UTD	**Course**	**CS4347 Section 0U1**
	Professor	Dr. Ebru Çankaya
	Term	Summer 2016
	Meetings	TuTh 10:00am-12:15pm @ JSOM 2.722

Professor's Contact Information

Web page	http://www.utdallas.edu/~exc067000
Office Location	ECSS 3.604
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Office Hours	TuTh 11:00am-11:30am @ JSOM 2.722

TA's Contact Information

TA	TBA
TA Office Location	TBA
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TA Office Hours	TBA

General Course Information

Pre-requisites, Co-requisites, & other restrictions	**Prerequisite:** CE/CS/SE/TE 3345. (Same as SE 4347) (3-0) Y
Course Description	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	After successful completion of this course, the students are expected to gain these: • Understand Data Modeling • Understand the Relational Model and theory • Understand normalization of relations • Gain a fundamental understanding of SQL programming • Understand data organization methods, indexing, and query processing • Understand database integrity and concurrency
Required Texts & Materials	R. Elmasri, S. Navathe, "Fundamentals of Database Systems", 6th ed., Addison-Wesley, 2010, ISBN: 978-0136086208.
Suggested Texts, Readings, & Materials	**Suggested Texts:** - A. Silberschatz, H. Korth, S. Sudarshan, "Database System Concepts", 6$_{th}$ ed., Mc-Graw Hill, 2010. - H. Garcia-Molina, J. D. Ullman, J. Widom, "Database Systems: The Complete Book", 2$_{nd}$ ed, Prentice Hall, 2008. - C. Coronel, S. Morris, P. Rob, "Database Systems: Design, Implementation, and Management", Cengage Learning; 10th ed., 2012. **Materials:** - http://cs.utdallas.edu/about/oracle-help/ - Dreamspark Microsoft SQL 2012 - Microsoft Access

Assignments & Academic Calendar

Week	Dates	Course Content	Assignments
1	05/24 – 05/26	Syllabus discussion, Ch 1: Databases & Database Users	Read Ch1, Assignment 1 issued
2	05/31 – 06/02	Ch2: Database System Concepts and Architecture, Ch 3: The Relational Data Model and Relational Database Constraints	Read Ch 2, 3
3	06/07 – **06/09**	Ch 6: The Relational Algebra and Relational Calculus	Read Ch 6, Assignment 1 due Assignment 2 issued, **06/09: due date for adopting a Final Project topic**
4	06/14 – 06/16	Ch 4: Basic SQL, Ch 5: More SQL: Complex Queries, Triggers, Views, and Schema Modification	Read Ch 4, Ch 5, Assignment 2 due, Assignment 3 issued
5	06/21 – 06/23	Ch 7: Data Modeling Using the ER Model	Read Ch 7, Assignment 3 due
6	06/28 - 06/30	Review, <mark>06/30: Exam 1: Ch 1, 2, 3, 4, 5, 6, 7</mark>	**07/01: Final Project Deliverable 1 due**
7	07/05 – 07/07	Ch 8: The Enhanced ER (EER) Model, Ch 9: Relational Database Design by ER- and EER-to-Relational Mapping	Read Ch 8, 9, Assignment 4 issued
8	07/12 – 07/14	Ch 19: Algorithms for Query Processing and Optimization	Read Ch 19, Assignment 4 due
9	07/19 – 07/21	Ch 15: Basic Functional Dependencies and Normalization for Relational Databases Ch 21: Introduction to Transaction Processing Concepts and Theory	Read Ch 15, 21, Assignment 5 issued
10	07/26 – 07/28	Ch 22: Concurrency Control Techniques Ch 18: Indexing Structures for Files	Read Ch 22, 18, Assignment 5 due **07/29: Final Project Deliverable II Due**
11	**08/02** – 08/04	<mark>08/02: Exam2: Ch 8, 9, 15, 18, 19, 21, 22</mark> 08/04: (OPTIONAL) Project demo	

*: Exam 1 and Exam 2 will be closed book and closed notes. NO FINAL EXAM. Final Project instead.

Course Policies

Grading (credit) Criteria	Assignments : 15% (3% each) Exam 1 : 30% Exam 2 : 30% Final Project : 25% (10% Deliverable I, 15% Deliverable II) **Letter grades will be assigned as follows:** 98-100 A+ 92-97 A 90-91 A- 88-89 B+ 82-87 B 80-81 B- 78-79 C+ 72-77 C 70-71 C-

	68-69 D+ 62-67 D 60-61 D Below 60 F All programming assignments and exams (other than the term project) are to be individual efforts. Please do not collaborate with other students. Copying of programming assignments or exams, in whole or in part, from other sources will be considered an act of scholastic dishonesty. This policy includes copying from other students, from assignments from previous semesters or from the Internet.
Assignments	There will be 5 assignments during the semester. Assignments will be posted on eLearning and should be turned in via **eLearning** ONLY. **No e-mail submissions are accepted**. **No late submissions are accepted. So, please plan accordingly, do not leave your submissions to the last minute. Everybody submits his/her work very easily via eLearning, you can do it, too. If you encounter a problem during elearning submission, please contact 24/7 elearning Help IMMEDIATELY. This help is available 24/7 at:** **elearning Help URL:** http://www.utdallas.edu/elearning/eLearningHelpdesk.html **eLearning Help Phone:** 1 866 588 3192 **Any submission via eLearning that is missed will be graded with a zero. Please do not insist for exceptions.** Assignments will be graded on a 100 point basis.
Final Project	The Final Project that will be posted on eLearning and should be turned in via **eLearning** ONLY. Students should work in a group of min. 2 and max. 3 members only. **No e-mail submissions are accepted**. **No late submissions are accepted.**
Make-up Exams	A student can ONLY get a make up exam if it was missed due to an extreme emergency (proved by official documents), and arrangements are made BEFORE the exam date. Acceptable evidences of absence are: police report, doctor's report (for self or immediate family member only) or University approved travel.
Extra Credit	No extra credit is offered.
Late Work	No late submission is accepted.
Class Attendance	Attendance will not be taken, but students are responsible for everything done and said in the class, such as detailed explanation of course slides, extra examples, etc. So, regular attendance will be beneficial to students.
Field Trip Policies	*Off-campus, out-of-state, and foreign instruction and activities are subject to state law and University policies and procedures regarding travel and risk-related activities. Information regarding these rules and regulations may be found at the website address http://www.utdallas.edu/BusinessAffairs/Travel_Risk_Activities.htm. Additional information is available from the office of the school Dean. Below is a*

	description of any travel and/or risk related activity associated with this course. No off-campus activities are scheduled.
Student Conduct and Discipline	The University of Texas System and The University of Texas at Dallas have rules and regulations for the orderly and efficient conduct of their business. It is the responsibility of each student and each student organization to be knowledgeable about the rules and regulations which govern student conduct and activities. General information on student conduct and discipline is contained in the UTD publication, *A to Z Guide*, which is provided to all registered students each academic year. The University of Texas at Dallas administers student discipline within the procedures of recognized and established due process. Procedures are defined and described in the *Rules and Regulations, Board of Regents, The University of Texas System, Part 1, Chapter VI, Section 3*, and in Title V, Rules on Student Services and Activities of the university's *Handbook of Operating Procedures*. Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations (SU 1.602, 972/883-6391). A student at the university neither loses the rights nor escapes the responsibilities of citizenship. He or she is expected to obey federal, state, and local laws as well as the Regents' Rules, university regulations, and administrative rules. Students are subject to discipline for violating the standards of conduct whether such conduct takes place on or off campus, or whether civil or criminal penalties are also imposed for such conduct.
Academic Integrity	The faculty expects from its students a high level of responsibility and academic honesty. Because the value of an academic degree depends upon the absolute integrity of the work done by the student for that degree, it is imperative that a student demonstrate a high standard of individual honor in his or her scholastic work. Scholastic dishonesty includes, but is not limited to, statements, acts or omissions related to applications for enrollment or the award of a degree, and/or the submission as one's own work or material that is not one's own. As a general rule, scholastic dishonesty involves one of the following acts: cheating, plagiarism, collusion and/or falsifying academic records. Students suspected of academic dishonesty are subject to disciplinary proceedings. Plagiarism, from the web, from portions of papers for other/previous classes, from classmates, or from any other source is unacceptable and will be processed based on the University's policy on plagiarism (see general catalog for details). This course will use plagiarism detection tools such as turnitin.com, and Moss, which are over 90% effective. **Any student plagiarizing will fail the class with an "F" grade and WILL HAVE TO BE REPORTED TO the University of Texas at Dallas Dean of Students to initiate the academic dishonesty procedures as explained in "Student Discipline and Conduct - UTDSP5003" at** http://policy.utdallas.edu/utdsp5003.
Email Use	**To protect privacy of students, e-mail communication will not involve discussions of specific grade information. If you would like to discuss your grades, you can do so either in class, or during office hours.**

	The University of Texas at Dallas recognizes the value and efficiency of communication between faculty/staff and students through electronic mail. At the same time, email raises some issues concerning security and the identity of each individual in an email exchange. The university encourages all official student email correspondence be sent only to a student's U.T. Dallas email address and that faculty and staff consider email from students official only if it originates from a UTD student account. This allows the university to maintain a high degree of confidence in the identity of all individual corresponding and the security of the transmitted information. UTD furnishes each student with a free email account that is to be used in all communication with university personnel. The Department of Information Resources at U.T. Dallas provides a method for students to have their U.T. Dallas mail forwarded to other accounts.
Withdrawal from Class	The administration of this institution has set deadlines for withdrawal of any college-level courses. These dates and times are published in that semester's course catalog. Administration procedures must be followed. It is the student's responsibility to handle withdrawal requirements from any class. In other words, I cannot drop or withdraw any student. You must do the proper paperwork to ensure that you will not receive a final grade of "F" in a course if you choose not to attend the class once you are enrolled.
Student Grievance Procedures	Procedures for student grievances are found in Title V, Rules on Student Services and Activities, of the university's *Handbook of Operating Procedures*. In attempting to resolve any student grievance regarding grades, evaluations, or other fulfillments of academic responsibility, it is the obligation of the student first to make a serious effort to resolve the matter with the instructor, supervisor, administrator, or committee with whom the grievance originates (hereafter called "the respondent"). Individual faculty members retain primary responsibility for assigning grades and evaluations. If the matter cannot be resolved at that level, the grievance must be submitted in writing to the respondent with a copy of the respondent's School Dean. If the matter is not resolved by the written response provided by the respondent, the student may submit a written appeal to the School Dean. If the grievance is not resolved by the School Dean's decision, the student may make a written appeal to the Dean of Graduate or Undergraduate Education, and the deal will appoint and convene an Academic Appeals Panel. The decision of the Academic Appeals Panel is final. The results of the academic appeals process will be distributed to all involved parties. Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations.
Incomplete Grades	As per university policy, incomplete grades will be granted only for work unavoidably missed at the semester's end and only if 70% of the course work has been completed. An incomplete grade must be resolved within eight (8) weeks from the first day of the subsequent long semester. If the required work to complete the course and to remove the incomplete grade is not submitted by the specified deadline, the incomplete grade is changed automatically to a grade of **F**.
Disability Services	The goal of Disability Services is to provide students with disabilities educational opportunities equal to those of their non-disabled peers. Disability Services is located

	in room 1.610 in the Student Union. Office hours are Monday and Thursday, 8:30 a.m. to 6:30 p.m.; Tuesday and Wednesday, 8:30 a.m. to 7:30 p.m.; and Friday, 8:30 a.m. to 5:30 p.m. The contact information for the Office of Disability Services is: The University of Texas at Dallas, SU 22 PO Box 830688 Richardson, Texas 75083-0688 (972) 883-2098 (voice or TTY) Essentially, the law requires that colleges and universities make those reasonable adjustments necessary to eliminate discrimination on the basis of disability. For example, it may be necessary to remove classroom prohibitions against tape recorders or animals (in the case of dog guides) for students who are blind. Occasionally an assignment requirement may be substituted (for example, a research paper versus an oral presentation for a student who is hearing impaired). Classes enrolled students with mobility impairments may have to be rescheduled in accessible facilities. The college or university may need to provide special services such as registration, note-taking, or mobility assistance. It is the student's responsibility to notify his or her professors of the need for such an accommodation. Disability Services provides students with letters to present to faculty members to verify that the student has a disability and needs accommodations. Individuals requiring special accommodation should contact the professor after class or during office hours.
Religious Holy Days	The University of Texas at Dallas will excuse a student from class or other required activities for the travel to and observance of a religious holy day for a religion whose places of worship are exempt from property tax under Section 11.20, Tax Code, Texas Code Annotated. The student is encouraged to notify the instructor or activity sponsor as soon as possible regarding the absence, preferably in advance of the assignment. The student, so excused, will be allowed to take the exam or complete the assignment within a reasonable time after the absence: a period equal to the length of the absence, up to a maximum of one week. A student who notifies the instructor and completes any missed exam or assignment may not be penalized for the absence. A student who fails to complete the exam or assignment within the prescribed period may receive a failing grade for that exam or assignment. If a student or an instructor disagrees about the nature of the absence [i.e., for the purpose of observing a religious holy day] or if there is similar disagreement about whether the student has been given a reasonable time to complete any missed assignments or examinations, either the student or the instructor may request a ruling from the chief executive officer of the institution, or his or her designee. The chief executive officer or designee must take into account the legislative intent of TEC 51.911(b), and the student and instructor will abide by the decision of the chief executive officer or designee.
Off-Campus Instruction and Course Activities	Off-campus, out-of-state, and foreign instruction and activities are subject to state law and University policies and procedures regarding travel and risk-related activities.

	Information regarding these rules and regulations may be found at http://www.utdallas.edu/BusinessAffairs/Travel_Risk_Activities.htm. Additional information is available from the office of the school dean.

These descriptions and timelines are subject to change at the discretion of the Professor.