

COMP 3005: Database Management Systems
Winter Term 2013

Instructor: Prof. Leopoldo Bertossi (bertossi@scs.carleton.ca)

Lectures: M&W 10:00 – 11:30. Room: 306 SA

Office hour: Room 5125A. Mondays 15:00 – 16:30.

Course web page: <http://www.scs.carleton.ca/~bertossi/db13/index.html>.

The course web page has a “News” section containing news posted by the instructor on a regular basis. Students must read them frequently. That is the main source of information for students about administrative aspects of the course. Students are expected and assumed to stay informed.

Prerequisite: A good understanding of the material in COMP 1805, in particular, of Predicate Logic (e.g. Chap. 1 in “Discrete Mathematics and Its Applications”, by Kenneth H. Rosen, McGraw-Hill).

Contents:

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| 1. Introduction to Data Models and Databases | 6. Query Languages: Relational Algebra and Relational Calculus |
| 2. The Entity/Relationship Data Model | 7. Query Languages: SQL |
| 3. The Relational Model of Data | 8. Query Languages: Datalog, Views |
| 4. Relational Database Design | 9. Elements of Data Integration |
| 5. Data Semantics, Integrity Constraints | 10. Data access through Ontologies |

Evaluation:

- One mid term test, in class (closed book), 25%. Date TBA during first week on the course News (see above).
- 4-5 assignments:¹ 40%
Assignments are allowed to be done in groups of two. The group has to stick together for all the assignments or split. Formation of new groups after the first assignment is not allowed. Assignments can also be done individually.
- A final examination, as scheduled by the university: 35%

¹Assuming the appropriate computational resources and support are provided by the SCS.

- To pass the course (grade above F), the student must have at least 40% as the average of the midterm (20%) and the exam (80%).

Literature:

- Lecture slides will be posted on the course web page **right after** every lecture. It is crucial to read them carefully, filling out the gaps, and solving the proposed exercises. Make sure to read the slides for the previous lecture before coming to the next.