Course Specification
(Bachelor)

Course Title:	Distributed Information Systems
Course Code:	465CIS-3
Program:	Information Systems
Department:	Information Systems
College:	College of Computer Science and Information Systems
Institution:	Najran University
Version:	*Course Specification Version Number*
Last Revision Date:	*Pick Revision Date.*

Table of Contents

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: (Level 7 / Year 4)					
4. Course General Description:					
Distributed Systems Fundamentals, Primitives for Distributed Systems, Models of Distributed Systems, Performance Evaluation and Common Problems (and Solutions) for Distributed Systems, Techniques and Algorithms, The Internet and Internet Applications as a Distributed Information System, The Internet Environment (TCP/IP), Existing Internet Applications, Client-Server Applications, Peer-to-Peer Applications, Coding Internet Applications Using TCP and UDP, Inter-process communication; Remote invocation; Distributed operating system; and Distributed file systems, Distributed Multimedia Systems, Distributed Transaction and Control, Security Issues in Distributed Systems, Distributed Computing Using Java.					
5. Pre-requirements for this course (if any)**:**					
6. Co-requisites for this course (if any)**:**					
7. Course Main Objective(s):					
To provide students with essential concepts of distributed information systems.					

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	75	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**	30
2.	**Laboratory/Studio**	30
3.	**Field**	15
4.	**Tutorial**	
5.	**Others (specify)**	
Total		75

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

Code	Course Learning Outcomes	Code of PLOs aligned with the program	Teaching Strategies	Assessment Methods
1.0	**Knowledge and understanding**			
1.1	**Define the basic concepts and terminologies of distributed information systems.**	**K2**	**Lecture Presentation**	**Class Quizzes. Assignment. Midterm exam Final Exam**
1.2	**Explain various distributed information systems paradigms.**	**K2**	**Lecture Presentation**	**Class Quizzes. Assignment. Midterm exam Final Exam**
...				

Code	Course Learning Outcomes	Code of PLOs aligned with the program	Teaching Strategies	Assessment Methods
2.0	**Skills**			
2.1	**Evaluate the performance and different issues of distributed information systems**	**S2**	**Group discussion Lecture Presentation**	**Class Quizzes. Assignment. Midterm exam Final Exam**
2.2	**Analyze the algorithms of distributed information systems**	**S4**	**Group discussion Lecture Presentation**	**Class Quizzes. Assignment. Midterm exam Final Exam**
2.3	**Apply the knowledge and methods of distributed information systems in programming using java.**	**K1, K3, S2, S4**	**Group discussion Lecture Presentation**	**Class Quizzes. Assignment. Midterm exam Final Exam Continuous Lab assessment Lab exam**
3.0	**Values, autonomy, and responsibility**			
3.1				
3.2				
...				

C. Course Content

No	List of Topics	Contact Hours
1.	Introduction to Distributed Systems	3
2.	Distributed Systems architecture and models	3
3.	Performance issues of distributed systems	3
4.	Techniques and Algorithms 1	10
5.	Techniques and Algorithms 2	3
6.	Inter-process communication	3
7.	Remote invocation	3
8.	Distributed operating system	3
9.	Distributed file system	3
10.	Distributed Multimedia Systems,	3
11.	Distributed Transaction and Control,	3
12.	Security Issues in Distributed Systems,	3
13.	Distributed Computing Using Java part 1	15

14.	Distributed Computing Using Java part2	15
15.	Review	2
Total		**75**

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Quiz # 01	3th week	2%
2.	Quiz # 02	6th week	3%
3.	Assignments	9th week	5%
4.	Mid Term Exam-I	7th week	15%
5.	Mid Term Exam-II	10th week	15%
6.	Final Lab Exam	15th week	10%
7.	Final Exam	16th week	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	**George Coulouris, Jean Dollimore, Tim Kindberg and Gordon Blair, Distributed Systems Concepts and Design, fifth edition, Addison Wesley**
Supportive References	
Electronic Materials	
Other Learning Materials	

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	**Lecture Rooms with seats and a whiteboard or a smart board. Lab with PCs and projector**
Technology equipment (projector, smart board, software)	**Desktop/ Laptop computer Multimedia Projector**
Other equipment (depending on the nature of the specialty)	**A File cabinet to keep Class Stuff, Markers, papers and students Files, and a printer to print program screenshots.**

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Students	Survey
Effectiveness of Students assessment	Faculty	Survey, Exams
Quality of learning resources	Students, Faculty	Survey
The extent to which CLOs have been achieved	Students, Faculty	Survey
Other		

Assessors (Students, Faculty, Program Leaders, Peer Reviewers, Others (specify)

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	**17th Department Council**
REFERENCE NO.	**14460810-0976-00017**
DATE	**10/02/2025**