

EASTERN CONNECTICUT STATE UNIVERSITY
SCHOOL OF EDUCATION AND PROFESSIONAL STUDIES
DEPARTMENT OF BUSINESS ADMINISTRATION

BIS 450 DATABASE MANAGEMENT, E-STRUCTURE AND SECURITY
Webb 307, Monday 7-9.45pm, Spring 2005

NOTE THAT FOR 2006 ARE PLANNED CERTAIN CHANGES

Instructor: Dr D Petkov, petkovd@easternct.edu, ph. 4650264
Office: Webb Hall 446

Office hours: Mon 11.20-12.15am, 9.45-10.15 pm; Tues 10.00-12 am; Wed 11.20-12.15 am and 4.30-5.30 pm

Student consultations during office hours and by appointment.
Students should check the webct site for the course and their webct email at least twice a week for instructions related to the course.

Course Catalogue Description:

PREREQUISITE: BIS 370

An introduction to database concepts, systems design and the practical realities of database administration in network structures. Different types of file systems, database systems and database models are examined. Students design and develop a particular model of a database management system.

Course learning objectives: After the completion of the course you will be able to:

1. Develop an understanding about different types of data models.
2. Apply the relational data model concepts in practice
3. Apply principles of database design
4. Know SQL
5. Understand the issues related to database administration
6. Develop ability to conduct a team project on database design.
7. Understand personal, organizational and Internet security issues.

Personal development student goals: The above goals will be pursued through the parallel development of analytic and information search skills, communication skills, development of self discipline and ability to cope with change and work under pressure individually and in small teams.

Methods and instructional materials employed: The course objectives will be pursued through class discussions, small group work on a project, work with the textbook (bring it to class please), through homeworks, library and Internet search.

How to Prepare for Class

Prior to each class, please read the corresponding chapter that is to be covered. Prepare very well, to be able to do any of the problems from the previous lecture. This class requires continuous presence and hard work. Considering the interactive nature of the class sessions and the, class participation is an important part of the learning experience in this course. Some students are shy,

or come from backgrounds where speaking in class is not rewarded. I will endeavor to provide a supportive environment in class, and in return ask that you contribute to the class by participating in our discussions.

The objective is to have a stimulating discussion and to examine ideas on database issues carefully. Please make every effort to attend all sessions. Poor attendance will affect the quantity of your class participation, and therefore your final grade.

Class Participation Grade

The class participation grade will reflect my judgment of the quality and quantity of your contribution during class sessions over the course of the semester. You should attend class prepared to answer questions, and contribute to class group discussion and small class group projects.

The following are some general guidelines that I use to grade class participation. If you almost never speak out in class or miss several classes, you will receive a participation grade no better than C. If you speak occasionally but rarely say anything inspired, your participation grade will be some sort of B (depending on how "occasionally" and how prepared you are). The path to an A participation grade involves things like, (1) applying conceptual material from the reading or the lecture, (2) ability to apply the concepts to the problems discussed (3) integrating comments from class discussions, (4) generally demonstrating that you have carefully read the book and the assignments and give them careful thought. *I prefer not to call on students who do not raise their hands, but in the absence of volunteers, or if you have been silent in class for several sessions, you can expect to be called on to contribute.*

Required textbooks: Pratt, P. Adamski, J Concepts of Database Management, 5th ed and Ciampa M., ,2004, Applying practical security in your world, Course Technology and for self study as a revision on Access: Access 2002 Intermediate and Advanced, Course ILT by Course Technology. The bundle is available at a lower price in the bookstore. You have to prepare in advance for every week, following the schedule below.

Requirements for completion of the course: To successfully complete this course the student must pass the examinations and complete the term project and assignments. Much of the learning in this course occurs during class. It is very important to be prepared for class and to join in the discussion. You will also probably find class more interesting if you are a participant and not just an observer!

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Grading is as follows:

Midterm exam	10%
Group Term project and presentation	20%
5 Class mini projects	20%

Two quizzes 4 and 6% respectively	10%
6 Individual homeworks	18%
Class participation	7 %
Final exam	15%

Your midterm grade is based on H1, H2, Midterm test, Miniprojects 1-2 and Quiz1. Homeworks are to be submitted on paper, typed, single spaced in 12pt font. Do not send them as attachments to emails. The details of the homeworks deadlines and the term project are found below. For submissions that are late more than a week there will be a penalty of 20% unless a medical certificate is provided. If you miss a quiz or a midterm test, please provide a certificate to the instructor at the make-up quiz/test to be held always 7 days after the original one 15min before the class session.

The project grade will be based on the following components: Draft report: 6%, Final report – 7%, report by the team leader on the specific contribution of every team member and organization of the work: 3%, Presentation: 4%. Total: 20%

There will be bonus 4 three minute express tests, each worth 1% at various times in the course.

The **grading scale** will be 93-100 =A; 90-92=A-; 87-89=B+; 83-86=B; 80-82=B-; 77-79=C+; 72-76=C; 70-72=C-; 67-69=D+; 63-66=D; 60-62=D-, 0-59=F.

Accommodation of students with disabilities:

If you are a student with a disability and believe you will need accommodations for this class, it is your responsibility to contact the Office of AccessAbility Services at 465-5573. To avoid any delay in the receipt of accommodations, you should contact the Office of AccessAbility Services as soon as possible. Please understand that the instructor cannot provide accommodations based upon disability until she/he has received an accommodation letter from the Office of AccessAbility Services. Your cooperation is appreciated.

COURSE SCHEDULE

Schedule of sessions: Sometimes there will be lectures, or small group work. The student is supposed to prepare for each session in advance covering on their own the material. The sessions in class will be in the form of a review of important highlights of the particular chapter, quizzes, cases and exercises. Please bring your text books always to class.

Topics covered

Unit	Lecture Topic	Reading Assign	Projects/Assignments Announcements
One, starting 01.24	Pratt Ch 1 Introduction to DB	You can read this chapter at the Library electronic repository for BIS450. Read also Ch 2 (buy the book!) before next session. Revise the introductory tutorials on Access from any book on Access.	Each week the student is responsible to read the material covered during unit. This includes the chapter Cases
Two 01.31	Pratt Ch 2 The relational model 1	Read from the library electronic repository for the subject ch 7 and 8 of George et al for next unit. In class – exercises on relational algebra and QBE	Project Introduction, See deliverables and milestones Express test1
Three 02.07	Revision of George et al. SAD: Ch 7 and 8, Conceptual data modeling and Mapping of conceptual models to tables	Revise the data modeling examples at the end of ch 7 and also ch 8. In class – exercises on data modeling	Revision. Homework 1 due: Henry book case, end of ch 2 Pratt, first 12 problems, explain step by step for each of them how they can be implemented using QBE in Access

Four 02.14	Lecture (not based on a book): Introduction to Database design approaches: top down and bottom up design.	Read for next time Pratt ch 1,2 and 3 In class: miniproject 1 The sailboat rental business- design	Quiz 1 (will be available on the WebCT system) Project Review Homework 2 Due: On data modeling (see webct)
Five 02.28	Pratt, Ch 3 SQL	In class miniproject 2: The adult education program - design Read ch 5 Pratt	Midterm exam available via WebCT
Six 03.07	Pratt, Ch 5, Normalization	In class: miniproject3 SQL on Premiere products exercises Read Ch 6 Pratt	Homework 3 due: Creating the db and outputs for The adult education program from miniproject 2. and tasks on SQL
Seven 03.14 03.21 – is break	Pratt Ch 6 Design methodology 2	In class: miniproject 4 Normalization on Premiere products exercises end of ch5 Pratt. Read ch 4 Pratt	Express test2
Eight 03.28	Pratt Ch 4 The relational model – advanced topics	In class: miniproject 5, Normalization on Henry books case at the end of ch 5 Pratt Read ch 7 Pratt	Homework 4 due: On normalization and SQL– see webct Project review.
Nine 04.4	Pratt Ch 7 Database functions	Read Ch 8 Pratt	Submission of first completed draft of the full project report for instructor feedback. Use still the WebCT email system for this draft.
Ten 04.11	Pratt Ch 8 Database administration	Read Ciampa Ch 1 and 2	Homework 5 Due: On SQL, Premiere Products Exercises at the end of ch 4 Pratt. Work on revising the project and preparation of the PPT presentation.

Eleven 04.18	Ciampa –Security, ch 1 and 2 Introduction to security and Personal computer security	Read Ciampa ch 3	Submit via WebCT the completed revised final project (every member of the team needs to submit it via WebCT Hk section, not as an email). Only the group leader submits the PPT file via webct email and also sends via webct email a report on the participation of the team
Twelve 04.25	Ciampa Ch 3 Organizational security	Read Ciampa ch 4	Group project presentations. Quiz 2 available via WebCT
Thirteen 05.02	Ciampa Ch 4 Internet security	Read Pratt Ch 9	Revision on Security Submit Hk 6 – On security
Fourteen 05.09	Pratt Ch 9 Database Management approaches		Revision of the course. The final exam after May 16 th