

Course Name : Certificate Course in Programming Excellence through C# with ASP.Net

Course Code : C24

Eligibility : 10+2

Fee : Rs 6,000/-

Duration : 04 Months (200 Hrs)

C24 – 01

Concept of C# along with Microsoft .Net Framework		
Total Hours :-55 (T: 30, P:25)		
Topics	Theory	Practical
Section - I		
<p>Introduction to .Net Framework:- Architecture of .Net Framework, Main Components of .Net Framework, .Net Core and .Net Framework, Characteristics, Versions, Advantages and Disadvantages</p> <p>Fundamentals of C# - Default Assignment and Variable Scope, The C# Member Initialization Syntax, Basic Input and Output with the Console Class, Understanding Value Types and Reference Types, Keywords, Variables, Constants, Data Types, Expressions, Statements, Operators, Type Conversion, Basic Structure of C# Program, .Net Collections</p> <p>Control Structures:- Control Statements - Conditional Statements - Decision Making or Branching Statements -Simple - If else - Else if - Nested if - Switch - Looping Statements - for - while - do while- foreach - Unconditional Statements - break - continue - goto</p>	6	4
Section - II		
<p>C# Arrays: - Declaration, Initialization, One dimensional and Multi-dimensional arrays, Jagged array.</p> <p>Strings: - Creating Strings, Operations on Strings – Length, Compare, Joining, Arrays of Strings</p> <p>Functions :- Definition, Types of Functions, Advantages and Disadvantages, Call by Value and Call by Reference.</p> <p>Recursion: - Working of Recursion, Advantages and disadvantages, Examples - Factorial</p> <p>Lists: - Creation, Accessing, Iteration Basic Operations on List</p>	10	8
Section – III		
<p>C# Object Oriented Programming: - Classes, Objects, Structs, Access Modifiers, Constructors and Destructors, Inheritance, Sealed Classes and Sealed methods, Extension methods, Encapsulation using accessors and mutators, Encapsulation using</p>	8	8

properties, and Polymorphism, Compile time and Run Time Polymorphism, Data Abstraction, abstract classes, abstract methods, Interfaces – Syntax and Implementation.		
Section – IV		
<p>File Handling: - C# File Class and its Methods, Operations on Files – Create, Read, Write, Open, Copy, Processing a file, BinaryReader and BinaryWriter classes in C#, FileInfo</p> <p>Exceptions :- Types of Errors, Exceptions and its types, Exception Handling, Custom Exceptions, Exception handling abuse in C#.</p>	6	5

C24 – 02

Integration with ASP.Net		
Total Hours :-95 (T: 40, P:55)		
Topics	Theory	Practical
Section - I		
<p>Fundamentals of ASP.Net: - Introduction to ASP.Net, ASP.Net Web Applications, Client – Server Architecture, The Common Language Runtime, Object Oriented Concepts, Event Driven Programming, Types of ASP.Net Files, Page Life Cycle.</p> <p>Server Control: - Postback, Data binding – Grid view, list box, data list, data binding event, Sorting data, paging through data, repeater, form view. Web Server Controls, HTML Server Controls</p> <p>Form Validation:- Client side validation, server side validation, Navigation Controls, Login Control, Regular Expression, Custom Validation, Compare Field, Validation Summary, Radio Button, Radio Button List, Checkbox, Check box List, Image Button, Label, Link Button, Text Box, Panel</p>	12	15
Section - II		
<p>Style, Theme and Master Pages: - Creating Style sheet, applying style sheet rules, Themes, Basics of Master Page, How Master page and content pages are connected, Nesting Master page.</p> <p>ASP.Net State Management: - Client side State Management technique, Server side Management technique, View State, The Query String, Cookies, Session State, Application State, The Global.asax Application files, ASP.Net Configuration Files, Communication with Web Browser, Object, Variable Scope</p>	10	15
Section – III		
<p>Advanced ASP.Net :- web.config, Sitemappath server control, User control, User Profile, Web Services – Basics, Interfacing with Web Services, Error Handling – Unstructured Error, Structured Error, Error handling in database.</p> <p>Database Access using ADO.Net: - ADO.Net Architecture, Data Provider, Adapter, Connection object, Command object, Data Reader object, Data Adapter object, Grid View, Dataset, Data</p>	10	15

View, Data Binding, Typed datasets, SQL Data Source: Select, Delete and Update Records, Database Access using ADO.Net, Transactions		
Section – IV		
<p>Data and Security in ASP.Net:- Web application using ASP.Net, ASP.Net Architecture, Working with Controls, User Interface Elements, Deployments, Web Sites, Applications and Virtual Directors in IIS. Accessing data using ADO.Net, Connecting to data, Executing commands, IIS URL Authorization, Forms Authentication and Config File encryption. Caching: Data Caching and Output Caching.</p> <p>Internalization: Globalization vs Localization, Creating Global Resources, Applying Culture dynamically.</p> <p>FTP Management:- Understanding FTP, Setting up FTP Server, Uploading and downloading FTP Contents</p>	8	10