQLi
6. **SQL/MySQL**
    a. Basics of relational databases
    b. Reasons to use a relational database
    c. Basics of MySQL

d. Datatypes
e. SQL DDL/DML
f. Joining
g. Like

Schedule

Week 1:

- How to set up a Linux server and basic Linux commands.

Week 2:

- Introduction to HTML

Week 3:

- Introduction to CSS
- Assignment 1 – Personal Webpage

Week 4:

- Introduction to JavaScript
- Assignment 2 – JavaScript Calculator

Week 5:

- Assignment 2 (Continued)
- Introduction to PHP

Week 6:

- Introduction to PHP (Continued)
- Introduction to SQL/MySQL
- Assignment 3 – Contact List Website

Week 7 – End:

- Assignment 3 (Continued)
- Final Assignment

Assessment Overview

This class is based around in class code, 3 practice assignments, and one "cumulative" final assignment. The evaluation is based on the ability to complete the final assignment to a satisfactory level (satisfactory implying that all components are functional and there is a clear indication that all sections were understood).