East West University
Department of Computer Science and Engineering
Course Outline
Summer 2025

Course Information

Course: CSE479 Web Programming

Credit and Teaching Scheme

	Theory	Laboratory	Total
Credits	3	1	4
Contact Hours	3 Hours/Week for 11 Weeks	2 Hours/Week for 11 Weeks	5 Hours/Week for 11 Weeks

Prerequisite

CSE302 Database System

Course Objective

This course introduces the fundamental concepts and practices of designing and implementing a website using the database. It also analyzes website requirements and determines the entities involved in the system and their relationship to one another. The main outcome of this course is the construction of actual information system by following the software and database lifecycle from the requirement analysis, specification, modeling and design phases. Knowledge of this course will be needed as prerequisite knowledge for future courses such as CSE 482 Parallel Computation, CSE 484 Computation Geometry, and CSE 485 Advanced Algorithm.

Course Outcomes (COs)

After completion of this course students will be able to:

CO1	**Apply and examine basic webpage designing concepts such as HTML, CSS, Bootstrap, and JavaScript for designing frontend of webpages.**
CO2	**Design** and **develop** the webpages using PHP, MySQL and MongoDB for designing backend of a dynamic web application.
CO3	**Apply** and **interpret** concepts of Cookies, Sessions, Authentication, Data Security, Web services, MVC Architecture while developing a website through a web development framework.
CO4	**Choose** appropriate tools, **perform** and **demonstrate** skills and **write** report to design, build, and test realistic and useful web-based database applications.

Course Topics, Teaching-Learning Methods and Assessment Scheme

Course Topic	Teaching-Learning Method	CO	Mark of Cognitive Learning Levels		Mark of COs	Exam (Mark)
			C3	C4		
Introducing basic concepts on web technology, Basic and Advanced HTML and CSS, Bootstrap	Lecture, Class Discussion, Discussion Outside Class with Instructor/ Teaching Assistant	**CO1**	10	5	15	**Midterm Exam (30)**
Basic JavaScript, Object Oriented JavaScript	Do	**CO1**	10	5	15	
Basic and advanced PHP programming and Integrating PHP and MySQL database to build a dynamic Website	Do	**CO2**	-	10	10	**Final Exam (30)**
JSON and XML in PHP for the representation of the data	Do	**CO2**	5	5	10	
Introducing MongoDB for NoSQL database	Do	**CO3**	-	5	5	
Working with Sessions, Cookies, Authentication and Data Security, API/Web service	Do	**CO3**	**5**	**-**	5	

Lab Exercises

Experiment		CO	Mark of Cognitive	Mark of Psychomotor	Mark of Affective	CO Mark

	Teaching-Learning Method		Learning Levels	Learning Levels		Learning Levels	
			C3	P2	P3	A2	
Creation of a personal blog using HTML5.	Preparing Pre-Lab Report, Lab Experiment and Result Analysis, Preparing Post-Lab Report	CO4					
Developing a static website using HTML5 and CSS3	Do	CO4					
Problem solving using JavaScript	Do	CO4					
Developing N-puzzle game using HTML, CSS, and JavaScript	Do	CO4					
Problem solving using HTTP Request Methods Get Post submission, PHP Form validation	Do	CO4					
Problem solving using Session and cookie, Text file read-write using PHP	Do	CO4					
Problem solving using MongoDB	Do	CO4					
Problem solving using data operation in MYSQL using PHP	Do	CO4					
Problem solving using Object Oriented PHP, Homework on database access via Object Oriented PHP based coding, Laravel Framework	Do	CO4					
Lab Exercises	Do	CO4	5	5	3	2	15
Lab Exam (Oral/ Written)	Individual	CO4	1	1	2	1	5

Total			**6**	**6**	**5**	**3**	**20**

Mini Project

Mini Project	**Teaching-Learning Method**	**CO**	**Mark of Cognitive Levels**		**Mark of Psychomotor Levels**		**Mark of Affective Levels**	**Mark of COs**
			C3	C4	P2	P3	A2	
Mini Project including Report and Presentation	Moderately complex Project with report writing, and oral/poster presentation	CO4	**4**	**4**	**3**	**2**	**2**	**15**

Overall Assessment Scheme

Assessment Area	**CO**				**Total**
	CO1	**CO2**	**CO3**	**CO4**	
Class Test	5	5			10
Midterm Assessment	30				30
Final Exam		15	15		30
Laboratory Experiments				15	15
Mini Project				10	10
Assignment				5	5
Total Mark	**35**	**20**	**15**	**30**	**100**

Teaching Materials/Equipment

Textbook:

[1] “MySQL/PHP Database Applications”, Author: Brad Bulger, Jay Greenspan and David Wall, Wiley Publishing.
[2] “HTTP: The Definitive Guide”, Author: Robert Sedgewick, Addison-Wesley Publishing Company.
[3] “Learning PHP. MySQL and JavaScript with jQuery, CSS and HTML5”, Author: Robin Nixon, 5th edition, O’Reilly Media.
[4] “Head First HTML with CSS and XHTML”, Author: Elisabeth Freeman, Eric Freeman, 1st Edition, O’REILLY, 2006.
[5] “Web Database Applications with PHP and MySQL”, Author: Hugh E. Williams, David Lane, 1st Edition, O’REILLY, 2002.

[6] “JavaScript: The Definitive Guide”, Author: David Flanagan, 6th Edition, O’REILLY, 2011.
[7] “HTTP: The Definitive Guide”, Author: Robert Sedgewick, Addison-Wesley Publishing Company.

Web Links:

- W3Schools Online Web Tutorials; URL: http://www.w3schools.com
- PHP Documentation; URL: http://www.php.net/docs.php

Assignment:

Assignment description will be provided.

Software/Tools:

Software Name	Link
XAMPP Development Environment	https://www.apachefriends.org/index.html
LARAVEL Framework	https://laravel.com/
MongoDB	https://www.mongodb.com/
Bootstrap	https://getbootstrap.com/
XML	https://www.w3.org/XML/

Grading System

Marks (%)	Letter Grade	Grade Point	Marks (%)	Letter Grade	Grade Point
80-100	A+	4.00	55-59	B-	2.75
75-79	A	3.75	50-54	C+	2.5
70-74	A-	3.5	45-49	C	2.25
65-69	B+	3.25	40-44	D	2
60-64	B	3.00	Below 40	F	0.00

Academic Code of Conduct

Academic Integrity:

Any form of cheating, plagiarism, personification, or falsification of a document as well as any other form of dishonest behavior related to obtaining academic gain or the avoidance of evaluative exercises committed by a student is an academic offense under the Academic Code of Conduct and **may lead to severe penalties as decided by the Disciplinary Committee of the university.**

Special Instructions:

- Students are expected to attend all classes and examinations. A student MUST have at least 80% class attendance to sit for the final exam.
- Students will not be allowed to enter the classroom 20 minutes after the starting time.
- For plagiarism, the grade will automatically become zero for that exam/assignment.
- Normally there will be **NO make-up exam**. However, in case of **severe illness, death of any family member, any family emergency, or any humanitarian ground**, if a student misses any exam, the student MUST get approval for a makeup exam by written application to the Chairperson through the Course Instructor **within 48hours**of the exam time. Proper supporting documents in favor of the reason for missing the exam must be presented with the application.

- For the **final exam**, there will be NO makeup exam. However, in case of **severe illness, death of any family member, any family emergency, or any humanitarian ground**, if a student misses the final exam, the student MUST get an approval of **Incomplete Grade** by written application to the Chairperson through the Course Instructor **within 48 hours** of the final exam time. Proper supporting documents in favor of the reason for missing the final exam must be presented with the application. **It is the responsibility of the student to arrange an Incomplete Exam within the deadline mentioned in the Academic Calendar in consultation with the Course Instructor**.

- All mobile phones and smart watches MUST be turned to silent mode during class and exam periods. Students cannot carry any Bluetooth device in the exam hall.

- There is **zero tolerance for cheating** in exams. Students caught with cheat sheets in their possession, whether used or not; writing on the palm, back of calculators, chairs, or nearby walls; copying from cheat sheets or other cheat sources; copying from other examinees, etc. would be treated as cheating in the exam hall. The only penalty for cheating is **expulsion for several semesters as decided by the Disciplinary Committee of the university**.
