

Web Application Development

Course Overview

Course Description

Introduction to software development, and what it's like to work in a professional team of developers. The course focuses on web applications but the subjects covered are relevant for all software development.

Who is it for?

The course is ideal for those who are interested in a career as a website developer or software programmer.

Content Summary

The course guides you through creating a complete web application from start to finish. You'll use HTML, CSS, JS, PHP and SQL. The course will also cover the MVC design pattern.

Course Format

Four hours of classroom lessons to introduce key concepts and begin working on the sample project.

Self-study workbook for you to continue working on the sample project at home. Ongoing instructor support for one month.

Pre-requisites

- You do not need any coding experience.
- You will need to be comfortable working in English.
- You will need to be comfortable using a Windows or Mac computer and a web browser.
- You will need **YOUR OWN COMPUTER** to work on at home. If you have a laptop you can bring it to the classes and the instructor will help you set it up.

Learning Outcomes

After completing this course you will understand the basics of software development and typical methods used in commercial organisations. You will be able to code websites and web-based applications from scratch. This is an introductory course. It touches on a few advanced concepts but mainly it provides overviews only, and explains how to use the online reference documentation to learn more by yourself. The course provides a sound foundation for learning other languages such as C++.

Course Content

Web application architecture

Overview of how websites work
Server-side vs Client-side code

Software Design Patterns

What are they and why use them
Introduction to the MVC design pattern
URIs and Routing

Important Coding Concepts

Variables, arrays and functions
Classes and objects
Properties and methods
Using the official documentation

Development tools

Atom and Chrome
The development workflow

Introduction to HTML

Document structure
Elements, tags and attributes

Introduction to CSS

Rule sets and selectors
CSS classes and IDs

Introduction to JavaScript

Functions and Events
Arrays and loops
Mouse controls

Introduction to PHP

Sessions
Functions and variables
Arrays and loops
Database connections

Introduction to SQL

Creating a database
Inserting, updating and deleting data

Advanced Concepts

Designing for mobile devices
Media queries
Navigation bars and menus
Browser compatibility
Using APIs