هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

2023
TP-153

Course Specification
(Bachelor)

Course Title:	Web Engineering & Development
Course Code:	SE1501
Program:	Software Engineering
Department:	Software Engineering
College:	Computing and Information
Institution:	Al-Baha University
Version:	V1.0
Last Revision Date:	24-4-2024

Table of Contents

A. General information about the course:

1. Course Identification

1. Credit hours: (4)					
2. Course type					
A.	☐University	☐College	☒ Department	☐Track	☐Others
B.	☒ Required		☐Elective		
3. Level/year at which this course is offered: (7th /3rd year)					
4. Course general Description:					
Web Engineering introduces a structured methodology utilized in software engineering to Web development projects. The course addresses the concepts, methods, technologies, and techniques of developing Web sites that collect, organize, and expose information resources. Topics covered include requirements engineering for Web applications, design methods and technologies, interface design, usability of web applications, accessibility, testing, metrics, operation and maintenance of Web applications, security, and project management. Specific technologies covered in this course include client-side (HTML, JavaScript, and CSS) and server-side (ASP.NET).					
5. Pre-requirements for this course (if any): CS1251 Programming 2					
6. Pre-requirements for this course (if any): None					
7. Course Main Objective(s):					
The main objective of this course is to examine systematic, disciplined, and quantifiable approaches to developing high-quality, reliable, and usable web applications. The course introduces the methodologies, techniques and tools that support their design, development, evolution, and evaluation.					

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	3	100%
2	E-learning		
3	Hybrid		

No	Mode of Instruction	Contact Hours	Percentage
	• Traditional classroom • E-learning		
4	Distance learning		

3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	**Lectures**	33
2.	**Laboratory/Studio**	22
3.	**Field**	
4.	**Tutorial**	
5.	**Others (specify)**	
Total		55

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	**Knowledge and understanding**			
1.1	Describe the architecture of client-sideand server-side web applications	**K1**	Lecture, exercise	Quiz, Exams assignments
1.2	Identify the appropriate programming environment for developing dynamic client-side and server-side web applications	**K2**	Lecture, exercise	Quiz, Exams assignments
1.3	Identify the tools needed to create dynamic client-side and server-side web applications	**K3**	Lecture, exercise	Quiz, Exams assignments

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
2.0				
2.1	Plan, develop, debug, and implement interactive client-side and server-side web applications.	**S1**	Lecture, Group discussion, tutorials	**Exams** assignments ,project
2.2	Evaluate and validate web applications for conformance to the latest W3C markup standards.	**S2**	Lecture, Group discussion, tutorials	**Exams** assignments ,project
2-3	Analyze and evaluate web applications for conformance to section 508 and W3C accessibility standards.	**S3**	Lecture, Group discussion, tutorials	**Exams** assignments ,project
3.0	**Values, autonomy, and responsibility**			
3.1	Choose between server-side and client-side programming, depending on the task to be performed.	**V1**	Project, Discussion	assignments, Project

C. Course Content

No	List of Topics	Contact jHours
1.	An Introduction to Web Engineering Requirements Engineering for Web Applications	3
2.	Modeling Web Applications Web Application Architectures	4
3	Technology-aware Web Application Design	4
4	Usability of Web Applications	3
5	Technologies for Web Applications	3
6	Web Project Management	3

7	The Web Application Development Process	4
8	Security for Web Applications	3
9	Testing of Web Applications	3
10	Operation & Maintenance of Web ApplicationsIntroduction to AJAX	3
Total		**33**

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Midterm Exam	5	20%
2.	Project	10	10%
3.	Lab exam	11	20%
4	Final Exam	12	40%

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.).

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	Web Engineering: A Practitioner's Approach by Roger Pressman and David Lowe, McGraw-Hill, 2009.
Supportive References	HTML and CSS: Comprehensive 7th edition, Denise M. Woods andWilliam J. Dorin. Publisher: Cengage Learning; (2012) ISBN-10: 1133526144
Electronic Materials	Internet & World Wide Web How to Program, 5/e Paul J. Deitel,Harvey M. Deitel, Abbey Deitel, Pearson Education 2012.
Other Learning Materials	**N/A**

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	Classroom and Blackboard
Technology equipment (projector, smart board, software)	Data show and software
Other equipment (depending on the nature of the specialty)	N/A

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	• Students • Faculty • Peer Reviewers • Program Leader Course Coordinator	•Surveys (indirect). •Direct feedback from students. •Course evaluation by Peer Reviewers (indirect). •Class visit by Program Leader (indirect) Comprehensive Course report (where we can find information about teaching difficulties and action plan, …)
Effectiveness of Students assessment	• Students • Faculty • Peer Reviewers • Program Leader • Exam Evaluation Committee Course Coordinator	• Surveys (indirect). • Direct feedback from students. • Course evaluation by Peer Reviewers (indirect). • Class visit by Program Leader (indirect) Exam evaluation by the Exam Evaluation Committee (indirect)
Quality of learning resources	• Students • Faculty • Peer Reviewers • Course Coordinator	• Surveys (indirect) • Course evaluation by Peer Reviewers (indirect). Comprehensive Course report (where we can find information about difficulties and challenges about learning resources as well as consequences and action plan, …)
The extent to which CLOs have been achieved	• Faculty • Program Leader Course Coordinator	• Student Results (direct) Comprehensive Course report (where we can find the CLO assessment results)
Other	None	None

Assessor♦ (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	**Curriculum Committee**
REFERENCE NO.	
DATE	**28 April 2024**