



Kadi Sarva Vishwavidyalaya
Faculty of Engineering & Technology
Third Year Bachelor of Engineering (CE/IT)
(In Effect From Academic Year 2019-20)

Subject Code: CT506C-N	Subject Title: Dot Net Technology
Pre-requisite	

Teaching Scheme (Credits and Hours)

Teaching scheme				Total Credit	Evaluation Scheme					
L	T	P	Total		Theory		Mid Sem Exam	CIA	Pract.	Total
Hrs	Hrs	Hrs	Hrs		Hrs	Marks	Marks	Marks	Marks	Marks
03	00	02	05	04	03	70	30	20	30	150

Course Objective:

- Programming using high-level abstractions such as classes, interfaces, namespaces, properties, delegates, events, threads, attributes, generics, and iterators.
- Using the .NET platform to develop dynamic web pages with ASP.NET, Web Services, ADO .NET.
- It also covers the most important features of the class library (collections, IO, threading, sockets, Windows Forms, reflection, Xml, generics).
- Students will learn about the CLR (assemblies, versioning, security, JIT compilation, configuration) and about the most important .NET tools (VS.NET, ildasm, gacuti).
- Also covers the introduction about new features in Web development (WPF, WCF, WF, Silver light, Ajax Controls).

Outline Of the Course:

Sr. No	Title of the Unit	Minimum Hour
1	Introduction	04
2	Basic concepts of VB.NET and C#	12
3	ADO.NET	05
4	ASP.Net and Web Development	16
5	Advanced Concepts	11

Total hours (Theory): 48

Total hours (Lab): 32

Total hours: 80



Kadi Sarva Vishwavidyalaya
Faculty of Engineering & Technology
Third Year Bachelor of Engineering (CE/IT)
(In Effect From Academic Year 2019-20)

Detailed Syllabus

Sr. No	Topic Details	Lecture Hours	Weight age(%)
1	<p>Introduction</p> <p>Fundamental terms in .NET</p> <ul style="list-style-type: none"> - Detailed .NET Framework architecture, Name spaces - Assemblies, Exploring Assemblies and Namespaces - Common Language Implementation , Metadata and Intermediate Language - Garbage Collection, Versioning and Side-by-Side Execution, The <p>Data Types and Base Class Libraries</p> <ul style="list-style-type: none"> - Understanding .NET Data Types - Stream and String Manipulation, Files and I/O, Collections - The Microsoft Visual Basic Namespace End to DLL Hell, Managed Execution 	4	8
2	<p>Basic concepts of VB.NET and C#</p> <p>Introduction to VB.NET and C#, Namespaces</p> <ul style="list-style-type: none"> - Creating Classes, Classes and Inheritance, Overloading, Constructors and Destructors, Inheritance, Controlling scope and visibility, Dispose and Finalization, Modifiers, Properties and Indexers, Attributes, Reflection API ,Unsafe Code, Events and Delegates <p>Windows Application:</p> <ul style="list-style-type: none"> - Language Features Creating .NET Projects, Namespaces, Threads, Debugging and Error Handling, Structured Error Handling - Windows Forms: Benefits, Windows Form Controls, Properties and Events, .NET Events, MDI Form, Visual Inheritance, Apply Inheritance techniques to Forms - Dialogs, ToolTips, Resizing , Menus, Custom control creation, Using ActiveX Controls, Printing, Handling Multiple Events, GDI+ <p>Console Applications</p> <ul style="list-style-type: none"> - When to use Console Applications - Generating Console output, processing Console Input 	12	25
3	<p>ADO.NET</p> <ul style="list-style-type: none"> - Benefits of ADO.NET, ADO.NET compared to classic ADO, ADO .NET Objects Working with Data Sets, Managed Providers, Data Binding - Data Sets and XML, Typed Data Sets, Working with Data Reader, Reading and Write Data Using the SqlDataSource Control 	5	11



Kadi Sarva Vishwavidyalaya
Faculty of Engineering & Technology
Third Year Bachelor of Engineering (CE/IT)
(In Effect From Academic Year 2019-20)

4	ASP.Net and Web Development <ul style="list-style-type: none"> - Introduction to ASP.NET, Difference between ASP and ASP .Net, Controls, Rich Server Controls, Web Site Administration Tool, Configuration Overview, Programming Configuration Files, Encrypting Configuration Sections, Database accessing, ListBound Controls- Repeater Control, DataList Control - Server side: Cache, session, Application, Request, Response - State Management: Preserving State in Web Applications, Page-Level State, Using Cookies, ASP.NET Session State, Storing Objects in Session State, Configuring Session State, Using Cookieless Session IDs, Application State - Themes and Master Pages: Consistent Web Site, CSS and Scene files, Master Pages: Content place holder and Nested Master page. - Web Services: XML Web Services, Creating and Designing an XML Web Service, Creating Web Service Consumers - ASP.net security 	16	33
5	Advanced Concepts <ul style="list-style-type: none"> - MVC: MVC Application development, ASP.NET MVC - Introduction and developing simple applications using WPF(Windows Presentation Foundation), WCF(Window Communication Foundation), W F(Work flow), Silverlight Framework, AJAX controls. 	11	23
Total		48	100

Instructional Method and Pedagogy:

- At the start of course, the course delivery pattern, prerequisite of the subject will be discussed.
- Lectures will be conducted with the aid of multi-media projector, black board, OHP etc.
- Attendance is compulsory in lecture and laboratory which carries 10 marks in overall evaluation.
- One internal exam will be conducted as a part of internal theory evaluation.
- Assignments based on the course content will be given to the students for each unit and will be evaluated at regular interval evaluation.
- Surprise tests/Quizzes/Seminar/tutorial will be conducted having a share of five marks in the overall internal evaluation.
- The course includes a laboratory, where students have an opportunity to build an appreciation for the concepts being taught in lectures.
- Experiments shall be performed in the laboratory related to course contents.

Learning Outcome:

- On successful completion of this course, the student should be able to:
- Apply the principles of object-oriented programming.
- Write clear and effective C# code.
- Create applications using Microsoft Windows® Forms
- Working with XML Documents
- Using Crystal Reports
- Access data using ADO.NET
- Develop web applications using ASP.NET Web Forms.



Kadi Sarva Vishwavidyalaya
Faculty of Engineering & Technology
Third Year Bachelor of Engineering (CE/IT)
(In Effect From Academic Year 2019-20)

- Develop and use ASP.NET Web Services.
- Create a rich GUI for web based applications using a rich set of controls
- Create secure (authentication and authorization) web applications
- Personalize a web page using Web Parts
- Create asynchronous web applications using ASP.NET AJAX
- Create and use web services
- Deploy web applications

e-Resources:

- <https://dotnet.microsoft.com/learn>
- <http://www.tutorialspoint.com>
- <https://www.codeproject.com>
- <https://www.c-sharpcorner.com>

Reference Books:

1. Advance .Net Technology, Chirag Patel, Dreamtech Publication.
2. Professional VB. NET, Wrox publication
3. C# 2012 programming, covers .net 4.5, black book, KOGENT learning solutions inc., Dreamtech Pub.
4. ASP .NET complete reference, TMH
5. ASP.NET 2.0, Black Book, Dreamtech
6. ASP.NET 4, Unleashed – Stephen Walther, Kevin Hoffman, Nate Dudek, Pearson
7. Professional C# .Net, Wrox publication

List of experiments:

No	Name of Experiment
1	Write a program for Arithmetic Calculator using Windows Application.
2	Implement Windows Form based application using controls like menus, dialog
3	Implement Master Form with Windows application.
4	Implement Overloading and Overriding, constructor and Destructor.
5	Write a program for events and Delegates.
6	Implement concepts of Inheritance, visual inheritance and Interface in windows
7	Implement printing of GDI+ with windows application.
8	Use Dataset, Data Reader, XML Reader & Data Sources (SQL, Object & XML)
9	Use Data Controls like Data List, Grid View, Detail View, Repeater and List
10	Implement web application using ASP.NET with web controls.
11	Write a code for web application to provide input validations using Input
12	Create a Web application that illustrates the use of themes and master pages with



Kadi Sarva Vishwavidyalaya
Faculty of Engineering & Technology
Third Year Bachelor of Engineering (CE/IT)
(In Effect From Academic Year 2019-20)

13	Create a Web Application in ASP.NET using various CSS
14	Implement the concept of state management in a web application.
15	Implement code in ASP.NET that creates and consumes Web service by any
16	Create the simple application to demonstrate the WPF concept.
17	Create the simple application to demonstrate the WCF concept.
18	Create the simple application to demonstrate the WF concept.
19	Create the simple application to demonstrate the Silverlight architecture.
20	Create the simple application to demonstrate the AJAX concept using AJAX toolkit.