

	GLOBAL LEARNING INSTITUTE
Course:	Creating & Developing Websites - An Introduction to HTML, CSS and Javascript (Basic to Advanced)
Contact Hours:	45
Pre-requisite:	Computer Literacy

Abstract

This course is an introduction to HTML, CSS and JavaScript and explores various ways to use these languages to create an effective and well-designed webpage. This course also teaches why performance and organization are important, along with how to position content for a website to work on any device.

Today's digital marketplace enables companies to use a variety of methods to better connect with their customers, most notably through the use of websites. A well-designed website provides customers with easily accessible information about the company, details on how to find or contact them, and the ability to make purchases and place orders.

Learning Outcomes

On completion of this course, learners will be able to do the following:

- Set up a development environment
- Inspect a web page with development tools
- Create a complete web page with HTML
- Create a semantic web page
- Style a web page with CSS
- Add multimedia elements to a web page
- Link multiple web pages
- Layout a web page with CSS
- Write simple JavaScript functions
- Write simple event handlers
- Make a website available on the internet
- Add simple scripts to a web page
- Display tabular data
- Create web pages that capture user input
- Optimize a web page for search engines
- Create a one dimensional layout
- Create a two dimensional layout
- Create web pages that work on all screen sizes

- Write simple application logic
- Use JavaScript data structures
- Get data from third party APIs

Course Content

1. Set up a Development Environment & Basic Web Page Creation

Installing a Text Editor & Browser, VSCode & Running a local webserver, Online Resources: repl.it Basic file editing, Inspect an existing web page with dev tools, create a web page with HTML Anatomy of HTML: Elements and Tags, Structure of an HTML document, Using Chrome Dev Tools to examine a document

Basic Formatting: Headings, Paragraphs; Div, Span, Anchor Semantic HTML: Header, Main, Section, Article, Footer

2. Style a web page with CSS

Anatomy of CSS: Rules, Basic Styles, Linking to stylesheets Selectors: Class selectors, Id selectors, Name selectors, Nested selectors Links: Absolute vs Relative URLs, Structure of a URL, Linking to external content Hyperlinks to external and internal web pages, Bookmarks (linking to the same page)

3. Font, Colors & Images

Units of Measure: pixels; points; em; rem Fonts: font-family; font-size; font-weight; color; Web fonts, Google Fonts Colors: Named Colors, RGB and HexCode values, opacity, color wheel Images: Specifying images in HTML & CSS, Image file types and tradeoffs; The Alt attribute, width, height, aspect ratio, background repeating images, min-height, max-height

4. Layout a web page with CSS

Box Model: Width, Height, Margin, Border, Padding, Basic Layout Display types: Block, Inline and Inline-Block

5. Tables & Lists

Tables: Displaying tabular data, Rows, Columns, Captions, Table styles Unordered & Ordered Lists, Nested Lists, Changing Number, Letter & Custom Bullets, List Styles.

6. Forms

Forms for User Input: Inputs, Text Areas, Selects, Radio Buttons, Checkboxes, Date, Time Pickers

7. Positioning

Static, Relative, Absolute, Fixed, Sticky, Positioning Contexts, Z-Index, Scrolling Index

8. Flexbox & Grid

CSS Flexbox for One Dimensional Layout: Parent and child containers, justify-content, align-items, flex sizing CSS Grid for Two Dimensional Layout: Grid areas, Grid templates

9. Create web pages that work on all screen sizes

Responsive Layout: Media queries, Using Chrome's mobile view, Mobile first design

10. Deployment & SEO

Deployment: Web servers; Static Website Hosting; Optimize a web page for search engines SEO considerations: Using Chrome's Audit, Meta description

11. Javascript

Printing, Literals, Types, Variables, Expressions, Statements Primitive & Reference Types Memory Model

12. Javascript

Numbers, Strings, Arrays & Objects and their associated Methods

13. Javascript

Boolean arithmetic & operators, Formatted Printing and String Interpolation Decisions (if-else, switch) and Loops (while, for)

14. Javascript

Functions, JSON, AJAX, Fetch API & Callbacks, Postman, Obtaining Data from public APIs

15. Javascript

DOM Manipulation, Event Handlers, Interactive Web Pages, Tables and Forms (Client Side Validation)