

M&IS 44043 - Database Management Systems

SYLLABUS

Fall 2012

COURSE INFORMATION:

Name of Course: Database Management Systems
Term: Fall 2012
Room: 210 BSA
Meeting Time: 12:30-1:45 TuTh
Web Sites: Course: <http://learn.kent.edu>
Publisher: http://wps.prenhall.com/bp_kroenke_database_12/
Prerequisites: M&IS 24053, 24065
Course Description: The design, implementation and management of database management systems within organizations are studied from an applied perspective.

INSTRUCTOR INFORMATION:

Name of Instructor: Dr. Alan Brandyberry
Office Address: BSA A425
Telephone: (330) 672-1146 (email preferred)
Office Hours: 10:00am-Noon, 1:50pm-2:20pm TuTh
E-mail: abrandyb@kent.edu (preferred contact method)

COURSE MATERIALS:

Required Text: David M. Kroenke; David J. Auer, *Database Processing: Fundamentals, Design and Implementation*, 12th Edition, Prentice Hall, 2012 (ISBN-10: 0132145375; ISBN-13: 978-0132145374)

COURSE OBJECTIVES, REQUIREMENTS & EVALUATION:

Learning Outcomes: Upon completion of this course, students will:

1. Understand the role of databases in business and other environments.
2. Be acquainted with various concepts associated with designing, implementing, and using databases.
3. Understand the use of relevant analysis and design tools (e.g. entity relationship diagrams).
4. Obtain a working understanding of structured query language (SQL), normalization, transaction management and concurrency control.
5. Be acquainted with current issues concerning data and database management (e.g. XML).

Class Preparation: In order to succeed in this course, it is essential that you do the assignments (reading, written, and database assignments) independently and in a timely fashion and come to class consistently and well prepared for the topic(s) to be covered. In leading the class discussion I will assume that every student has prepared for the class ahead of time; therefore, if you are not prepared, you will not be able to follow the discussion and will quickly become "lost".

Homework: Homework will be assigned on a regular basis. All assignments are to be individual efforts unless specifically assigned as a group project. The due date for assignments will be given when the work is assigned. Assignments must be handed in at the beginning of the class. Submitting assignments electronically through Learn is encouraged but not required. If you have an excused absence you must turn in the assignment before the due date when the absence allows

for planning ahead (weddings, group trips, interviews, athletics, etc.). Excused absences that are true emergencies and do not allow planning ahead will be dealt with individually. No makeups will be given to compensate for a missed assignment once the due date has passed.

All homework combined will be worth 50 pts of the total points for the course. Each assignment will be given a grade representing the percentage correct of the assignment according to the criteria given for that assignment. The assignments will all be weighted equally unless stated otherwise (i.e. an especially involved assignment might be worth two homeworks) so the points each assignment is worth depends on the total number of assignments given (i.e. your overall assignment % will determine your assignment grade; 90% = 45 pts).

As I believe that homework is best used as a learning experience rather than an evaluation of learning, homeworks will be graded on an effort basis. Homeworks will generally not be 'corrected' but rather will have solutions provided for the student to compare their answers to.

Readings: The chapter or portion of a chapter that is to be discussed in class should be read by the student before class.

Chapter Quizzes: Each covered chapter will have an objective quiz associated with it. You may drop one quiz score that you have taken. Quizzes that have not been taken cannot be dropped. Quizzes will be taken outside of class, in the computer lab, with a proctor. Quizzes are closed book. Substantial flexibility is allowed in when you choose to take each quiz but there will be three deadlines for taking quizzes.

| Chapters | Deadline for Completion |
|---------------|---------------------------|
| 1, 2, 3, 4, 5 | October 9 th |
| 6, 7, 8 | November 20 th |
| 9, 12 | December 7 th |

Oracle Implementation Practicum: Each student will implement a small database. Details will be announced early in the semester. Practicums will be graded on overall quality and the meeting of specific requirements. Practicums will be done individually.

In-class Practicums: I have called these 'in-class practicums' instead of exams because they will target very specific skills and knowledge rather than being a general examination on everything we have covered up until that point.

The first practicum will be a database design problem. Students will need to read a problem scenario and create an entity relationship diagram. Other ERD related problems may also be included.

The second practicum is on structured query language (DML and DDL). Students will write SQL statements associated with a problem scenario.

Students may feel free to inquire into any aspect of examinations or their scores during office hours. However, to encourage quick resolution of problems or concerns that may arise, issues must be raised with the instructor within one week following return of the exam grade. If the instructor is not contacted prior to that time the examination will be considered closed and grades finalized.

Attendance: Students are responsible for all in class announcements and material whether absence is excused or unexcused. Missed assignments/quizzes will usually not be made up. In certain cases (emergencies) the score will be dropped. All other cases receive a score of 0. Missed in-class exercises will receive a score of zero and cannot be made up.

GRADES:

| | |
|--------------------------|-----------------|
| Homework | 50 pts. |
| ERD Practicum | 100 pts. |
| SQL Practicum | 100 pts. |
| Implementation Practicum | 100 pts. |
| Chapter Quizzes | 150 pts. |
| TOTAL | 500 pts. |

The following scale indicates the minimum course percentage required for each letter grade:

Letter-grade determinations will be made on the following percentage basis (your score rounded to the nearest whole number): A >93; A- 90-92; B+ 87-89; B 83-86; B- 80-82; C+ 77-79; C 73-76; C- 70-72; D+ 67-69; D 60-66 F <60. A lower curve may be substituted at the discretion of the instructor. Do not try to anticipate the curve - target the score that will get you the desired grade on the straight scale above.

TENTATIVE SCHEDULE:

| Day | Topics | Readings |
|-----------------------|---|------------|
| Aug 28 | <ul style="list-style-type: none"> ➤ Course Introduction ➤ Introduction to the Database Environment | Chapter 1 |
| Aug 30 | <ul style="list-style-type: none"> ➤ Introduction to Oracle SQL Developer and the Oracle Environment, preface to SQL | |
| Sep 04, 06, 11 | <ul style="list-style-type: none"> ➤ Introduction to Structured Query Language (SQL) | Chapter 2 |
| Sep 13, 18 | <ul style="list-style-type: none"> ➤ The Relational Model and Normalization | Chapter 3 |
| Sep 20, 25 | <ul style="list-style-type: none"> ➤ Database Design Using Normalization | Chapter 4 |
| Sep 27, Oct 02, 04 | <ul style="list-style-type: none"> ➤ Data Modeling and the Entity-Relationship Model | Chapter 5 |
| Oct 09 | <ul style="list-style-type: none"> ➤ Catch-up and/or Review for ERD Practicum ➤ Quizzes for Chapters 1, 2, 3, 4, 5 must be complete by the end of the day*. | |
| Oct 11 | <ul style="list-style-type: none"> ➤ ERD Practicum | |
| Oct 16, 18, 23 | <ul style="list-style-type: none"> ➤ Transforming Data Models into Database Designs | Chapter 6 |
| Oct 25, 30, Nov 01 | <ul style="list-style-type: none"> ➤ SQL for Database Construction and Application Processing | Chapter 7 |
| Nov 06, 08 | <ul style="list-style-type: none"> ➤ Database Redesign | Chapter 8 |
| Nov 13 | <ul style="list-style-type: none"> ➤ Catch-up and/or Implementation Practicum Help Session | |
| Nov 15 | <ul style="list-style-type: none"> ➤ Implementation Practicum Deadline – Oracle access will be shutdown at 10pm. ➤ Classtime: Implementation Practicum Help Session | |
| Nov 20 | <ul style="list-style-type: none"> ➤ <i>Instructor will be at an academic conference (http://www.decisionsciences.org/annualmeeting/). Students will work on SQL review problems.</i> ➤ Quizzes for Chapters 6, 7, 8 must be complete by the end of the day*. | |
| Nov 27, 29 | <ul style="list-style-type: none"> ➤ Managing Multiuser Databases | Chapter 9 |
| Dec 04, 06 | <ul style="list-style-type: none"> ➤ Database Processing with XML | Chapter 12 |
| Dec 07 | <ul style="list-style-type: none"> ➤ Quizzes for Chapters 9, 12 must be complete by the end of the day*. | |
| Dec 13 | <ul style="list-style-type: none"> ➤ SQL Practicum (Thursday, December 13th, 10:15 am-12:30 pm) | |

* Quiz deadline of ‘end-of-day’ means the following: Quizzes must be completed in proctored lab sessions so the end-of-day refers to the final proctored lab time available that day. Check lab proctor schedule. Since your instructor has no control over when proctors are available, students are *strongly advised* not to wait to the very last minute to try to take a quiz.

The Following Policies Apply to All Students in this Course:

A. Students attending the course who do not have the proper prerequisite risk being deregistered from the class.

B. Students have responsibility to ensure they are properly enrolled in classes. You are advised to review your official class schedule (using Student Tools on FlashLine) during the first two weeks of the semester to ensure you are properly enrolled in this class and section. Should you find an error in your class schedule, you have until Sunday, September 9, 2012 to correct the error. If registration errors are not corrected by this date and you continue to attend and participate in classes for which you are not officially enrolled, you are advised now that you **will not** receive a grade at the conclusion of the semester for any class in which you are not properly registered.

C. Academic honesty: Cheating means to misrepresent the source, nature, or other conditions of your academic work (e.g., tests, papers, projects, assignments) so as to get undeserved credit. In addition, it is considered to be cheating when one cooperates with another in any such misrepresentation. The use of the intellectual property of others without giving them appropriate credit is a serious academic offense. It is the University's policy that cheating or plagiarism result in receiving a failing grade for the work or course. Repeat offenses may result in dismissal from the University.

D. For Fall 2012, the course withdrawal deadline is Sunday, November 4, 2012.

E. Students with disabilities: University policy 3342-3-01.3 requires that students with disabilities be provided reasonable accommodations to ensure their equal access to course content. If you have a documented disability and require accommodations, please contact the instructor at the beginning of the semester to make arrangements for necessary classroom adjustments. Please note, you must first verify your eligibility for these through Student Accessibility Services (contact 330-672-3391 or visit <http://www.registrars.kent.edu/disability/> for more information on registration procedures).

F. Graduation:

It is your responsibility to apply for graduation before the set deadline. If you apply after the deadline you will be assessed a \$200 late fee. Please see your academic advisor as soon as possible if you are uncertain as to your progress toward graduation. The graduation application deadlines are follows:

Graduation Application Deadlines:

May Graduation: Apply before September 15th

August Graduation: Apply before December 15th

December Graduation: Apply before March 15th

To apply for graduation complete the following steps:

1. Log onto your Flashline account
2. Click on the Student Tools tab
3. Look in the Graduation Planning Tool Box
4. Click on Application for Graduation

**If an error message appears, you must contact your advisor.