2023
TP-153

Course Specification
(Bachelor)

Course Title:	Framework and Tools of Software Engineering
Course Code:	SE1751
Program:	Bachelor of Software Engineering
Department:	Software Engineering
College:	Faculty of Computers and Informatics
Institution:	Al-Baha University
Version:	1.0
Last Revision Date:	23/4/2024

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A. General information about the course:

1. Course Identification

1. Credit hours: (3)					
2. Course type					
A.	☐University	☐College	☒ Department	☐Track	☐Others
B.	☒ Required		☐Elective		
3. Level/year at which this course is offered: (9)					
4. Course general Description:					
This course introduces a set of frameworks and examines a number of contemporary issues in software projects within the public and private sectors. While we refer to accepted project management practice. The focus of the course is on the project as a domain of management decision-making. A number of important tools and techniques in project management are covered comprehensively. This is particularly the case with such areas as work planning, task scheduling, diagramming, and project resourcing. Conventional wisdom in project management is based on a rich and fascinating collage of analytical techniques, accepted practice, proprietary products, agreed standards, regularized procedures, anecdotal evidence, folklore, urban myths, professional ritual, assertions, strongly held beliefs, and methodological zealotry.					
5. Pre-requirements for this course (if any)**:**					
Software Testing SE1504					
6. Pre-requirements for this course (if any)**:**					
none					
7. Course Main Objective(s):					
The main objective of this course is to introduce different types of important tools, techniques and software of project, clarifying the most prominent tasks performed by each tool, and working on developing student's individual skills in how to deal with these tools to increase usability.					

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	3	100%
2	E-learning	0	0
3	Hybrid • Traditional classroom • E-learning	0	0
4	Distance learning	0	0

3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	**Lectures**	33
2.	**Laboratory/Studio**	0
3.	**Field**	0
4.	**Tutorial**	0
5.	**Others (specify)**	0
Total		33

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	**Define different types of frameworks and tools for designing and implementing software projects.**	**K1**	**Lecture, Exercise, and Group Discussion**	**Quizzes, Exams, Assignments**
1.2	**Demonstrate current theories, models, and techniques of using software**	**K2**	**Lecture, Exercise, and Group Discussion**	**Quizzes, Exams, Assignments**

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
	lifecycle.			
2.0	Skills			
2.1	Implement software engineering framework and tool by demonstrating competence in communication, planning, analysis, design, construction, and deployment.	S1	Lecture, Group Discussion.	Exams, Assignments, Project.
2.2	Experiment with software engineering techniques, frameworks, and tools in engineering practice	S2	Lecture, Group Discussion.	Exams, Assignments, Project.
2.3	evelop and justify a qualityassurance strategy for a software project, including making decisions.	S3	Lecture, Group Discussion.	Exams, Assignments, Project.
3.0	Values, autonomy, and responsibility			
3.1	Demonstrate responsibility, ethics, and effective teamwork.	V1	Project, Discussion	Project

C. Course Content

No	List of Topics	Contact Hours
1.	What is a Framework and Tool?	3
2.	Why We Use Framework and Tool?	3
3.	Framework vs Tools	3
4.	How do Framework and Tool work?	3

5.	Types of Frameworks	3
6.	Types of Tools	3
7.	Web (Laravel, Angular ,...etc)	4
8.	Data Science (PyTorch, TensorFlow, ...etc)	4
9.	Mobile (Ionic, Flutter,...etc)	4
10.	Practical Examples	3
Total		33

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Assignments and Quizzes	4,6	20%
2.	Group Project	10	20%
3.	Midterm Exam	5	20%
4.	Final Exam	11	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	Greenfield, J., Short, K., Cook, et al., 2022. Software Factories: Assembling Applications with Patterns, Models, Frameworks, and Tools. 1st ed. Wiley
Supportive References	Blokdyk, G., 2022. Software Framework A Complete Guide - 2020 Edition. Emereo Publishing
Electronic Materials	
Other Learning Materials	

2. Required Facilities and equipment

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

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Student	- Survey
Effectiveness of Students assessment	Lecturer	- Annual report
Quality of learning resources	Program Coordinator	- Survey - Evaluation of test Models - Standard sample
The extent to which CLOs have been achieved		
Other		

Assessors (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