



Course Specification

— (Bachelor)

Course Title: **Fundamental of Databases**

Course Code: **502372-3**

Program: **Bachelor in Computer Science**

Department: **Department of Computer Science**

College: **College of Computers and Information Technology**

Institution: **Taif University**

Version: **V1.2024**

Last Revision Date: **01/02/2024**



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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: (5/3)

4. Course general Description:

This course will introduce the basic concepts in database systems and architectures, including data models, database design, and database implementation. Its emphasis on topics in ER model and relational databases, including relational data model, SQL, functional dependency and normalization, database design process.

5. Pre-requirements for this course (if any):

501220-3 (Programming 1)

6. Pre-requirements for this course (if any):

None

7. Course Main Objective(s):

The main objective of this course is to Learn the students basics of databases and approaches to store data using databases, the data modelling concepts and notation of the entity-relationship model, including their use in data modelling, design and construct relational databases using the concept of relational data model, database queries in relational algebra and implement using SQL and normalization rules for designing databases

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	5	100%
2	E-learning	0	0
3	Hybrid <ul style="list-style-type: none"> • 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	45
2.	Laboratory/Studio	30
3.	Field	0
4.	Tutorial	0
5.	Others (specify)	0
Total		75

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	Describe basics of databases and approaches to store data.	K1	Lecture Discussion	Written Exams Assignments
1.2	Describe the data modelling concepts and notation of ER and the relationship model	K1	Lecture Discussion	Written Exams Assignments
2.0	Skills			
2.1	Design and construct databases using the concepts of ER and relational models	2.1	Lecture Discussion	Written Exams Assignments Practical Exam
2.2	Develop database queries in relational algebra and implement using SQL	2.2	Lecture Discussion Lab work	Written Exams Assignments Practical Exam
2.3	Enhance databases using normalization rules	2.3	Lecture Discussion	Written Exams Assignments





Total

75

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1	Assignments	10	5%
2	Mid Exam	8	20%
3	Minor project	10	15%
4	Labs	15	20%
5	Final Exam	16	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	Fundamentals of Database Systems, Ramez Elmasri, Shamkant Navathe, P
Supportive References	Fundamentals of Database Management Systems, Gillenson, Wiley, latest Edition,
Electronic Materials	Presentations and recorded lectures
Other Learning Materials	NON

2. Required Facilities and equipment

Items	Resources
<p>facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)</p>	<ul style="list-style-type: none"> A Lecture room appropriate for maximum 25 students with a personal computer, a data show and a smart board. A Lab room appropriate for maximum 15 students with a personal computer, a data show and a smart board.
<p>Technology equipment (projector, smart board, software)</p>	<ul style="list-style-type: none"> Lab materials and required software
<p>Other equipment (depending on the nature of the specialty)</p>	<ul style="list-style-type: none">

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	<ul style="list-style-type: none"> Students 	<ul style="list-style-type: none"> Course exit survey





Assessment Areas/Issues	Assessor	Assessment Methods
	<ul style="list-style-type: none"> Faculty members Coordinator Council Curriculum Committees 	<ul style="list-style-type: none"> Feedback from Faculty members Feedback from Course Coordinator Feedback from council Feedback from Curriculum Committees
Effectiveness of Students assessment	<ul style="list-style-type: none"> Students Faculty members Coordinator Council Curriculum Committees 	<ul style="list-style-type: none"> Course exit survey Feedback from Faculty members Feedback from Course Coordinator Feedback from council Feedback from Curriculum Committees
Quality of learning resources	<ul style="list-style-type: none"> Students Faculty members Coordinator Council Curriculum Committees 	<ul style="list-style-type: none"> Course exit survey Feedback from Faculty members Feedback from Course Coordinator Feedback from council Feedback from Curriculum Committees
The extent to which CLOs have been achieved	<ul style="list-style-type: none"> Students Faculty members Coordinator Council Curriculum Committees 	<ul style="list-style-type: none"> Course exit survey Feedback from Faculty members Feedback from Course Coordinator Feedback from council Feedback from Curriculum Committees
Other		

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

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	CS COUNCIL
REFERENCE NO.	MEETING #11
DATE	07/03/2024

