Spring 2012

# CS 701: Database Systems and Design I

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# CS 701 Database Systems and Design I
# Summer Quarter, 2012

**Description:** An introduction to database design, database system implementation issues and techniques, and advanced data models and concepts.

**Prerequisite:** CS405/605 or equivalent.

**Instructor:** Dr. Guozhu Dong. Joshi 383.

**Phone & Email:** (937)-775-5066, guozhu.dong@wright.edu

**Class details:** 6:05-7:20pm T Th, Medical Sciences 145.

**Office hours:** 5:00-5:50pm, T Th. Use e-mail for short questions.

**Text Book:** Fundamentals of Database Systems, 6th edition, R. Elmasri and S. B. Navathe, Addison-Wesley.

**References:** Database Management Systems, R. Ramakrishnan and J. Gehrke. McGraw Hill.

Database System Concepts, Silberschatz, Korth, & Sudarshan McGraw Hill.

**Topics:**
- Database design: theory and methodology (Chapters 15–16, 10).
- Query processing and optimization (Chapters 19-20).
- Transaction processing, concurrency control, recovery (Chapters 21–23).
- Object-oriented and object-relational databases (Chapters 11).
- Other/advanced database concepts and applications (selection of Chapters 12, 14, 24 – 29).

**Grading:** Midterm 22%; Final 40%; Home work assignments 8%; Project 30%.

Final grade: A=[90,100], B=[80,90), C=[70,80), D=[60,70), F=[0,60). The instructor may curve the final grades in such a way that they deviate from this standard at his/her discretion.

In the project you will write a short survey on recent research papers on a focused topic that is related to databases; details will be given in project spec.

Academic dishonesty will be punished. No sharing of submitted work is allowed.

Late home works or projects will not be accepted except for documented medical reasons. No makeup exam will be given except for documented medical reasons.

**Home work:** To improve your understanding of the materials, you should read the texts and do as many as possible relevant exercises at the end of the covered chapters.

**Handouts and slides:** Handouts and certain other course materials will be distributed in class. It is your responsibility to collect them. Slides and certain other materials will be available on pilot.

**Important dates:**
- 7/5: Project selection (students submit a 1-page summary of topic for the project).
- 7/12: In class midterm (75 minutes long).
- 8/14: Project due (when class starts).
- 8/16 (Thursday): 6:05-7:45pm, Final.

**Important notes:** All exams are closed book, except that you can use one sheet of hand written notes for the midterm and two sheets of hand written notes for the final.