B. Sc. (Information Technology)		Semester – IV	
Course Name: Advanced Web Programming Practical		Course Code: VGVUSTVSE401	
Periods per week (1 Period is 120 minutes)		2	
Credits		2	
		Hours	Marks
Evaluation System	Practical Examination	3	100
	Internal	-	-

Course Objective
To make learner aware of
1. Basics of C# fundamentals.
2. Web form fundamentals and various form controls used in website development using C#.
3. M aster page and content page development in C#.
4. ADO.NET fundamentals, data binding and data controls.
5. ASP.NET AJAX basics.

	List of Practical
1.	**Working with basic C# :** **The C# Language**: C# Language Basics, Variables and Data Types, Variable Operations, Object-Based Manipulation, Conditional Logic, Loops, Methods, Class and Object.
a.	Create an application that obtains four int values from the user and displays the product.
b.	Create an application to demonstrate string operations.
d.	Create an application to demonstrate following operations i. Generate Fibonacci series. ii. Test for prime numbers. iii. Test for vowels. iv. Use of foreach loop with arrays v. Reverse a number and find sum of digits of a number.
e.	Create an application to demonstrate method overloading.
2.	**Working with Object Oriented C#:** Constructor, destructor, Inheritance and all types of inheritance , use of Interface.
a.	Create simple application to perform following operations i. Finding factorial Value ii. Money Conversion iii. Temperature Conversion
b.	Create simple application to demonstrate use of following concepts i. Inheritance (all types) ii. Constructor overloading iii. Interfaces
3.	**Working with Web Forms and Controls(Part A):** **Web Form Fundamentals**: Writing Code, Using the Code-Behind Class, Adding Event Handlers, Introducing Server Controls with its properties, AutoPostBack mechanism.
a.	Create a simple web page with sever controls TextBox, Button, Label,CheckBox, RadioButton to demonstrate setting and use of their properties)
b.	Create a simple web page with sever controls ListBox, DropDownList, CheckBoxList, RadioButtonList , BulletedList to demonstrate setting and use of their properties)

c.	Create a web page with sever controls TextBox, Label, and implement AutoPostBack property of TextBox.
d.	Create a web page which shows the implementation of SelectedIndex, SelectedValue, SelectedItem properties for ListBox control and Dropdownlist control.
e.	Create a simple web page with sever controls ListBox, DropDownList to demonstrate the event handlers for both the controls.
4.	**Working with Web Forms and Controls(Part B):** Rich Controls: Calendar Control, AdRotator Control, User Control.
a.	Create Web Form to demonstrate use of Adrotator Control.
b.	Create Web Form to demonstrate use User Controls.
c.	Demonstrate the use of Calendar control to perform following operations. a) Display messages in a calendar control b) Display vacation in a calendar control c) Selected day in a calendar control using style
5.	**Working with Navigation and Validation Control** Understanding Validation Control and Navigation Control with all its types with its properties.
a.	Create Web Form to demonstrate use of Website Navigation controls and Site Map.
b.	Create a Registration form to demonstrate use of various Validation controls.
6.	**Working with Database:** **ADO.NET Fundamentals:** Understanding Databases, Configuring Your Database, Understanding SQL Basics, Understanding the Data Provider Model, Using Direct Data Access, Using Disconnected Data Access.
a.	Create a web application which shows the use of connected architecture.
	Create a web application which shows the use of connected architecture.
b.	Create a web application for to display the phone no of an author using database.
c.	Create a web application for inserting and deleting record from a database. (Using Execute- Non Query).
7.	**Working with data binding :** Introducing Data Binding, Using Single-Value Data Binding, Using Repeated-Value Data Binding, Working with Data Source Controls
a.	Create a web application to demonstrate Single Value Data Binding.
b.	Create a web application to demonstrate Repeated-Value Data Binding using dropdown list control.
c.	Create a web application to demonstrate Repeated-Value Data Binding with a Dictonary Collection.
d.	Create a web application to demonstrate various uses and properties of SqlDataSource.
c.	Create a web application to display Using Disconnected Data Access and Databinding using GridView.
8.	**Working with Data controls:** The GridView, Formatting the GridView, selecting a GridView Row, Editing with the GridView, Sorting and Paging the GridView, Using GridView Templates, The DetailsView and FormView

a.	Create a web application to demonstrate use of GridView control template and GridView hyperlink.
b.	Create a web application to demonstrate use of GridView button column and GridView events.
c.	Create a web application to demonstrate GridView paging and Creating own table format using GridView.
9.	**Working with Database more examples.**
a.	Create a web application bind data in a multiline textbox by querying in another textbox.
b.	Create a web application to display records by using database.
c.	Demonstrate the use of Datalist link control.
10.	**Working with AJAX and Master Page:**
	Understanding Ajax, Using Partial Refreshes, Using Progress Notification, Implementing Timed Refreshes, Working with the ASP.NET AJAX ControlToolkit.
	Master Page: What is Master Page, Content Page , How to create Master Page and Content Page.
a.	Create a web application to demonstrate use of Master Page with applying Styles and Themes for page beautification.
b.	Create a web application to demonstrate use of various Ajax controls.
c.	Create a web application to demonstrate use of various ASP.NET AJAX ControlToolkit.
11.	**Programs to create and use DLL**

Course Outcome	
Learner will be able to	
CO1	Design a responsive web site and demonstrate Rich Internet Application.
CO2	Implement interactive and dynamic web page(s) using HTML,CSS,AJAX, C# with .NET concepts.
CO3	Develop database oriented web application.
CO4	Build dynamic web site using server side .NET technology and Database connectivity.
CO5	Motivate to work as website developer.

Books and References:

Sr. No.	Title	Author/s	Publisher	Edition	Year
1.	Beginning ASP.NET 4.5 in C#	Matthew MacDonald	Apress		2012
2.	C# 2015	Anne Bohem and Joel Murach	Murach	Third	2016
3.	Murach"s ASP.NET 4.6Web Programming in C#2015	Mary Delamater andAnne Bohem	SPD	Sixth	2016
4.	ASP.NET4.0 programming	J. Kanjilal	Tata McGraw-Hill		2011
5.	Programming ASP.NET	D.Esposito	Microsoft Press (Dreamtech)		2011
6.	Beginning Visual C#2010	K. Watson, C. Nagel, J.H Padderson, J.D. Reid, M.Skinner	Wrox (Wiley)		2010