



Prince Sultan University
College of Computer and Info Sciences / Department of Software Engineering
Term 261(2026-2027)

COURSE SYLLABUS

Mission Statement of the Bachelor of Software Engineering Program(s): Prepare world-class software engineering graduates through an academic environment that promotes professional skills, ethical behavior, life-long learning, research and service to the community

1. **Course number and name:** SE371 Web Engineering
2. **Credits and contact hours:** 3 credits and 4 contact hours (Lectures: 3 Tutorials: Lab: 1)
3. **Instructor's or course coordinator's name:** Ms. Ishrat Khan
 - a. **Scheduled Office Hours:** Sun, Mon, Tues, & Wed 9:00- 10:00 am
 - b. **Office Location:** Building 101, 2nd Floor, R307
 - c. **Email:** ikhan@psu.edu.sa
4. **Text book, title, author, and year**
 - **Primary Text:** Learning PHP, MySQL, JavaScript, CSS & HTML5, by Robin Nixon, Publisher O'Reilly Media.
 - a. **Other References:**
 - Learning Fundamentals of Web Development 1/Ed by Randy Connolly, Pearson
 - Shneiderman, B., Plaisant, C., Cohen, M. S., Jacobs, S., Elmqvist, N., & Diakopoulos, N. (2016). Designing the user interface: strategies for effective human-computer interaction. 6th Ed. Pearson.
 - Online Certification: After finishing this course, students are encouraged to get online free certifications on responsive web design and front-end development here: [SATR.codes](https://sitr.codes)
 - b. **Course Website [Optional]:**
 - a. **Learning Management System:** Moodle available at <https://lms.psu.edu.sa>
5. **Specific course information**
 - a. **Brief description of the content of the course (catalog description):** This course covers the major aspects of full-stack web applications development. Full-stack web development involves the design and development of front-end and back-end applications in web framework. The course starts with a short introduction on the web applications architecture and underlying technologies, including HTML (focus on HTML 5), Cascading Style Sheets (CSS) and JavaScript for client-side scripting. The course then proceeds to cover server side Web application development in depth, including the multi-tier development model (data tier, business tier, presentation tier), web database development, authentication, navigation, working with XML, state management, caching, ...etc.
 - b. **Prerequisites or co-requisites:** CS210
 - c. **Indicate whether a required, elective, or selected elective (as per Table 5-1) course in the program:** Required as a Core course in BS SE program
6. **Specific goals for the course**
 - a. **Specific outcomes of instruction. The student will be able to:**

Learning Domain	Course Learning Outcomes
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Knowledge & Understanding	CLO 1: Describe the fundamental concepts and requirements for designing a full-stack web framework.
Skills	CLO 2: Develop a responsive front-end web application using HTML and Cascading Styles Sheets CLO 3: Develop dynamic web applications using client-side scripting with Synchronous and Asynchronous JavaScript and interact with Document Object Model (DOM) CLO 4: Build interactive web applications using Server-side scripting with backend Web Server and Databases. CLO5: Apply current website technologies to engage in design and development of web applications.
Values	CLO6: Apply a team-based collaborative approach to develop a full stack web application using current web technologies.

b. Explicitly indicate which of the student outcomes listed in Criterion 3 or any other outcomes are addressed by the course.

Course LOs #	Student Outcomes	
	Software Engineering	Computer Science
1	1	
2	2	
3	2	
4	2	
5	7	
6	5	

7. Brief list of topics to be covered

Week No.	Topics	CLO(s) alignment	Assessments
1	Introduction to Full-Stack Web Development (Chapter 1)	1	Labs, Quiz1, midterm and Project(part 1), assignment 1, final
2-3	HTML5 (Basics, Semantic elements, Tables, Forms, HTML validation) (Chapter 2)	2,6	
4-5	Cascading Style Sheet (CSS3) (Chapter 3)	2,6	
6-7	JavaScript (basics, Object-Oriented Concepts) (Chapter 4)	3,6	
8-9	Javascript (DOM, events, client-side data validation, RegEX) (Chapter 5)	3,5,6	
10	Javascript (DOM, events, client-side data validation, RegEX) (Chapter 5)	3,6	Lab, Assignment 2
11-12	Server-side development (async javascript, HTTP requests routing, server-side rendering) (Chapter 6)	4,5,6	Labs, Quiz2, and Project(part 2),
13-14	Working with databases (MVC, CRUD) (Chapter 7)	4,6	



15-16	Managing state (cookies, sessions, authentication) (Chapter 8)	4,6	assignment 3, final
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8. Weight of Assessments

- Attendance 5% - Throughout the semester
- Quiz 1 5% - Week 5 (On 6 Sep 2026)
- Quiz 2 5% - Week 9 (On 4 Oct 2026)
- Project Milestone 1 10% - Week 8
- Project Milestone 2 10% - Week 14
- Lab / Assignments 10% - Throughout the semester
- Major Exam 15% - Week 12 [Tentative Date: 26th Oct 2026 at 12 to 1 pm]
- Final Exam 40% - Check Edugate

9. Additional Information:

Plagiarism and Academic Dishonesty: "Plagiarism can be defined as unintentionally or deliberately using AI-based tools or another person's writing or ideas as though they were one's own. Plagiarism includes, but is not limited to, using **ChaptGPT** or other AI tool or copying another individual's work and taking credit for it, paraphrasing information from a source without proper documentation, and mixing one's own words with those of another author without attribution. In addition, buying a paper or project, or downloading a paper from the Internet, and submitting them as your own is also plagiarism. The penalty for academic dishonesty will bring course expulsion and failure, or even suspension" (Academic Integrity and Syllabus Acknowledgement Form).

Attendance Policies: The University attendance policy will be strictly followed. Students are expected to attend all class sessions and be in class on-time. Missing a class session is a student's responsibility. Missed classes will not be repeated. A total of **16** absences may lead to denial grade DN. **It is the sole responsibility of a student to keep satisfying level of attendance. Otherwise, "DN" grade will be granted automatically during any time in the semester, without any notice. Please refer to the table below for the details.** It is the student's responsibility to periodically check course website/Moodle for course content, projects assignments, updates and notifications. If a student arrives 10 minutes late to the class, she will be marked late for the hour.

	No deduction	1 mark	2 marks deduction	3 marks deduction	4 marks deduction	5 marks deduction	DN
Four Times Weekly	Total of or less than 3 absences	Total of 4 absences	Total of 7 absences	Total of 10 absences	Total of 13 absences	Total of 15 absences	Total of 16 absences

Major/Midterm Exam Policies: Major exams are unified among all sections (if applicable) and their dates are announced from the onset of the semester. Arrangements with the Registration Office and the department are made before the beginning of the semester so that all sections will take the same exam and during the same time. It is not possible to reschedule any major exam. If any student missed an assessment, the makeup will be at the end of the semester and all the materials are included. Makeup exam will only be approved in limited cases as stipulated in the university bylaws. Generally, the final exam includes all material covered during the semester (comprehensive).

Class exercises/Tutorials/Project Policies: Students are expected to actively participate in class discussion and activities. Students must submit their class exercises/ tutorials and project works on time. Failure to submit on time will result with deduction of 1 mark per day (for project) and 50% (for class exercises/tutorials) to their submission marks.