

Syllabus: CS432 Database Systems

Course Number: CS432-01

Course Title: Database Systems

Instructor: Richard Scherl

Office: Howard Hall C-6

Phone: 571-4457

Email: rscherl@monmouth.edu

Web: www.monmouth.edu/~rscherl/

Class Times: Mondays 1:00 –2:50 Thursdays 1:00 - 2:50

Class Location: Howard Hall 316

Office Hours: Tuesdays 3:00-4:00, Thursdays 3:00-4:00

Texts:

Required *Database Systems: The Complete Book* (Second Edition) by Hector Garcia-Molina, Jeffrey D. Ullman, and Jennifer Widom. Prentice-Hall, 2009.

Required *Gradiance Packet (GOAL)*

Expected Work: Regular reading assignments, midterm examinations, quizzes, online assignments, written assignments, mini-project, and a final examination.

An Interesting Opportunity: Free online course taught by Jennifer Widom. Begins Oct10. <http://www.db-class.org>

Class Information All computer-generated overheads and handouts will be put on Ecampus.

Grading:

Midterms 30 %

Quizzes 10 %

Final 30 %

Homeworks 30 %

Exam Dates

Midterm I To be announced

Midterm II To be announced

Final During the final exam period

Class Participation: If you miss a class, it is your responsibility to find out about any announcements made in class, and about the material covered. Similarly you are responsible for all information included in any assignments whether handed out or transmitted online and for all the information in this syllabus. Class participation is strongly encouraged. Feel free to ask questions. When in doubt, ASK.

Sessions of the class held on Ecampus are required. You will be graded for your participation in the Ecampus activities.

Late Policies: Homeworks should be handed in on the date due. The deduction for late homeworks is 5% per day up till 1 week late. Late homeworks may not be handed in by email except by special arrangement under special circumstances. They should be handed in to me directly. If you leave them in my mail box or under my door, you should also send me an email saying that you left it. They may also be mailed in by U.S. mail with the postmark date being used as the date handed in. After the one week has ended, late homeworks can be corrected, but will not receive credit as the solutions will have been discussed in class.

Computer: All students will need an account on **rockhopper**. You may do your assignments on any machine (including your own PC), but I can only guarantee that the software will work as intended on **rockhopper**.

Ecampus: The course will make use of Ecampus (<http://ecampus.monmouth.edu>) which is Monmouth's online education software. All registered students will be automatically given accounts. You use your hawkdom password to access ecampus.

Gradiance: Online Learning Tool.

Prerequisites: CS202 and CS 305 with a grade of C or better. Familiarity with Unix.

Goals of the Course: The purpose of the course is to give the students an introduction to the design and use of database systems.

PDA Everyone in the course will choose a domain for their own personal database assistant (PDA). A number of the programming assignments will involve the PDA. The topic is something that you choose yourself. Choose something that you are interested in.

Oracle: All students will be given ORACLE and/or MySQL (to be determined) accounts on **rockhopper**.

Rules: All cell phones need to be turned off during the class. If due to an emergency the phone needs to be left on, the permission of the instructor is needed.

During exams, all cell phones must be off and put away. They can not be kept on the desk. Additionally, no calculators may be on the desk during an examination. They are not needed.

Academic Honesty: Cheating in this course will not be tolerated. Both the giver and the receiver of information will receive the same penalty. The penalty is likely to be an F in the course and may very well lead to expulsion from Monmouth University. All such cases will be handled as outlined in the *Monmouth University Student Handbook*.

Homeworks may NOT be solved in collaboration. You may talk about problems with each other. Where does talking end and cheating start? My rule of thumb is: you may not have a pen/pencil in your hand while you are talking (and no keyboard!).

Special Accommodations Students needing accommodations are encouraged to see me during office hours or to make a specific appointment to discuss their needs. Students with disabilities who need special accommodations for this class are encouraged to meet with me and/or the appropriate disability service provider on campus as soon as possible. In order to receive accommodations, students must be registered with the appropriate disability service provider on campus as set forth in the student handbook and must follow the University procedure for self-disclosure, which is stated in the *University Guide to Services and Accommodations for Students with Disabilities*. Students will not be afforded any special accommodations for academic work completed prior to the disclosure of the disability and prior to completion of the documentation process with the appropriate disability service office.

Regrades All disagreements about grading must be discussed in my office only. A request for an assignment or exam to be regrades must include a written note explaining the disagreement and also the original exam or assignment. These requests may be submitted in class or in my office. Regrade requests for a particular exam or assignment can only be accepted until the next test or assignment is due.

Course Content Tentative and subject to change

1. Introduction
2. E/R Diagrams
3. Relational Model

4. Object-Oriented and Object-Relational Models
5. Relational Algebra
6. SQL
7. Constraints and Triggers
8. Data Storage and Index Structures
9. Other Topics if time permits. Possibilities include:
 - XML
 - Datalog
 - Information Integration
 - Query Languages for the Web
 - Connecting a Database to a Web Page

Initial Assignment Chapters 1 and 2.1-2.3 from Garcia-Molina, Ullman, and Widom.