CMSC 661: Principles of Database Systems

Fall 1995 – Mon/Wed 4:00-5:15 – SS105

Computer Science and Electrical Engineering
University of Maryland Baltimore County

Instructor: Dr. Timothy Finin, 207 ECS, 455-3522
Cyberspace: finin@umbc.edu, http://umbc.edu/~finin/
Office Hours: by appointment

Teaching Assistant: Linglan Zhang , 225G ECS, 455-3016
Cyberspace: linglan@cs.umbc.edu, http://www.cs.umbc.edu/~linglan/
Office Hours: tba

Prerequisites: Some experience with the basic concepts of database systems or a desire to work extremely hard.

Course Web page: `http://www.cs.umbc.edu/courses/graduate/661/fall95/`

Readings:

- *Principles of Database and Knowledge-base Systems*, Jeffrey Ullman, Computer Science Press, 1988.
- *Readings in Database Systems*, second edition, Michael Stonebreaker (ed.), Morgan Kaufmann, 1994.
- Several papers and notes to be handed out in class. Some documentation will be made available on the web (e.g., for Sicstus Prolog).

Grading Policy: A tentative weighting is as follows:

- One in class mid-term exam 15%
- Final examination 25%
- Homework assignments 60%

Incompletes. As per University policy, incomplete will be granted only under extraordinary circumstances; students who are enrolled after the last day to drop a class should be prepared to receive a grade.

Homeworks: There will be four or five homeworks. Several of the homework assignments will require use of computer systems (e.g., VAX/VMS SQL, Prolog and other systems on Unix). One may require you to write a position paper based on some of our readings. Homeworks will be due at the beginning of the class unless otherwise specified. You are expected to do your own work unless an assignment explicitly calls for a team effort.

On-line information: There will be a local newsgroup named *umbc.course.cs661* for this course. We will post messages to this newsgroup and assume that you will read them. You should also feel free to post your own messages to this newsgroup if you feel you have something that would be useful and appropriate to share with the rest of the class. If you do not know how to read news, you should find out by reading the man page for the *rn* command. There is a web page for the course at `http://www.cs.umbc.edu/courses/graduate/661/fall95/` which will contain pointers to useful document and information.

Tentative Syllabus

Week	*Date*	*Topic*	*Ullman*	*Stonebreaker*	*Other*
1	9/6	Introduction	1	Preface	
2	9/11	Data models, ER Model	2	10.0	
2	9/13	CSEE MEETING	2	10.1	
3	9/18	ER model, Relational model	2	1.0, 1.1	
3	9/20	Relational model	2	1.4, 1.5	
4	9/25	Relational algebra	2		rdb notes
4	9/27	Relational algebra	2		rdb notes
5	10/2	Logic data model	3		
5	10/4	Logic data model (Yom Kippur)	3		
6	10/9	Logic data model	3		
6	10/11	Prolog			Prolog notes
7	10/16	Relational query languages	4		
7	10/18	SQL	4		
8	10/23	SQL	4		VAX/VMS Notes
8	10/25	exam			
9	10/30	DB design - issues	7		
9	11/1	DB design - normalization	7		notes
10	11/6	DB design - conceptual schemata			notes
10	11/8	OODB	5	12.4, 11.0, 11.1	
11	11/13	OODB	5	11.2, 11.3	
11	11/15	OODB and CORBA	5		notes
12	11/20	Security and integrity	8		
12	11/22	Transaction management	9	3.0	
13	11/27	Transaction management	9	3.1	
13	11/29	Distributed databases	10	7.0	
14	12/4	Distributed databases	10	7.3	
14	12/6	Everything else			notes
15	12/11	Review and discussion			
16	12/18	FINAL 3:30-5:30			