

**KONGU ENGINEERING COLLEGE**

(Autonomous)

PERUNDURAI ERODE - 638 060**DEPARTMENT OF COMPUTER SCIENCE AND
ENGINEERING****Course Plan****Revision-2.1****01-12-2018**

IQAC

Name of the Faculty, Designation & Dept.	Dr.E. Gothai, Dr.S.Shanthi, S.Mohanapriya, S.Gayathri	Programme & Department of the Students	BE(CSE), CSE
Course Code & Name	18CST41 Database Management Systems	Academic Year, Semester & Section	2020-21, II CSE 'A', 'B', 'C', 'D'
Type of Course	Theory+Theory-cum-Practical/Practical/Value Added Course / Others(specify)		

OUTCOME BASED EDUCATIONAL DETAILS - COURSE WISE**COURSE OUTCOMES:**

On completion of the course, the students will be able to		BT Mapped (Highest Level)
CO1:	Outline the features, architecture and applications of database system	Applying (K3)
CO2:	Design a ER model and use relational database with SQL statements	Applying (K3)
CO3:	Design relational database using normalization methods	Applying (K3)
CO4:	Apply indexing and hashing techniques in the design of relational database and perform transaction processing	Applying (K3)
CO5:	Apply the concepts of concurrency control and recovery in a relational database	Applying (K3)

Mapping of COs with POs, PSOs

COs / POs&PSOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	2	1										3	1
CO2	3	2	1						2				3	1
CO3	3	2	1						2				3	1
CO4	3	2	1										3	1
CO5	3	2	1										3	1

1 - Slight, 2 - Moderate, 3 - Substantial

COURSE PLAN FOR THEORY COURSE / THEORY CUM PRACTICAL (THEORY COMPONENT):

No.	Intended learning Outcomes	CO(s) Mapped	Cognitive Level	TLM	Planned*		Actual*	
					Date	Period	Date	Period
1.	ILO1.1:Describe the purpose of database systems and its applications	CO1	K2	M1				
2.	ILO1.2:Outline the view of data and database languages	CO1	K2	M1				
3.	ILO1.3:Elaborate the components of database architecture	CO1	K2	M1				
4.	ILO1.3:Elaborate the components of database architecture	CO1	K2	M1				
5.	ILO1.4:Demonstrate the structure of relational databases and schema	CO1	K3	M1				
6.	ILO1.5:Illustrate the different types of keys in relational databases	CO1	K2	M1,M2				
7.	ILO1.6:Design a schema diagram for the Given application	CO1	K3	M1				
8.	ILO1.7:Explain the unary and binary operations in relational algebra	CO1	K2	M1,M2				

Cognitive Process : K1 - Remembering K2 - Understanding K3 - Applying K4 - Analyzing K5 - Evaluating K6 - Creating
 Knowledge Dimension : F - Factual C - Conceptual P - Procedural MC - Meta Cognitive
 Psychomotor Domain : S1-Imitation S2-Manipulation S3-Precision S4-Articulation S5-Naturalization

9.	ILO1.7: Explain the unary and binary operations in relational algebra	CO1	K2	M1,M2			
10.	ILO2.1: Describe the fundamental constructs and concepts in SQL	CO2	K2	M1			
11.	ILO2.2: Demonstrate the various operations that can be carried out in relational database	CO2	K3	M1,M2			
12.	ILO2.3: Illustrate the built-in aggregate functions in SQL	CO2	K3	M1,M2			
13.	ILO2.4: Identify the importance of nested sub queries in SQL	CO2	K3	M1			
14.	ILO2.5: Demonstrate the purpose of views and joins	CO2	K3	M1,M2			
15.	ILO2.5: Demonstrate the purpose of views and joins	CO2	K3	M1,M2			
16.	ILO2.6: Apply integrity constraints and authorization to a given problem	CO2	K3	M1,M2			
17.	ILO2.7: Design an ER model for the given problem	CO2	K3	M1,M2			
18.	ILO2.7: Design an ER model for the given problem	CO2	K3	M1,M2			
19.	ILO3.1: Describe the features of a of good relational design	CO3	K2	M1			
20.	ILO3.2: Demonstrate the various normal forms	CO3	K3	M1			
21.	ILO3.2: Demonstrate the various normal forms	CO3	K3	M1,M2			
22.	ILO3.2: Demonstrate the various normal forms	CO3	K3	M1,M2			
23.	ILO3.2: Demonstrate the various normal forms	CO3	K3	M1,M2			
24.	ILO3.3: Recall the characteristics of data storage and tertiary storage	CO3	K1	M1			
25.	ILO3.4: Paraphrase the different RAID levels	CO3	K2	M1			
26.	ILO3.5: Outline the methods of representing logical data in files	CO3	K2	M1			
27.	ILO3.6: Determine the possible ways of organizing records in files	CO3	K3	M1			
28.	ILO4.1: Explain the concepts of ordered indices	CO4	K2	M1,M2			
29.	ILO4.2: Demonstrate various operations in B tree	CO4	K3	M1,2			
30.	ILO4.2: Demonstrate various operations in B tree	CO4	K3	M1,M2			
31.	ILO4.3: Demonstrate various operations in B+ tree	CO4	K3	M1,M2			
32.	ILO4.3: Demonstrate various operations in B+ tree	CO4	K3	M1,M2			
33.	ILO4.4: Apply static and dynamic hashing methods in relational database	CO4	K3	M1,M2			
34.	ILO4.4: Apply static and dynamic hashing methods in relational database	CO4	K3	M1,M2			
35.	ILO4.5: Recall the concepts of bitmap indices and apply for a application	CO4	K3	M1,M2			
38.	ILO4.6: Interpret the basic concepts of transaction processing	CO4	K2	M1			
39.	ILO4.6: Apply the concepts of transaction processing in an application	CO4	K3	M1,M2			
40.	ILO5.1: Demonstrate the lock based protocol to ensure concurrency control	CO5	K2	M1,M2			
41.	ILO5.1: Demonstrate the lock based protocol to ensure concurrency control	CO5	K2	M1,M2			
42.	ILO5.2: Illustrate how deadlock is handled in a transaction	CO5	K3	M1,M2			
43.	ILO5.2: Illustrate how deadlock is	CO5	K3	M1,M2			

IL05.3: Apply timestamp and validation based protocol to serializability order	CO5	K3	M1,M2				
IL05.3: Apply timestamp and validation based protocol to serializability order	CO5	K3	M1				
IL05.3: Apply timestamp and validation based protocol to serializability order	CO5	K3	M1				
IL05.3: Apply timestamp and validation based protocol to serializability order	CO5	K3	M1				
IL05.3: Apply timestamp and validation based protocol to serializability order	CO5	K3	M1				
IL05.4: Identify the need of recovery system	CO5	K2	M1				
IL05.4: Outline the various recovery algorithms and buffer management strategies	CO5	K1	M1				
IL05.4: Apply the various recovery algorithms and buffer management strategies for the applications	CO5	K3	M1,M2				
IL05.5: Overview of query processing and optimization	CO5	K2	M1				

Note: Content beyond syllabus if any may be included.

Tutorial plan

S. No.	Intended learning Outcomes	CO(s) Mapped	Cognitive Level	Planned*		Actual*	
				Date	Period	Date	Period
1.	Applications, Keys and Relational algebra operations	CO1	K3				
2.	ER MODEL	CO2	K3				
3.	SQL	CO2	K3				
4.	Normalization	CO3	K3				
5.	Indexing and Hashing, Transactions	CO4	K3				
6.	Concurrency control and recovery system	CO5	K3				
7.	ER MODEL AND SQL	CO1,CO2	K3				
8.	NORMALIZATION, INDEXING, TRANSACTIONS	CO3,CO4, CO5	K3				

COGNITIVE PROCESS DISTRIBUTION IN PERCENTAGE: (Percentage of questions to be asked in each CATs)

Assessments / Cognitive	K1	K2	K3	K4	K5	K6
CAT - I	8	26	46			
CAT - II	4	16	60			
CAT - III	8	26	46			
Other Assessment - I						

Note: Tolerance limit is $\pm 2\%$

Cognitive Process : K1 - Remembering K2 - Understanding K3 - Applying K4 - Analyzing K5 - Evaluating K6 - Creating
Knowledge Dimension : F - Factual C - Conceptual P - Procedural MC - Meta Cognitive
Psychomotor Domain : S1-Imitation S2-Manipulation S3-Precision S4-Articulation S5-Naturalization

QUESTION PAPER PATTERN:

Test	Section(s) & Type of Question	No. of Questions	No. of Choices	Maximum Marks / Question	Total marks in this section
CAT - I	Part A	10	NIL	2	20
	Part B	4	Any 3	10	30
CAT - II	Part A / MCQ	10	NIL	2	20
	Part B / MCQ	4	Any 3	10	30
CAT - III	Part A / MCQ	10	NIL	2	20
	Part B / MCQ	4	Any 3	10	30

COURSE PLAN FOR ACTIVITY:

S. No	Description	CO(s) Mapped	Cognitive, Knowledge, Psychomotor Dimension	Planned Date*	Actual Date*
Mini Project					
1.	Activity - Mini Project	CO1, CO2, CO3, CO4, CO5	K3, S3		

COURSE PLAN FOR OTHER ASSESSMENTS

S. No	Description	CO(s) Mapped	Cognitive, Knowledge, Psychomotor Dimension	Planned Date*	Actual Date*
Assessment 1: (Case study / Mini Project / Online Test / Industrial Training / Paper Presentation / Others)					
1.					

* To be filled sectionwise

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Course Faculty

2. S. M. L. (S. Mohanapriya)

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