جامعة الشرقية
A' SHARQIYAH UNIVERSITY

Course Descriptor
[MIFS410 Advanced Databases]

Proposed Academic Year	2020-2021	**Last Reviewed Academic Year**	2020-2021
Course Code	MIFS410	**Course Title**	Advanced Databases
Credit hours	03	**Level of study**	Undergraduate
College / Centre	CoBA	**Department**	MIS
Co-requisites		**Pre-requisites**	MIFS201

1. COURSE OUTLINE

The Advance Databases course builds on Fundamentals of Databases course. In this course, the students will experience the advanced level of the database development and management. Topics will include distributed databases, database administration and security, managing transactions and concurrency. To respond to the shift from desktop to web-based application, phpMyAdmin will be used as a delivery platform. Such knowledge will help students to respond to business needs.

2. AIMS

The course aims to equip the students with the appropriate knowledge that is needed to understand the databases and their applications and peripherals.

3. LEARNING OUTCOMES *(Definitive) and* TEACHING, LEARNING and ASSESSMENT METHODS

Learning Outcomes ***(Definitive)*** Upon successful completion of this course, students will be able to**:**	**Teaching and Learning methods** ***(Indicative)***	**Assessment** ***(Indicative)***
1. Demonstrate command in analyzing business problems to design a database.	e.g., lectures, online videos tutorials and seminars, online group discussions using LMS, independent readings, individual or group work, presentation.	e.g., tests, assignments, individual or group project, participation
2. Formulate SQL queries to create and maintain databases, and manipulate and retrieve data .	e.g., lectures, online videos tutorials and seminars, online group discussions using LMS, independent readings, individual or group work, presentation.	e.g., tests, assignments, individual or group project, participation
3. Differentiate between various types of databases and their capacities.	e.g., lectures, online videos tutorials and seminars, online group discussions using LMS, independent readings, individual or group work, presentation	e.g., tests, assignments, individual or group project, participation
4. Demonstrate advance level of data modelling and development through	e.g., lectures online videos tutorials and seminars, online group discussions using LMS, independent readings,	e.g., tests, assignments, individual or group project, participation

the analysis of business needs..	individual or group work, presentation	

4. ASSESSMENT WEIGHTING

Assessment	Percentage of final mark (%)
Mid-term Examination	30
Final Exam	30
Assignments	30
Participation	10
TOTAL	**100%**

5. ACHIEVING A PASS

Students will achieve **03** credit hours for this course by passing **ALL** of the course assessments *[alternatively, list the compulsory pass assessments*]* and achieving a **minimum overall score of 50%**

NB *Ensure that ALL learning outcomes are taken into account

6. COURSE CONTENT (Indicative)

Databases Design and Development
Databases Application and types of databases
Advanced Data Modeling
Entity Relationship Modeling
Enhanced Data Modeling
Working with XAMPP Environment
1. SQL Commands
1.1. DDL-Data Definition Language
1.2. DQL- Data Query Language
1.3. DML- Data Manipulation Language
1.4. DCL- Data Control Language

TOTAL HOURS	**45**
Plus **RECOMMENDED INDEPENDENT STUDY HOURS**	**45**
TOTAL COURSE HOURS	**90**

Core text/s:

1. Coronel, C. and Morris, S., 2016. *Database systems: design, implementation, & management*. Cengage Learning.
2. Özsu, M.T. and Valduriez, P., 2011. *Principles of distributed database systems*. Springer Science & Business Media.
3. Ambler, S., 2012. *Agile database techniques: Effective strategies for the agile software developer*. John Wiley & Sons.

4. Stephens, R.K. and Plew, R.R., 2003. *Sams teach yourself SQL in 21 days*. Sams Publishing.
5. Any other reading or online reading resources seen appropriate by the instructor>

Library + online resources:

ASU library
ASU online resources (ProQuest and ebrary)
Sultan Qaboos University Library (by agreement

Open Educational Resources:

1. https://www.mysqltutorial.org/