



Course Specifications

Course Title:	Fundamental of Databases
Course Code:	502372-3
Program:	Bachelor in Information Technology
Department:	Department of Information Technology
College:	College of Computers and Information Technology
Institution:	Taif University

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A. Course Identification

1. Credit hours: 3
2. Course type
a. University <input type="checkbox"/> College <input checked="" type="checkbox"/> Department <input type="checkbox"/> Others <input type="checkbox"/>
b. Required <input checked="" type="checkbox"/> Elective <input type="checkbox"/>
3. Level/year at which this course is offered: 8/3
4. Pre-requisites for this course (if any): 501220-3
5. Co-requisites for this course (if any): NON

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	8	100%
2	Blended	0	0
3	E-learning	0	0
4	Distance learning	0	0
5	Other	0	0

7. Contact Hours (based on academic semester)

No	Activity	Contact Hours
1	Lecture	50
2	Laboratory/Studio	30
3	Tutorial	0
4	Others (specify)	0
	Total	80

B. Course Objectives and Learning Outcomes

1. Course 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.	
2. Course Main Objective	
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.	
3. Course Learning Outcomes	
	CLOs
Aligned PLOs	
1	Knowledge and Understanding



CLOs		Aligned PLOs
1.1	Describe basics of databases and approaches to store data.	K1
1.2	Describe the data modelling concepts and notation of ER and the relationship model	K1
2	Skills :	
2.1	Design and construct databases using the concepts of ER and relational models	S2
2.2	Implement database using SQL	S1
2.3	Enhance databases using normalization rules	S2
3	Values:	
3.1	Function effectively as a member or leader of a team engaged in activities to build a database for some organization	V2

C. Course Content

No	List of Topics	Contact Hours
1	Databases and Database Users	8
2	Database System Concepts and Architecture	8
3	Data Modeling Using the Entity-Relationship (ER) Model	8
4	The Relational Data Model and Relational Database Constraints	8
5	Relational Database Design by ER-to-Relational Mapping	8
6	Basics of SQL	8
7	Advanced SQL	8
8	Relational Algebra	16
9	Functional Dependencies and Normalization for Relational Databases	8
Total		80

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	Knowledge and Understanding		
1.1	Describe basics of databases and approaches to store data.	Lecture Discussion	Written Exams Assignments
1.2	Describe the data modelling concepts and notation of ER and the relationship model	Lecture Discussion	Written Exams Assignments
2.0	Skills		
2.1	Design and construct databases using the concepts of ER and relational models	Lecture Discussion	Written Exams Assignments Practical Exam
2.2	Implement database using SQL	Lecture Discussion Lab work	Written Exams Assignments Practical Exam
2.3	Enhance databases using normalization rules	Lecture Discussion Lab work	Written Exams Assignments Practical Exam



Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
3.0	Values		
3.1	Function effectively as a member or leader of a team engaged in activities to build a database for some organization	Discussion Work group	Reports Oral Presentations

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Assignments	10	5%
2	Mid Exam	6	20%
3	Minor project	10	15%
4	Labs	11	20%
5	Final Exam	12	40%

*Assessment task (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :

Academic advising and counseling of students is an important component of teaching; student academic advising is a mandatory requirement of College of Computers and Information Technology (CCIT). Appropriate student advising provides support needed for the student during times of difficulty. In addition, it helps the student to build a close relationship with his/her advisor and to provide student motivation and involvement with the institution.

In addition, since faculty are usually the first to recognize that a student is having difficulty, faculty members play a key role in developing solutions for the students or referring them to appropriate services. Faculty members also participate in the formal student-mentoring program.

Additional counseling is provided by course directors, who provide students with academic reinforcement and assistance and refer “at risk” students to the Vice Dean for Academic Affairs and the Vice Dean for female section.

F. Learning Resources and Facilities

1. Learning Resources

Required Textbooks	Fundamentals of Database Systems, Ramez Elmasri, Shamkant Navathe, Pearson, latest Edition,
Essential References Materials	Fundamentals of Database Management Systems, Gillenson, Wiley, latest Edition,
Electronic Materials	Presentations and recorded lectures
Other Learning Materials	NON



2. Facilities Required

Item	Resources
<p>Accommodation (Classrooms, laboratories, demonstration rooms/labs, 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 Resources (AV, data show, Smart Board, software, etc.)</p>	<ul style="list-style-type: none"> • Lab materials and required software
<p>Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)</p>	

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of Teaching	Students	Students surveys and Students course evaluation
Improvement of Teaching	Course Coordinator	deficiencies based on the student Evaluation, faculty input, course file, and program assessment
Verifying Standards of Student Achievement	Curriculum Committee	<ul style="list-style-type: none"> • Review CAF (Course assessment file) • Alumni surveys. Periodic exchange and remarking of tests or a sample of assignments with staff at another

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)

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

Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	IT Department Council/ Executive program committee
Reference No.	11
Date	23/10/21443



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