

**FACULTY OF COMPUTER APPLICATIONS**  
**Bachelor of Computer Applications**

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- **Sem.** : 5
- **Subject Code** : 05BC3505
- **Subject** : ASP.Net
- **Course Objectives** :
  1. To understand and gain knowledge about .Net framework.
  2. To learn and create web application development using ASP.Net
  3. To learn concept of state management and error handling.
  4. To develop interaction of front end with database using ADO.NET platform.
  5. To get overview of MVC, AJAX and Web Services for web application development.
  
- **Prerequisites** : Knowledge of basic web application development with object oriented concepts.

Unit No	Topics Covered	No of lectures required
<b>1</b>	<b>Introduction of .Net Framework</b> <ul style="list-style-type: none"> <li>• Concept of .Net Programming Framework, CLR, .Net Class Library,</li> <li>• Data Types, Object Based Manipulation, Overview about Namespace,</li> <li>• APS.Net Applications: ASP.Net File Types, Various files behind the web applications, ASP.Net Configuration with web.config file.</li> </ul>	<b>05</b>
<b>2</b>	<b>Web form fundamentals with web controls</b> <ul style="list-style-type: none"> <li>• Introduction of Web Controls: Basic web control classes and web control tags, Concept of AutoPostBack and Web control Events, How to access web controls.</li> <li>• Web controls: Basic Web controls, List Controls, Rich Controls, Validation Controls.</li> </ul>	<b>06</b>

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<b>3</b>	<b>State Management &amp; Error Handling</b> <ul style="list-style-type: none"> <li>• Concept of Viewstate, Transferring Information, Custom Cookies, Session State and its configuration, Application State.</li> <li>• Overview of Common Error, .Net Exception object, Handling Exceptions, Throwing your own exception.</li> <li>• Managing User Interface Consistency : Concept of ASP.NET Master Page, Theme, Skins</li> </ul>	<b>06</b>
<b>4</b>	<b>Database Connectivity using ADO.Net &amp; Data Binding</b> <ul style="list-style-type: none"> <li>• Introduction of ADO.Net with Characteristics, ADO.Net Object Model,</li> <li>• SQL Basics with executing various SQL statements, Connection with database , accessing records and managing data base connectivity in web application.</li> <li>• Data Binding with ListControl Based controls,Tree View Contro,Menu Control,GridView Control, DataList Control</li> </ul>	<b>07</b>
<b>5</b>	<b>Introduction of MVC, Ajax and Web services</b> <ul style="list-style-type: none"> <li>• Overview of The Model-View-Controller (MVC) Architecture, ASP.Net and MVC</li> <li>• Concept of AJAX, Overview of Client and server side support for AJAX.</li> <li>• Introduction of Web Service Architecture. Configuring a web services.</li> </ul>	<b>06</b>

**Course Outcomes:**

1. Students will be able to understand the architecture of .Net framework.
2. Students will be able to develop web application using ASP.Net.
3. Students will be able to understand and implement the state management and error handling.
4. Students will be able to implement database connectivity using ADO.NET.
5. Students will be able to get overview of MVC, AJAX and Web Services for web application development.

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Course Outcomes – Program Outcomes Mapping Table:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1		L				L			H		
CO2			M		H			L			
CO3	L			M							
CO4	L			L			M			L	
CO5		M			L			M			M

**Text Book :**

1. ASP.Net The Complete Reference, Matthew MacDonald, Tata McGraw Hill Edition, First Edition
2. Microsoft ASP.Net 4 Step by Step, George Shepherd, Microsoft Press, First Edition

**Reference Books :**

1. Professional ASP .NET 2.0, Alex Homer, Dave Sussman, and Rob Howard Wrox Publication, Second edition.
2. ASP.Net core in action, Andrew lock, manning Publication, second edition, 2021.
- 3.

**Web References:**

1. <http://www.tutorialspoint.com>
2. <http://www.microsoft.com/learning/en/us/certification/mcsd.aspx>
3. [https://www.w3schools.com/asp/asp\\_ajax.asp](https://www.w3schools.com/asp/asp_ajax.asp)
4. <https://docs.microsoft.com/en-us/aspnet/core/?view=aspnetcore-5.0>
5. <https://asp.net-tutorials.com/>

**App References:**

1. Learn ASP.NET, Sky Apper
2. Learn ASP.Net Offline, JustForYouLimited
3. ASP.NET Tutorial Offline, Nestic

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**Syllabus Coverage from text /reference book & web/app reference:**

Unit #	Chapter Numbers
1	Book – 1 Chapter : 1,2,5
2	Book – 1 Chapter : 7,27
3	Book – 1 Chapter : 10,11 Book – 2 Chapter : 7
4	Book – 1 Chapter : 12,13 Book – 2 Chapter : 10
5	Book – 2 Chapter : 22,23 Book – 1 Chapter : 18

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**PRACTICALS**

Unit No.	List of practical
1	<ol style="list-style-type: none"> <li>1. Prepare only GUI of Login screen with appropriate control.</li> <li>2. Prepare only User interface design of Registration form.</li> <li>3. Prepare only user interface design of contact us page.</li> <li>4. Prepare only user interface design of your blog page.</li> <li>5. Prepare only user interface of password change.</li> </ol>
2	<ol style="list-style-type: none"> <li>1. In login screen, when user press login button then compare user id and password with static data and give appropriate message to user.</li> <li>2. Design a web form of student admission form with appropriate controls. Also give proper validation in the form and when user presses submit button then it should be displays registration successful message on screen.</li> <li>3. Create a web form of students mark sheet with appropriate validation as per below fields :            Student Roll No, Name, Course, semester , email id , mobile number , Marks of five subjects, total, per , grade and result (Pass / Fail)When user input details up to marks and press submit button then on the next page, it should be displayed Roll No, Name, Result , Per , grade and result.</li> <li>4. Create a web form of simple calculator with basic facility and validation.</li> <li>5. Create a web form of billing which contains the following controls:            ListBox, Button , Image, Label, Text box or any other required control</li> <li>6. The listbox is used to list items available in the hardware store. When the user clicks on an item in the listbox, its image is displayed in the image control &amp; price in the label. Also entry quantity of that item in the text box and when the user clicks the button, the cost of the selected item is displayed in the label control.</li> </ol>
3	<ol style="list-style-type: none"> <li>1. Create a web page which illustrates the concept of cascading style sheets in ASP.NET.</li> <li>2. Create a web page which illustrates the concept of Theme &amp; Skin in ASP.NET</li> <li>3. Design a simple web application home page to illustrate the concept of master page in ASP.NET</li> <li>4. Develop a web page which implements the concept of state management using Cookies, Session and Application.</li> <li>5. Create a web page to implement the concept of state management using ViewState and QueryString.</li> <li>6. Create a web application which demonstrates the various tags in Web.config file for ASP.NET configuration.</li> </ol>

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	<ol style="list-style-type: none"> <li>7. Apply an appropriate exception handling in login page</li> <li>8. Apply an appropriate exception handling in student Mark sheet web portal.</li> <li>9. Apply an appropriate exception handling in Calculator webpage.</li> <li>10. Apply various themes on web page and change as per user selection.</li> </ol>
<b>4</b>	<ol style="list-style-type: none"> <li>1. Create one user sign up form and store details in database. After that, compare user id and password of login screen using database connectivity.</li> <li>2. Design a web form of student registration with appropriate fields. When student press submit button then all the details should be stored in database and generate user id (same as email) and password.</li> <li>3. Design a web form of Password change with appropriate controls. When user enter user id and password then it should be compare from database , once it is successful then display appropriate message .</li> <li>4. Design a web form of Employee recruitment form with appropriate controls and Write a code of database connectivity (connection object), Fetching and inserting data from database (command object) and using Data Reader. Provide a facility of add, update, delete and search option button in the form.</li> <li>5. Design a web form of Students mark sheet with appropriate controls &amp; Write a code to allow the admin to ADD, UPDATE, MODIFY, DELETE &amp; SEARCH facility, once he has logged into the website using Bound and Unbound Controls.</li> </ol>
<b>5</b>	<ol style="list-style-type: none"> <li>1. Implement the concept of AJAX in Student Mark sheet project.</li> <li>2. Implement the concept of AJAX in Employee Recruitment web portal.</li> <li>3. Implement the concept of AJAX in billing project.</li> <li>4. Create a web form which implements the concept of Web services.</li> <li>5. Create a web application which will use the data from other web portal using web services.</li> </ol>

**Case Study**

Create a web application of Online MCQ base examination with appropriate facilities like students registration, list of subjects and questions entries , schedule a test with date and time limit, conduct exam and display result with correct ,incorrect and skip questions at the end of exam.