HTML CSS JS

Programming with HTML, CSS, and JavaScript

This five-day instructor-led is intended for IT professionals interested in becoming client-side web developers. who need to get a jump start on all three technologies. The course includes more than 30 exercises, providing a rapid hands-on introduction to the three major client-side languages: HTML, CSS, and JavaScript. Students should be prepared to cover a lot of ground quickly.

This course covers the same technologies as the retired Course 20480-C: Programming in HTML5 with JavaScript and CSS3. Like that course, this course focuses on using HTML, CSS, and JavaScript to develop web pages, implement programming logic, define and use variables, perform looping and branching, capture and validate user input, store data, and create well-structured applications. However, this course does not cover the HTML5 APIs covered in 20480.

Students can take this course on any computer with a web browser. Although it's not required, we recommend Visual Studio Code as the editor.

CODE: HMCSJV

DURATION: 5 days

START DATE: Day, xx/xx/xxxx

AUDIENCE PROFILE:

This course is intended for students new to computer programming or experienced programmers who are new to client-side web development.

PREREQUISITES FOR PARTICIPATION:
Basic computer and typing skills

TRAINING LANGUAGE:

Greek or English

TRAINING MATERIALS:

Step by Step training materials in the English Language

METHODOLOGY:

Lecture, discussion, demonstration and practice.

COURSE OBJECTIVES:

Upon completion of this course the participants will :
- Describe the technologies involved in web development.
- Create HTML pages with links and images.
- Explain the benefits of CSS.
- Style HTML pages with CSS.
- Explain the concepts of objects, methods, and properties.
- Work with JavaScript variables.
- Create their own custom functions in JavaScript.
- Write flow control logic in JavaScript.
- Write JavaScript code that listens for and handles events, such as mouse clicks and page loads.
- Create forms with HTML and validate them with JavaScript.
- Use regular expressions in JavaScript for advanced form validation.

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VENUE:
Webinar
or
EDITC & MMC Conference Center,
Imvrou 16, 1055 Nicosia

DATES & TIMES:

DAY, XX/XX/2022, XX:XX - XX:XX

DAY, XX/XX/2022, XX:XX - XX:XX

DAY, XX/XX/2022, XX:XX - XX:XX

DAY, XX/XX/2022, XX:XX - XX:XX

PARICIPATION COST:
The cost incudes the course notes and certificate.
In the event of classroom led training, coffee, snacks and lunch (only for full day courses) are offered complimentary.

Participation Cost
- Total Cost: €XXX
- HRDA Subsidy: €XXX
- Net Cost: €XXX

For Unemployed
- Please contact us

Programming with HTML, CSS, and JavaScript

COURSE TOPICS

Module 1: A Quick Overview of Web Development

This module gives an overview of the client-side and server-side technologies used in web development.

Lessons
- HTML is Part of a Team
- Client-side Programming
- Server-side Programming
Web Development Technologies

Lab 1: None
- None

After completing this module, students will be able to:
- Distinguish between client-side and server-side technologies.
- Identify the major client-side technologies.
- Identify the major server-side technologies.

Module 2: Introduction to HTML

This module explains the syntax and structure of HTML documents and provides a short history of HTML.

Lessons
- Exercise: A Simple HTML Document
- Getting Started with a Simple HTML Document
- HTML Elements, Attributes, and Comments
- The HTML Skeleton
- Viewing the Page Source
- Special Characters
- HTML Elements and Special Characters
- History of HTML
- The lang Attribute

Lab 1: Getting Started

- A Simple HTML Document

After completing this module, students will be able to:
- Create a simple HTML page.
- Understand HTML elements and attributes.

- Understand how whitespace is treated in HTML.
- Add special characters to HTML pages.
Explain the general history of HTML.

Module 3: Paragraphs, Headings, and Text

This module explains how to add paragraphs, headings, and inline text to HTML pages.

Lessons
- Paragraphs
- Heading Levels
- Breaks and Horizontal Rules
- Exercise: Paragraphs, Headings, and Text
- The div Tag
- Creating an HTML Page
- Quoted Text
- Preformatted Text
- Inline Semantic Elements
- Exercise: Adding Inline Elements

Lab 1: Exercises included throughout lesson

- Creating an HTML Page
- Adding Inline Elements

After completing this module, students will be able to:
- Add paragraphs to HTML pages.
- Add headings to HTML pages.
- Add breaks and horizontal rules.
- Add quoted text.
- Add preformatted text.
- Add phrase elements to call out or identify textual elements on the page.
- Understand the meaning of semantic content.

Module 4: HTML Links

This module explains the difference between absolute and relative paths and shows how to add links to external HTML pages and to locations within a page. It also shows how to create email links.

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COURSE TOPICS

Lessons
- Links Introduction
- Text Links
- Absolute vs. Relative Paths
- Targeting New Tabs
- Email Links
- Exercise: Adding Links
- Lorem Ipsum
- The title Attribute
- Linking to a Specific Location on the Page
- Targeting a Specific Location on the Page

Lab 1: Exercises included throughout lesson
- Adding Links

After completing this module, students will be able to:
- Add basic text links.
- Understand the difference between absolute and relative paths.
- Add links that open in new tabs or windows.
- Add links that open up an email client.
- Add links to specific locations on the page.

Module 5: HTML Images

This module explains how to add images to a page, how to make those images accessible, and how to create image links.

Lessons
- Inserting Images
- Image Links
- Adding Images to the Document
- Exercise: Adding Images to the Page
- Providing Alternative Images

Lab 1: Exercises included throughout lesson
- Adding Images to the Page

After completing this module, students will be able to:
- Add images to an HTML page.
- Create image links.

- Make images accessible.

Module 6: HTML Lists

This module explains how to add ordered, unordered, and definition lists to HTML pages.

Lessons
- Unordered Lists
- Ordered Lists
- Definition Lists
- Exercise: Creating Lists

Lab 1: Exercises included throughout lesson
- Creating Lists

After completing this module, students will be able to:
- Create unordered (bulleted) lists.
- Create ordered (numbered) lists.
- Create definition lists.

Module 7: Crash Course in CSS

This module provides a rapid introduction to CSS, explaining the benefits of using CSS to style HTML pages and describing the different ways to add CSS styles to HTML pages and elements.

Lessons

- Benefits of Cascading Style Sheets
- CSS Rules
- Selectors
- Combinators
- Precedence of Selectors
- How Browsers Style Pages
- CSS Resets
- CSS Normalizers
- External Stylesheets, Embedded Stylesheets, and Inline Styles
- Exercise: Creating an External Stylesheet
- Exercise: Creating an Embedded Stylesheet

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COURSE TOPICS

- Exercise: Adding Inline Styles
- div and span
- Exercise: Styling div and span
- Media Types
- Units of Measurement
Inheritance

Lab 1: Exercises included throughout lesson

- Creating an External Stylesheet
- Creating an Embedded Stylesheet
- Adding Inline Styles
- Styling div and span Elements

After completing this module, students will be able to:
- Understand the benefits of CSS.
- Redefine how elements are formatted.
- Create and use CSS selectors.
- Create and use CSS combinators.
- Understand the CSS cascade.
- Understand the role of CSS resets and normalizers.
- Create and use external and embedded stylesheets.
- Add inline styles to HTML elements.
- Use the div and span elements.
- Understand media types.
- Understand and use the viewport tag.
- Understand and select proper units of measurement.
- Understand inheritance in CSS.

Module 8: CSS Fonts

This module explains how to make text bold and italic and how to control other font attributes with CSS.

Lessons
- font-family
- @font-face
- font-size
- font-style
- font-variant
- font-weight
- line-height
- font shorthand
- Exercise: Styling Fonts

Lab 1: Exercises included throughout lesson
- Styling Fonts

After completing this module, students will be able to:
- Use the font-family property.
- Use the font-size property.
- Use the font-style property.
- Use the font-variant property.
- Use the font-weight property.
- Use the line-height property.
- Use shorthand properties, such as font.

Module 9: Color and Opacity

This module explains how to control the color and opacity of elements on an HTML page.

Lessons

- About Color and Opacity
- Color and Opacity Values
- color
- Opacity
- Exercise: Adding Color and Opacity to Text

Lab 1: Exercises included throughout lesson
- Adding Color and Opacity to the Text
After completing this module, students will be able to:
- Use the color property.
- Use the opacity property.

Module 10: CSS Text

This module explains how to align, underline, cross out, and space letters and words, how to indent text, how to control whitespace, and how to add shadows to text.

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COURSE TOPICS

Lessons
- letter-spacing
- text-align
- text-decoration
- text-indent
- text-shadow
- text-transform
- white-space
- word-break
- word-spacing
- Exercise: Text Properties

Lab 1: Exercises included throughout lesson
- Text Properties

After completing this module, students will be able to:
- Use the letter-spacing property.
- Use the text-align property.
- Use the text-decoration property.
- Use the text-indent property.
- Use the text-shadow property.
- Use the text-transform property.
- Use the white-space property.
- Use the word-break property.
- Use the word-spacing property.

Module 11: JavaScript Basics

This module provides an introduction to the HTML Document Object Model and to JavaScript, its purpose, its syntax, and its structure.

Lessons
- JavaScript vs. EcmaScript
- The HTML DOM
- JavaScript Syntax
- Accessing Elements
- Where Is JavaScript Code Written?
- JavaScript Objects, Methods, and Properties
- Exercise: Alerts, Writing, and Changing Background Color

Lab 1: Exercises included throughout lesson
- Alerts, Writing, and Changing Background Color

After completing this module, students will be able to:
- Understand the HTML Document Object Model
- Understand the JavaScript syntax rules.
- Write inline JavaScript.
- Write JavaScript within script blocks.
- Create external JavaScript files.
- Work with JavaScript objects, methods, and properties.
- Reference HTML elements with JavaScript.

Module 12: Variables, Arrays, and Operators

This module explains how to create and use JavaScript variables and arrays, and introduces JavaScript operators.

Lessons
- JavaScript Variables
- A Loosely Typed Language
- Google Chrome DevTools
- Storing User-Entered Data
- Exercise: Using Variables
- Constants
- Arrays
- Exercise: Working with Arrays
- Associative Arrays
- Playing with Array Methods
- JavaScript Operators
- The Modulus Operator
- Playing with Operators
- The Default Operator
- Exercise: Working with Operators

Lab 1: Exercises included throughout lesson
- Working with Arrays
- Working with Operators

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COURSE TOPICS

After completing this module, students will be able to:

- Create, read, and modify variables in JavaScript.
- Create JavaScript arrays.
- Use JavaScript operators.

Module 13: JavaScript Functions

This module explains how to use built-in JavaScript functions and how to write your own user-defined functions.

Lessons
- Global Objects and Functions
- Exercise: Working with Global Functions
- User-defined Functions
- Exercise: Writing a JavaScript Function
- Returning Values from Functions

Lab 1: Exercises included throughout lesson
- Working with Global Functions
- Writing a JavaScript Function

After completing this module, students will be able to:
- Understand JavaScripts global functions and objects.
- Create custom JavaScript functions.
- Return values from functions.

Module 14: Built-In JavaScript Objects

This module covers the built-in JavaScript objects and shows how to create helper functions to provide additional functionality.

Lessons
- Strings
- Math
- Date
- Helper Functions
- Exercise: Returning the Day of the Week as a String

Lab 1: Exercises included throughout lesson

- Returning the Day of the Week as a String

After completing this module, students will be able to:
- Work with JavaScript's built-in String object.
- Work with JavaScript's built-in Math object.
- Work with JavaScript's built-in Date object.

Module 15: Conditionals and Loops

This module explains flow control. It covers the different types of conditionals and loops in JavaScript.

Lessons
- Conditionals
- Short-circuiting
- Switch / Case
- Ternary Operator
- Truthy and Falsy
- Exercise: Conditional Processing
- Loops
- while and do…while Loops
- for Loops
- break and continue
- Exercise: Working with Loops
- Array: forEach()

Lab 1: Exercises included throughout lesson
- Conditional Processing
- Working with Loops

After completing this module, students will be able to:
- Write if / else if / else conditions.
- Write switch / case statements.
- Create for and while loops.

Module 16: Event Handlers and Listeners

This module explains how to capture and respond to events such as mouse clicks and keyboard actions. It also explains how to create timers in JavaScript.

Lessons
- On-event Handlers

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COURSE TOPICS

- Exercise: Using On-event Handlers
- The addEventListener() Method
- Anonymous Functions
- Capturing Key Events
- Exercise: Adding Event Listeners
- Benefits of Event Listeners
- Timers
- Typing Test

Lab 1: Exercises included throughout lesson
- Using On-event Handlers
- Adding Event Listeners
- Creating a Typing Test

After completing this module, students will be able to:
- Understand on-event handlers.
- Identify and use commonly-used on-event handlers.
- Create eventListeners.

Module 17: The HTML Document Object Model

This module dives deep into the HTML Document Object Model, explaining the many ways of accessing elements on the page and showing how to dynamically add and remove elements with JavaScript.

Lessons
- CSS Selectors
- The innerHTML Property
- Nodes, NodeLists, and HTMLCollections
- Accessing Element Nodes
- Exercise: Accessing Elements
- Dot Notation and Square Bracket Notation
- Accessing Elements Hierarchically
- Exercise: Working with Hierarchical Elements
- Accessing Attributes
- Creating New Nodes
- Focusing on a Field
- Shopping List Application
- Exercise: Logging
- Exercise: Adding EventListeners

- Exercise: Adding Items to the List
- Exercise: Dynamically Adding Remove Buttons to the List Items
- Exercise: Removing List Items
- Exercise: Preventing Duplicates and Zero-length Product Names
- Manipulating Tables

Lab 1: Exercises included throughout lesson
- Accessing Elements
- Working with Hierarchical Elements
- Logging
- Adding EventListerners
- Adding Items to the List
- Dynamically Adding Remove Buttons to the List Items
- Removing List Items
- Preventing Duplicates and Zero-length Product Names

After completing this module, students will be able to:
- Access specific nodes within the HTML DOM.
- Identify nodes by tag name, class name, and CSS selector.
- Access nodes hierarchically.
- Create and remove nodes.
- Dynamically create an HTML page with JavaScript.

Module 18: HTML Forms

This module explains how to create HTML forms.

Lessons
- How HTML Forms Work
- The form Element
- Form Elements
- Buttons
- Exercise: Creating a Registration Form
- Checkboxes
- Radio Buttons
- Exercise: Adding Checkboxes and Radio Buttons

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COURSE TOPICS

- Fieldsets
- Select Menus
- Textareas
- Exercise: Adding a Select Menu and a Textarea
HTML Forms and CSS

Lab 1: Exercises included throughout lesson
- Creating a Registration Form
- Adding Checkboxes and Radio Buttons
- Adding a Select Menu and a Textarea

After completing this module, students will be able to:
- Understand how HTML forms work.
- Understand the difference between the get and post methods.
- Add various types of form elements.
- Use labels to identify form elements.

Module 19: JavaScript Form Validation

This module explains how to validate HTML forms with HTML attributes and with JavaScript.

Lessons
- Server-side Form Validation
- HTML Form Validation
- Accessing Form Data
- Form Validation with JavaScript
- Exercise: Checking the Validity of the Email and URL Fields
- Checking Validity on Input and Submit Events
- Adding Error Messages
- Validating Textareas
- Validating Checkboxes
- Validating Radio Buttons
- Validating Select Menus
- Exercise: Validating the Ice Cream Order Form
Giving the User a Chance

Lab 1: Exercises included throughout lesson
- Checking the Validity of the Email and URL Fields
- Validating the Ice Cream Order Form

After completing this module, students will be able to:
- Access data entered by users in forms.
- Validate text fields, textareas, radio buttons, check-boxes, and select menus.
- Write clean, reusable validation functions.

Module 20: Regular Expressions
This module covers regular expressions and explains how to use them for advanced HTML form validation and to clean up form entries.

Lessons
- Getting Started
- Regular Expression Syntax
- Backreferences
- Form Validation with Regular Expressions
- Cleaning Up Form Entries
- Exercise: Cleaning Up Form Entries
- A Slightly More Complex Example

Lab 1: Exercises included throughout lesson

- Cleaning up Form Entries

After completing this module, students will be able to:
- Use regular expressions for advanced form valida-tion.
- Use backreferences to clean up form entries.