Syllabus

Instructor
Dr. Konstantinos Kalpakis
Computer Science & Electrical Engineering Department
Office: ECS 233A
Phone: (410) 455-3143
Email: kalpakis@csee.umbc.edu
Class homepage: http://www.csee.umbc.edu/~kalpakis/Courses/661/
Office Hours Tuesday and Thursday 5:30pm–6:30pm, and by appointment.

Meeting Time and Place
Tuesday, Thursday 4:00pm–5:15pm
Room BS120

Teaching Assistants: Koustuv Dasgupta and Vasundhara Puttagunta,
Room ECS 335A, Phone: 410-455-6337, Email: {dasgupta, vputtal}@csee.umbc.edu.
Office hours: Tuesday and Thursday 3-4pm, and by appointment.

Important Dates

- Midterm Exam, October 30, 2001, 4:00pm–5:15pm.
- Final Exam, December 13, 2001, 3:30pm–5:30pm.
- Projects due, December 11, 2001, 23:59pm.

Prerequisites CMSC–461 or permission of the instructor.


Tentative List of Topics.

- Data Models and Query Languages.
- Relational Algebra and Calculus
- Logic Data Model

- Physical Data Organization
- Design Theory of Relational Databases
- Database Security and Integrity
- Transaction Management (Concurrency Control and Recovery)
- Distributed Concurrency Control
- Query Processing and Query Optimization Techniques
- Selected topics (TBD)

**Required Work**

Required work consists of (1) taking the midterm and final exams, (2) homework assignments, (3) carrying out a project. Further, you are expected to do the assigned reading before each class and actively participate in class discussions.

There will be four or more homework assignments. Some may require use of computer systems. Homework assignments are to be done individually by each student. Each homework assignment will be due during the first 15 minutes of class on the date specified. No late homeworaks will be accepted, unless University Policy states otherwise.

In addition to homework assignments, there will be a semester-long project requiring substantial amount of work. It will involve both theoretical and practical issues in modern database systems. The project can be carried out by a small team (2-4) students. You will be required to submit a final project report due on December 11, 2001. Be advised that you will be asked to demonstrate your project in the period December 8 through December 14, 2001. The project also has a number of intermediate milestones you must pass. No late projects will be accepted, unless University Policy states otherwise. Additional details regarding your projects will be provided by the instructor during the semester.

There will be a midterm exam and a comprehensive final exam. All the exams will take place in class and will be closed-books.

**Facilities.** You will be provided accounts on the Oracle Server of UCS. In addition, you will have access to the facilities and software available in the CSEE department. All computer work will be done on the UMBC Unix–based computers.

**Grading Policy**

The course grades will be determined as follows. For each course activity in Table 1, each student will receive an activity score, which will be the average of the student’s scores on the assignments for that activity. An activity score is a number in the range 0…100. A term score will be computed by taking the weighted sum of the activity scores, using the
<table>
<thead>
<tr>
<th>Activity</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project</td>
<td>25%</td>
</tr>
<tr>
<td>Homework</td>
<td>10%</td>
</tr>
<tr>
<td>Midterm Exam</td>
<td>30%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>35%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100%</td>
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</tbody>
</table>

Table 1: Course Activities and their relative weights.

relative weights given in Table 1. The instructor will convert term scores into letter grades by using the following mapping: $[90, 100] \Rightarrow A$, $[80, 90] \Rightarrow B$, $[70, 80] \Rightarrow C$, $[60, 70] \Rightarrow D$, $[60, 100] \Rightarrow P$, $[0, 60] \Rightarrow F$.

Make-up exams are possible only under University Policy. You should make prior arrangements with the instructor if you expect to miss an exam. Incomplete grades will issued only under those extreme situations described by University Policy for granting incompletes. Failure to complete assignments on time is not a sufficient reason for an incomplete. **Necessary but not sufficient conditions to pass the course are as follows:** you must have a project and homework activity score of at least 50 points, pass all the project milestones, and at least 30 points for each exam, including the final exam.