

UNIVERSITY OF TEXAS AT DALLAS
Department of Computer Science
Course Syllabus, Fall 2013.

COURSE NUMBER: CS4347.001

COURSE TITLE: Database Systems

CREDIT HOURS: 3

Class Hours: Monday/Wednesday 10:00 to 11:15 AM
Location: ECSS 2.312

INSTRUCTOR: John Cole
Office: 4.702
Office phone: 972/883-6353
Office Hours: 2:45 to 3:45 PM Monday and Wednesday or
by appointment.
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TA: See instructor's Web site.
Office:

Course Description

Topics: Introductory concepts: Data models, ER diagrams. Relational Model, Query Languages: Relational Algebra, Relational Calculus, SQL. Database Design Concepts: Functional dependencies, Normal forms. Data Organization, Index Structures. Query Optimization. Transaction Processing: Concurrency control, Deadlock prevention, Serializability, Recovery. Security issues. Special topics (Web based systems, DDBMS, OODBMS, Data Warehousing).

Course Pre-requisites, Co-requisites, and/or Other Restrictions

CS/SE 3345 or equivalent (Data structures and algorithms): Abstract data types: lists, stacks, queues, trees, search trees. Hashing. Priority queues: heaps. Sorting and searching. Graphs: representation and algorithms. Running-time analysis of algorithms and order notation.

Course Goals

Study methods, principles and concepts that are relevant to the design of database systems. Analyze issues related to database systems from different points of view (designer, programmer, user, performance analyst, administrator).

Grading

Students will be evaluated on the basis of two factors:

1. Their performance on two exams and occasional quizzes.
2. Their performance on homework projects.

Project: 30% of grade

Exams and quizzes: 70% of grade

There will be no extra credit work.

Grading will be on a curve, although it is the opinion of the instructor that there is a certain minimum set of knowledge which you must demonstrate to be considered proficient in the subject. The curve takes into account problems in measurement and will not be decided until all grades are in. Your midterm grade will have a limited number of data points and may or may not be an accurate reflection of your final grade, just your proficiency up to that point. The base grading given below may be adjusted based upon the performance of the class as a whole:

A - 90% to 100%

B - 80% to 89%

C - 70% to 79%

D - 60% to 69%

Below 60% is failing.

Textbook

Fundamentals of Database Systems, 6th Edition, R. Elmasri and S. B. Navathe, Addison-Wesley Inc.

GENERAL RULES:

- 1) There will be regularly assigned reading and homework problems. Reading assignments should be done before the class lecture, and are to be found in the class schedule. Homework problems will require the student to spend time writing or programming a computer outside of class.
- 2) Assignments are due on the dates given in eLearning. Late assignments will receive 10 points off per day late up to 5 days. Homework handed in more than 5 days late will not be accepted and will receive a zero.
- 3) Although class attendance is not mandatory, it will be documented and you are expected to attend. Pop quizzes may be given, for which there is no makeup.
- 4) Exams are closed book, closed notes, no electronics. You are to use only materials provided with the exam. If you require a calculator, you will be notified well in advance of the exam. Calculators on cell phones are not allowed.
- 5) No supplemental exams. Exceptional cases, such as an illness or accident, will be handled on an individual basis. Proof is required and is the responsibility of the student.
- 6) Students have one week after the result of an assignment or exam is returned to request a review/correction of their grade. A review can result in the lowering of a grade.

- 7) Those suspected of cheating will be subject to the university's discipline code.

CLASS MATERIALS, ASSIGNMENTS:

- 1) Class materials will be available on eLearning or the instructor's Web site. You should check the Web site frequently.
- 2) Homework should be submitted according to the instructions in eLearning.

ACADEMIC HONESTY:

The University of Texas System Policy on Academic Honesty appears in the Regents Rules and Regulations, Part One, Chapter VI, Section 3, Paragraph 3.22. *Any student who commits an act of scholastic dishonesty is subject to discipline. Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another, any act designed to give unfair advantage to a student, or the attempt to commit such acts.* The **minimum** penalty for academic dishonesty is a failing grade (zero) for the project or examination. Do your own work on all projects and exams. DO NOT let anyone copy your work!

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.