Course	**CS 6360 Section 006**
Professor	Murat Kantarcioglu
Term	Fall 2017
Meetings	Friday: 10:00am-12:45pm @ CB 1.214

Professor's Contact Information

Office Phone	972-883-6616
Other Phone	None
Office Location	ECSS 3.225
Email Address	Muratk
Office Hours	Fridays 9am-10am and 3pm-4pm
Other Information	All announcements will be made in class, course web page and/or via UT Dallas email.

General Course Information

Pre-requisites, Co-requisites, & other restrictions	CS 5343
Course Description	Methods, principles, and concepts that are relevant to the practice of database software design. Database system architecture; conceptual database models; relational and object-oriented databases; database system implementation; query processing and optimization; transaction processing concepts, concurrency, and recovery; security.
Learning Outcomes	1. Understanding of conceptual, logical and physical organization of data 2. Understanding of Relational Models and theory 3. Understanding of Normalization of Relations 4. Understanding of SQL programming 5. Understanding of Data organization methods 6. Understanding of Indexing, Query processing, Transactions 7. Understanding of Database integrity, Concurrency, Crash Recovery
Required Texts & Materials	Database Management Systems, Ramakrishnan and Gehrke, 3rd Edition http://pages.cs.wisc.edu/~dbbook/
Suggested Texts, Readings, & Materials	Papers will be assigned on course web page as needed. Please check the course web page as needed. http://www.utdallas.edu/~muratk/courses/db17f.htm

Assignments & Academic Calendar

Aug. 25th	• Introduction • ER Model
Sep. 1th	• The Relational Model and SQL DDL • Relational Algebra
Sep. 8th	• SQL • JDBC and Spring Framework

Sep. 15th	• Overview of Storage and Indexing
Sep. 22th	• Tree Indexes
Sep. 29th	• External Sorting • Evaluation of Join Operations
Oct. 6th	• Evaluation of Other Operations • A typical relational optimizer
Oct. 13th	• Overview of Transaction Management
Oct. 20th	• **MIDTERM In Class!!!**
Oct. 27th	• Concurrency Control
Nov. 3th	• Crash Recovery
Nov. 10th	• Schema Refinement
Nov. 17th	• Database Security Overview
Nov. 18th Saturday	• **Since final exam will be given during last lecture. We will have an extra class today.** • In-memory databases and column stores • Key-value Stores • Map-reduce • In-memory distributed data processing
Nov. 24th	• **Happy Thanksgiving !!!**
Dec. 1st	• **Final Exam in Class!!!**

Course Policies

Grading (credit) Criteria	Grading on a curve technique will be used. Homework % 16 (4 homework, each worth 4%) Project % 24 (Group project that may require programming) Midterm % 25 Final % 35
Make-up Exams	No make-up exam will be given.
Extra Credit	None.
Late Work	**Late submissions will not be graded.**
Special Assignments	**None.**
Class Attendance	**Strongly recommended.**
Classroom Citizenship	**Good classroom citizenship is expected.**
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.