

Course Syllabus

CS 4347 Database Systems; Spring 2012; MW 5:30-6:45; SLC 2.304; URL: utdallas.edu/~rbk/teach/db/
Class notes will be available on elearning and utdallas.edu/~rbk/teach/db/Notes/ [Userid: rbk, password:

Professor Contact Information

Balaji Raghavachari; (972) 883-2136; rbk@utdallas.edu; ECSS 4.225; Office hours: MW 2:00-3:45 PM

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

CS 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 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, Case studies.

Student Learning Objectives/Outcomes

Study methods, principles and concepts that are relevant to the design of database systems. Analyze issues related to database systems from several perspectives (designer, programmer, user, administrator).

Required Textbooks and Materials

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

Assignments & Academic Calendar

Midterm Exam: 5:30-6:45 PM, March 7 (Wednesday); Final Exam: 5:00-7:00 PM, May 9 (Wednesday)

Grading Policy

Homework total	Project score	Exam total	Guaranteed Grade
> 80%	> 90%	> 90%	A
> 75%	> 80%	> 80%	B
> 65%	> 65%	> 65%	C

Course & Instructor Policies

- Assignments are due in class on the specified date. Turn in what is completed by the deadline for partial credit. No late submissions will be accepted.
- All submissions must be your own work. Identical assignments will not be accepted. Solutions copied from the internet, instructor's manual, etc. will be given zero credit.
- Regular class attendance and participation is expected and is the responsibility of each individual. There is a strong correlation between regular class attendance and good performance. If a student should elect not to attend a class, (s)he is responsible for any handouts, announcements, reading material and contents of missed lectures.
- Grades are determined by the scores in three categories: homeworks, project and exams. For example, if a student gets 82% in Homeworks, 95% in Project, and 86% in Exams, then a grade of B or better is guaranteed. The grade for this score is likely to be A- and will be decided by the instructor.

See also UTD's policies at <http://go.utdallas.edu/syllabus-policies>