

**CMPS 460
DATABASE MANAGEMENT
SYSTEMS
SPRING 2011**

Instructor:

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Objective:

- To gain an understanding of the fundamental concepts of the relational database model. These concepts include relational database design, relational database theory, and relational database implementation and access.
- To gain experience implementing and accessing relational databases using the SQL standard.
- To gain experience in the development of programs that use embedded database calls.
- To gain experience in the design and development of web-based database applications.
- To be exposed to other topics related to relational database management systems as time allows.

Text: Fundamentals of DATABASE SYSTEMS (6E)
Elmasri/Navathe

Topics Covered:

- Relational database design using ERM
- Relational model concepts
- Relational constraints
- The relational algebra
- Database declaration and manipulation using SQL
- Embedded SQL
- Web-based database application development
- Relational database normalization

Course Goals:

- To gain an understanding of the fundamental concepts of the relational database model.
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Learning Outcomes of this Course:

Upon successful completion of this course, students will have the ability to:

- Understand and apply fundamental database design techniques
- Analyze written application requirements and design a database to store and retrieve the necessary data
- Understand the theory of the relational database model
- Understand the fundamental concepts of relational algebra
- Use relational algebra to formulate logical database queries
- Understand the syntax and semantics of SQL (Structured Query Language)
- Use SQL to create and execute ad hoc queries against a relational database
- Develop web based software applications that use a relational database for data storage and retrieval
- Design and implement software applications using PHP, MySQL, and HTML
- Understand the cost benefit tradeoff of database management system usage
- Recognize the need for and importance of clear, concise, accurate software documentation
- Orally present their completed project and elicit and answer questions
- Work in team projects

Grading:

Components

Assignments	20%	
Project	20%	
Mid term 1	20%	
Mid term 2	20%	
Final	20%	(Monday, May 2 nd 11:00 AM – 1:30 PM)

<u>Undergraduate Scale</u>		<u>Graduate Scale</u>	
90 – 100	A	92 – 100	A
80 – 89	B	84 – 91	B
70 – 79	C	76 – 83	C
60 – 69	D	68 – 75	D
< 60	F	< 68	F

YOU MUST TURN OFF ALL NOISE MAKING DEVICES AT THE BEGINNING OF CLASS.

CHEATING WILL NOT BE TOLERATED.

Policies:

- ⇒ There will be no make up exams. If you do not contact me prior to an exam (with a valid excuse) you will receive a zero for that exam.
- ⇒ There will be a 10% penalty per day for late assignments. This includes weekends and holidays.
- ⇒ There will be no curving of grades.
- ⇒ It is your responsibility to see that your assignments are graded, recorded and returned to you. Keep these assignments to ensure that you can prove you turned them in.

- ⇒ **There is a one-week “statute of limitations” on all assignments and tests. That means that after one week from the date the assignment/test is returned you can no longer request a review of the grade. NOTE: The clock starts ticking when I return the material, not when you get it.**
- ⇒ **Incompletes are given only in the event of extreme extenuating circumstances.**
- ⇒ **If there are problems with your assignments, please see the grader first.**