**CSE 4101 INTERNET TECHNOLOGIES [2 1 0 3]**

**Course Objectives:**

* To understand the fundamentals, concepts and principles of web programming.
* To gain knowledge of creating rich GUI for web based applications.
* To understand techniques of accessing database and files, implementing security and improving performance of web applications.

**Course Outcomes:**

* Ability to develop web based applications.
* Ability to design websites with better look and feel.
* Ability to create real-world web applications.   
    
    
    
  **1.**WEB ESSENTIALS:  
    
  Basics of WWW, HTTP, XHTML, HTML5 and CSS3.  
    
            (Chapter 6 Sections 6.1 – 6.4 of Text Book 1; Chapter 2 of Text Book 2)        (2 hrs)  
    
     
    
  2. SERVER SIDE PROGRAMMING:   
    
  Client Side Scripting Vs Server Side Scripting, PHP, Java Web Technologies, ASP.NET.  
    
  (Chapter 8 Sections 8.1 – 8.6; Chapter 10 Sections 10.1, 10.5 of Text Book 1; Chapter 1 of Text Book 3)                                                                                           (4 hrs)  
    
     
    
     
    
     
    
  3. DEVELOPING WEB APPLICATION  
    
            The C# Language, The Anatomy of an Web Application, Introducing Server Control, The Page Class, Application Events, Web Controls, Error Handling, Logging and Tracing, State Management.   
    
              (Chapter 5 - 8 of Text Book 3)                                                                            (8 hrs)  
    
     
    
  4. ADVANCED TECHNOLOGIES  
    
              Validation, Styles, Themes and Master Pages, The Data Provider Model, Direct Data Access, Disconnected Data Access, Data Binding, Data Source Controls, The GridView, Files and Streams, XML.  
    
              (Chapter 9; Chapter 12; Chapter 14 - 18 of Text Book 3)                                 (14 hrs)  
    
     
    
  5. WEB SECURITY AND CACHING  
    
              Understanding Security, Authentication and Authorization, Forms Authentication, Windows Authentication, Understanding Caching, Output Caching, Data Caching.  
    
              (Chapter 19; Chapter 23 of Text Book 3)                                                            (4 hrs)  
    
     
    
  6. CLIENT SIDE DEVELOPMENT                                               
    
              Understanding the Need of Ajax, Building ASP.NET AJAX Applications, ASP.NET AJAX’s Server-Side Controls, Using Multiple UpdatePanel Controls, Introduction to jQuery, Selecting Elements, Modifying Elements, Event Handling.                           
    
              (Chapter 23; Chapter 25 of Text Book 2)                                                            (4 hrs)

**Text Book:**

1. Achyut Godbole, Atul Kahate, "*Web Technologies*", McGraw Hill 3rd edition, 2013.
2. Jason N. Gaylord, Christian Wenz, Pranav Rastogi, Todd Miranda, Scott Hanselman, “*Professional ASP.NET 4.5 in C# and VB*”, Wrox, 2013.
3. Matthew MacDonald, "*Beginning ASP.NET 4.5 in C#",* Apress, 2012.

**References:**

1. Jennifer Niederst Robbins, "*Learning Web Design: A Beginner's Guide to HTML, CSS, JavaScript, and Web Graphics*", O'Reilly 4th edition, 2012.
2. Jon Duckett, "*HTML and CSS: Design and Build Websites*", Wiley 1st edition, 2011.
3. Stephen Walther, Nate Scott Dudek, "*ASP.NET 4.5 Unleashed*", Pearson Education Inc., 2013.
4. Elliotte Rusty Harold, W. Scott Means, "*XML In a nutshell*", O'Reilly 3rd edition, 2005.