

CP351: .NET TECHNOLOGY
CREDITS = 5 (L=3, T=0, P=2)

Course Objective:

To impart basic knowledge of .NET framework and C# leading to design of web application.

Teaching and Assessment Scheme:

Teaching Scheme			Credits	Marks Distribution				Total Marks
L	T	P	C	Theory Marks		Practical Marks		
				ESE	CE	ESE	CE	
3	0	2	5	70	30	30	20	150

Course Contents:

Unit No.	Topics	Total Hours
1	<u>Basic of .NET Framework:</u> NET framework, MSIL, CLR, CLS, CTS, Namespaces, Assemblies The Common Language Implementation, Assemblies, Garbage Collection, Managed Execution, Introduction to .NET Core, Important of .NET core , Introduction to ASP.NET Core.	08
2	<u>C# - The Basics and Advances:</u> Program structures, Types and Variables, Expressions, Statements, Class, Objects Name Spaces - Constructor and Destructors, Function Overloading & Inheritance, Operator Overloading, Array, Interfaces, Modifiers -, Working with Console input & Output, Property and Indexers ,Enum, Attributes & Reflection API, Async, Generics, LINQ Query Expressions, Lambda Expressions, Logging log4net.	10
3	<u>Data Access:</u> Advantage of ADO.NET, ADO.NET Architecture, .NET Providers, Connection, Command, DataSet, DataReader. Working with Connection Oriented and Connection less approach, LINQ, Entity Framework.	05
4	<u>ASP.NET:</u> Introduction to WebForms, Basic working of WebForms, MVC, Introduction to ASP.NET MVC, UI, Layouts and Themes, Working with Entity Framework using MVC , Security Authentication and Authorization.	10

5 **Web Services:**

The Motivation for XML Web Services, Creating an XML Web Service with Visual Studio, Designing XML Web Services, Creating Web Service Consumers, Discovering Web Services Using UDDI, Hosting and Deployment: Hosting web sites and web services on IIS on premises and hosting on Azure/AWS cloud hosting. 05

6 Introduction to WPF, Create simple Desktop application, Understating of AJAX with ASP.NET, AJAX Toolkit, and Introduction to extended AJAX Toolkit. 05

TOTAL 45

List of Reference Books:

1. Christian Nagel,"Professional C# 6 and .NET Core 1.0", wrox publication.
2. Brad Wilson, K. Scott Allen, David Matson,"Professional ASP.NET MVC 5", Wrox publication
3. Joseph Albahari, Ben Albahari,"C# 6.0 in a Nutshell, 6th Edition",O'Reilly Media

Course Outcomes (COs):

At the end of this course students will be able to

1. Understand the basics of .NET framework
2. Develop programs using C# programming language.
3. Develop Web application having database connectivity.
4. Understand of ADO.NET, MVC based ASP.NET architecture.
5. Develop application using MVC and Ajax.
6. Deploy web application on Web servers