# Online Web Applications Developer Course

**404 hours / 12 months**

## Course Description

Whether you're new to web development or want to enhance your skills, this self-paced course will teach you how to create dynamic, database-driven websites using the latest technologies. By course completion, you'll build and develop a web application from the ground up.

You will master basic HTML, the core technology behind almost all websites. From there, you will go on to learn Cascading Style Sheets (CSS) for styling pages and JavaScript for adding interactivity to your pages. You will then learn how to interact with a database, auto-generate emails, and create registration and login pages using HTML forms, PHP, and SQL. Let's not forget XML: this course will also teach you the basics of the fundamental markup language.

## Prerequisites

There are no prerequisites to take this course.

### Hardware Requirements

- This course can be completed on either a PC (Windows 10 or later) or a Mac (MacOS 11.0 or later).

### Software Requirements

- Browser: The latest version of Google Chrome or Mozilla Firefox are preferred. Microsoft Edge is also compatible.
- Visual Studio Code (not included in enrollment).
- One of the following databases (not included in enrollment):
    - Microsoft Access
    - Microsoft SQL
    - Server Express
    - MySQL Oracle
- MAMP (Instructions for installing MAMP will be included with the course).
- MySQL Workbench (Instructions for installing MySQL Workbench will be included with the course).
- Adobe Acrobat Reader.
- You will need to have administrative access to your computer so you can properly download and configure the software required for the course.
- Software must be installed and fully operational before the course begins.

### Other Requirements

- Email capabilities and access to a personal email account.

## Course Outline

| MODULE | TOPICS COVERED |
|---|---|
| 1: Introduction to HTML | • A Quick Overview of Web Development<br>• Introduction to HTML<br>• Paragraphs, Headings, and Text<br>• HTML Links<br>• HTML Images<br>• HTML Lists<br>• HTML Tables<br>• Sectioning a Web Page<br>• Audio and Video |
| 2: Introduction to CSS | • A Crash Course in CSS<br>• CSS Fonts<br>• Color and Opacity<br>• CSS Text<br>• Borders, Margins, and Padding<br>• Backgrounds<br>• Display and Visiblity<br>• Pseudo-classes and Pseudo-elements<br>• Styling Tables with CSS<br>• Positioning<br>• Transforms and Transitions<br>• Layouts<br>• CSS Lists as Hierarchical Navigation<br>• Media Queries |
| 3: Introduction to JavaScript | • JavaScript Basics<br>• Variables, Arrays, and Operators<br>• JavaScript Functions<br>• Built-In JavaScript Objects<br>• Conditionals and Loops<br>• Event Handlers and Listeners<br>• The HTML Document Object Model<br>• CSS Object Model<br>• Errors and Exceptions |
| 4: Creating, Styling, and Validating Forms | • HTML Forms<br>• JavaScript Form Validation<br>• Styling Forms with CSS<br>• Regular Expressions<br>• Node.js and Server-side Form Validation<br>• JSON |
| 5: Advanced JavaScript Concepts | • Node.js<br>• Scope, var, let, and const<br>• Arrow Functions |

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| | • Rest Parameters<br>• Spread Operator<br>• Array Destructuring<br>• Template Literals<br>• Objects<br>• The this Object<br>• Array map( ) Method<br>• Array filter( ) Method<br>• Array find( ) Method<br>• JavaScript Modules<br>• npm |
| 6: Vue.js 3 | • Getting Started with Vue.js<br>• Basic Vue Features<br>• Directives<br>• Implementing Game Logic<br>• Transitions and Animations<br>• Vue Routing |
| 7: Bootstrap Training | • Getting Started with Bootstrap Basics<br>• Bootstrap Layout<br>• Creating Responsive Navigation<br>• Bootstrap Typography<br>• Tables<br>• Bootstrap Forms<br>• Images<br>• Bootstrap Components<br>• Bootstrap Utilities<br>• Bootstrap Flex |
| 8: Introduction to SQL Training | • Relational Database Basics<br>• Simple SELECTs<br>• Advanced SELECTs<br>• Subqueries, Joins, and Unions |
| 9: Introduction to PHP Training | • PHP Basics<br>• Flow control<br>• Arrays<br>• PHP and HTML Forms<br>• String Manipulation<br>• Reusing Code and Writing Functions<br>• Managing Data<br>• Authentication with PHP and SQL<br>• Regular Expressions<br>• Session Control and Cookies<br>• Sending Email with PHP<br>• File System Management |
| 10: Introduction to XML Training | • XML Basics<br>• DTDs<br>• XML Schema Basics<br>• XSLT Basics |
| 11: WordPress Training | • Introduction and Setup Options |

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| | • WordPress Dashboard<br>• Posts<br>• Comments and Feedback<br>• Appearance<br>• Pages<br>• Reader Page |