

Course Syllabus: CMPS180 Database Systems I, Winter 2016

Instructor: Wang-Chiew Tan (tan@cs.ucsc.edu)
Office Hours: E2-343B, Tuesday 2:30-4:00pm or by appointment.
Teaching Assistant: Sanjana Maiya (smaiya@ucsc.edu)
Lectures: Physical Sciences 110, TTH 4:00pm-5.45pm
Lab Sections: Tuesday 6:00pm to 7:45pm Social Science I Mac (Room 135),
Wednesday 3:00pm to 4:45pm Social Science I Mac (Room 135),
Thursday 10:00am to 11:45am College 8 lab.

You are strongly encouraged to attend the lab sections as the teaching assistant will be available to guide you through your project/lab assignments and answer your questions during lab sections.

Course Description: Introduction to the concepts, approaches, tools, and methodology of database design. The topics that are covered includes the entity-relationship model, the relational model, relational algebra, relational calculus, commercial languages (such as SQL and QBE), functional dependencies, normal forms, and design theory. Other topics may include knowledge-bases, constraint databases, and alternative database models. Prerequisite: course 101.

Textbook

A First Course in Database Systems (3rd edition). By Jeffrey D. Ullman and Jennifer Widom.
ISBN: 9780136006374. **Publisher:** Pearson Prentice Hall.

Gradiance

You will be using the Gradiance online homework system for most of your homework assignments. To get started, please make sure you register an account at <http://www.newgradiance.com/services/servlet/COTC> for CMPS180 with the class token **423B5E4C**.

Timetable

<u>Topic</u>	<u>Number of lectures</u>	<u>Chapters</u>
History and Introduction	1	1
The Relational Data Model	1	2.1,2.2
SQL: DDL, DML	4-5	2.3,2.5, 6.1-6.5,7.1,7.2
Defining relations and constraints, writing queries		
Relational Algebra	4-5	2.4,2.5
Database Application Development	1	9.1,9.2,9.6
Schema Refinement and Normal Forms	4-5	3.1-3.5
Web Data Model, Query language	1-2	11.1-11.3, 12.1-12.2
Extra topics (time permitting): NoSQL, MapReduce Relational Calculus		

Evaluation

Midterm 30%, Final Exam 30%, Gradiance homeworks 20%, Project/Lab Assignments 15%, Class participation 5%, practice homeworks.

You are required to pass each component to pass the class.

Important Dates

Midterm: Feb 12, 2016 (Thursday), in class.

Final Exam: March 16, 2016 (Wednesday), 4:00pm-7:00pm.

*The dates for the midterm and final exam are **fixed**. Requests for changes in the schedule will **not** be accommodated. There will be no make up homework assignments, midterm, or final examination.*

Academic Integrity

No form of academic dishonesty will be tolerated. You are encouraged to read the campus policies regarding academic integrity (http://undergraduate.ucsc.edu/acd_integrity/index.html). You are allowed to ask for help when working on assignments, provided that you acknowledge, on the work that you turn in, the help that you received. Points will be deducted if it appears that labor has been divided among multiple students; otherwise, there will be no penalty for small amounts of acknowledged assistance. If you have any questions about these rules, please discuss them with the instructor immediately.