1 Basic Information

Time & Place: Tuesday and Thursday 1:00 – 2:15 am, Goessmann 151

Instructor: Prof. Gerome Miklau (miklau [at] cs.umass.edu)

Course mailing list: cmpsci-445-01-fal10 [at] courses.umass.edu


Teaching Assistant: Abhinav Parate (aparate [at] cs.umass.edu)

Mail TA and Instructor: cs445-help [at] edlab-mail.cs.umass.edu

2 Course Goals and Topics

Database systems are at the core of large-scale information management, providing the most efficient mechanism for storing, updating, and retrieving structured data. This course will provide an introduction to the design and use of database systems, as well as the key issues in building such systems. The World Wide Web is the largest distributed information management system. In addition to database topics, this course will also provide an introduction to key technologies for managing and exchanging data on the World Wide Web.

In presenting the fundamental principles of databases we will cover the relational model, conceptual design, and query languages. We will also cover core database implementation issues including storage and indexing, query processing and optimization, and transaction management. In presenting modern Internet-based data management we will cover XML data, web application development, and selected topics in information retrieval and information integration. The course will also emphasize the secure management of data in both conventional databases and the World Wide Web.

3 Course Resources

Course Notes: Course lecture notes will not be provided by the instructor, but will be made available by a “scribe” who volunteers to take notes for each course meeting.

Additional resources: Linked to the course website.

4 Course Requirements

The work of this course consists of the following:

Homework & Project Work (45%) There will be weekly homework assignments, typically due Fridays, which will include written problems and programming tasks. Some homework assignments will build on one another, representing parts of a larger project.

Exams (35%) There will be a midterm (15%) and final exam (20%).

Quizzes (10%) There will be in-class quizzes. No make-up quizzes will be given, however the lowest quiz grade will be dropped.

Participation (10%) You should attend every lecture. If you miss a lecture, talk to a friend who was present, and check the Web site for course news. Your participation in class is an important contribution to the success of this course. You are responsible for asking questions, offering comments, and completing in-class exercises. You will also receive participation points for volunteering to be a scribe for a lecture.

Lateness & Absence Policy

Most assignments will be submitted electronically on Friday afternoons. Barring truly exceptional circumstances, such as documented medical events, late homework will not be accepted for credit. Each student will receive two “late days”, allowing homework to be submitted 24 hours late without penalty.

UMass policy is that students are required to notify instructors at least one week in advance that they will miss class in order to observe a religious holiday; in this case only will I offer a makeup quiz or exam.

5 Academic Misconduct

All submitted work must be your own. Although students may study together, each student is expected to produce his or her own solution to the homework problems. When discussing problems with others, do not show any of your written or programmed solutions to others. When asking others for help, do not take notes about the solution other than to jot down publicly available references. When in doubt, contact the instructor about whether a potential action would be considered plagiarism.

Copying or using sections of someone else’s program or assignment, even if it has been modified by you, is not acceptable. The University has very clear guidelines for academic misconduct and the TA and instructor of CS 445 will be vigorous in enforcing them. Please see the UMass policy on academic honesty here: [www.umass.edu/dean_students/code_conduct/acad_honest.htm](http://www.umass.edu/dean_students/code_conduct/acad_honest.htm)