هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

T-104
2022

Course Specification

Course Title:	**Database 1**
Course Code:	**IS1004**
Program:	**Computer Information Systems**
Department:	**Computer Information Systems**
College:	**Computer Science & Information Technology**
Institution:	**Al-baha University**
Version:	**T104 – V2**
Last Revision Date:	**25 May 2023**

Table of Contents:

A. General information about the course:

Course Identification					
1. Credit hours:	4 Credit Hours (3, 2, 0) (Lecture, Lab, Tutorial) (5 Contact Hours)				
2. Course type					
a.	University ☐	College ☐	Department☒	Track☐	Others☐
b.	Required ☒	Elective☐			
3. Level/year at which this course is offered:	5^{th} level/ 2^{rd} Year				
4. Course general Description **Lecture:** This course covers concepts and techniques used in constructing relational databases. The students learn the rules of modelization and normalization of the databases, the implementation and the use of the SQL DDL language. Then through the relational algebra, they learn to solve the simple and complex queries and then translate them into SQL DML. They also acquire how to convert the Entity Relation Model to a Relational Model. **LAB** The lab is planned to give students practical experiments on Oracle DBMS. Students will also learn how to build database using SQL, how to insert, delete, update rows and/or tables, how to write simple and complex queries (query and sub query, join, group by, exist, all, negation form, etc…).					
5. Pre-requirements for this course (if any): None					
6. Co- requirements for this course (if any): None					
7. Course Main Objective(s) **The main purpose for this course is to:** • Describe the concepts of database. • Explain the Relational Model. • Demonstrate an understanding of SQL • Demonstrate an understanding of the Entity-Relationship Model. • Demonstrate an understanding of Relational Database design. • Interact in groups collaboratively. • Communicate concepts and techniques in oral presentations.					

1. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1.	Traditional classroom	30	60%
2.	E-learning		
3.	Hybrid • Traditional classroom • E-learning		
4.	Distance learning		
5.	Others	20	40%

2. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	Lectures	30
2.	Laboratory/Studio	20
3.	Field	-
4.	Tutorial	-
5.	Others (specify)	-
	Total	50

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 the concepts of database.	K1	• Lectures • Assignments	***Direct Assessment Tool*** • Midterm Exam ***Indirect Assessment Tool*** Course Exit Survey
1.2	Explain the querying concept.	K1	• Lectures • Assignments	***Direct Assessment Tool*** • Project • Final exam ***Indirect Assessment Tool*** Course Exit Survey
1.3	Explain the relational model.	K1	• Lectures • Assignments	***Direct Assessment Tool*** • Quiz • Project • Final exam ***Indirect Assessment Tool*** Course Exit Survey
2.0	Skills			
2.1	Understand of SQL language (SQL-DDL+ SQL-DML simple queries	S2	• Lectures • Assignments	***Direct Assessment Tool*** • Midterm Exam • Lab Work • Final Exam ***Indirect Assessment Tool*** Course Exit Survey
2.2	Use Advanced SQL querying SQL-DML complex queries)	S2	• Lectures • Assignments	***Direct Assessment Tool*** • Quiz • Project • Final Exam ***Indirect Assessment Tool*** Course Exit Survey

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
2.3	Understand of the entity-relationship model design and the mapping to the relational database model.	S2	• Lectures • Assignments	***Direct Assessment Tool*** • Quiz • Lab Work • Final Exam ***Indirect Assessment Tool*** Course Exit Survey
2.4	Communicate concepts and techniques in oral presentation	S6	• Teamwork	***Direct Assessment Tool*** • Project (Rubrics) ***Indirect Assessment Tool*** Course Exit Survey
3.0	Values, autonomy, and responsibility			
3.1	Express self-efficacy through a willingness to problems, learn and take challenges independently.	V1	• Teamwork (Small group)	***Direct Assessment Tool*** • Project (Rubrics) ***Indirect Assessment Tool*** Course Exit Survey

C. Course Content

No	List of Topics (Lectures)	Contact Hours
1.	Introduction to Database	4
2.	The database concepts	4
3.	Basic SQL: SQL DDL language	4
4.	Algebraic and logical query languages (relational algebra)	4
5.	SQL - DML language	5
6.	Database Design and the Entity-Relationship Model	5
7.	Mapping to the Relational Database, Normalization	4
Total		30

No	List of Topics (Lab)	Contact-Hours
1.	Access DBMS	2
2.	The database language SQL DDL(Data Definition Language), Creating and Inserting queries, data types in SQL , constraints, indexes (Installing ORACLE 11Express edition)	4
3.	The database language SQL DDL: altering and dropping tables, update and delete queries	3
4.	The database language SQL DML(Data Manipulation Language): select query: simple queries, Aggregate functions, Nested subqueries, Join expressions and Views	4
5.	Project	7
Total		20

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Quiz	9	10%
2.	Lab Work	Every two weeks	10%
3.	Midterm Exam	6	20%
4.	Final Lab Exam	11	20%
5.	Final Exam	12	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	*Modern Database Management: 13th edition. Global Edition by Jeffrey Hoffer (Author) Publisher. Pearson; Publication date. August 26, 2019*
Supportive References	
Electronic Materials	• Access to the Saudi Digital Library (SDL). • Using the learning management system of the university – Rafid
Other Learning Materials	Open access course material online

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	A classroom or lecture hall with whiteboard for at least 25 students. A laboratory with computers that have installed Windows, for at least 25 students.
Technology equipment (projector, smart board, software)	• A digital image projection system with connection to desktop computer and laptop computer. • High speed Internet connection. • An instructor computer station • Power outlets for student's laptop plug-in • Microsoft Access • Oracle Database Express Edition (11*g* Release 2)
Other equipment (depending on the nature of the specialty)	A laboratory with multiple computers, with a variety of operating systems:

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	• Students • Faculty • Peer Reviewers • Program Leader • Course Coordinator	• Surveys (indirect). • Direct feedback from students. • Course evaluation by Peer Reviewers (indirect). • Class visit by Program Leader (indirect) • Comprehensive Course report (where we can find information about teaching difficulties and action plan, …)
Effectiveness of students assessment	• Students • Faculty • Peer Reviewers • Program Leader • Exam Evaluation Committee • Course Coordinator	• Surveys (indirect). • Direct feedback from students. • Course evaluation by Peer Reviewers (indirect). • Class visit by Program Leader (indirect) • Exam evaluation by the Exam Evaluation Committee (indirect)
Quality of learning resources	• Students • Faculty • Peer Reviewers • Course Coordinator	• Surveys (indirect) • Course evaluation by Peer Reviewers (indirect). • Comprehensive Course report (where we can find information about difficulties and challenges about learning resources as well as consequences and action plan, …)
The extent to which CLOs have been achieved	• Faculty • Program Leader • Course Coordinator	• Student Results (direct) • Comprehensive Course report (where we can find the CLO assessment results)
Other	None	None

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

Assessment Methods (Direct, Indirect)

G. Specification Approval Data

COUNCIL /COMMITTEE	Curriculum Committee Meeting
REFERENCE NO.	
DATE	**25 May 2023**