Course	CS4347.501.18F
Course Title	**Database Systems**
Professor	Kamran Z. Khan
Term	2018 Fall Semester
Meetings	Mon/Wed: 7:00pm-8:15pm ECSS 2.305

Professor's Contact Information

Office Phone	(214) 280-7124
Other Phone	(972) 883-3892
Office Location	ECSS 4.607
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Office Hours	Mon, Tue, Wed, Thurs: 4:30-5:30 or by Apt via email.
Other Information	

General Course Information

Pre-requisites, Co-requisites, & other restrictions	CE 3345 or CS 3345 or SE 3345 or TE 3345. (Same as SE 4347) (3-0) Y
Course Description	Databases are at the heart of modern commercial application development. In addition, their use extends to many other environments and domains where large amounts of data must be stored for efficient update, retrieval, and analysis.This course emphasizes the concepts and structures necessary for the design and implementation of database management systems. Topics include data models, data normalization, data description languages, query facilities, file organization, index organization, file security, data integrity, and reliability.
Learning Outcomes (CLO)	1. Understand Data Modeling 2. Understand the Relational Model and theory 3. Understand normalization of relations 4. Gain a fundamental understanding of SQL programming 5. Understand data organization methods, indexing, and query processing 6. Understand database integrity and concurrency
Required Texts & Materials	Fundamentals of Database Systems (7th Edition) ISBN-13: 978-0133970777 ISBN-10: 0133970779

Assignments & Academic Calendar
[Topics, Reading Assignments, Due Dates, Exam Dates]

CLO	Material
1	**Syllabus. Introduction to Databases; Concepts and Architecture.**
1	**Conceptual Data Modeling and Database Design (ER and EER)**
2	**Continued; The Relational Data Model and SQL**
2	**The Relational Data Model and SQL**
2	**The Relational Data Model and SQL**
3	**Continued; Database Design Theory and Normalization**
3	**Database Design Theory and Normalization**
4	**Midterm attempt 1: 10/16 Database Programming Techniques; Query Processing and Optimization**
4,5	**Database Programming Techniques – continued. Midterm attempt 2: 10/25**
5	**Query Processing and Optimization**
6	**Transaction Processing, Concurrency Control, and Recovering**
6	**Transaction Processing, Concurrency Control, and Recovering**
	Fall Break
6	**Transaction Processing, Concurrency Control, and Recovering**
	Final Exam Review 12/3; Final Exam 12/5 (Material: 8/20-12/3)

Departmental Attendance Policy: The Computer Science Department has implemented the following attendance policy beginning Fall 2016:
If a student misses three consecutive classes, the student will receive a letter grade reduction to his or her final grade. This deduction is cumulative, so if a student misses three consecutive classes twice, the final grade will be reduced by two letter grades. **If a student misses four consecutive classes, the student will automatically receive an F for his or her final grade.**

Grading Scale:

98-100 A+	88-89 B+	78-79 C+	68-69 D+	Below 60 F
92-97 A	82-87 B	72-77 C	62-67 D	
90-91 A-	80-81 B-	70-71 C-	60-61 D	

Course Policies

Grading (credit) Criteria	Daily/Weekly Quizzes: 30%; No Midterm 0%; Final Exam 35%; Homework/Programming Assignments: 30% (Writing and Programming) Participation/Discussion: 5% Programming projects may require demonstration to the instructor or the TA for the student to receive a grade on them. To pass the course, a student has to pass separately in examinations and homework assignments. In order to obtain an "A" or "A-" grade a student must perform above class average in the examinations, as well as above the class average in the homework assignments. This is the minimum requirement, and satisfying this requirement does not guarantee an A or A- grade.
Make-up Exams	An exam should not be missed except for the most extreme circumstances (such as hospitalization or death of an immediate family member). A make-up exam may be given to students with a valid reason (and documentation) for missing the exam. Otherwise, the missed exam grade will be zero. The allowance of a make-up exam is at the sole discretion of the instructor. Make-up exams must be completed within 48 hours of the date and time of the exam.
Extra Credit	No extra credit work will be assigned.
Late Work	Programming projects submitted after the due date will be penalized at the rate of 10% of the total credit for that project for every day (not including weekends and holidays) by which they are late. Late submissions will not be accepted once the solution has been discussed in class and the graded submissions have been returned.
Class Attendance	Regular attendance is highly recommended. Unexcused absence in three successive lectures will result in a dropping of one letter grade; and four successive lectures will result in a failing grade (as per the Computer Science department's policy)
Classroom Citizenship	The instructor encourages students to take active part in class discussions. No question is too simple/stupid to be asked. So, do not hesitate.
Comet Creed	*This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:* *"As a Comet, I pledge honesty, integrity, and service in all that I do."*
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.*

The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.