



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 , Fall 2022

Course Description : In this course you will learn to develop interactive and responsive websites. It includes HTML5, CSS3, J-Query and Bootstrap 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 .NET MVC Core 5. Come away knowing how to implement web pages by writing HTML5 and CSS3. 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 and perform CRUD operation using Entity Framework Core and SQL Server 2019. Also implement the N-Tier architecture in .NET MVC Core 5 using IDE Visual Studio 2019.

Course Code	CSC394																		
Course Title	Web Design and Development																		
Credit Hours	3																		
Prerequisites by Course(s) and Topics	Fundamentals of programming,Object Oriented Programming, Database																		
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	Ahsan Ali Haroon																		
URL (if any)	https://www.w3schools.com/ https://jquery.com/ https://getbootstrap.com/ https://www.entityframeworktutorial.net/what-is-entityframework.aspx https://learn.microsoft.com/en-us/aspnet/core/tutorials/first-mvc-app/start-mvc?view=aspnetcore-5.0&tabs=visual-studio																		
Current Catalog Description																			
Textbook (or Laboratory Manual for Laboratory Courses)	Pro HTML5 Programming Peter Lubbers , Brian Albers , Frank Salim ASP.NET-Core-5-for-Beginners Publish by: Packt																		
Reference Material	https://www.w3schools.com/ https://jquery.com/ https://getbootstrap.com/ https://www.entityframeworktutorial.net/what-is-entityframework.aspx https://learn.microsoft.com/en-us/aspnet/core/tutorials/first-mvc-app/start-mvc?view=aspnetcore-5.0&tabs=visual-studio https://www.microsoft.com/en-us/sql-server/sql-server-downloads https://visualstudio.microsoft.com/vs/older-downloads/ https://visualstudio.microsoft.com/downloads/																		
Course Goals	This course is to provide a combined applied and theoretical background in Web Development & Design to improve students' learning outcomes: 1. Recognize the principles of effective web page. 2. Learn Html5, CSS3, JavaScript, jQuery and Bootstrap for Graphical user interface. 3. Practice a web application in .Net MVC Core 5 using C#, Entity Framework Core, SQL Server and N-Tier Architecture. 4. Implement web concepts.																		
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>Recognize the principles of effective web page.</td><td>Cognitive</td><td>2</td></tr><tr><td>Learn Html5, CSS3, JavaScript, jQuery and Bootstrap for Graphical user interface.</td><td>Cognitive</td><td>2</td></tr><tr><td>Practice a web application in .Net MVC Core 5 using C#, Entity Framework Core, SQL Server and N-Tier Architecture.</td><td>Cognitive</td><td>4</td></tr><tr><td>Implement web concepts.</td><td>Psychomotor</td><td>5</td></tr><tr><td colspan="2">* BT= Bloom's Taxonomy, C=Cognitive domain, P=Psychomotor domain, A= Affective domain</td><td></td></tr></table>	At the end of the course the students will be able to:	Domain	BT Level*	Recognize the principles of effective web page.	Cognitive	2	Learn Html5, CSS3, JavaScript, jQuery and Bootstrap for Graphical user interface.	Cognitive	2	Practice a web application in .Net MVC Core 5 using C#, Entity Framework Core, SQL Server and N-Tier Architecture.	Cognitive	4	Implement web concepts.	Psychomotor	5	* BT= Bloom's Taxonomy, C=Cognitive domain, P=Psychomotor domain, A= Affective domain		
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Recognize the principles of effective web page.	Cognitive	2																	
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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	Rivision
	14	Midterm
Week 8	1 hours	Mid Term
Week 9	15	Introduction to JQuery. Functions of JQuery. Implementation using functions.
	16	JQuery Functions with form validations. Regular expressions. Web page Development using JQuery. Implementation
Week 10	17	Introduction to SQL Server. Working with Tables, Schemas. Columns & Built-In Data Types.
	18	Working with Primary Keys, Foreign Keys & Identity Column.Introduction to T-SQL & Writing Basic.
Week 11	19	Where clause Select Statements. Normalizations.
	20	Joins and Stored Procedure Introduction using ecommerce database. Overview of Microsoft .NET Platform. Fundamentals of C# Language.
Week 12	21	C# Introduction, Object Oriented Class Libraries Development
	22	Developing Web Applications using Visual Studio 2019 & 2022. Admin theme convert into MVC.
Week 13	23	Create web pages and user registration form using HTML, CSS and Bootstrap.
	24	User registration form Validating using HTML Attributes, JavaScript & jQuery
Week 14	25	Creating & using Layout Views, Partial Views & HTML Helpers Create user registration table in sql server 2019 Database connectivity using Database-First approach Database Programming using Entity Framework LINQ queries using Entity Framework approach
	26	Login module. Authentication and Authorization. CRUD of user registration form and product table using entity framework
Week 15	27	Data submit on server side using ajax. Concepts of session and cookies using login module.
	28	Model Validation Using Data Annotations In .NET MVC CORE 5.
Week 16	29	Fetch data from database and show in frontend theme in mvc. Show category, sub category, Products

	Week	Lecture	Topics Covered
		30	Add to cart using session. Mange order table and order details.
	Week 17	2 hours	Final Term
Laboratory Projects/Experiments Done in the Course	Semester Project in .Net MVC Core 5 using Microsoft Visual Studio 2019, SQL Server 2019, Entity Framework Core.		
Programming Assignments Done in the Course	Yes		

Instructor Name	Ahsan Ali Haroon
Instructor Signature	
Date	