

| Course Code | Course Name | Teaching Scheme (Hrs/week) | | | Credits Assigned | | | |
|-------------|-----------------------------------|----------------------------|----|-----|------------------|---------------------|----|-------|
| | | L | T | P | L | T | P | Total |
| MCA501 | Advanced web Technology & Dot Net | 4 | -- | -- | 4 | -- | -- | 4 |
| | | Examination Scheme | | | | | | |
| | | ISE | | MSE | | ESE | | |
| | | 10 | | 30 | | 100 (60% Weightage) | | |

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| Pre-requisite Course Codes | Programming languages like C++, JAVA |
| Course Outcomes | Students will be able to |
| | CO1 Learn latest technologies, tools and frameworks |
| | CO2 Develop well designed standalone as well as dynamic Web applications |
| | CO3 To develop project using technologies like C# , ASP .NET , Ajax, JQuery |
| | CO4 To design project based on Semantic web, Web Services, Silverlight |

| Module No. | Unit No. | Topics | Ref. | Hrs. |
|------------|----------|--|---------|------|
| 1 | | Introduction : | 5 | 4 |
| | 1.1 | The World Wide Web: WWW Architecture | | |
| | 1.2 | Web Search Engines, Web crawling, Web indexing | | |
| | 1.3 | Web Searching, Search engines optimization and limitations | | |
| | 1.4 | Introduction to the semantic web(RDF, OWL) | | |
| 2 | | Introduction to .NET framework : | 6 | 5 |
| | 2.1 | Evolution of .NET , Comparison of Java and .NET, Architecture of .NET framework | | |
| | 2.2 | Common Language Runtime | | |
| | 2.3 | Common Type System | | |
| | 2.4 | Metadata, Assemblies, Application Domains, CFL Features of .NET , Advantages and Application | | |
| 3 | | C# : | 1,4, 10 | 8 |
| | 3.1 | Basic principles of object oriented programming, Basic Data Types | | |
| | 3.2 | Building Blocks- Control Structures, | | |
| | 3.3 | operators, expressions, variables | | |
| | 3.4 | Reference Data Types- Strings, Data time objects, | | |
| | 3.5 | Arrays, Classes and object | | |
| | 3.6 | Exception Handling, Generics | | |
| | 3.7 | File Handling, Inheritance and Polymorphism | | |
| | 3.8 | Database programming | | |
| 4 | | Web Applications in ASP.NET | 7 | 8 |
| | 4.1 | ASP.Net Coding Modules, | | |
| | 4.2 | ASP.NET Page Directives, Page events and Page Life | | |

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|--------------|-----|--|-----------|----|
| | | Cycle , | | |
| | 4.3 | Post Back and Cross Page Posting | 3 | |
| | 4.4 | ASP.Net Application Compilation models ASP.NET server Controls | | |
| | 4.5 | HTML Controls, Validation Controls, | | |
| | 4.6 | Building Databases | | |
| | 4.7 | Introduction to JQuery: What is jQuery? JavaScript vsjQuery | | |
| | 4.8 | How to use jQuery in ASP.NET? | | |
| 5 | | Managing State | 7 | 5 |
| | 5.1 | Preserving State in Web Applications , Page-Level State, Using Cookies to Preserve State | | |
| | 5.2 | ASP.NET Session State , Storing Objects in Session State , | | |
| | 5.3 | Configuring Session State , Setting Up an Out-of-Process State Server | | |
| | 5.4 | Storing Session State in SQL Server | | |
| | 5.5 | Using Cookie less Session IDs, Application State | | |
| 6 | | Introduction to web services: | 12, 13 | 5 |
| | 6.1 | What is a Web Service? Software as a service , Web Service Architectures | | |
| | 6.2 | SOA , Creating and consuming Web | | |
| | 6.3 | XML Web Services, Designing XML Web Services | | |
| | 6.4 | Creating an XML Web Service with Visual Studio | | |
| | 6.5 | Creating Web Service Consumers ,Discovering Web Services Using UDDI | | |
| 7 | | Advance .NET Concepts : | 11, 13 | 10 |
| | 7.1 | Introducing WPF , WPF Class Hierarchy | | |
| | 7.2 | Introducing WCF The WCF Architecture , WCF Endpoints | | |
| | 7.3 | Introducing WF, Describing Components of WF , Exploring Activities, Describing Types of Workflows | | |
| | 7.4 | Exploring Built-in Activities , Understanding Bookmark Activities | | |
| | 7.5 | Handling Runtime Errors ,Hosting Workflows ,Creating a Simple WF Application | | |
| | 7.6 | Exploring Silverlight , Architecture of Silverlight , Silverlight Controls in Silverlight Applications | | |
| | 7.7 | Creating a Simple Silverlight Application Integrating Silverlight with ASP.NET Applications | | |
| | 7.8 | Introducing AJAX Controls The Script Manager Control, The Script Manager Proxy Control, The Timer Control | | |
| | 7.9 | The Update Panel Control, The Update Progress Control | | |
| Total | | | 45 | |

References:

- [1] "Beginning C#" -Wrox Publication
- [2] Chirag Patel "Advance .NET Technology" second edition DreamTech Press
- [3] Jonathan Chaffer and Karl Swedberg"Learning jQuery" Third Edition, SPD Publication
- [4] "Professional C# 2012 and .NET 4.5"- Wrox Publication
- [5] RAJ KAMAL "Internet and Web Technologies" Tata McGraw Hill
- [6] ".NET programming" Black Book
- [7] Murach's"ASP. Net 4. 0 Web Programming with C# 2010"
- [8] Andrew Trolsen"Pro C# 5.0 and the .NET 4.5 Framework", APress
- [9] Vijay Mukhi"C# with Visual Studio", BPB
- [10] "Heard First C#" Second Edition , O'Reilly
- [11] Murach's"ADO. Net 4 Database Programming with C#"2010 4th Edition
- [12] "Web Technologies Black book", DreamTech Press
- [13] Ralph Moseley & M. T. Savaliya"Developing Web Application"Second Edition, Wiley