

Course Outline

Introduction to HTML5 / CSS3 and JavaScript Course TT4003: 3 days Instructor Led

About this course

This is an **introductory level** course, designed for web developers that need to upgrade core skills leveraging modern scripting and web development languages and standards. This course provides an excellent foundation for continued learning to gain in-demand skills in in-demand skills and technologies such as Angular, React, NodeJS, JQuery and more. This course can also be tuned for non-developers. Please inquire for details.

Audience profile

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At course completion

After completing this course, students will be able to:

HTML5:

- How to effectively meet requirements using the full range of HTML5 semantic and structural elements
- To work with technologies such as web storage, application caching, and cross-domain messaging to improve performance and the user experience

CSS:

- What features CSS3 supports and how they can be effectively used with HTML5 and other technologies
- To adapt to varying degrees of browser support for HTML5 and CSS3

JavaScript:

- What JavaScript is, how it relates to other programming languages, and how to script your web pages with it
- To traverse and manipulate the DOM and handle events in ways that work in all browsers
- To work with closures and prototypes and other exotic features of JavaScript

Debugging

- What is needed to effectively debug these web technologies
- How to use both browser-based and proxy-based debuggers and tools

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Session: HTML Refresher

Lesson: HTML Review

- Define HTML and review its history
- Look at XHTML and its relationship to HTML
- Identify HTML limitations and improvements

Lesson: Introduction to HTML5

- HTML5 Overview
- HTML5 Semantic Structure
- HTML5 Forms

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- HTML5 Media Delivery

Session: Introduction to CSS

Lesson: CSS Basics

- Learn the basics of CSS
- Meaning of cascading in CSS
- Declaring CSS within your HTML page
- Creating styles in an external CSS file
- Control how to display and position HTML elements
- Overriding standard tag behavior
- Adding new classes
- Using custom classes in your page

Lesson: CSS3 Overview

- What is new in CSS3
- The Advantages of CSS3
- Browser Support for CSS3

Lesson: CSS3 Advanced Selectors

- Selecting Using Attributes
- Selecting Using DOM Structure
- Complex Selecting using Pseudo-Classes
- Selecting Using UI Components and State

Lesson: CSS3 Visual Effects

- Font Options, Opacity, and Color
- Distributing Content Across Columns
- Working with Borders and Boxes
- Working with Vendor Prefixes
- Functional Techniques

Session: Introduction to JavaScript

Lesson: JavaScript Basics

- JavaScript Defined
- Variables and Operators
- Flow Control and Conditionals

Lesson: Debugging Tools

- Using the strict mode and setting breakpoints
- Browser debugging tools
- Monitoring resource usage and performance

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- Emulating devices Exceptions in JavaScript

Lesson: JavaScript Functions

- Functions in JavaScript
- Invoking Functions
- Function Constructor
- Function Scope and Closures

Lesson: JavaScript Arrays, Math and Date

- JavaScript Literals
- JavaScript Arrays
- Working with Numbers and Dates

Lesson: JavaScript Event Handling and the DOM

- Events and Event Handling
- HTML Document Object Model
- Accessing the DOM
- Dynamically Working with the DOM
- DOM Challenges

Lesson: Object-Oriented JavaScript

- JavaScript “Objects” and “Classes”
- Constructors and Prototypes
- Prototypes
- Extending Classes with Prototype
- Reusable, Flexible Classes