**Course Outline**

**Faculty of Computing & Information Technology**

**Department of Computer Science**

**Hafiz Hayat Campus, University of Gujrat**

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| **Title & Code** | **Web Systems and Technologies (IT-304)** |
| **Instructor** | **Mr. Zaheer Ahmed** |
| **Credit Hours** | 3  **Theory/ week:**  Weight 3 Cr. Hrs.  Contac t Hours 3 Hrs.  Lectures: 2/week  Duration 1.5 Hrs./Lecture |
| **Prerequisite** | Introduction to Computer and Information Technology(required) |
| **Aims and**  **Objectives** | The course will help the students to utilize PHP or .Net Technologies particularly ASP.Net and C# to create effective, scalable, maintainable, and adaptable distributed applications to solve an extremely wide range of problems. Students can expect to gain experience in PHP or in various .Net technologies such as ASP.Net, C#, Ado.Net, LINQ etc. Besides they will be taught major .Net related components including LINQ, Web Services etc. The students will be involved in various industry oriented assignments and will learn to explore the power of PHP or .Net technologies in solving various enterprise problems. Aim to cover an in-depth treatment of the web technology and applications related topics including web standards, protocols, web applications architecture, web services, content management, web 2.0,, to explore some of the technologies used for display, data access and processing, and to give the students practice in integrating these to produce a functional web -based system. |
| **Learning**  **Outcomes** | * The student will be able to develop a complete dynamic website * The student will be able to develop, mange e-Commerce websites * The student will have enough knowledge about emerging web technologies and can perform work with new technology with little effort. * The student will have complete command on web page handling, web hosting and relating issue and domain handling problems. * At the end of this course student will be able to work on .Net technologies and tools. * Well trained on industry oriented web development frameworks * To work in a team to complete a web project. * Learn how to use different third party technologies to create a complete industry oriented project   The course objective is to prepare students for effective use of distributed, .Net technologies with hands-on-experience in a team work environment. |

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| **Syllabus** | In-depth study of World Wide Web architectures, protocols and standards (HTTP, HTML, H TML5, CSS etc.), Web Technologies and Tools (such as scripting tools) for web application development and deployment (web servers, application servers, etc.), Web Based Applications including search engines and content management, management of large scale web based information systems, Web Services, PHP with MySQL/XAMPP server or Microsoft Dot Net platform and technologies such as ASP.Net, C#, Ado.Net, SQL Server 2012, LINQ etc. practical exercises in web site development. |
| **Course Book and**  **Reference Material** | All the notes will be provided.  **Reference Material**:   1. Professional Asp.Net 4 in C#-and VB, WROX Series 2. MCTS Self Placed Training kit Exam 70-562 Microsoft .Net Framework 3.5 ASP.NET by Mike Snell 3. Internet and World Wide Web How to Program By Deitel. (Highly Recommended) 4. JavaScript By Paul Kooros & Michele Dewolf |
| **Assessment/Grading**  **Criteria** | 1. course will be evaluated on the following basis’s:   Mid Term 25%  Sessional work 25%  Final term 50%   1. To pass a course, student must obtain at least ‘D’ grade (50% marks) 2. The final term examination will cover the entire course. |
| **Assessment/Grading**  **Criteria** | |  |  |  |  | | --- | --- | --- | --- | | **Marks in Percentage** | **Letter Grade** | **Numeric Value of Grade** | **Description** | | 84.5 and above | A+ | 4.00 | Exceptional | | 79.5-84.4 | A | 3.70 | Outstanding | | 74.5-79.4 | B+ | 3.40 | Excellent | | 69.5-74.4 | B | 3.00 | Very Good | | 64.5-69.4 | B- | 2.50 | Good | | 59.5-64.4 | C+ | 2.00 | Average | | 54.5-59.4 | C | 1.50 | Satisfactory | | 49.5-54.4 | D | 1.00 | Pass | | Below 49.5 | F | 0.0 | Fail | |  | W |  | Withdrawal | |  | I |  | Incomplete | |

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| **Framework** | | | | | | | | | |
| **Week #** | | **Topic** | | | | | **Recommendation s for**  **Learning Activities**  (Mention Assignments, Test, Quizzes, Practical, Case Study, Projects, Lab Work or Reading Assignments) | | |
| 1 | | **Introduction, Overview:**  Introduction to Web and its various technologies. | | | | |  | | |
| 2 | | **HTML**  HTML Attributes ,Html Link s, HTML Tables, DIV concept, DIV Handling ,List all kinds, Image dealing in HTML, covering all tags, usage of all tags with notepad | | | | | Assignment | | |
| 3 | | **HTML5:**  Intro, elements, Canvas, SVG, Drag/Drop, Geolocation, Video, Audio, Form handling, SSE | | | | | Assignment | | |
| 4 | | **Cascading Style Sheets (CSS) :**  Intro and Basic Syntax, CSS Background, CSS Text, CSS Fonts ,CSS Border, web page body style sheet, Issues in CSS and solutions | | | | | Quiz | | |
| 5 | | | | **Java Script:**  JS statement ,commenting concept ,usage of variables ,External JS and its usage ,JS Operators, JS Comparison ,JS Conditions , JS Popup, JS Functions ,JS For loop, JS do while loop, JS while loop ,Events in JS, Form validation with J S. | | | Assignment | | | | |
| 6 | | | | **Java Script:**  JS statement ,commenting concept ,usage of variables ,External JS and its usage ,JS Operators, JS Comparison ,JS Conditions , JS Popup, JS Functions ,JS For loop, JS do while loop, JS while loop ,Events in JS, Form validation with J S. | | | Assignment | | | | |
| 7 | | | | **Introduction to C#: (Revision)**  Programming in C#  Difference from C/C++, Java  Variables, loops, decisions, functions, classes | | |  | | | | |
| 8 | | | | **Introduction to C#: (Cont.)**  Inheritance, operator overloading, polymorphism  Events, delegates, indexers, properties | | |  | | | | |
| 9 | | | |  | **M I D T E R M E X A M I N A T I O N** | | | |  | | |
| 10 | | | | **ASP.NET/PHP:**  Introduction to Programming in ASP.NET, ASP.NET Life Cycle, IIS Server | | | Quiz + Assignment | | | | |
| 11 | | | | **ASP.NET/PHP (Cont.)**  Different types of ASP.NET/PHP application, Web Forms, server side controls | | |  | | | | |
| 12 | | | | **ASP.NET/PHP (Cont.)**  Different types of ASP.NET/PHP application, Web Forms, server side controls | | |  | | | | |
| 13 | | | | **ASP.NET/PHP:**  Validation, state Management, Web parts, caching | | | Assignment | | | | |
| 14 | | **ADO.NET/MySQL/XAMPP:**  MS SQL Server 2012 Management Studio/XAMPP/MySQL  Installation, Tables, Queries, Stored Procedures. | | | | | Quiz | | | | |
| 15 | | **ADO.NET/MySQL/XAMPP**  Intro to LINQ, LINQ to SQL, SQL Reporting | | | | | Mini Assignment | | | | |
| 16 | | **Final Term Project (Practical Demonstration + Viva)** | | | | | Final Term Project | | | | |
| Revision and Discussion | | | | |  | | | | |
| **NOTE: \* Some Advanced Topics may be Discussed or Given as an Assignments**  **\* There are some Advance topics which are optional means if we get time for those topics then we will try our best to cover those topics too.**  **\* Quiz can be announced or Surprise Quiz**  **\*Last day to submit Final Term Project is 2 weeks before Last Day of Class**  **\*There can be quiz or viva for Assignment evaluation**  **\*There will be min 4 Assignments and 4 Quizzes**  **\*No Retake of Quiz, Assignment, Mid etc.** | | | | | | | | | | | |
|  | | | | | | **F I N A L T E R M E X A M I N A T I O N** | | | |  | |