

CPTR 319 Database Management Systems

Winter 2010
10:00 MWF HSC 107

Instructor: Scot Anderson, Ph.D. (Dr. A – to distinguish me from my better half in Math)

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Office Hours: See <http://www.cs.southern.edu/scot/>

Prerequisites: CPTR 314, CPIS 315 or CPTE 212

Textbook: Database Processing Fundamentals, Design, and Implementation ISBN: 0-13-167272-X

Supplemental Reading: Projects will require research that you will need to access ACM and IEEE online repositories. These can be found at: <http://library.southern.edu/research/>

Course Purpose, Goals & Objectives

Introduction to database management systems, including data modeling, query languages and processing, database design, data integrity and security. Issues related to distributed database systems, object-oriented database systems, and legacy database systems are also discussed. At the conclusion of this course a student will:

1. Understand the difference between the file-oriented method of building applications and the database method.
2. Learn and practice data modeling using the E-R model.
3. Learn and practice designing normalized databases using the E-R.
4. Learn the fundamentals of the relational data model and understand its role in database implementation.
5. Learn and practice SQL.
6. Design and implement a relational database and application using a database system.
7. Understand how Internet technologies and databases work together.
8. Understand the implications and problems of enterprise database systems and study solutions to some of the problems.
9. Understand the role of the "people" involved in a database system.
10. Learn about object-oriented database systems.

Grading Policies

Late material (any assignment turned in after the posted due date) will not be accepted for credit. It is far better that you turn in an uncompleted assignment than to try to turn it in late. Graded papers will be available in my office or in class. The following table shows the relative weights associated with the various course components:

Category	Weight	Hand-in Policy	Grading Scale	
Quizzes	10%	Reading quizzes will be online	A	90% - 100%
Homework	20%	In class in printed form	B	80% - 89%
Projects	15%	Hand in online in .zip format	C	70% - 79%
Tests	30%	In class	D	60% - 69%
Final Exam	25%	In class	F	< 60%

Attendance Policy

We must take attendance due to fire safety issues. I will count attendance as one quiz and you will receive a grade equivalent to the number of classes you attend out of those recorded. This quiz will be weighted higher than reading quizzes.

Method of Instruction

Quizzes cover reading assignments for each chapter as listed in the schedule and possibly lecture information from the chapter. You must complete the quiz for the day prior to coming to class. For example, **if** there is an online quiz for reading sections 1.1-1.2 you must complete the quiz before class time on due date for those sections. **Homework** assignments will have a due date on the schedule. These include written assignments and projects. Tests will cover chapters and are tentatively scheduled in the online schedule. Written chapter tests evaluate performance for each chapter covered and a final comprehensive test will cover all material.

The Projects: Two general types of projects will be allowed:

1. Individual projects – You may choose to do an individual project on some topic related to networking. For example, you might write a Java applet demonstrating some aspect of networking. If you choose this type of project, please notify me two weeks prior to the “project proposal” due date for approval.
2. Group project – A small group may decide to work on a single project. For group projects it would be expected that the project would be more involved (or complex) than an individual project. If a group wishes to work on a group project a written *preliminary* project proposal is required two before the project proposal due date. The detailed project proposal must clearly outline the responsibilities of each of the participants so that I will be able to evaluate each participant’s part of the total project.

The detailed project proposal should include a project title, a high level description of the project, what you intend to show by doing the project, a description of related work, and how you intend to carry out the project including a schedule of when various parts of the project will be completed.

A written project report written using LaTeX is required of all students. You will be provided with a report template in LaTeX. You will also be provided a sample BibTeX file demonstrating references. Students involved in group projects will each document their part of the project. Additional information will be provided in class and on my web page.

Extra Credit

There are only two ways to get extra credit in this course. Both of them are designed to help you perform better in all of your classes. I give you more rational for this in class.

The first five minutes of class is often devoted to a devotional for the first class of the day. For those who wish to participate I will give you a book to keep and to read during the first 5 minutes of class. To receive the extra credit you must attend class regularly and read during the first 5 minutes from that book. At the final exam you will be asked to have prepared a single page response to your reading. Please do not try to make this into a report on what you read, just a personal response to what you read. For this I will add 10 percent to your homework grade.

The second way involves your health. For those willing to maintain 35 hours of sleep between Sunday night and Thursday night (average 7 hours or more a night) and eat a healthy breakfast each morning (donuts do not count, at least cereal, and juice or some kind of fruit – dried fruit works if you are in a hurry), I will add 10 percent to your quizzes. There will be a question on the final exam about your participation in this opportunity.

Academic Honesty

Cheating will not be tolerated. Verified incidents of dishonesty may receive a (2. b) punishment from http://www.southern.edu/?page=academics/policies/academic_honesty.php.

Disability Policy

In keeping with University policy, any student with a disability who needs academic accommodations must call Disability Support Services at 236-2574 or stop by Lynn Wood Hall, room 308, to arrange a confidential appointment with the Disability Services Coordinator during the first week of classes. (Students who request accommodations after the third week of the semester should not depend on receiving accommodations for that semester. Legally, no retroactive accommodations can be provided. For more details, visit the Learning Success Services Web site at <http://lss.southern.edu/>.)

Students whose accommodations requests are approved will be provided confidential letters for them to deliver to their professors for review and discussion about how to implement the accommodations in relation to particular course requirements. Accommodations for disabilities are available only as recommended by Disability Support Services.