INSTITUTIONAL COURSE SYLLABUS TEMPLATE

Course Code: SE371	Course Title: Web Engineering
Course Instructor: Skander Turki	Email: sturki@psu.edu.sa
Credit Hours: 3 (3, 0, 1)	Course Location: Boys Campus (Building 105)
Scheduled Office Hours: 4 (details can be found on the instructor schedule on his office door)	
Office Location: Building 101 – first floor	
Co-Requisite: none	Prerequisite: CS210
On Campus or Online: On Campus	

Mission Statement

"The College of Computer and Information Sciences aims to offer internationally proven computing programs in an academic environment that promotes excellence and innovation in education, research and service to the community."

I. Course 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.

II. Course Learning Outcomes:

(A summary of intended learning outcomes of the course in each domain of learning). On the successful completion of this course, students will be able to demonstrate the following:

Skills	Course Learning Outcomes
Knowledge & Understanding	**CLO 1: Develop** a responsive front-end web application using HTML and Cascading Styles Sheets

	CLO 2: Develop dynamic web applications using client-side scripting with Synchronous and Asynchronous JavaScript and interact with Document Object Model (DOM).
Skills	**CLO 3: Build** interactive web applications using Server-side scripting with backend Web Server and Databases. **CLO 4: Apply** current website technologies to engage in design and development of web applications **CLO 5: Apply** a team-based collaborative approach to develop a full stack web application using current web technologies.
Values	

III. Tentative Weekly Course Schedule: (Should mention the specific course topics to be covered within the semester) *May change to accommodate guest presenters & student needs*.

WEEK	UNIT/ TOPIC	CLO(s) alignment	STUDENT TASKS (assignments, readings, exams, quizzes, presentations, etc…)	Number of Contact hours
1	Introduction to Full-Stack Web Development	1	Labs, Quiz1, Major1 and Project(part 1)	4
2-3	HTML5 (Basics, Tables, Forms, multimedia)	1,4,5		8
4-5	Cascading Style Sheet (CSS) and Bootstrap	1,4,5		8
6-7	JavaScript (basics, Object-Oriented Concepts)	2,4,5		8
8-10	Javascript (DOM, events, client-side data validation, RegEX)	1,2,4,5		12

11-12	Server-side development (async javascript, HTTP requests routing, server-side rendering)	3,4,5	Labs, Quiz2, Major2 and Project(part 2)	8
13-14	Working with databases (MVC, CRUD)	3,4,5		8
15	Managing state (cookies, sessions, authentication)	3,4,5		4

IV. Student Assessment & Teaching Strategies:

Assessment Task (Indicate the kind of assessment tasks to be used to measure student learning in each of the learning domains. Example: quiz, oral examination, group work, etc.).
Teaching Strategies: (Please indicate the teaching and student activities to be used to develop the kinds of learning involved in each learning domain. Also, research specialized Information about Best Teaching Practices for the particular course/field).

Domain	Assessment Task	Teaching Strategy
Knowledge **CL01, CLO2, CLO3**	Labs, Quiz1, Major1-2, project, final	In class lectures, labs
Skills **CLO4** **CLO5**	Labs, Project (part 1-2), final Project (part 1-2)	labs and project.
Values	none	

V. Course Requirements [Whatever tasks and assignments you include in your course should be aligned with the specified learning outcomes (final learning, skills, knowledge, attitudes, and values the students leave the course with) you have defined and specified earlier.
These requirements should be consistent with the Course Specification on file in the particular department.]

VI. Schedule of Assessment (Specify the schedule/date of assessment & proportion of assessment, attach related rubrics for each assessment if applicable. For examples of rubrics, visit www.irubrics.com . The schedule should be consistent with the academic calendar. Any significant changes should be avoided. If significant changes are made, academic leaders should be informed in writing, and students should be given a new schedule of assessment table).

Assessment	Assessment Task	Week Due	Proportion of Final Assessment
0	Attendance (0-4 absences: 5/5, then every absence gets -0.5)	-	5
1	Quiz	Week 4	5
2	Major 1	Week 6	10
3	Project (part 1)	Week 9	10
5	Major 2	Week 11	10
6	Project (part 2)	Week 14	10
7	Assignments	Week 6, 12	10
8	Final Exam	finals	40

VII. Learning Resources

A. References:

a. Primary Textbook: Learning PHP, MySQL, JavaScript, CSS & HTML5, by Robin Nixon, Publisher O'Reilly Media.
b. Optional Text: Learning Fundamentals of Web Development 1/Ed by Randy Connolly, Pearson
c. Learning Management System: Moodle available at https://lms.psu.edu.sa

Optional:

1- After finishing this course, you can try to get online free certifications on responsive web design and front-end development here:
a- Level 1: https://www.freecodecamp.org/learn/2022/responsive-web-design/
b- Level 2: https://www.freecodecamp.org/learn/front-end-development-libraries/

B. Facilities Required:

a. Visual Studio code
b. Node.js
c. MongoDB
d. Google Chrome

C. Digital Tools:

Freecodecamp website is used for graded assignments: https://www.freecodecamp.org/
Students are requested to take online courses on freecodecamp and print their achievements report from the website.

D. Learning Management System – LMS using "Moodle" is required; items such as syllabus, course materials, assignments, rubrics, and announcements will be delivered through Moodle.

E. Online Courses: No online courses are scheduled. Only in cases on force majeure are courses delivered online through google meet.

F. Writing and Tutoring Center – Students are highly advised to use the Writing and Tutoring Center's academic services by booking tutoring/writing appointments through the **booking system:** (https://psu.mywconline.net/)

VIII. Classroom Policies

A. Academic Integrity Policy (e.g., plagiarism or dishonesty)

"Plagiarism can be defined as unintentionally or deliberately using another person's writing or ideas as though they are one's own. Plagiarism includes, but is not limited to, 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).

All students are expected to submit their 'own' work and not the work of others.

B. Attendance Policy

Please, adhere to the following guidelines:

1. The University attendance policy will be strictly followed. In this course, the absence of **(insert number here based on the number of credit hours)** hours results in a Denied Notice (DN). (Refer to the student regulation handbook for further details.)

   Please Note: IT IS THE SOLE RESPONSIBILITY OF THE STUDENT TO KEEP SATISFYING their level of attendance. Otherwise, a "DN" grade will be granted automatically during any time in the semester without any notice from the e-register system.

2. No make-up exams will be allowed except for university accepted documents. (Refer to the student regulation handbook for further details.)

C. Homework Submission Policy ***(****policy depends upon the course or the instructor****):***
Submissions that are less than one week LATE are graded out of 80% of the grade.
Submissions that are more than one week LATE are graded 0.

IX. My Assumptions (Optional)

The quality of the code the student writes is always taken into consideration in grading.
Students have to apply the coding styles that are leaned throughout the course. For your reference, we are using google code styles:
HTML: https://google.github.io/styleguide/htmlcssguide.html
CSS: https://google.github.io/styleguide/htmlcssguide.html
Javascript: https://google.github.io/styleguide/jsguide.html