King Fahd University of Petroleum & Minerals

KFUPM Business School

Department Information Systems & Operations Management

Course Syllabus

MIS 311 – Business Data Management

Spring Semester 222

Instructor Name	*Office*	*Phone*	*Office Hours*	*Email*
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Description

Database versus file processing environments. Data resource management. Database support for various levels of management. Relational Database model. Logical database design. Integrity and security. Object database model. Database languages including SQL. Data and Database administration. Data governance and big data

Objectives

- Possess knowledge of the key concepts behind data resource management
- Have a sound understanding of the terminologies and concepts associated with relational databases and RDBMS
- Have a good understanding of the various kinds of databases and the support they provide to different levels of management
- Be able to apply data analysis and modeling techniques including entity-relationship diagramming and normalization, and produce well structured, complete, correct, and flexible database models
- Be able to use SQL with confidence to implement a relational physical database model
- Have an understanding of issues related to database planning, database administration, and role and function of the Data Base Administrator

Prerequisite

- ICS-102 or ICS-104 (Introduction to Computing I) & MIS 215 (Principles of Management Information Systems)

Textbook

Coronel, C., Morris, S. & Rob, P. *Database Principles: Fundamentals of Design, Implementation, and Management*. 13th Edition. CENGAGE Learning, 2018

Course Attendance

1. As per the University regulations all students are expected to attend every lecture and laboratory session. Nine (9) unexcused absences will result in a DN grade in the course. For details, refer to the Undergraduate Bulletin. Also, for every unexcused absence beyond three (3) unexcused absences, one percentage (1%) will be deducted from your final grade.

2. In order to qualify for an excused absence, students must submit the official excuse (endorsed by the Dean of Student Affairs) no later than one (1) week following resumption of class attendance. Unofficial excuses will not be accepted.

# of unexcused absence	Deduction
3	0%
4 ~ 8	1% for each
9	DN grade

Course Policy

1. Issues discussed in the textbook, classwork, assignments, handouts, web notes, and lectures are subject to be in the quizzes/exams.
2. Quizzes and exams will be arranged via Blackboard.
3. When the exams and quizzes are taken online:
    a. You may NOT receive assistance from ANYONE, and cannot access any resources during the exam and quizzes. This means no resources of any kind are allowed, including but not limited to, course material, blackboard resources, external websites, other software applications, or any other soft or hard copy resources.
    b. You are responsible for any Internet or electricity power disconnection, failure, or shortage for quizzes and exams. Hence, keep sufficient power / electricity backup, laptop / notebooks must be fully charged having sufficient backup time during exam.
4. Classwork/Projects must be submitted on the due date in class as announced by the instructor.

5. You must always endeavor to provide a complete and satisfactory solution, but if you are unable to do so, at least deliver the work you have managed to complete on time.

6. **No late submissions will be accepted**. A lower grade will be the consequence of failing to make the deliveries within the deadline. No excuses are considered or accepted.

7. You may consult with your colleagues in approaching and designing the solution, however, the final submission must be your own effort and work. Project and homework assignments are self-dependent and you will receive extremely little or no assistance from your instructor for completing the assignments.

8. CHEATING will result in an "F" grade in the course, and further disciplinary action will be pursued.

9. There will be **no make-up examinations, quiz, and homework**, except for extreme emergency or medical reasons supported by medical or other appropriate documentation (endorsed by the Dean of Student Affairs).

Ethical Conduct

- Appropriate classroom behavior and honesty are required to pass this class. Any evidence of cheating will result to a "**DN**" grade for the course.

AACSB Perspective

- The AACSB expect business curricula to incorporate ethical, global, and technological issues in the course. Ethical issues are integral part of the assigned readings at the most of the assigned chapters. Moreover, some of the chapters cover the global issues.

Weight of Course Items

Item	Percentage
Midterm Exam	20%
Final Exam	25%
Mini-project (homework)	15%
Quiz	15%
Lab Work	10%
Project	15%
Total	100%

Grade Distribution

≥ 95	≥ 90	≥ 85	≥ 80	≥ 75	≥ 70	≥ 65	≥ 60	< 60
A+	A	B+	B	C+	C	D+	D	F

Quizzes and Assignments

- Quizzes and assignments will be given during lecture and lab sessions. If the student is absent from the class, he is still required to submit the assignment on the due date as **there is no make-up work**.

Course Tools

- Diagram Editor (https://www.diagrameditor.com/) for ERD
- Oracle Apex (https://apex.oracle.com/en/) for SQL or Oracle sql live (https://livesql.oracle.com)

Mini-project

Students will have a great opportunity to work with students in the University of Dayton through which they can learn how to work with people who have different background. Students will make groups with the students in the university and perform a project of designing database based on the given scenario. During the three weeks, students are required to analyze the given scenario and discuss how to design the database to meet the requirements in the scenario and draw Entity-Relationship Diagram (ERD). Normalization is also required to make their developed database model more efficient.

Group Projects

Students will be required to develop group term projects. The project is based on a type of business database application drawn from real business organizations. In groups of three or four students, each team will be asked to design and implement a database as part of an information system to manage the operations of the business they picked for their project. Alternatively, they may design and implement a database as part of an information system to serve their society or community as part of their social responsibility. The main objective of the database development project is to improve student's practical skills in Database design and development. To execute the term project successfully students are required to adhere to following guidelines:

- Team members must work together and approximately the same portion of the project.
- Team members should understand completely the whole project since each one will have to answer his questions individually during the presentation.

A full description of the project will be provided by the instructor later during the semester

COURSE SCHEDULE*

Week	Lecture Topics	Reading	Lab topics
1	Course Overview / Database Systems	Chapter 1	No lab
2	Database Systems	Chapter 1	No lab
3	Data Models	Chapter 2	No lab **(Quiz 1: Ch. 1)**
4	The Relational Database Model	Chapter 3	Database Model **(Quiz 2: Ch. 2)**
5	Entity Relationship (ER) Modeling	Chapter 4	Data Modeling with ERD **(Quiz 3: Ch. 3)**
6	Entity Relationship (ER) Modeling	Chapter 4	Data Modeling with ERD
7	**Midterm Exam (Chapter 1, 2, 3, & 4)**		
8	Advanced Data Modeling	Chapter 5	Data Modeling with ERD **(Quiz 4-Ch 4)**
9	Normalization of Database Tables	Chapter 6	Normalizing Problems **(Quiz 5-Ch 5)**
10	Introduction to Structural Query Language (SQL)	Chapter 7	SQL Problems
11	Introduction to Structural Query Language (SQL)	Chapter 7	SQL Problems
12	Advanced SQL	Chapter 8	SQL Problems
13	Advanced SQL	Chapter 8	SQL Problems
14	Business Intelligence and Data Warehouses	Chapter 13	No lab
15	**Project presentation**		
Final exam (Chapter 5, 6, 7, 8, & 13)			

**Tentative plan – it might be modified during the semester*