

**M.Sc.(CA) 2<sup>nd</sup> semester**

Course Code: 040020209: Web Technology

**Teaching Schedule**

**Objective:** To provide basic understanding of ASP.NET and in-depth knowledge of developing dynamic, secure and rich web application in conjunction with event handling, state management, data accessing using ASP.NET, Caching, File stream LINQ and XML.

**Course Outcomes:** Upon completion of the course, students shall be able to

- CO1. Determine usage and working of ASP.NET with C#.
- CO2. Create ASP.NET pages, react to its events and manipulate its content in code.
- CO3. Design and develop well-integrated, consistent, secure and dynamic web application with the use of various server controls.
- CO4. Build web application in place of individual page using state management and its different types of options that are available to manage state in an ASP.NET Web application.
- CO5. Conveniently extract and process data from arrays, File stream, enumerable classes, XML documents, relational, and third-party data sources, and also able to develop the application with concept of caching and LINQ.
- CO6. Access data by using built-in data access tools of ASP.NET.
- CO7. Design and develop web utility with rich GUI.

Unit	Sub Unit	No. of Lecture(s)	Topics	Reference Chapter/Additional Reading	Teaching Methodology To be used	Evaluation Parameters
<b>1</b>		<b>[8]</b>	<b>Introduction to ASP.NET</b>			
	1.1	1	Introducing ASP.NET, Visual Studio	MM #1,2 - Page No. 3 – 74	Power Point Presentation	
	1.2	2	Web forms	MM #3 - Page No. 77 – 127	PPT & Demonstration	
	1.3	2	Server Controls	MM #4 - Page 129 – 181	Demonstration of Server Control	
	1.4	1	ASP.NET Application	MM #5 - Page No. 183 – 233	Demonstration of Application	
	1.5	2	State Management	MM #6 - Page No. 235-272	Presentation & Demonstration	Quiz-1
<b>2</b>		<b>[8]</b>	<b>Data Access</b>			
	2.1	2	ADO.NET Fundamentals	MM #7 - Page No. 277 – 318	Power Point Presentation	
	2.2	2	Data Components and the Dataset	MM #8 - Page No. 321 – 350	Power Point Presentation	
	2.3	2	Data Binding	MM #9 - Page No. 353 – 400	Demonstration of Data binding	
	2.4	2	Rich Data Controls	MM #10 - Page No. 403 – 475	Demonstration of Rich Control	

<b>3</b>		<b>[8]</b>	<b>Working with other Data</b>			
	3.1	2	Caching and Asynchronous Pages	MM #11 - Page No. 477 – 525	Power Point Presentation	Unit Test-1
	3.2	2	Files and Streams	MM #12 - Page No. 527 – 560	PPT & Demonstration	
	3.3	2	LINQ	MM #13 - Page No. 563 – 615	Power Point Presentation	
	3.4	2	XML	MM #14 - Page No. 617 – 677	Power Point Presentation	
<b>4</b>		<b>[8]</b>	<b>Building ASP.NET website</b>			
	4.1	1	User Controls	MM #15 - Page No. 681 – 701	PPT & Demonstration	
	4.2	1	Themes, Master Pages and CSS	MM #16 - Page No. 703 – 732	PPT & Demonstration	
	4.3	2	Website Navigation	MM #17 - Page No. 735 – 788	PPT & Demonstration	
	4.4	2	Website Deployment	MM #18 - Page No. 791 – 830	Demonstration	
	4.5	2	Profiles	MM #24 - Page No. 995 – 1027	Power Point Presentation	
<b>5</b>		<b>[8]</b>	<b>Security</b>			
	5.1	1	The ASP.NET Security Model	MM #19 - Page No. 835 – 848	Power Point Presentation	
	5.2	1	Forms Authentication	MM #20 - Page No. 851 – 875	Demonstration	
	5.3	2	Membership	MM #21 - Page No. 877 – 931	Power Point Presentation	
	5.4	2	Authorization and Roles	MM #23 - Page No. 963 – 992	Demonstration	
	5.5	2	Cryptography	MM #25 - Page No. 1029 – 1058	Power Point Presentation	
<b>6</b>		<b>[8]</b>	<b>Advanced ASP.NET</b>			
	6.1	1	Introduction to custom server Controls	MM #27 - Page No. 1099 – 1132	Power Point Presentation	Unit Test-2, Internal
	6.2	1	Portals with Web Part Pages	MM #31 - Page No. 1303 – 1360	Power Point Presentation	
	6.3	1	Introduction to ASP.NET AJAX	MM #30 - Page No. 1239 – 1301	Power Point Presentation	
	6.4	1	Introduction to MVC	MM #32 - Page No. 1363 – 1395	Power Point Presentation	
	6.5	1	Introduction to Dynamic Data	MM #33 - Page No. 1397 – 1434	Power Point Presentation	
	6.6	1	Introduction to Silverlight	MM #34 - Page No. 1437 – 1488	Power Point Presentation	
	6.7	1	Introduction to ASP.NET Mobile	E-material	Power Point	

			Web Applications		Presentation
6.8	1		Send email from ASP.NET application	E-material	Demonstration of send mail

**Course objectives and Course outcomes mapping:**

- Understanding of ASP.NET: CO1
- In depth knowledge of Event handling: CO2, CO6
- In-depth knowledge of State management: CO4
- In depth knowledge of Data access using Caching, File Stream, LINQ and XML: CO5
- Developing dynamic, secure and rich web application: CO3, CO4,CO7

**Course units and Course outcomes mapping:**

Unit No	Unit	Course Outcome						
		CO1	CO2	CO3	CO4	CO5	CO6	CO7
1	Introduction to ASP.NET	✓	✓		✓			
2	Data Access			✓				
3	Working with other data					✓		
4	Building ASP.NET website				✓		✓	✓
5	Security			✓				
6	Advanced ASP.NET							✓

**Course outcomes and Programme outcomes mapping:**

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6
CO1	✓					
CO2	✓	✓		✓		
CO3				✓		
CO4		✓		✓	✓	
CO5				✓	✓	✓
CO6					✓	✓
CO7				✓	✓	✓

**Computing Environment:**

A student must have the following computing environment in laboratory and or on his/her laptop.

- ❖ Visual Studio 2012

**Modes of Transaction (Delivery):**

Mr. Hiren Patel, Mr. Vivek Fumakia, Ms. Trupti Rathod

- ❖ Lecture/Discussion method shall be used.
- ❖ Demonstration of topic covered in each unit shall be given.
- ❖ Hands on training shall be given of topic covered in each unit.

### Activities/Practicum:

The following activities shall be carried out by the students

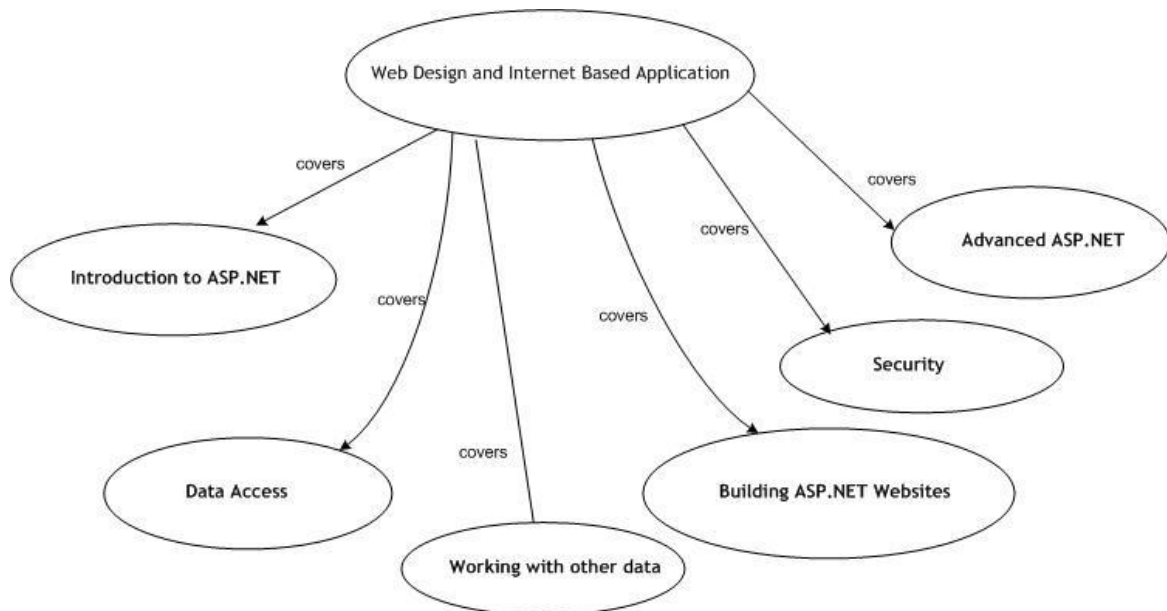
- ❖ Group of students shall solve question bank after completion of each unit.
- ❖ As and when instructed by teacher, student shall perform hands-on activity in classroom in their personal laptop.
- ❖ Students will develop a mini project which covers all concepts of .NET

The following activities may be carried out by the teacher.

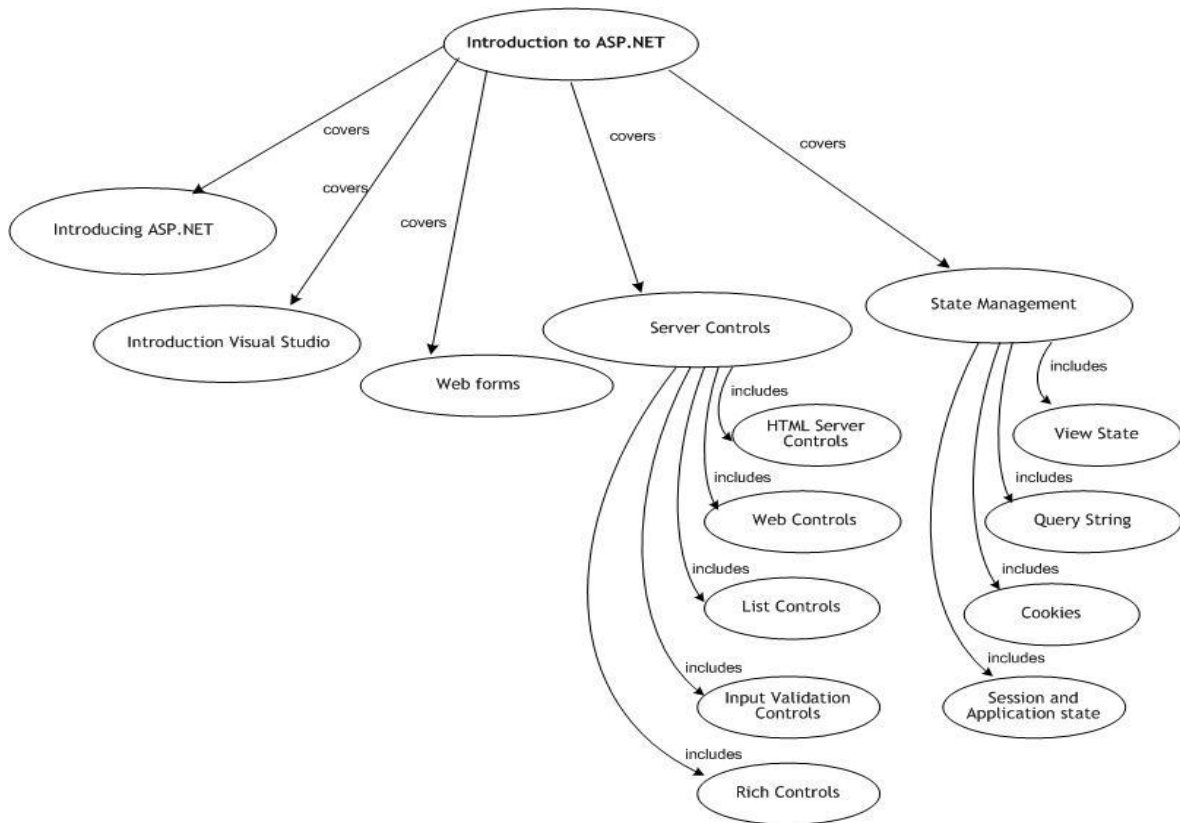
- ❖ Demonstration of server controls.
- ❖ Demonstration of SQLServer databases connections with ASP.NET.

### Concept map:

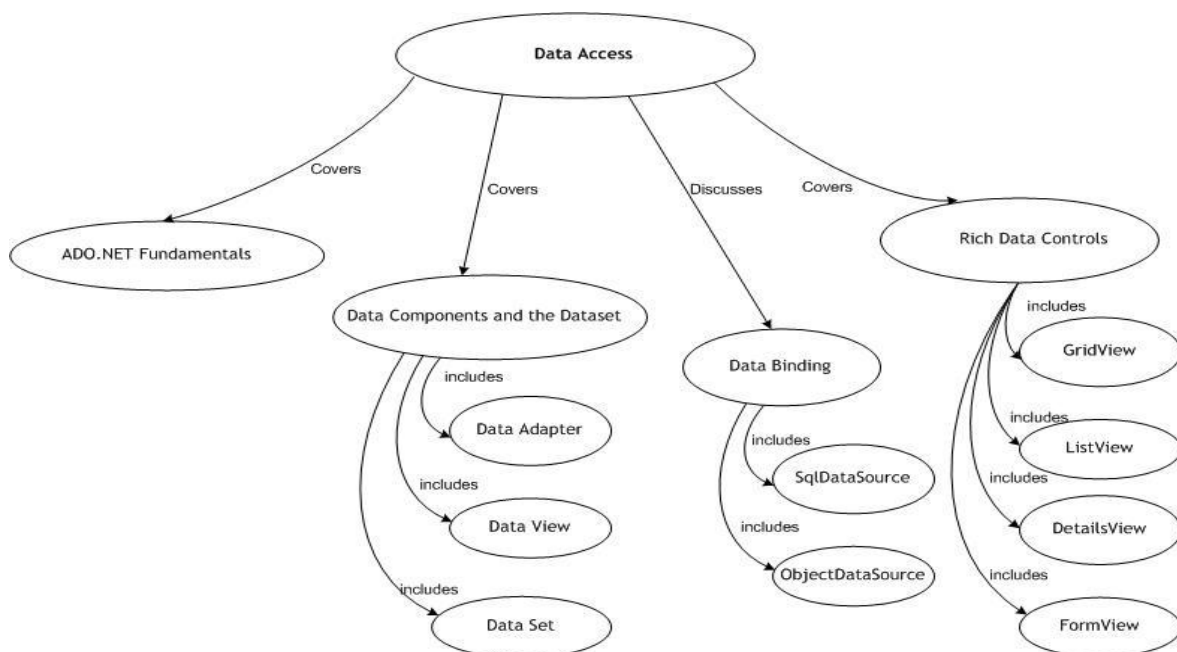
#### Web Technology



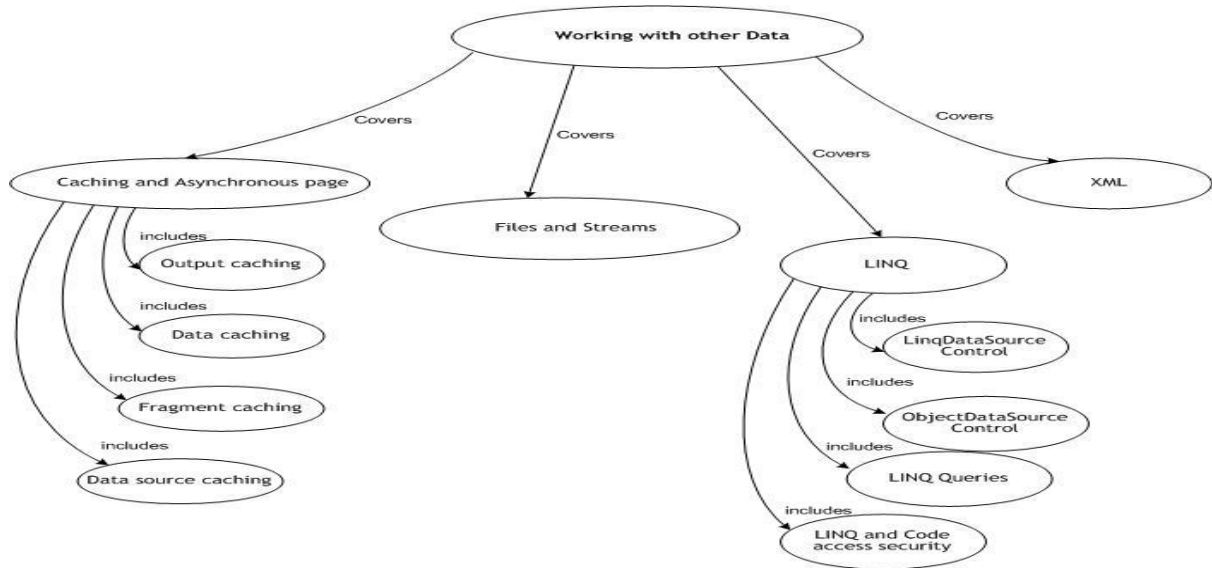
#### Unit 1: Introduction to ASP.NET



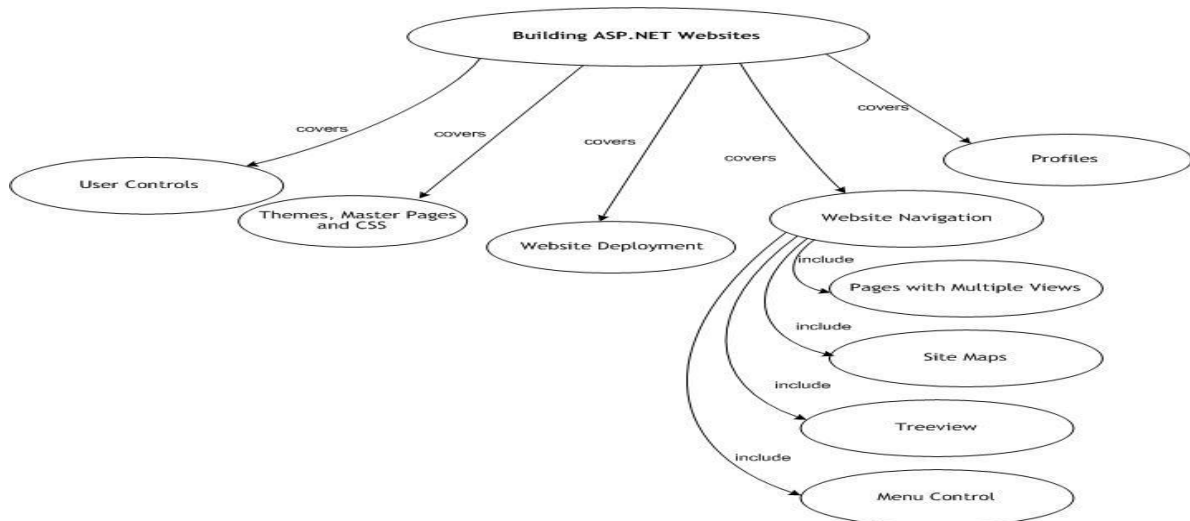
**Unit 2: Data Access**



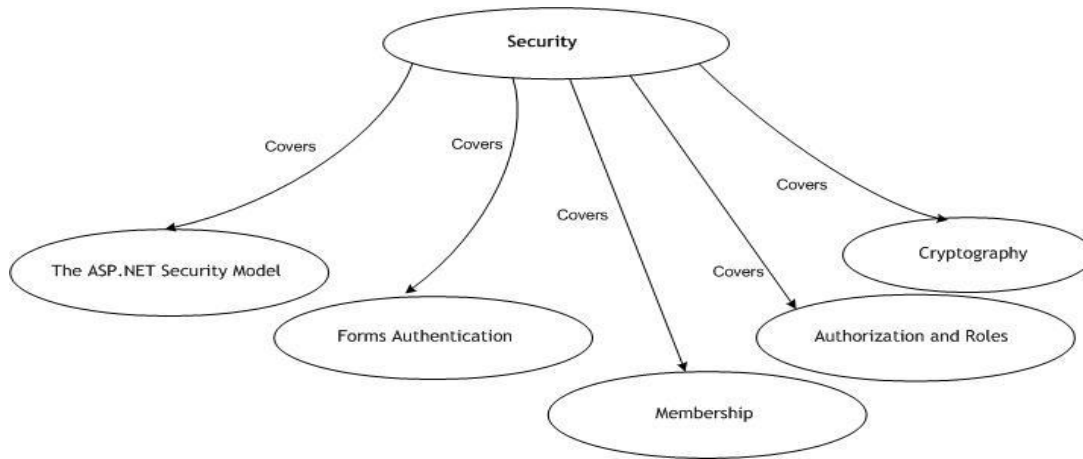
**Unit 3: Working with other data**



**Unit 4: Building ASP.NET website**



**Unit 5: Security**



**Unit 6: Advanced ASP.NET**

