



National Computing Education Accreditation Council NCEAC



NCEAC.DOC.001-E

COURSE DESCRIPTION

NAME OF INSTITUTION	Lahore Garrison University
PROGRAM (S) TO BE EVALUATED	Computer Science , Spring 2022

Course Description : In this course you will learn to develop interactive and responsive websites. It includes HTML5 and CSS3 for creating beautiful web pages. No prior knowledge of HTML or web design is required. Throughout the course students will get the info need to plan and design effective web pages using AP.NET MVC 5. Come away knowing how to implement web pages by writing HTML and CSS code. And discover ways to enhance web pages with the use of page layout techniques, text formatting, graphics, and images. Bootstrap will use for developing responsive and elegant websites.

Course Code	CSC394																								
Course Title	Web Design and Development																								
Credit Hours	3																								
Prerequisites by Course(s) and Topics	Fundamentals of programming and OOP. Fundamentals of SQL Server																								
Assessment Instruments with Weights (homework, quizzes, midterms, final, programming assignments, lab work, etc.)	SESSIONAL (Quizzes, Assignments, Presentations) =25 % Midterm Exam =25 % Final Exam = 50%																								
Course Coordinator	Abdul Rehman																								
URL (if any)	https://www.w3schools.com/																								
Current Catalog Description																									
Textbook (or Laboratory Manual for Laboratory Courses)	• Head first html and css: a learner's guide to creating standards-based web pages – by elisabeth robson & eric freeman • Fundamentals of computer programming with c# • Learn microsoft sql server intuitively. Transact-sql the solid basics • Microsoft sql server a complete guide: 2019 edition gerardus blokdyk • Pro asp.net mvc 5 (expert's voice in asp.net) 5th ed. Edition																								
Reference Material	• https://www.w3schools.com/ • https://dotnettutorials.net/course/asp-dot-net-mvc-tutorials/ • https://www.guru99.com/asp-net-mvc-tutorial.html https://www.tutorialsteacher.com/mvc																								
Course Goals	Students will develop a commercial level web application using C#, Entity Framework and ASP .NET MVC 5. The project should be implemented using the best practices of object-oriented software application development.																								
Course Learning Outcomes (CLOs):	<table><tr><td>At the end of the course the students will be able to:</td><td>Domain</td><td>BT Level*</td></tr><tr><td>Students will develop a commercial level web application using C#, Entity Framework and ASP .NET MVC 5. The project should be implemented using the best practices of object-oriented software application development.</td><td></td><td></td></tr><tr><td>Produce a HTML web page using suitable tags and attributes and explain the advantages of CSS compared to inline styling.</td><td></td><td></td></tr><tr><td>Demonstrate how to use the Document Object Model (DOM) to access an element of a web page.</td><td></td><td></td></tr><tr><td>Produce an interactive website using JavaScript and JQuery.</td><td></td><td></td></tr><tr><td>Build forms with server-side and client-side validation.</td><td></td><td></td></tr><tr><td>Use Entity Framework to query or update data. Implement CRUD operations and implement authentication and authorization using ASP.NET.</td><td></td><td></td></tr><tr><td>* BT= Bloom's Taxonomy, C=Cognitive domain, P=Psychomotor domain, A= Affective domain</td><td></td><td></td></tr></table>	At the end of the course the students will be able to:	Domain	BT Level*	Students will develop a commercial level web application using C#, Entity Framework and ASP .NET MVC 5. The project should be implemented using the best practices of object-oriented software application development.			Produce a HTML web page using suitable tags and attributes and explain the advantages of CSS compared to inline styling.			Demonstrate how to use the Document Object Model (DOM) to access an element of a web page.			Produce an interactive website using JavaScript and JQuery.			Build forms with server-side and client-side validation.			Use Entity Framework to query or update data. Implement CRUD operations and implement authentication and authorization using ASP.NET.			* BT= Bloom's Taxonomy, C=Cognitive domain, P=Psychomotor domain, A= Affective domain		
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Topics Covered in the Course, with Number of Lectures on Each Topic (assume 15-week instruction and one-hour lectures)

Week	Lecture	Topics Covered
Week 1	1	Introduction to Course, Description, Course Outline, Objectives Goals, Scope and Applications of web development.
	2	Internet concepts and History, Addressing schemes (IP, DNS), Protocols, URL AND URI, Web Client/Web Server. Installation of Visual Studio & SQL Server
Week 2	3	Introduction and History of WWW. Communication Networks. Web Design Tools and Technologies, Types of websites (Static and Dynamic), Web Design and Development planning System.
	4	Web Development Technologies: HTML, XHTML, HTML5, XML. TAGS with Html and HTML5 Syntax implementation.
Week 3	5	Common Tags: html, title, body, header, footer, article, aside, nav. Formatting Tags: P, B, I, U, FONT, BR, HR, Center
	6	Structural Tags, Embedded Content Tags, Meta Tags, Form Tags, Table Tags, Scripting Tags Implementation of tags using Html 5. Table based layout VS Div. based layout. HTML and HTML5 with tags Image Tags, Image tag with links. Form Tags, Frame and Frameset. Text, Radio, Checkbox, Select, Button. Forms and Table Implementation.
Week 4	7	Image Tags, Image tag with links. Form Tags, Frame and Frameset. Text, Radio, Checkbox, Select, Button. Forms and Table Implementation.
	8	Html with Internal And Inline Styling. HTML selectors (Class and Id) with implementation. Page layout with Box model using div. Web page design implementation.
Week 5	9	CSS Formatting: Text Formatting, Links, Block Elements, Inline Elements, Display Property, Selector Pseudo code class, Selector Pseudo code element, CSS Attributes Float, Positions. Web Implementations using HTML 5 Tags and CSS Concept of media queries and view port for Responsive Websites
	10	Concepts of Frame works- Bootstrap - grid based system. Implementation of Web page using Bootstrap. PSD to Bootstrap Conversion Project: Static Web Site PSD to Bootstrap using HTML5, CSS, CSS3 Project Implementation using PSD (Slicing, Cropping, Color Picker, Text Formatting) to HTML/BOOTSTRAP
Week 6	11	Introduction of Client and Server Scripting. Introduction to Java Script, Elements of Java Script, Variables Data Types. Operators, Control Statements, Functions.
	12	Dialogs: Performing I/O, Objects in Java Script such as Date, Document Object Model: Document, Form, Controls, Events, Alerts, Prompts Box and implementation
Week 7	13	Introduction to JQuery. Functions of JQuery. Implementation using functions.
	14	JQuery Functions with form validations. Regular expressions. Web page Development using JQuery. Implementation
Week 8	1 hours	Mid Term
Week 9	15	Introduction to SQL Server. Working with Tables, Schemas. Columns & Built-In Data Types.
	16	Working with Primary Keys, Foreign Keys & Identity Column. Introduction to T-SQL & Writing Basic.
Week 10	17	Where clause Select Statements. Normalizations.
	18	Joins and Stored Procedure Introduction using ecommerce database. Overview of Microsoft .NET Platform. Fundamentals of C# Language.
Week 11	19	C# Introduction, Object Oriented Class Libraries Development
	20	Developing Web Applications using Visual Studio 2017. Admin theme convert into MVC.
Week 12	21	Create web pages and user registration form using HTML, CSS and Bootstrap.
	22	User registration form Validating using HTML Attributes, JavaScript & jQuery
Week 13	23	Creating & using Layout Views, Partial Views & HTML Helpers Create user registration table in sql server 2012, 2014, 2016, 2017, Database connectivity using Database-First approach Database Programming using Entity Framework LINQ queries using Entity Framework approach
	24	Login module. Authentication and Authorization. CRUD of user registration form and product table using entity framework
Week 14	25	Data submit on server side using ajax. Concepts of session and cookies using login module.
	26	Model Validation Using Data Annotations In ASP.NET MVC
Week 15	27	Fetch data from database and show in frontend theme in mvc. Show category, sub category, Products
	28	Add to cart using session. Mange order table and order details.
Week 16	29	Testing and Debugging Creating Reports Configuration & Deployment of ASP.NET MVC Applications,

	Week	Lecture	Topics Covered
		30	Concepts of Hosting, Domain, Server, File Zilla. Website upload on File manager / Cpanel Data base Creation on C panel Upload Site using File manager
	Week 17	2 hours	Final Term
Laboratory Projects/Experiments Done in the Course	Semester Project in Asp.Net using Microsoft Visual Studio & SQL Server.		
Programming Assignments Done in the Course	Yes		

Instructor Name	Abdul Rehman
Instructor Signature	
Date	