

CS 1555/2055: Database Management Systems (Fall 2019)
Department of Computer Science, University of Pittsburgh
Course Reference Number: 17050 (CS1555), 17051 (CS2055)

When: Fall 2019 (Term 2201 or 20-1)

What & Where:

Lectures: Tuesday & Thursday, 11:00am – 12:15 pm @ CL 208B
Recitations: Friday 11:00 – 11:50am @ 6110 Sennott Square (CRN 17054 & 17052)
Friday 2:00 – 2:50pm @ 6110 Sennott Square (CRN 17055 & 17688)

Instructor: Prof. Panos K. Chrysanthis

Email: panos@cs.pitt.edu Office hours: Tuesday, 3:30 – 5:00 pm
Web: <http://panos.cs.pitt.edu> Thursday, 3:30 – 5:00 pm
Office: 6421 Sennott Square
Phone: 412-624-8924

Recitations Instructor: Dr. Constantinos Costa

Email: cs1555-staff@cs.pitt.edu Office hours: Mon/Wed, 4:30pm - 5:30pm
Web: <http://people.cs.pitt.edu/~costa.c/> Tue/Thu, 9:30am - 10:30am
Office: 5425 Sennott Square Fri, 3:00pm - 5:00 pm

Teaching Assistant: Xiaozhong Zhang

Email: cs1555-staff@cs.pitt.edu Office hours: Mon/Wed, 10:00am - 10:45am
Web: <http://people.cs.pitt.edu/~xiaozhong/> Tue/Thu, 10:00am - 10:45am
Office: 6414 Sennott Square Fri, 10:00am - 10:45am

Course Description: There are two principle objectives for this course. First, to introduce the fundamental concepts necessary for the design and use of a database. Second, to provide practical experience in applying these concepts using commercial database management systems.

Prerequisites: A grade of C or better in CS 0441 and CS 0445 is required. Working knowledge of Java and familiarity with Unix are assumed.

Class Web Page: <http://db.cs.pitt.edu/courses/cs1555/current.term>

All handouts and class notes will be published on the class web page. You are expected to check this page frequently (at least twice a week).

Textbook: *Fundamentals of Database Systems, 6th Edition*. Fundamentals of Database Systems, 6th Edition Ramez Elmasri and Shamkant B. Navathe, Pearson (c) 2015, 7th Edition (ISBN-10: 0-13-397077-9; ISBN-13: 978-0-13-397077-7)

Reference: *Oracle10g Programming: A Primer*, R. Sunderraman, Addison-Wesley, 2007

Learning SQL, Alan Beaulieu, O'Reilly 2005 (Available online from campus computers through Safari Bookshelf – link at web site).

Note on Email & Communication: In order to achieve the highest level of communication outside the classroom, we will use the **Piazza** system for all questions and clarifications on lectures, recitations and assignments. *You should use email only for confidential matters.* For a confidential email to the instructor and the TA, you should send the email to **cs1555-staff@cs.pitt.edu**. Note that this email address works only within the pitt.edu domain. If you have a confidential matter for the *instructor only*, then please email the instructor directly, but make sure to include the keyword cs1555 or cs2055 in the subject line of your email message. We will make every effort to respond to all email requests within one business day at the latest. **Due to spam filtering, you should always try to use your pitt email address when sending email and include your full name.**

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Course Grading:

Homework Assignments	20%	Roughly one per week
Term Project & Demo	15%	3-member team project; Demos: Dec. 11-13, 2019
Midterm Exam	30%	Thu., Oct. 22, 2019, 2:00pm – 3:15pm
Final Exam	30%	Thu., Dec. 10, 2019, 12:00pm – 1:50pm
Recitation & Class Participation	5%	

Grading Policy: The grade scaling will be computed based on the performance of the undergraduate students only. Graduate students will then be graded on this undergraduate scale.

Attendance and participation in lecture and recitation may be used to decide borderline grades.

Unless explicitly noted otherwise, the work in this course is to be done independently. Discussions with other students on the assignments should be limited to understanding the statement of the problems. Cheating in any way, including giving your work to someone else will result in an F for the course and a report to the appropriate University authority.

Marks can be appealed up to two weeks after they have been posted, after that no appeals will be considered.

Submission & Late Policy: All written assignments must be submitted electronically and **there is no late submission**. An assignment which is late will be accepted *only* under special circumstances with the instructor's permission prior to its deadline. In such a case, the instructor will determine any penalty in a fair manner.

Make-up Policy: Students are expected to take both midterm and final exams. Make-up exams will only be given in the event of a medical situation or an emergency, and only if this is documented and the instructor is notified *immediately if in advance is not possible*. Missing an exam will result in a zero for the exam.

Students with Disabilities: If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and Disability Resources and Services, 140 William Pitt Union, 412-648-7890 or 412-383-7355 (TTY) as early as possible in the term.

Religious Observance: In order to accommodate the observance of religious holidays, students should inform the instructor of any such days within the first two weeks of the term by email (**Sept. 10**).

Audio/Video Recording - Use of Cell Phones To ensure the free & open discussion of ideas, students may not record classroom lectures, discussion and/or activities without the advance written permission of the instructor, and any such recording properly approved in advance can be used solely for the student's own private use. Also, any use of Cell Phones during lectures is disruptive and is not permitted.

Copyrighted Material All material provided through this web site is subject to copyright. This applies to class/recitation notes, slides, assignments, solutions, project descriptions, etc.

You are allowed (and expected!) to use all the provided material for personal use. However, you are strictly prohibited from sharing the material with others in general and from posting the material on the Web or other file sharing venues in particular.

Outline: A detailed reading guide will be published on the web page, along with the class notes.

1. Relational/Object-Relational Data Model, Relational Databases – SQL, QBE
2. Database Design – Relational Normal Forms & Entity-Relationship Data Model
3. Storage and File Organizations, Access Methods
4. Transactions, Concurrency, Recovery & New Trends – Data Streams, NoSQL