

# Web Application Development

## Module 1 – HTML and CSS

### Course Description

This course is an introduction to developing web sites and web applications using HTML and CSS.

### Who is it for?

The course is ideal for those who are interested in a career as a web site designer or programmer. It is also useful for anyone thinking of creating web-based applications including business applications and games.

### Learning Outcomes

After completing this module, you will be able to create simple web sites from scratch. You will have a good understanding of HTML and CSS. You will understand how to build web sites that adapt to different screen sizes (for desktop, tablet and mobile devices). And you will know how to use online HTML and CSS reference documentation so that you can learn more by yourself.

### Pre-requisites

- The module does not assume that you have any coding experience.
- You will need to be comfortable working in English.
- You will need to be comfortable using a computer or laptop and a web browser.
- You must be aged 14 to 19 at the start of the course.

### Course Format

9 hours of classroom instruction and guided practical exercises. Usually delivered as 6 weekly sessions of 90 minutes per session.

### Next Steps

The course provides a sound foundation for learning more advanced concepts and technologies including JavaScript, JQuery, AngularJS, PHP, ASP and SQL. It is also a good introduction for anyone looking to build hybrid applications and games for mobile devices.

### Course Content

#### Web application architecture

- How web sites work
- Components of a web application
- Comparing client-side and server-side

#### Development tools

- Visual Studio Code
- Developer features in Chrome

#### Using reference documentation

- How to use HTML and CSS reference documentation

#### Introduction to HTML

- Document structure
- Elements
- Attributes

#### Introduction to CSS

- Font
- Color
- Size ('em' and 'px' sizing)
- Inline, internal and external code

#### Selectors and Combinators

- Basic selectors
- Combinators: descendent, child, sibling
- Classes and IDs
- Pseudo-classes

#### Responsive Web Design

- The principle of "mobile first" design
- Float and clear
- Percentage sizes
- Viewport scaling
- Media queries
- Pseudo-elements

#### Navigation bars and menus

- Block and inline positioning
- Hyperlinks
- Lists
- Horizontal and vertical menus
- Absolute positioning
- Drop down menus