CSCI 526 Database Systems

INSTRUCTOR:
Paul Deignan, Ph.D., Adjunct Faculty, Department of Computer Science
Texas A&M University – Commerce
Office: TBA; Phone: (903) 457-7893;
E-mail: paul.b.deignan@l-3com.com
Office Hours: by appointment only

CLASS MEETINGS: Fridays 1:30-4:10PM, Jour 104

MANDATORY TEXT:

- *Fundamentals of Database Management Systems* – 6ed., Ramez Elmasri and Shamkant Navathe, Addison Wesley.

Supplementary Text:

- *Database Principles, Programming, and Performance* – 2ed., Patrick and Elizabeth O'Neil, Morgan Kaufmann.

TOPICS TO BE COVERED:
Data models; data definition language; data manipulation language; entity-relation(ER) diagram; design of ER database scheme; relational model; relational databases; relational commercial languages; functional dependencies; normalization.

COURSE OBJECTIVES:

1. To obtain current status of the state-of-the-art database design methodology in industry and academics
2. To master the technique for team play and teamwork for small scale database projects through brain storming and joint requirement planning
3. To learn and use effective tools for logical and physical database design and development
4. To perform data normalization process for effective data management
5. To write SQL programs for effective data definition and manipulation
6. To develop ER diagrams for logical design of database systems
7. To implement a small scale database development project using commercially available DBMS tools
8. To learn to apply various data verification techniques for easy and effective data maintenance
9. To learn how to evaluate database management systems with widely-accepted industry standards
10. To be able to demo and present the initial, intermediate, and final delivery of the database design project

CO	1	2	3	4	5	6	7	8	9	10
A1						X				
A2			X							
A3			X							
A4					X					
A5				X						
A6										
A7										
A8										
A9	X									
A10	X									
Test I			X	X	X	X				X
Test II										
Final				X	X	X				
Project	X	X	X	X	X	X	X	X	X	X

EVALUATION:

Your grade for the course will be based on the following percentages (tentative):

Two Tests	30%
Assignments	20%
Course Project	20%
Final Test	25%
Class Activity	5%

You should do your own work on exams/projects and for computer assignments. Copying another student's work is not acceptable. Any indication of cheating and/or plagiarism on an exam/assignment/project will be an automatic 0 (zero) for the exam/assignment/project for all students involved. Yet, based on cheating and plagiarism activity in any section of class, instructor holds the right to give F grade to the identified student(s). Regarding codes in assignments / projects, you may be required to explain the code you submitted. In case of discursive explanation, the instructor holds the right to lower your grade.

Letter grades will be assigned according to the following scale as a guarantee (or curved up) :

A - at least 90% of the total points
B - at least 80% of the total points
C - at least 70% of the total points
D - at least 60% of the total points
F - less than 60% of the total points

STUDENTS WITH DISABILITIES

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services
Texas A&M University-Commerce
Gee Library, Room 132
Phone (903) 886-5150 or (903) 886-5835
Fax (903) 468-8148
StudentDisabilityServices@tamu-commerce.edu

ACADEMIC ETHICS:

"All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment." (See Student's Guide Handbook, Policies and Procedures, Conduct). Absolutely no usage of laptops and cellular devices (texting and talking) is allowed in class. Talking and other activities that distract/disturb others in the class would not be tolerated. Instructor holds the right to ask you to leave the classroom anytime based on any of disturbing attitude. Each student should sign the sign-sheet if asked by instructor. Late student may not be allowed to participate in the lecture. No food and drink in the class.

ATTENDANCE POLICY:

Attendance is mandatory. Students are expected to be present at all class lectures and are responsible for all material covered in class and assigned in readings.

COURSE REQUIREMENT DEADLINES:

Credit will be given for ONLY those exams, programs, and/or projects turned in no later than the deadline as announced by the instructor of this class, unless prior arrangement has been made with the instructor. Late programs / projects / assignments can or cannot gain partial credit. Credit for late programs / projects / assignments will be announced with the description of it. Assignments and projects will be posted in university's eCollege communication system. Detailed information will be provided by the instructor. Students also should turn in their assignments through eCollege portal. Each student is responsible for the content/instructions of email communications.

Date	Reading	Topic	Assignment
31 Aug	Ch. 1-2	Introduction	
7 Sep	Ch. 7-8	ER and EER Models	1
14 Sep	Ch. 3, 6	Relational Model, Algebra, Calculus	2
21 Sep	Ch. 9, 4	ER-Relational Mapping; SQL I	3
28 Sep	Ch. 4-5	SQL II	4
5 Oct			**Test I** (Ch. 1-9)
12 Oct	Ch. 15-16	Dependencies; Normalizations	5
19 Oct	Ch. 17-18	File Organizing; Indexing	6
26 Oct	Ch. 19-20	Query Processing, DB Tuning	7
2 Nov			**Test II** (Ch. 15-20)
9 Nov	Ch. 13-14	DB & Web Programming	8
12 Apr	Ch. 24-25	Security ; Distributed, Client Server	9
16 Nov	Ch. 28-29	Data Mining, Warehousing	10
30 Nov	Course Project Compensatory Time		
7 Dec	Course Project Due in Class		
14 Dec	**Final** (Ch. 1-8, 10-11, 13-16 w/Project-Focus)		