

Branch Name:	Information and Communication Technology
Semester/Year:	Semester VI / Third Year
Subject Title:	.NET (Elective-I)
Subject Code:	1ET1070608
Pre-requisite:	Object Oriented Programming

Course Objective:

- To analyze and evaluate various components of .net framework
- To understand features of C#/VB using Console Application.
- To understand Windows/Web based application using Microsoft Visual Studio.
- To understand ADO.net based database driven .NET application.

Teaching Scheme (Hours per week)				Evaluation Scheme (Marks)				
Lecture (L)	Tutorial (T)	Practical (P)	Credit	Theory (Marks)		Practical (Marks)		Total (Marks)
				University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	
03	-	02	04	70	30	30	20	150

Subject Contents				
Sr. No	Topic	Total Hours	Weightage (%)	
1	Introduction to .NET Framework: .NET framework Architecture, MSIL, CLR, CLS, CTS, Namespaces, Assemblies, Garbage Collection, End to DLL Hell - Managed Execution, Reflection API.	4	8	
2	Basics and Console Applications in C#: Variables and Constants, Data Types, Arrays, Classes and Inheritance, Name Spaces - Constructor, Method Overloading, Property and Indexers, Delegates, Debugging and Error Handling, String Manipulation, Files and I/O, Collections.	5	10	
3	Windows Forms and Controls: The Windows Forms Model, Creating Windows Forms, Windows Forms Properties and Events, Windows Form Controls, Container Controls, Menus - Dialogs – ToolTips, DataGridView control	6	10	
4	Deploying Window Application: Deployment Overview, Visual studio setup and Deployment project types	4	7	
5	ADO.NET: Introduction to ADO.NET, ADO.NET Architecture, Data Providers in .Net, Data Readers, Datatable, Dataset and Data Adapters, Data Source Controls.	7	20	
6	ASP.NET: Introduction to ASP.NET, HTML and ASP.NET Controls, Using Rich Server Controls, Login controls, ASP.NET Validation Controls, ASP.NET page events, ASP.NET Configuration, Tabular Data Bound Controls, Hierarchical Data Bound Controls	7	20	
7	Themes and Master Pages: Fundamentals of ASP.NET Master Pages, Master Pages in Web Configuration, ASP.NET Themes- Creating Themes, Skin File, CSS.	5	10	

8	Managing Application State: Using Cookies to Preserve State, ASP.NET Session State Management, Storing Objects in Session State, Configuring SQL Server Session State.	5	10
9	Web Services: Introduction, The Motivation for XML Web Services, WSDL, SOAP, UDDI, Creating an XML Web Service with Visual Studio, Creating Web Service Consumers, Discovering Web Services Using UDDI.	4	3
10	Advanced in .NET: Introduction to Windows Presentation Foundation (WPF), Window Communication Foundation, Silverlight	3	2

Course Outcome:

After successful completion of this course, student will be able to:

Use components of .net framework architecture, various tools, and Validation techniques, Develop Windows/Web based application using Microsoft Visual Studio, Develop ADO.net based database driven .NET application, Develop ASP.net web application.

List of Text Books:

1. ASP.NET unleashed - Stephen Walther, Kevin Hoffman, Nate Dudek. Pearson
2. C#: The Complete Reference - Herbert Schildt TMH

List of Reference Books:

1. ASP.NET: The Complete Reference - Matthew Macdonald TMH
2. Beginning C# Object-Oriented Programming By Dan Clark , Apress
3. Head first C# by Andrew Stellman O'Reilly

List of Suggested titles of Experiments:

1. Develop a console application to display sum of digits.
2. Develop a Console application to calculate Courier Service Charges of goods from source to destination with Following Constraints. Following are the cost distance matrix:
Less than 100 km - 50 Rs/Kg, 100 to 200 km – 65Rs/Kg
200 to 300 km - 90 Rs/Kg Greater than 300 km - 120 Rs/K
Distance in Kilometer and Total Kg of goods are the input parameter.
3. Develop a Console application to Create a Student class that stores rollno, name and marks of three subjects. Add one function that calculates percentage and grade based on percentage. Calculate total students who have passed.
4. Develop a Console application to demonstrate use of Property {get, set}.
5. Develop a Console application to read and write to a file.
6. Develop a Simple Calculator Form in Windows Application.
7. Develop an ASP.net webpage to demonstrate validation controls.
8. Develop an ASP.net web page to show all page events along with their order of Execution.
9. Develop an ASP.net web page to upload an image and load it within same page. Repeat for multiple image upload and display all in the same page.
10. Develop an ASP.net web application to demonstrate page themes.
11. Develop an ASP.net web application to demonstrate session management across application
12. Develop an ASP.net web application to demonstrate Data Bound Controls. [Controls must be bounded dynamically.]