SAIT

CPRG 213 - Web Development 1

Course Description:
This course introduces you to the fundamental concepts and technologies in web development. You'll explore standardized web technologies and languages, including front end HTML, CSS ASP.NET Core and Javascript. You'll also get hands-on experience creating and implementing website applications

3 Credits

Time Guidelines:
The standard instructional time for this course is 75 hours.

Course Assessment:

Assignments	60%
Labs	40%
Total:	**100%**

Other Course Information:
Learner Engagement:

In order to be successful, the learner is expected to be engaged in learning activities for a total of 9 to 12 learning hours per course per week, which includes both in-class and out-of-class time.

SAIT Policies and Procedures:
For information on the SAIT Grading Scale, please visit policy AC 3.1.1 Grading Progression Procedure, found on the SAIT Academic Policies and Procedures page: https://www.sait.ca/about-sait/administration/policies-and-procedures

For information on SAIT Academic Policies, please visit: www.sait.ca/about-sait/administration/policies-and-procedures/academic-student

Course Learning Outcome(s):
1. Describe how websites work.

    Objectives:

        1.1 Describe the structure of a web server.

        1.2 Describe how clients connect to web servers.

        1.3 Differentiate between front-end web development and back-end web development.

        1.4 Differentiate between HTML, CSS and JavaScript.

        1.5 Describe web standards.

2. Build a static webpage using basic HTML elements.

Objectives:

    2.1 Describe HTML syntax.

    2.2 Define HTML elements and their attributes.

    2.3 Identify obsolete elements from previous HTML versions.

    2.4 Distinguish between block, inline and inline-block elements.

    2.5 Use marked-up text in a web page.

    2.6 Ensure an HTML page meets current World Wide Web Consortium (W3C) validation requirements.

3. Create a webpage using logical document structure.

    Objectives:

        3.1 Explain the purpose of sectioning elements.

        3.2 Compare sectioning elements.

        3.3 Produce a document outline model (DOM).

        3.4 Explain how to address accessibility concerns.

4. Use CSS to style an HTML webpage.

    Objectives:

        4.1 Relate CSS to web development.

        4.2 Describe the different ways to link CSS to a webpage.

        4.3 Describe the rules of CSS syntax.

        4.4 List basic CSS selectors.

5. Use interactive HTML elements in a webpage.

    Objectives:

        5.1 Define the types of lists available in HTML.

        5.2 Describe the purpose of each type of list.

        5.3 Use list elements in a webpage.

        5.4 Describe types of anchors.

        5.5 Use anchors in a webpage.

        5.6 Describe types of user input.

        5.7 Use form elements to create a simple form.

6. Use CSS to lay out a webpage.

    Objectives:

        6.1 Explain how to use CSS for page layout.

        6.2 Describe the box model.

        6.3 Differentiate between a flexbox container and child elements.

        6.4 Apply the flexible box layout to a webpage.

7. Outline the functionalities of JavaScript.

Objectives:

        7.1 Relate JavaScript to web development.

        7.2 Describe how JavaScript impacts HTML and CSS.

        7.3 Define events in JavaScript.

8. Use JavaScript to add interactivity to a website.

    Objectives:

        8.1 Use variables to hold data.

        8.2 Apply data types to variables.

        8.3 Construct JavaScript expressions.

        8.4 Demonstrate how to use logic in JavaScript.

        8.5 Construct functions in JavaScript.

9. Deploy a website to the internet.

    Objectives:

        9.1 Outline website deployment tools.

        9.2 Describe the domain name system (DNS).

        9.3 Demonstrate how to use a web app development framework.