	Iraq Ministry of Higher Education and Scientific Research University of Anbar **Department of Information System**	

MODULE DESCRIPTOR FORM

Module Information				
Module Title	DISTRIBUTED DATABASE MANAGEMENT SYSTEMS		**Module Type**	TYPE C
Module Code	ISDC306	**ECTS Credits**		6
Module Level	Three	**Semester of Delivery**		Five
Administering Department	IS	**Faculty**	CSIT	
Module Leader	Waleed Khalid Hassan Deeb	**e-mail**	waleed.hassan@uoanbar.edu.iq	
Module Leader's Acad. Title	Lecturer	**Module Leader's Qualification**		Ph.D
Module Tutor	Waleed Khalid Hassan Deeb	**e-mail**	waleed.hassan@uoanbar.edu.iq	
Peer Reviewer Name	/	**e-mail**	/	
Review Committee Approval	01/06/2023	**Version Number**		2.0

Relation With Other Modules	
Pre-requisites	ISDC205
Co-requisites	

Module Aims, Learning Outcomes and Indicative Contents	
Module Aims	To introduce the fundamental concepts and issues of managing large volumes of shared data in a parallel and distributed environment, and to provide insight into related research problems.
Module Learning Outcomes	On completion of this course, students should: 1. Understand distributed database systems architecture and design. 2. Be able to apply methods and techniques for distributed query processing and optimization.

Indicative Contents	3. Understand the broad concepts of distributed transaction process. 4. Understand the basic concepts of Data warehousing and OLAP technology. 5. Be able to apply methods and techniques for association analysis, data classification and clustering.

Learning and Teaching Strategies

Strategies	Topics covered in this course include.
	  1. Distributed database system architecture
	  2. Distributed database system design
	  3. Distributed query processing and optimization
	  4. Distributed transaction management
	  5. Data warehousing and OLAP technology
	  6. Association analysis
	  7. Classification and prediction
	  8. Cluster analysis
	Assignments will broadly follow the content of these topics

Module Delivery

Structured workload (h/w)	6.3
Unstructured workload (h/w)	8.7
Total workload (h/w)	15

Module Evaluation

	Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Quizzes	1 or 2	6% (6)	5 or 5, 10	
Assignments	2	6% (6)	At the start	
Projects / Lab.	1	5% (5)	Continuous	
Report	1	15% (15)		
Midterm Exam	2 hr	18% (18)	8	
Final Exam	3 hr	50% (50)	16	All
Total		100% (100 Marks)		

Learning and Teaching Resources

	Text	Available in the Library?
Required Texts	M. Tamer Özsu · Patrick Valduriez(2020), Principles of Distributed Database Systems, 4th edition,	Yes
Recommended Texts		Yes/No
Websites	https://www.tutorialspoint.com/distributed_dbms/index.htm	

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	Introduction Advantages and disadvantages of DDBS
Week 2	Overview of database and computer network concepts
Week 3	Distributed Database Management System Architecture
Week 4	Transparencies in a distributed DBMS; Distributed DBMS architecture; Global directory issues
Week 5	Distributed Database Design Alternative design strategies
Week 6	Semantics Data Control
Week 7	View management; Data security; Semantic Integrity Control
Week 8	Query Processing Issues Objectives of query processing; Characterization of query processors
Week 9	Layers of query processing; Query decomposition; Localization of distributed data
Week 10	Distributed Query Optimization Factors governing query optimization
Week 11	Centralized query optimization; Ordering of fragment queries
Week 12	Transaction Management The transaction concept; Goals of transaction management
Week 13	Concurrency Control Concurrency control in centralized database systems

Week 14	Parallel Database Systems Parallel architectures; parallel query processing and optimization
Week 15	**Preparatory Week**
Week 16	**Final Exam**

APPENDIX:

UNIVERSITYof Anbar				
GRADING SCHEME				
Group	**ECTS Grade**	**% of Students/Marks**	**Definition**	**GPA**
Success Group **(50 - 100)**	**A -** Excellent	Best 10%	Outstanding Performance	**5**
	B - Very Good	Next 25%	Above average with some errors	**4**
	C - Good	Next 30%	Sound work with notable errors	**3**
	D - Satisfactory	Next 25%	Fair but with major shortcomings	**2**
	E - Sufficient	Next 10%	Work meets minimum criteria	**1**
Fail Group **(0 – 49)**	**FX –** Fail	(45-49)	More work required but credit awarded	
	F – Fail	(0-44)	Considerable amount of work required	
Note:				
NB Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The university has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				