

COSC 3385 - Database Design (Spring 2023)

Course Description

Prerequisites: COSC 1337. This course covers information systems design and implementation within a database management system environment. Students will design and construct a system using database software to implement the logical design.

Class Time

Mon/Wed 2:30pm – 3:55pm COB 207 Tue/Thu 8:00am – 9:20am COB 255

Instructor Information

Dr. Robert P. Schumaker Professor, Computer Science Dept. rschumaker@uttyler.edu

Office Hours

DM through Slack (preferred), Zoom, email

If your inquiry is grade-related, please make a Zoom or physical appointment No appointments needed for Tuesdays and Thursdays 12:30 pm - 2:00 pm in COB 315.05

Textbook Information

Database Design for Mere Mortals (Hernandez) ISBN: 978-0-13-678804-1

Course Objective

- Learn and apply a systematic process for information system development
- Develop the ability to use the latest tools and techniques to develop information systems
- Create appropriate documents for requirements, functional design, implementation and user training
- Develop an understanding of the current state of the art by preparing and presenting a term paper on a current topic in information systems
- Develop an ability to work cooperatively to develop a high quality information system

Computer Account Access

Students will need a Patriot account and password for computer access. This information can be found at https://www.uttyler.edu/ccs

Course Documents and Slides

This class will use Canvas for course documents, slides, quizzes and other class-related materials. Students are encouraged to check the website frequently during the course of the semester to keep up to date about course activity.



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Course Grading

Course evaluation will be based on the following:		
Homeworks $(4 @ 10 \text{ points each})$	40	
Quizzes $(10 @ 5 points each, drop 1)$	45	
Lifelong Learning	5	
Class Participation	10	
Total Points	100	

Grading Scale

- A 90.0 points or more
- B 80.0 to 89.999 points
- C ~~70.0 to 79.999 points
- D 60.0 to 69.999 points
- F 59.999 points or less

Course Policies

- 1. Homeworks Homeworks will be periodically assigned with specific deadlines. Students will practice the skills learned against the course database.
- 2. Quizzes Quizzes will be given at the beginning of specific classes and will test the student's mastery of the material. Missed quizzes cannot be made up without acceptable emergency-related documentation. The lowest quiz will be dropped and used as bonus points.
- 3. Lifelong Learning It is imperative for successful individuals to continue learning throughout their lifetime. Professional organizations are a wonderful opportunity to reinvent, retool and build connections with industry leaders. Students that attend a professional technology organization meeting (and bring proof of attendance) will receive five points. Upcoming meetings and events can be found on Canvas. Online webinars will be accepted.
- 4. Class Participation Class Participation points will be scored by the quantity of quality discussion a student contributes regarding relevant technology-related articles. The maximum points that can be earned is ten.
- 5. Missed Classes, Tests/Quizzes and Assignments Students who miss class are responsible for getting missed materials and lecture information on their own time from their peers. Any tests/quizzes and/or assignments due during the student's documented absence will be due by 5pm of the day of their return with no penalty.
- 6. Classroom Lab Rules
 - Please do not surf the Web during class unless instructed to access the Internet
 - Do not access inappropriate Web sites during class. This will lead to dismissal from the class
 - Please do not work on other computer assignments during class
 - Please do not talk to your neighbor during class
 - Do not use the printer during class
 - Please do not bring food or an uncovered drink into the computer classroom lab
 - Please do not order food to be delivered to the classroom
 - Do not use your phone during class



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Date	Concept	Assignments
Jan 9/10	Introduction to Database	
Jan $11/12$	Ch 1 - The Relational Database	
Jan $16/17$	No Classes - MLK Day	
Jan $18/19$	Ch 2 - Design Objectives	
Jan $23/24$	Ch 3 - Terminology	
Jan $25/26$	mySQL Navigation	
Jan 30/31	Ch 4 - Conceptual Overview	
Feb $1/2$	mySQL Querying Data	
Feb $6/7$	Ch 5 - Starting the Process	
Feb 8/9	Ch 6 - Analyzing the Current Database	Q1, H1
Feb $13/14$	mySQL Datatypes and Structures	
Feb $15/16$	Ch 7 - Establishing Table Structure	Q2
Feb $20/21$	mySQL Creating Tables	
Feb $22/23$	Ch 8 - Keys	Q3
Feb $27/28$	mySQL Alter, Modify and Keys	
Mar $1/2$	Ch 9 - Field Specifications	Q4, H2
Mar $6/7$	Creating Data Dictionaries	
Mar $8/9$	Ch 10 - Table Relationships	Q5
Mar $13/14$	No Classes - Spring Break	
Mar $15/16$	No Classes - Spring Break	
Mar $20/21$	mySQL Joining Tables	
Mar $22/23$	mySQL Joining More Tables	$\mathbf{Q6}$
Mar $27/28$	mySQL Types of Joins	
Mar $29/30$	mySQL Update	Q7, H3
Apr $3/4$	mySQL Delete	
Apr $5/6$	mySQL Where	$\mathbf{Q8}$
Apr $10/11$	mySQL Group By	
Apr $12/13$	mySQL Having	$\mathbf{Q9}$
Apr $17/18$	mySQL Order By and Limit	
Apr $19/20$	mySQL Database Administration	Q10, H4

Tentative Course Schedule and Assignments

Assignment Key

- H Homework
- $\mathbf{Q}-\mathbf{Quiz}$