

# Syllabus for Database Systems. Fall 2005.

**Course Number:** CS 435, Section: 01, CRN: 23139, Credits: 3

**Prerequisites:** CS 223 or CS 302.

*If you have not completed this course you must get a prerequisite waiver form signed by your advisor, CS Department Head, and the Dean of College of Engineering. Good luck on that one.*

**Meetings:** Monday, Wednesday, and Friday, 11:00-11:50AM at **EPS 108** \*.

\* *NOTE: on Oct/19 (Wednesday) we meet at the CS Conference Room! ! !*

**Course Web page:** <http://www.cs.montana.edu/courses/435/>

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## **Lecturer: Dr. Rafal A. Angryk**

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- ◇ Home Page: <http://www.cs.montana.edu/angryk/>
- ◇ Consultations on the class-related issues:
  - Right after each class in a classroom
  - Office hours:
    - Monday, Wednesday, and Friday 12:00-1:00 PM
    - Tuesday 11:00-12:00 PM
  - By individual appointment (Please, call or e-mail me first!)

**Teaching Assistant:** None

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## **Books:**

- ◇ **Textbook:** R. Elmasri, S.B. Navathe, *Fundamentals of Database Systems*, Fourth Edition, ISBN: 0-321-12226-7, Publisher: Addison-Wesley, 2003.
- ◇ Books you may want to read to extend the course material\*:
  - H. Garcia-Molina, J.D. Ullman, J. Widom, *Database Systems, The Complete Book*, ISBN: 0-13-031995-3, Publisher: Prentice Hall, 2002.
  - A. Silberschatz, H. Korth, S. Sudarshan, *Database System Concepts*, ISBN: 0-07-295886-3, Publisher: McGraw-Hill, 2002.

\* *Readings for your own pleasure.*

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## **Course description**

This course is designed to introduce the essential concepts of database systems: relational database model, fundamentals of data modeling and database design, Structured Query

Language, storage organization and basic indexing techniques applicable to DBMSs. Students will gain hands on experience through assignments and team projects.

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### Course outline

- ◇ **Part 1.** Relational Database design methodologies – **Major part!**
  - ◇ **Part 2.** SQL and introduction to the local RDBMS
  - ◇ **Part 3.** Concerns of DBMS implementations
  - ◇ **Part 4.** Emerging database technologies – If we still have time!
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### Course outcomes

At the end of the course, students should be able to:

- ◇ Understand concepts of relational algebra
  - ◇ Correctly design relational database model
  - ◇ Implement and maintain relational database
  - ◇ Efficiently use SQL
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### Contributions of all grades to the final course grade:

- ◇ Attendance: Lack of sufficient attendance (9 absences) may result in a grade of “F” for the whole course. Please refer to my class policies for details.
- ◇ Daily Quizzes and Individual Assignments: 20% (do not expect linear distribution of points)
- ◇ Team Project: 25% (maximum 2 persons per project)
- ◇ Tests during the course: 35% (3 tests expected: 1<sup>st</sup> – 5%, remaining 2 – 15% ea.)
- ◇ Final Exam: 20% (covers the whole semester of work: readings, assignments, and lectures)

*Please be aware that Computer Science is a production-oriented discipline. In the field it is not enough for students to try hard, they need to succeed!*

***ALL grades will be based NOT on your efforts but on your achievements.***

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**ATTENTION! You are obligated to get acquainted with my general class guidelines. I consider registration and participation in my class as acceptance of ALL my teaching rules and class policies.**