هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

2023
TP-153

Course Specification

(Bachelor)

Course Title:	Distributed programming paradigms
Course Code:	SE1004
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: (5th /2nd year)					
4. Course general Description:					
This course introduces students to distributed computing paradigms via programming and hands-on labs. Topics include process management and multi-threading programming, Internet architecture, application protocols and services, Client-server, Multi-tier, Peer-topeer, Publish/subscribe, RPC, Distributed Objects, Object Spaces, Mobile Agents, Network Services, Groupware.					
5. Pre-requirements for this course (if any): CS1251 Programming2					
6. Pre-requirements for this course (if any): None					
7. Course Main Objective(s):					
the main objective is to teach students the distributed programming paradigms with programming application on a variety of technological contexts.					

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	4	100%
2	E-learning		
3	Hybrid • 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	Recognize the main concepts and paradigms of distributed programming	**K1**	Coop learning Lectures Problem sets	Exams Rubrics Course Exit Survey
1.2	Explain how these paradigms implemented in practice	**K2**	Coop learning Lectures Problem sets	Exams Rubrics Course Exit Survey
2.0	Skills			
2.1	Design several distributed real-world applications	**S1**	Coop learning Lectures Group Discussion Brainstorming Lab exercises set Mini project	Quizzes and/or Online Quizzes, Midterm, Final Exam Rubrics Course Exit Survey
2.2	Apply distributed programming for a variety of protocols and platforms.	**S2**	Coop learning Lectures Group Discussion Brainstorming Lab exercises set Mini project	Skills Quizzes and/or Online Quizzes, Midterm, Final Exam Rubrics Course Exit Survey

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
3.0	programming paradigm according to a			
...				

C. Course Content

No	List of Topics	Contact Hours
1.	Process management and multithreading	6
2.	Distributed computing paradigms and Networking	6
3	Socket programming and P2P	6
4	RPC and Distributed Objects (Remote Method Invocation)	3
5	Publish/subscribe model	3
6	Network services, Groupware	6
7	Mobile Agents	3
Total		33

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Project	10	20%
2.	Lab exam	11	20%
3.	Midterm Exam	5	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	Distributed Systems: Principles and Paradigms; Andrew S. Tanenbaum, Maarten van Steen, https://www.amazon.com/Distributed-Systems-Principles-Andrew-Tanenbaum/dp/153028175X
Supportive References	Computer Networking, a Top-Down Approach; J. F. Kurose, K. W. Ross D. E. Comer, Computer Networks and Internets, Prentice Hall, Englewood Cliffs, NJ, USA, 2nd Edition, 1999
Electronic Materials	N/A
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

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**