

COMP306 – Database Management Systems

Syllabus Spring 2013

Instructor: Attila Gürsoy Rm# ENG 225 Office Hours: TBA

TA: Selim Ekizoglu RM# ENG 142 Office Hours MW 12:30-14:00
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Lectures Mon Wed B2 ENG Z15

Course Description: This is an introductory course that covers principles of database systems. The course will emphasize both application level and system level. We first cover foundations; topics include ER model, relational data model, relational algebra and calculus, and query language SQL, then more advanced topics such as transaction management and schema refinement. At system level, we will learn storage and indexing.

Textbook: Database Systems Concepts, Silberschatz, Korth, and Sudarshan, Sixth Edition, McGrawHill

Prerequisites: COMP202. Students taking this course must have good programming skills and data structure background.

Topics to be covered (minor changes possible):

Chapter 1: Introduction

Chapter 2: Introduction to the Relational Model

Chapter 3: Introduction to SQL

Chapter 4: Intermediate SQL

Chapter 5: Advanced SQL

Chapter 6: Relational Algebra, Tuple Relational Calculus and Domain Relational Calculus

Chapter 7: Entity-Relationship Model

Chapter 8: Relational Database Design

Chapter 9: Application Design and Development

Chapter 10: Storage and File Structure

Chapter 11: Indexing and Hashing

Chapter 12: Query Processing and some parts of Query Optimization (Chap 13).

Chapter 14: Transactions

Chapter 20: Overview of Data Warehousing and Mining

Grading: (tentative)

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| Quizzes | 15% |
| Homework and Programming Assignments | 15% |
| Midterm Examination | 20% |
| Final Exam | 30% |
| Term Project | 20% |

Projects and participation are crucial in learning the topics of this course.

IMPORTANT : Failure to hand in the projects and programming assignments will result in an F as a final grade, regardless of exams. In order to pass the course you need to get at least 50/100 of HW/PA+ Term Project.

Due dates for all assignment are sharp.

Late submission policy: For every day late, you will get 20% of the previous day's grade. HW/PA are to be submitted to F:\courses folder. Details will be announced later.

For all discussions about class related topics, labs etc. please use of the class forum.

Policy on Homework and Programming Assignments:

All assignments are individual. You must do it by yourself. The writing and programming must be your own work. Copying from others (your classmates) or any other resources (such as internet) without acknowledgement and presenting it as if it is your own work is plagiarism. Plagiarism (and other ways of cheating such as giving solutions or programs) will not be tolerated and will be penalized severely. Please read the university rules and regulations on this.

The database design term project is a group project. You are expected to form two-student groups. The project will be completed in phases. Your database will be implemented using Oracle and PHP on our course server.

Updated on Feb14, 2013.