Certified Associate Web Developer- WDA

Prerequisites: WDE (Web Developer Entry Level Certification)

Day 1: HTML Fundamentals and CSS Basics (8 Hours)

Morning Session (4 Hours)

1. **HTML Fundamentals Refresher (2 Hours)**

   o   Overview of HTML Structure and Semantics

   o   Essential Tags: Headings, Paragraphs, Links, Lists, and Images

   o   Forms and Input Elements Overview

2. **Introduction to CSS (2 Hours)**

   o   What is CSS and Its Role in Web Development

   o   CSS Syntax: Selectors, Properties, and Values

   o   Inline, Internal, and External CSS

Lab Session (2 Hours)

- Build a basic HTML webpage (header, footer, navigation, and content).
- Apply Inline and Internal CSS to style text, links, and images.

Afternoon Session (4 Hours)
3. CSS Selectors and Specificity (2 Hours)

- Universal, Type, Class, ID, and Group Selectors
- Attribute and Pseudo-class Selectors
- Understanding Specificity and Importance (!important)

4. **Basic Styling (2 Hours)**

   o   Colors and Backgrounds

   o   Text Styling: Fonts, Sizes, Line Height, and Spacing

   o   Borders and Shadows

Lab Session (2 Hours)

- Create a styled webpage with different selectors.
- Experiment with colors, fonts, and spacing.

Day 2: Integrating HTML and CSS (8 Hours)

Morning Session (4 Hours)

1. **CSS Box Model (2 Hours)**

- o Margins, Borders, Padding, and Content
  - o Box Sizing and Overflow
  - o Debugging with Browser Developer Tools

2. **CSS Positioning (2 Hours)**

  - o Static, Relative, Absolute, Fixed, and Sticky Positioning
  - o Z-index and Layering
  - o Centering Elements

Lab Session (2 Hours)

- Create a webpage demonstrating the box model.
- Build a layout using different positioning techniques.

Afternoon Session (4 Hours)
3. **CSS Layout Techniques (2 Hours)**

- Flexbox: Properties and Alignment
- Grid Layout: Rows, Columns, and Areas

4. **Integrating HTML and CSS (2 Hours)**

  - o Organizing External Stylesheets
  - o Maintaining Consistency with Variables (--variable-name)
  - o Adding Simple Transitions

Lab Session (2 Hours)

- Create a multi-section webpage using Flexbox and Grid.
- Enhance layout with transitions and variables.

Day 3: Responsive Web Design and Layout Techniques (8 Hours)

Morning Session (4 Hours)

1. **Responsive Design Principles (2 Hours)**

  - o Mobile-First Design Philosophy
  - o Viewport and Media Queries
  - o Relative Units: %, em, rem, and vh/vw

2. **Responsive Layouts (2 Hours)**

  - o Creating Fluid Grids
  - o Using Flexbox for Responsive Layouts

o   Making Images and Media Responsive

Lab Session (2 Hours)

- Build a webpage with a responsive layout using media queries.

- Test and refine the layout for different screen sizes.

Afternoon Session (4 Hours)
3. **Advanced CSS Techniques (2 Hours)**

- Pseudo-Elements and Advanced Pseudo-Classes

- CSS Animations and Keyframes

- Using Transformations for Creative Effects

4. **Typography in Web Design (2 Hours)**

   o   Web Fonts and Font Embedding

   o   Letter Spacing, Word Spacing, and Line Height

   o   Contrast and Readability

Lab Session (2 Hours)

- Add animations and responsive typography to a webpage.

- Use advanced pseudo-classes for dynamic effects.

Day 4: Accessibility, Usability, and Best Practices (8 Hours)

Morning Session (4 Hours)

1. **Accessibility Fundamentals (2 Hours)**

   o   ARIA Roles and Landmarks

   o   Keyboard Navigation and Focus Management

   o   Testing Accessibility with Tools

2. **Usability and Best Practices (2 Hours)**

   o   Optimizing CSS for Performance

   o   Modular CSS and File Organization

   o   Consistency and Maintainability

Lab Session (2 Hours)

- Make an existing webpage accessible and test using accessibility tools.

- Refactor CSS for improved organization and performance.

Afternoon Session (4 Hours)
3. **Final Project: Building a Responsive Webpage (4 Hours)**

- Develop a multi-page website integrating all learned techniques:
  - Semantic HTML and External CSS
  - Responsive Design with Flexbox and Grid
  - Accessibility Features and Modern CSS Effects

Lab Session (2 Hours)

- Work on the final project with instructor feedback.