

Course 6. MS.NET Programming

Sr. No.	Module Name	Hours
1	Fundamentals of Computer & OOPs Concepts	26
2	Software Development Life Cycle	12
3	Database Technologies	30
4	Foundations of Web Technologies	32
5	MS .Net Window programming	50
6	MS .Net Web based programming	70
7	Management Development Program	60
8	Project	40
Total		320

Eligibility: Any Engineering /Science graduate with mathematics up to 10+2 level.

Course Pre-requisites: Sound knowledge of Computing Fundamentals and Fundamentals of Programming.

Course Focus: The objective of this course is to provide the student with an expertise in .Net Programming. After doing the course the student will be able to design, develop and maintain web-based enterprise applications effectively

Detailed Syllabus

Fundamentals of Computer & OOPs Concepts (26 Hours)

- Fundamentals of Computers
 - Uses of Computer, Hardware, Accessories,
 - Interfaces and their functions, Computer hardware connectivity
 - Primary and Secondary storage
 - Input-output devices
 - Software, types of software, Operating Systems
 - Software used in Academic departments and other area.
 - Computer language, Different types of Programming Languages
 - Operating System (Introduction, The Need of Operating System, Functions of Operating System User Interface)
- Object oriented concepts
 - Classes and Objects
 - Access Specifiers
 - Overloading
 - Inheritance
 - Polymorphism

Software Development Life Cycle (12 Hours)

- Software Engineering
- Brief concept of Software Life Cycle Models
- Agile Techniques for software development
- Software Development Tools & Techniques
- Introduction to Coding Standards

- Software Testing

Database Technologies (30 Hours)

- Database Concepts
 - Client/Server Computing
 - RDBMS Technologies
 - Codd's Rules
 - Data Models
 - Normalization Techniques
 - ER Diagrams
- SQL and PL/SQL
 - Introduction SQL*Plus
 - DDL, DML and DCL
 - Tables, Indexes and Views
 - Generic PL/SQL
- Overview of OORD (Oracle)

Foundations of Web Technologies (32 Hours)

- Architecture of the Web
- HTML 5.0 programming
- DHTML
- CSS
- DOM
- JavaScript
- jQuery
- The Purpose and Nature of XML
- XML Syntax and Structure rules
- XML Document Type Declaration
- XML and Data Binding XML linking mechanisms
- XML style language
- XML parsers

MS .Net Window programming (50 Hours)

MS .NET 4.5 Framework (10 hours)

- Introduction to NET 4.5 Frameworks
- Application Domain
- Language Interoperability
- .NET Framework Class Library
- Assemblies
- Introduction of Windows Presentation Foundation
- Introduction of Windows Workflow Foundation
- Introduction of Windows Communication Foundation

C# .NET 4.5 (40 Hours)

- Need of C#
- Operators
- Namespaces & Assemblies
- Arrays

- Preprocessors
- Delegates and Events
- Boxing and Unboxing
- Regular Expression
- Collections
- Exceptions Handling
- Introduction to Win Forms
- Working with database
- Windows Communication Foundation

MS .Net Web based programming (70 Hours)

- Introduction and difference between ASP and ASP .Net Application
- The goals of Asp .Net 4.5
- Additional new features of Asp.net 4.5
- ASP .NET Server Controls and client-side scripts
- ASP .NET Web Server Controls
- Validation Controls
- User Controls in ASP .NET
- Working with Master-Detail relationship
- ASP .NET State Management
- ASP .NET Web Application Security
- Transaction Management
- Building .NET components
- ADO.NET 4.5, Querying with LINQ
- Master Pages, Themes and skins
- Difference between Web Services and Windows Communication foundation
- MVC Architecture
- MS.NET MVC Framework
- View master pages and view user control
- Understanding HTML Helpers
- Working with AJAX
- Using jQuery
- Authenticating users
- Understanding Routing
- Deploying ASP .NET MVC application

Management Development Program

Introduction to communication, Barriers to communication, Kind of communication, Confidence building Non-verbal Communication, Fluency and vocabulary, Synonyms, Antonyms, Grammar, Noun Pronoun, Verb, Adjective, Preposition, Conjunction, Words of Idioms & phrases, Sentence Construction, Fill up the blanks, Pronunciation, Conversation practice, Polite Conversation, Greeting, Logical reasoning, General Aptitude, Writing: Covering letter, Resume, Email, Presentation Skill, group discussion, Interview skills, Mock interview

Project