Dillard College of Business Administration
SYLLABUS: Database Design and Management
MIS 3123, Section 101
Fall Semester of 2022
TR 11:00am – 12:20pm
DB 306 or Zoom Virtual Meeting (Password 3123)

Contact Information

Instructor: Dr. Grace Zhang, Professor of Management Information Systems
Zoom Office hours: MW 9:30-11:30am, TR 12:30-1:00pm, also by appointments
Texting or Cell phone: (206)-724-1509
Email: grace.zhang@msutexas.edu

Course Materials

- Database Concepts (9th Edition), ISBN 9780135188149, by Kroenke et al.
- Lecture notes and other additional materials will be provided on D2L.
- Codecademy's interactive lesson of "Learn SQL," Udacity's free course of "Introduction to Relational Database," and SQL practice platform - SQL Zoo.
- D2L access to course-related activities. We will use D2L as the primary communication channel for the class.
- Microsoft Office 2016 including Microsoft Access. Dillard 335 and 306 have the software installed.

Course Description

An examination of database management systems and their applications in business. Emphasis is placed on design, consideration of the end-user, and management of the database. There will be extensive hands-on use of a microcomputer-based database package.

Course Prerequisite(s)

MIS 3003 or concurrent enrollment in MIS 3003

Learning Goals

General Learning Goals:
- Problem Solving and Decision Making. Various hands-on workbenches, online exercises, and Codecademy's interactive lessons will be the primary means by which the students learn the concepts of developing database applications in business. Hands-on activities require students to identify the requested business situation, make any necessary assumptions, assess given data/evidence, design the data model, and implement the database application. These graded hands-on are a portion of the overall course grade.
- Technology Utilization. Extensive use is made of business application technology throughout the course. Various software will be demonstrated to, evaluated by, and used by, the students. ER-Assistant will be used for data modeling. And DBMS software includes but is not limited to Microsoft Access and MySQL. Students will also demonstrate their ability to use typical business computer applications by utilizing Microsoft Word, Excel, and Visio for written assignments and Microsoft PowerPoint for their team presentation. Additionally, a variety of exercises will involve the use of various forms of information technology.

These general learning goals are among those established by the Dillard College of Business Administration. General learning goals represent the skills that graduates will carry with them into their careers. While assessing student performance in obtaining these general learning goals, Dillard College is assessing its programs. The assessments will assist us as we improve our curriculum and curriculum delivery.

Course-Specific Learning Goals:
After completing this course, students should be able to:
- Understand the conceptual foundation of a relational model and describe the basic relational terminology.
- Perform essential SQL operations to create, modify, and delete the database.
- Describe the stages of database development and construct an E-R data model to represent various kinds of relationships.
- Translate the E-R data model to database design with the appropriate level of normalization.
- Understand the need for and importance of database administration: concurrency control, security, and backup and recovery.
- Learn the basic concepts of data warehouse and data marts, dimensional databases, business intelligence systems, big data, structured storage, and the MapReduce process.

Course Policies

Attendance Policy: Regular attendance is expected, and roll will be taken. Upon a student's 5th unauthorized absence, that student will be dropped for nonattendance and receive a grade of WF for the course. See the MSU Student Handbook for University Class Attendance Policy.

Missed Examination, Quiz, and In-class Exercises Policy: Only students with authorized absences (see University Class Attendance Policy) may make up missed examinations, quizzes (announced and unannounced), and assignments. Arrangements must be made in advance, if possible. In all cases, the instructor must be contacted no later than the day of the scheduled exam, or no makeup will be allowed. At the instructor's discretion, a deduction may be assessed for a late exam.

Grading and Evaluation

Student's performance will be assessed using the following elements.

1. Exams (3): Each exam will consist of multiple-choice and true/false questions, some short answers, and/or essay questions. Exams will cover assigned chapters, assignments, and any other related exercises.
2. Online Platform Learning: Codecademy's interactive lesson of "Learn SQL" and Udacity's free course of "Introduction to Relational Database."
3. Workbenches and SQL Zoo: workbenches are assigned to apply database concepts in various chapters. Students are required to finish the workbench on time. SQL practice platform - SQL Zoo is also used for corresponding chapters.
4. D2L Chapter Quizzes: there is a D2L quiz for each chapter. Students can make multiple attempts toward the quiz, and the answers are released to students upon each submission.
5. Attendance and Participation: Class participation in all kinds of formats (hands-on, questions, answers, comments, and feedback) is highly encouraged to achieve a good participation grade. Further, ad hoc quizzes might be administrated.

Grades will be allocated using the following scheme.

Element	Percentage	Letter Grade	Numeric Grade
Exams	40%	A	90-100
Codecademy and Udacity	15%	B	80-89
Workbenches and SQL Zoo	25%	C	70-79
D2L Quizzes	15%	D	60-69
Attendance & Participation	5%	F	<= 59
Total	100%		

Academic Integrity

Concerning academic honesty, students are referred to as the "Student Honor Creed" of Midwestern State University Undergraduate Catalog. Academic dishonesty (cheating, collusion, and plagiarism) is taken seriously and will be dealt with according to the formal procedures. The minimum penalty is an "F" in this course and referral to the Dean of Students for disciplinary action, which may result in expulsion from the University.

Americans with Disabilities Act

If a student has an established disability as defined in the Americans with Disabilities Act and would like to request an accommodation, that student should please contact me as soon as possible (i.e., within the first two weeks of the semester). This class follows the guidelines suggested by the Center for Counseling and Disabilities Services for those students who qualify for disability services. Please refer to details in the Midwestern State University Undergraduate Catalog.

Campus Carry

Effective August 1, 2016, the Campus Carry law (Senate Bill 11) allows those licensed individuals to carry a concealed handgun in buildings on public university campuses, except in locations the University establishes has prohibited. The new Constitutional Carry law does not change this process. Concealed carry still requires a License to Carry permit, and openly carrying handguns is not allowed on college campuses. For more information, visit Campus Carry.

Active Shooter

The safety and security of our campus is the responsibility of everyone in our community. Each of us has an obligation to be prepared to appropriately respond to threats to our campus, such as an active aggressor. Please review the information provided by MSU Police Department regarding the options and strategies we can all use to stay safe during difficult situations. For more information, visit Safety / Emergency Procedures. Students are encouraged to watch the video entitled "Run. Hide. Fight." which may be electronically accessed via the University police department's webpage: "Run. Hide. Fight."

Midterm Progress Report

To help students keep track of their progress toward course objectives, I might provide a "Midterm Progress Report" through the student's WebWorld account. The reported grade will be ONLY for at-risk students identified around the Midterm. The midterm grades will not be reported on the students' transcript, nor will they be calculated in the cumulative GPA. They simply give students an idea of where they stand at the midpoint of the semester. Students earning below a C at the midway point should schedule a meeting with the professor to plan for improvement during the rest of the semester.

Syllabus Change Policy

This syllabus is a guide for the course and is subject to change. It is not a contract. Syllabus changes will be communicated by notification in D2L and may or may not result in document changes. It is the student's sole responsibility to find out if anything affecting the course requirements has changed. Please check D2L and related emails on a regular basis!

Tentative schedule

Please keep this syllabus as a reference! Students are responsible for all information contained in the syllabus and for any changes to the syllabus, which will be communicated in D2L.

Week	Date	Day	Chapter	Topic	Assignment Due
1	23-Aug	Tuesday		Introduction and Syllabus	**Software and Web Platforms**
	25-Aug	Thursday	1	Getting Started	
2	30-Aug	Tuesday		Workbench 1	Workbench 1
	1-Sep	Thursday	2	The Relational Model	
3	6-Sep	Tuesday		The Relational Model	
	8-Sep	Thursday		Workbench 2	Workbench 2
4	13-Sep	Tuesday	3	Structured Query Language	
	15-Sep	Thursday		Structured Query Language	
5	20-Sep	Tuesday		Workbench 3	Workbench 3
	22-Sep	Thursday		Additional SQL	
6	27-Sep	Tuesday		Additional SQL	Additional SQL
	29-Sep	Thursday		**Exam 1 Chapter 1-3**	
7	4-Oct	Tuesday	4	Data Modeling and the E-R Model	
	6-Oct	Thursday		Data Modeling and the E-R Model	
8	11-Oct	Tuesday		Workbench 4	Workbench 4
	13-Oct	Thursday	5	Database Design	
9	18-Oct	Tuesday		Database Design	
	20-Oct	Thursday		Workbench 5	Workbench 5
10	25-Oct	Tuesday		SQL Zoo Subquery	SQL Zoo
	27-Oct	Thursday		SQL Zoo Join	SQL Zoo
11	1-Nov	Tuesday		**Exam 2 Chapter 4-5 and SQL Zoo**	
	3-Nov	Thursday	6	Database Administration	
12	8-Nov	Tuesday		Database Administration	
	10-Nov	Thursday		Database Administration	Workbench 6
13	15-Nov	Tuesday	7	Data Warehouses, BI Systems, and Big Data	
	17-Nov	Thursday		Data Warehouses, BI Systems, and Big Data	
14	22-Nov	Tuesday		Data Warehouses, BI Systems, and Big Data	Workbench 7
	24-Nov	Thursday		No class, Thanksgiving Holiday	
15	29-Nov	Tuesday		SQL Zoo Using Null and Numeric Function	SQL Zoo
	1-Dec	Thursday		SQL Window Function and Self Join	SQL Zoo
Final	**6-Dec**	**Tuesday**	**1 - 3 pm**	**Exam 3 Chapter 6-7 & SQL Zoo**	**Codecademy, Udacity**