

CALIFORNIA STATE UNIVERSITY, SACRAMENTO
College of Business Administration

MIS 150 - Database Systems for Business

Course Syllabus

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Internet URL: www.csus.edu/indiv/c/chingr/mis114/index114.htm

Class Periods: 1:15-2:45 p.m. Monday, Wednesday (MIS 150)
6:00-8:50 p.m. Monday (MIS 271)

Office Hours: Monday, Wednesday: 3:00-4:00 p.m.
And by appointment

Required Textbooks: Database Systems: A Practical Approach to Design Implementation, and Management, 4th edition. Thomas Connolly and Carolyn Begg. Addison Wesley (2005).

Required Software: Oracle9i and Oracle Developer¹

Required Item: E-mail address²

Prerequisite³: MIS 120 – Advanced Object-Oriented Business Programming
MIS 175 – Computer Information Systems for Management

Course Description

¹Before installing Oracle9i and Developer, be sure to review the installation video posted on www.csus.edu/indiv/c/chingr/oracle/indexorcl.htm. They must be installed in a specific sequence.

²E-mail your address to me (rching@saclink.csus.edu) by Friday, September 2. If you do not already have one, open a SACLINK account. Instructions are available in any of the campus' computer labs. E-mail messages will be sent frequently throughout the semester. Non-university issued e-mail addresses are acceptable.

³A prerequisite means the successful completion (i.e., received a passing grade) of a course.



Involves the study of generalized database management systems. The study will include logical data base models and physical base models based primarily on the relational and object-relational models. The student will create and manipulate a database utilizing an established database management system. The importance of data administration and other database related topics such as independence, integrity, privacy, query, backup, and recovery will be covered. **Prerequisite:** MIS 120, MIS 175.

Course Objectives

The primary objective of this class is to provide you with the background knowledge needed to analyze, evaluate, design, implement and administer database systems, and recognize the importance of database and information resource management in its support of the organization. The following six subobjectives support the achievement of the primary objectives:

Subobjective 1: Fundamental concepts

To understand the fundamental concepts foundational to database including data models (i.e., relational, hierarchical, network, object-relational), database management systems, schemas, data integrity and terminology

Subobjective 2: Data resource management concepts

To understand the role of database as a means for managing data resources in an organizational setting for reporting and decision making

Subobjective 3: Analysis, design and implementation concepts

To develop an understanding for the analysis and design of a database including data modeling and normalization in the context of the conceptual, logical and physical database designs for a relational database. A group project involves students with the development of a database.

Subobjective 4: Data definition and manipulation language concepts

To acquire basic skills required to define and manipulate the components of a database. Oracle9i, SQL Plus and Developer (Oracle Reports) will be used to place into operation many of these concepts with a relational database.

Subobjective 5: Management and administrative issues

To be aware of management and administrative issues, including transaction management and security



Subobjective 6: Expansion of databases

To understand the expanded applications of database in distributed databases and data warehousing.

In addition to supporting the primary objective, the subobjectives are intended to increase the breadth of your basic IS background. Oracle9i and other Oracle products have been selected as a means to provide you with practical database and database processing exposure, and illustrate many of the concepts. However, the level of instruction is not intended to transform you into an Oracle expert.

Achievement of the Objectives

Achieving these objectives lies in your understanding of certain fundamental MIS concepts (i.e., programming, data processing, analysis and design), and your ability to recognize, relate and integrate them with the course material. Keep in mind database is just one link in the IS development chain. Reinforcement of this comes through the successful completion of the assignments. The exam essay questions have been composed for you to reflect upon the material and the context to which it pertains.

Note. In the past, many students have felt more exposure to SQL would help their understanding of database. Please keep in mind that SQL is not database. It is a language (i.e., tool) that can be used to define and manipulate data in a relational database.

Web Distribution

In addition to the Power Point slides and Camtasia videos presented in class, all assignments and handouts will be distributed through the Internet at

www.csus.edu/indiv/c/chingr

The class notes (Power Point slides) will be available for downloading 12 hours before class. It is recommended that you bring them to class and make YOUR notes on them. The slides by themselves convey little information and will not help you prepare for the exams; your notes add meaning to them.

Warning. Although the class notes and Camtasia videos can be viewed at your leisure outside of class, they are not substitutes for attending class or reading the textbooks.

Goal

Upon completing this class, you will not necessarily be a database expert. However, you should possess sufficient knowledge in this area to recognize the importance of database's and information management's role in supporting an organization. Greater levels of understanding provide the necessarily background to successfully develop applications that are directly linked to database



concepts, such as client/server applications in a fourth generation language (4GL) or transaction processing in a third (3GL). Unfortunately, the time constraint placed on this class and your obligations to your other classes limit our involvement to a topic survey. Thus, your background will depend upon the degree to which you become involved with the material.

Three Rules for Success

Your success in this class hinges upon three important *rules*:

- Take pride in your work and always present your best side,
- Learn to work smarter, not harder,
- Have fun doing the above.

Rather than approaching this class as another exercise in academe, think of it as a learning experience that adds value to your skill sets.

Note. Two *necessary but not sufficient conditions* to succeed in this class are diligence and *common sense*.

Grades

Final letter grades will be assigned according to the total number of points you have obtained through exams, programming and homework assignments and class participation relative to the total possible number of points.

Note. Listed are the maximum possible points. The actual total may be reduced for certain segments. However, it will never exceed the maximum.

	Points
Midterm Exams (2)	200
Final Exam	100
Individual Homework Assignments (5)	200
Group Project	<u>100</u>
Total Points	600

Final letter grades are assigned according to the following *rule of thumb*:

540 - 600	(90 - 100%)	A
480 - 539	(80 - 89%)	B
420 - 479	(70 - 79%)	C
330 - 419	(55 - 69%)	D



< 330 (Less than 55%) Failing
Grade

Pluses and minuses will be awarded along the extremes (i.e., 2% below the upper limit or the upper limit minus 2%, and 2% above the lower limit or the lower limit plus 2%, respectively). Because this is a rule of thumb, the final grade distribution is subject to change in the students' favor. If the median final grade falls below 75 percent, the final grade distribution will be adjusted accordingly.

Note. Percentages are rounded to the precision of the above scale.

To estimate your current grade, divide your accumulated points by the semester-to-date total possible points. The resulting percentage will indicate your letter grade.

Incomplete Grade (I)

An incomplete grade (I) will only be issued in accordance with College of Business Administration policy. Among the conditions imposed by the instructor that must be met (but are not limited to) are (1) a current passing grade (70 percent or better), (2) the successful completion of all prior assignments and exams, and (3) an unforeseen and unusual event beyond your control which prevents you from completing the semester, and can be documented and verified (employment-related events do not qualify). (4) An incomplete will only be considered after it has been determined that a withdrawal (W) cannot be issued. If you do not meet (1) through (4), you do not qualify for an incomplete. As stipulated by the University, an incomplete cannot be assigned when it is necessary for the student to attend additional class meetings to complete the course requirements.

Et cetera

Please keep the following points in mind:

- Final grades can only be changed if a posting error has occurred. Grades cannot be changed for any other reason (per the Registrar's Office).
- Grades are based on the published assignments. No extra credit assignments will be made available at the end of the semester to bolster your grade (i.e., *what you see is what you get*). However, changes to the grading policy can be applied to individual assignments.
- Reasons not related to your performance in this class (e.g., scholarships, grants, etc.) cannot be considered in determining your semester grade. Not only is this unethical, it is unfair to other students who have earned their grades.

Final grades cannot be changed unless a posting error has occurred per University policy. Please keep track of your grades throughout the semester. Your final grade should not be an unpleasant surprise to you.

Grade Appeals

Grade appeals on assignments and exams must be made within 14 calendars from the date the item was returned to the class (not the date you received it), ***no exceptions***. All grade appeals must be in



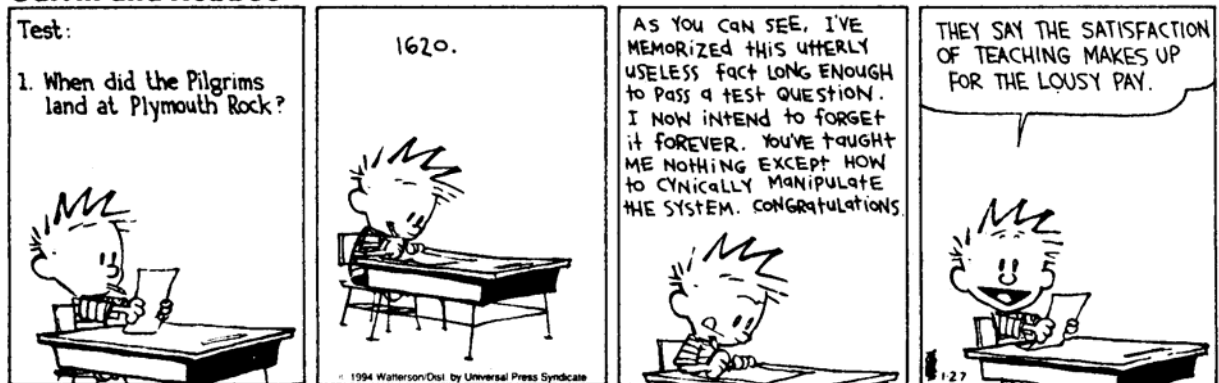
writing. Your appeal must specifically identify the grading error and suggest a correct answer, including references that support your argument. The original, unaltered document(s) and/or (when applicable) file(s) must be submitted with the grade appeal. Please be aware that an assignment or exam grade may be appealed only once.

Note. The number of points cannot be disputed since the same number of points is deducted for everyone with the same error. It would be unfair and unethical for me to reduce the number of points for the convenience of some (i.e., to be placed into a higher letter grade range), but not for others.

Examinations

Two in-class midterm and a final examination will be given during the semester. Each consists of 25 multiple choice questions, 2-3 essay questions and a problem solving question. Material will be drawn from the textbook readings, any other assigned readings, and class lectures and discussion. **Emphasis will be placed on your conceptual understanding of the material and NOT on rote memory** (see Calvin and Hobbes). Hence, understanding the application of the concepts will greatly enhance your grade. The exam dates appear in the tentative semester schedule.

Calvin and Hobbes



A list of possible essay questions will be posted a week before the exam on my *web* page. The actual exam questions will be drawn from the list.

Make up examinations will only be permitted with a bona fide excuse. **The exam must be completed within a week (i.e., five working days as defined by the University's calendar) of the scheduled date.** Once the exams have been returned, no make ups can be scheduled. Every effort will be made to return the exams during the following class session. However, for obvious reasons, exams cannot be returned if a make up is pending.

Homework and Group Assignments

The homework assignments involve the application of the concepts discussed in class and the textbook. They should reflect the individual's effort. Although working in a group is not discouraged, the submitted work should NOT be a copy (neither directly nor a close resemblance) of

another person's work or the product of a group effort. The assignments are moderately challenging, yet simple enough to promote learning. The *one assignment, one grade* rule⁴ will be strictly enforced.

Collaborative effort underlies both group assignments. Hence, the submitted assignment should be the product of all members. Individual grades will include a peer evaluation factor and may be adjusted accordingly.

Awarded points are based on the actual work received, and its correctness to the assignment's specifications and requirements. Points cannot be awarded for assumed work or work performed in lieu of what was required.

Assignments are due at the beginning of the class session. **No late, e-mailed or faxed assignments will be accepted** (no exceptions, *please don't ask*)⁵.

Classroom Etiquette (*Civility*)

The basic rule underlying classroom etiquette is *courtesy and consideration for others*. The following list of *guidelines* has been assembled.

- Do not interrupt others while they have the floor. You will always be given a chance to contribute to the discussion.
- Be tactful and thoughtful when responding to another person's remarks.
- Do not conduct personal conversations during class. Even though you may be speaking in a very low tone, your voice will carry and disturb others around you. Please conduct your conversations outside of the classroom.
- Turn off all cell phones, pagers and wrist watch alarms.
- If you need to leave or enter the classroom while class is in session, please do so in a non-disruptive manner. This includes (but is not limited to) walking in front of the class, letting the door slam, and making noises that prevent others from listening. If you need to leave class early, please sit near the exit.
- Please, no eating in the classroom.
- Sleeping will not be tolerated. If you are tired, please rest outside of the classroom. If you are caught sleeping during class, you will be asked to leave.

⁴The total points awarded are divided among participating parties.

⁵Please keep in mind that *making an exception for you means taking away an opportunity for someone else*.



If you cause a disruption or disturbance, you will be asked to leave the classroom. Persistent and blatant disregard for etiquette will lead to a (maximum) 20 percent reduction in your final grade (or approximately 2 letter grades) and administrative removal from the class (under the disruptive student section of the University's policy).

Academic Dishonesty

Unfortunately, the subject of academic dishonesty must be discussed for those who are inclined toward such activities. The university's policy is discussed in the following paragraphs. Please, there is no need to engage in any unethical behavior in this class! If you need help, my door is always open.

Academic dishonesty involves acts which may subvert or compromise the integrity of the educational process of the university. Included is any act by which a student gains or attempts to gain an academic advantage for him/herself or another by misrepresenting his/her, or another's work or by interfering with the completion, submission, or evaluation of work. These include, but are not limited to, accomplishing or attempting any of the following acts:

- Using any materials that are not authorized by the instructor for use during an examination.
- Copying from another student's paper during an examination.
- Collaborating (i.e., talking, passing notes and/or signals, etc.) during an examination with any other person by giving or receiving information without specific permission of the instructor.
- Stealing, buying or otherwise obtaining information about an unadministered examination.
- Substituting for another person or permitting any other person to substitute for oneself to take an examination.
- Submitting another person's work as yours either in its original or altered form.
- Giving someone else your work to fulfill his/her assignment.
- Using the assignment of another class to fulfill an assignment for this class without authorized consent of the instructor.
- Plagiarizing.

Violations of proper ethical conduct will NOT be tolerated. A failing semester grade will be assigned to all involved parties (NO exceptions). Severe cases of academic dishonesty will be handled at the university level.

If you are aware of any academic dishonesty, please notify me either personally (your identity will remain confidential) or anonymously. **Cheating devalues everyone's grade and degree, including your own!**



TENTATIVE CLASS SCHEDULE⁶

<i>Week</i>	<i>Week Beginning...</i>	<i>Topic</i>	<i>Reading</i>
1	8/29	Introduction	Chap. 1
2	9/5	Labor Day, Monday, Sept. 5 (no class) Database environment	Chap. 2
3	9/12	Relational model and relational calculus SQL: Data manipulation language (DML) and data definition language (DDL) Oracle9i	Chap. 3, 4, 5, 6
4	9/19	Query by example (QBE) Commercial RDBMS	Chap. 7, 8
5	9/26	Database planning, design and administration Fact-finding techniques	Chap. 9, 10
6	10/3	Midterm Exam (Chapters 1-8)	
7	10/10	Entity-relationship modeling and enhanced entity-relationship modeling	Chap. 11, 12
8	10/17	Normalization	Chap. 13
9	10/24	Advanced normalization Conceptual database design Logical database design	Chap. 14, 15, 16
10	10/21	Logical database design Physical database design Monitoring and tuning	Chap. 16, 17, 18
11	11/7	Database security Transaction management Query processing	Chap. 19, 20, 21
12	11/14	Midterm Exam (Chapters 9-18)	
13	11/21	OO database	Chap. 25, 26, 27, 28
14	11/28	No class on Monday* Business intelligence: data warehousing, OLAP and data mining	Chap. 31, 32, 33, 34
15	12/5	No Class**	
16	12/12	Final Exam - Monday, December 12, 12:45-2:45 (comprehensive with greater emphasis on chapters 19, 20, 21, 25, 26, 27, 28, 31, 32, 33, 34)	

*Recruiting for quantitative analysis faculty position in San Francisco

**Attending conference in Hong Kong

⁶Topics and chapters may be dropped when time does not permit their inclusion.

