ITSS 4300 Database Fundamentals

Class Information

Term	Spring 2019
Course Number	ITSS 4300.501 (27487)
Class Meetings	Tuesday 7:00 pm – 9:45 pm
Classroom	FO 3.616

Instructor Information

Instructor	Ms. Sunela Thomas
Email	Sunela.Thomas@utdallas.edu *Please include the course number in all email correspondence.*
Office Hours & Location	By appointment only (please email)

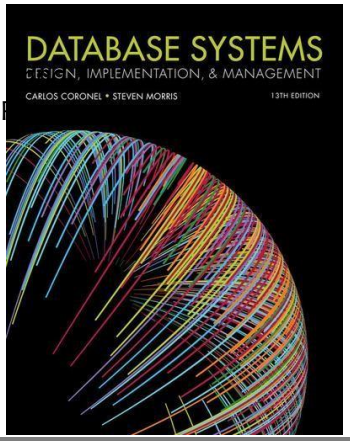
TA Information

Instructor	Jinglin Zhao
Email	jxz170001@utdallas.edu
Office Hours & Location	Tuesdays 3:00 – 5:00 pm, JSOM 2.604

Course Information

Course Description	Introduces the basic concepts for the design and development of relational databases and database management. Topics include entity-relationship data model, logical database design, data administration, Structured Query Language, and database management issues, such as concurrency control, data security, and integrity. A database management system software package is used to implement working database systems. (3 semester hours)
Course Objectives	1. Create a conceptual data model when requirements are provided. 2. Convert a conceptual data model into a physical relational database structure using MySQL or other similar relational database platform. 3. Write SQL statements using MySQL or other similar relational database platform. 4. Demonstrate an understanding of database management concepts relating to concurrency, security, and transaction management.
Prerequisites	ITSS 3300 and ITSS 3312; Recommended co-requisite: ITSS 4330

Course Materials

Textbook(s)	**Recommended:** *Database System: Design, Implementation, Management* by Carlos Coronel, Steven Morris, Rob, Course Technology, 13th Edition. 

Grading Policy

Grading Policy	This course will feature a mix of activities and written and verbal assignments that may be in class or off campus. The instructor will provide detailed instructions as well as the grading criteria for each assignment. Please consult the course schedule for deadlines. Your final grade will be based on the total score of the following: **Assignments: 30%** **Exams: 30%** **Group Project: 30%** **Attendance/Class Participation/Quizzes: 10%**

Final Grading Scale

Final Point Total	Letter Grade
A	93-100
A-	90-92
B+	87-89
B	83-86
B-	80-82
C+	77-79
C	73-76
C-	70-72
D+	67-69
D	63-66
D-	60-62
F	59 & below

Course and Instructor Policies

Attendance	Attendance is extremely important. Students are expected to attend all classes to achieve maximum success. Attendance will be taken at the beginning of class and will be used for class participation grading. **If you come in after attendance is called, you will not get points for attending class. There is no makeup for missed in-class assignments.**
Exams	All exams are scheduled well in advance. If you muss an exam, you will be given a zero! There are no makeups. If you have a legitimate, non-academic reason for missing an exam, you must provide verifiable documentation 24 hours BEFORE the day of the exam. If you contact me AFTER the exam, it is considered missing the exam.
eLearning	eLearning will be used for class content (e.g., class slides and assignment descriptions) and the recording of grades. Class announcements (e.g., change in assignment dates) will be posted in eLearning and/or sent to student email on record in eLearning. It is the student's responsibility to regularly check eLearning and their UTD email accounts.
Instructor Response Policy	The instructor will respond to all student inquiries within 48 business hours (excluding holidays and weekends).
Assignments	Written assignments must adhere to the APA style guide of formatting, citing, and referencing. Descriptions of assignments will be posted as they are assigned. All assignments will be submitted via eLearning. I do NOT accept assignments via email. If you submit an incorrect assignment or need to resubmit your assignment in eLearning, you will be allowed to resubmit as long as it is before the due date. Send me an email at least 12 hours prior to the due date and I will clear your submission so that you can re-submit.
Late Work	All assignments are due on or before the specified due date. I do NOT accept late assignments unless prior arrangements have been made with the instructor in which case a penalty of 20% per day (including weekends) will be assessed. **Why?** Deadlines in the professional world are not a moving target. Missed deadlines affect product delivery, professional reputations, and revenue. Please plan accordingly. For these reasons, late work or incomplete work is not acceptable in this course EXCEPT in the most extreme and unlikely circumstances.
Grading	You are encouraged to ask questions, raise issues, and make observations about homework. Please be advised that if you have a question or issue with your assignment or exam grade, your entire assignment is subject to re-review (grading) which may or may not result in additional point deductions. Assignment specific grading criteria will be included with the assignment instructions.
Final Course Letter Grade	Final course letter grade is based solely on your performance on the graded assignments, exams, projects, and/or attendance. No bonus points, curves, extra credit or additional assignments are offered. There is no rounding either!!!

UT Dallas Syllabus Policies and Procedures	The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus. **Please go to http://go.utdallas.edu/syllabus-policies for these policies.**

Course Schedule, Assignments and Due Dates (*Tentative*)

WEEK	DATE	CONTENT	READINGS	ASSIGNMENT DUE DATE
1	1/15	Introduction to the course Database Systems	Syllabus Chapter 1	
2	1/22	Data Models The Relational Database Model	Chapter 2 Chapter 3	
3	1/29	Entity Relationship Modeling	Chapter 4	Group Project Selection
4	2/5	Advanced Data Modeling	Chapter 5	Assignment 1 (ERDs)
5	2/12	Normalization of Database Tables	Chapter 6	
6	2/19	Normalization of Database Tables Database Design *Exam 1 Review*	Chapter 6 Chapter 9	
7	2/25-2/26	**EXAM 1 in Testing Center (RESERVATION Required)**		Assignment 2 (Normalization) Group Project Milestone 1
8	3/5	Introduction to SQL	Chapter 7	
9	3/12	Introduction to SQL	Chapter 7	
10	3/19	***Spring Break***		
11	3/26	Introduction to SQL	Chapter 7	Assignment 3 (Basic SQL) Group Project Milestone 2
12	4/2	Advanced SQL	Chapter 8	
13	4/9	Transaction Management & Concurrency Control Database Performance Tuning and Query Optimization	Chapter 10 Chapter 11	
14	4/16	Distributed Database Management Systems Business Intelligence and Data Warehouses	Chapter 12 Chapter 13	Assignment 4 (Advanced SQL) Group Project Milestone 3
15	4/23	Big Data and NoSQL Database Administration and Security	Chapter 14 Chapter 16	
16	4/30	*Exam 2 Review*		Group Project Milestone 4
17	5/6 – 5/9	**EXAM 2 (CUMULATIVE) in Testing Center (RESERVATION Required)**		