Paper Code   : .NET:404
Paper Name   : C# & ASP.NET

Teaching Hours (Per Week)		Examination Scheme		
TH. (hours)	Pr. (hours)	Internal	External	Total
		Th. (marks)	Th. (marks)	100 (marks)
4		30	70	

Lectures   =   68 Hours

"The .NET Framework has become a leading environment for which code is created. The premier language for .NET development is C#. and ASP.NET is flagship technology for building highly interactive, highly scaled websiter.Therefore, if .NET programming is in future, we have chosen the right language to learn."

Detailed Syllabus

UNIT I   15 Hours

Introduction
The C# language, The .Net Architecture and .Net Framework, The Common Language Runtime (CLR), Microsoft Intermediate Language (MSIL) Code, Just In Time Compilers (JITers), The Framework Class Library (FCL), The Common Languages Specification (CLS), The Common Type System (CTS), Garbage Collection (GC), The .Net Framework, Working with Visual Studio.Net, Similarities and Differences between C# and C++, Java, and Visual Basic, Understanding the HELLO WORLD Application Code, Namespaces in C#, The using Keyword, The class Keyword, The Main() Method, Printing on the Console, Comments.

C# Basics
Data Types, Variables & Constants, Operators in C#, Arithmetic Operators, Prefix and Postfix notation, Assignment Operators, Relational Operators, Other Operators, Operators precedence, Flow Control and Conditional Statements if-else statement, switch statement, Loops in C#, for loop, do-while loop, Array in C#, foreach Loop.

UNIT II   20 Hours

Object and Classes
Concept of a class, Objects, Fields, Methods, Instantiating the class, Accessing the members of a class, Access modifiers, Properties, Static members of the class, Constructors, Desturctors, Overloading Constructors, Value types (out & ref keywords).

Inheritance& Polymorphism

Implementing inheritance in C#, The base keyword, Protected Access Modifier, sealed keyword, Polymorphism, using the reference of the base type for referencing the objects of the child class, using methods with the same name in the base and Sub-class, Overriding the methods, the new keywords, Type casting, is and as keywords, Boxing and Un-boxing.

UNIT III   **8 Hours**

Structures, Enumeration, Garbage Collection and Nested Classes, Abstract classes & Interfaces
Defining and Instantiating Structures (struct), Using Enumeration (enum), Garbage Collection in .Net, System.GC.Collect() method, Nested Classes in C#, Abstract Classes, Interfaces.

UNIT IV   **16 Hours**

Exception handling, Delegates & Events, Multithreading
Exceptions in C# and .Net, Handling Exceptions using the try-catch-finally blocks, Delegates Basics, Delegates in the .Net Framework, Passing delegates to methods, Multicast Delegates, Events and Events handling in C#, Multicast events, Multithreading in C#, Thread Functionality, System.Threading.Thread class, using join() method, Thread Synchronization.

WinForm & Controls
Building the "HELLO WINFORM" Application, Adding Events Handling, Form Designer, Solution Explore, Windows Form Controls- The Button Control, Adding the Event Handlers, The Label and LinkLabel Controls, The TextBox Control, Adding the Event Handlers, The RadioButton and CheckBox Controls, The ListBox and CheckedListBox Controls, ListBox Properties, The ComboBox Control.

UNIT V   **7 Hours**

ASP.NET
Overview of ASP.NET framework, Stages in Web Forms Processing, Introduction to Server Controls, HTML Controls, Validation Controls, User control, Data Binding Controls, Configuration, Personalization, Session State, Adding controls to a web form, Buttons, Text Box , Labels, Checkbox, Radio Buttons, List Box, etc.

RECOMMENDED BOOKS
1. Faraz Rasheed "Programmer Heaven C# School".
2. Stephen Walthert "ASP.NET 3.5 unleased", SAMS
3. Shibi Panikkar and Kumar Sanjeev, "C# with .NET Frame Work", Firewall Media.
4. Jeffrey Richter, "Applied Microsoft .Net Framework Programming", (Microsoft)
5. Balagurusamy, "Programming with C#", TMH