# C# & ASP.NET Teaching Syllabus

Duration: 12 Weeks | 3 Lectures per Week | Each Lecture = 2 Hours

## Month 1 – C# Fundamentals

|  |  |  |  |
| --- | --- | --- | --- |
| Week | Day(1) | Day(2) | Day(3) |
| Week(1) | Introduction to .NET & C# Basics (variables, data types) | Control Structures (if, switch, loops) | Workshop: Console Applications |
| Week(2) | Methods & Parameters | Arrays & Strings | Workshop: Problem Solving with C# |
| Week(3) | OOP Concepts – Classes & Objects | Encapsulation & Inheritance | Workshop: OOP Mini Project |
| Week(4) | Polymorphism & Interfaces | Exception Handling | Workshop: Error Handling Scenarios |

## Month 2 – Database & ASP.NET Basics

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  | | --- | --- | --- | --- | | Week | Day(1) | Day(2) | Day(3) | | Week(5) | Introduction to SQL Server & ADO.NET | CRUD Operations with Database | Workshop: Student Management DB | | Week(6) | Introduction to ASP.NET Framework & Web Forms | Page Life Cycle & Controls | Workshop: Login Page | | Week(7) | State Management (ViewState, Session, Cookies) | Master Pages & User Controls | Workshop: Web Forms Application | | Week(8) | Introduction to ASP.NET MVC Architecture | Controllers & Views | Workshop: Task Manager App (MVC) | |

## Month 3 – ASP.NET MVC Advanced & Final Project

|  |  |  |  |
| --- | --- | --- | --- |
| Week | Day(1) | Day(2) | Day(3) |
| Week(9) | Models & Data Binding | Entity Framework Basics | Workshop: CRUD with MVC |
| Week(10) | Authentication & Authorization | Identity Framework & Roles | Workshop: Secure Login System |
| Week(11) | Routing & Navigation in MVC | Razor Syntax & Validation | Workshop: E-Commerce Mini Project |
| Week(12) | Project Development (Final Project) | Project Work | Project Presentation & Evaluation |