CIS 250
Database Theory and Design

Instructor: Eva Smith	**Quarter**: **Fall 2010**
Phone: (425) 640-1171 or (425) 296-2982	**Course**: CIS 250, Section A
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Office Location: Alderwood Hall, **ALD 234-A**. Please contact me via email for meetings by appointment.	**Meeting Times**: Online and meets Saturdays, 9:00 am to 3:00 pm, on the following dates: **Sept. 25, Oct. 2, Oct. 9, Oct. 16,** and **Oct. 23**
Office Hours: *Wednesdays*, **3:30 – 7:40 pm** - *or by Appointment*	
My published office hours during Fall Quarter will be held in **ALD 234-A.**	**Credits**: 5

COURSE DESCRIPTION

This course was designed to recognize data as a business resource. Database models are discussed from both a programmer's and a user's viewpoint. Roles of database designer and administrator will be examined. **Prerequisite**: 20 credits toward a CIS degree or certificate or CIS 116, with a grade point average of at least 2.5, or equivalent experience.

COURSE OBJECTIVES

Course objectives are based on nationally recognized industry skill standards as published by the NWCET (Northwest Center for Emerging Technologies). Upon successful completion of this course, students should be able to:

❖ Describe fundamental principals of database theory and design
❖ Research and analyze business data requirements
❖ Identify and document high-level business rules for data modeling
❖ Create and refine conceptual and logical data models
❖ Validate conceptual and logical data models
❖ Select unique identifiers and normalize the data model
❖ Understand the role of SQL in the business and database contexts
❖ Recognize the basic components and issues of database application design

REQUIRED TEXTBOOKS

1) *Database Concepts, 4th Edition* by David M. Kroenke. Prentice Hall, Copyright © 2010, ISBN:9780136086536
2) *Database Design for Mere Mortals, Second Edition* by Michael J. Hernandez. Addison-Wesley, Copyright © 2003, ISBN 0-201-75284-0

RECOMMENDED SUPPLIES

❖ Microsoft Visio (can be obtained from Misty Cline, CIS Program Assistant)
  o ***EMAIL*** **mcline@edcc.edu with a copy of your schedule to get into the MSDNAA system**

COURSE DELIVERABLES

Course deliverables are intended to:
1) provide hands-on practice
2) encourage you to seek related knowledge on your own
3) assess your understanding of the concepts covered in this course.

The following are some ground-rules regarding deliverables:

- ❖ **Deliverables** will be <u>submitted on Blackboard and will be due at the beginning of the class period</u> unless otherwise specified.
- ❖ **Late Deliverables**: Deliverables received after the due date will be accepted only at the discretion of the instructor, and up to **50% may be deducted** from the total assigned points for late deliverables. Also, I cannot guarantee that you will receive instructor comments or feedback on any deliverable received late.
- ❖ **Online Activities and Discussions**: Since this is a "hybrid" class, there are weekly online activities as well as our class meetings. Weekly online activities and discussion questions are based on the readings and are a required part of your overall grade.
- ❖ **Practice quizzes**: There are 5 chapter review practice quizzes are study aids to supplement your reading in the Database Concepts book. They can be taken multiple times and taken from the same question pool as the exams. *These practice quizzes will be available throughout the quarter, but must be completed before Finals Week.*
- ❖ **Exams:** There will be one ***on-line final*** exam during the quarter. **This exam will be 90 minutes, timed, and you will have a specified number of days to complete the exam online.** NO MAKE-UP EXAMS WILL BE GIVEN!
- ❖ **Term Project**: The Term Project Deliverable is due on **Saturday, October 30th.** *This document is required for those continuing in CIS 253.*
- ❖ **Team activities** (if applicable)**:** all participants receive the same grade.

ASSIGNMENTS AND GRADING

Grading will be weighted based on the assignment categories below. Your final grade is calculated by dividing your total points *earned* by the total *possible* points for each category to get your *percentage earned* by category. The result is multiplied by the weight for that category to get a *weighted score* for the category. These are added to total up to 100%. Your *total percentage earned* (total of weighted scores for all categories) will equate to a grade on the grading table that follows.

Number	Description	Weight % of Grade
5	Online Activities / Discussions	10%
5	In Class Lab Assignments	10%
5	Practice Quizzes	10%
1	Final Exam	20%
2	Term Project Drafts	10%
2	Term Project Peer Walk-throughs	5%
1	Final Term Project Deliverable	30%
1	Attendance and Participation (Instructor Discretionary Points)	5%
	Total	**100%**

GRADING TABLES

Grade Points for Percentage of Points earned			Letter Grade Equivalency
4.0=95%	2.9=84%	1.8=73%	A = 4.0 - 3.9
3.9=94%	2.8=83%	1.7=72%	A- = 3.8 - 3.5
3.8=93%	2.7=82%	1.6=71%	B+ = 3.4 - 3.2
3.7=92%	2.6=81%	1.5=70%	B = 3.1 - 2.9
3.6=91%	2.5=80%	1.4=69%	B- = 2.8 - 2.5
3.5=90%	2.4=79%	1.4=68%	C+ = 2.4 - 2.2
3.4=89%	2.3=78%	1.4=67%	C = 2.1 - 1.9
3.3=88%	2.2=77%	1.3=66%	C- = 1.8 - 1.5
3.2=87%	2.1=76%	1.2=65%	D+ = 1.4 - 1.2
3.1=86%	2.0=75%	1.1=64%	D = 1.1 - 0.9
3.0=85%	1.9=74%	1.0=63%	D- = 0.8 - 0.7

Instructor's Discretion:

I reserve the right to change deliverables and breakdown of percentages listed above, and will notify the class accordingly. **Extra credit** may or may not be offered – I reserve the right to decide on the meritocracy of extra credit on a class-by-class basis.

A SPECIAL NOTE ABOUT GRADING:

My grading philosophy may be slightly different than you have encountered in other courses. I am assessing the quality of your work (from an employer's point of view), not just your effort or ability to complete the work. The following describes my expectations for each grade, and how you will be evaluated:

4.0 = Exemplary (Above and beyond). A 4.0 indicates that a student consistently produced exemplary work of perfect or near-perfect quality on all deliverables, attended class sessions and was an active participant in class activities. The student not only demonstrated understanding of material, but also stretched his or her learning experiences beyond what was covered in class, either by doing research or helping other students. I would be proud to show off this student's work to other instructors or employers or write a recommendation letter on the student's behalf.

3.5 – 3.9 = Excellent. (This is still an "A" grade!) Most deliverables were perfect or near perfect, but perhaps could have been a little more polished to be exemplary. May have missed some points due to late deliverables, a low exam score, attendance, etc. It demonstrates high quality work and a strong understanding of the material presented during the quarter.

3.0 – 3.4 = Good. (Strong "B" grade.) Most deliverables were very good, but the quality was not consistent, or needed more attention to quality and detail to be excellent. Met all of the objectives of the class, and demonstrated a solid understanding of the material.   May have missed some points due to late deliverables, missing or low quiz scores, attendance, etc.

2.0 – 2.9 = Average. Met all of the objectives of the class, but no more. Demonstrated understanding of most of the material, but may have missed some important concepts. Missed a fair number of points due to lack of participation in team activities, late or missing deliverables, etc., or the student's deliverables did not demonstrate evidence of a solid understanding of the course material.

Below 2.0 = Below Average Work. Did not meet expectations or objectives of the class. Did not demonstrate understanding of the material or missed a significant amount of points due to lack of participation in team activities, late deliverables, missing or low quiz scores, attendance, etc.

_NOTE__:_ I do not consider "I" (Incomplete) or "V" (Instructor Withdrawal) grades acceptable, and will consider granting them only under _extraordinarily unique and extenuating circumstances_.

COLLEGE WIDE ABILITIES

This class supports the College-wide standards and general education requirements described iat http://www.edcc.edu/cwa/. While achieving the course objectives above, you will be applying and developing the following basic competencies:

Communicate and interact respectfully through critical and imaginative expression
- Exchange or present information, thoughts, feelings, insights, and perspectives to multiple audiences through a variety of written, verbal, non-verbal, visual, symbolic, and aesthetic means
- Communicate findings or results of analytic, quantitative, and creative models and processes
- Use creative and critical processes to create common understandings, present multiple perspectives, explore divergent viewpoints and evaluate the effectiveness of one's own and others' communication
- Work effectively in face-to-face and online group settings
- Use appropriate tools, techniques, and technology to communicate effectively

Act responsibly, both individually and collaboratively, within changing environments
- Demonstrate professional and academic integrity, responsibility, and ethics necessary for success
- Work together toward a common end or purpose and explore differences
- Demonstrate skills and knowledge associated with the responsible stewardship and sustainability of communities and systems
- Apply appropriate tools, techniques, and technology to facilitate sustainable practices

Reason clearly using varied analytic and creative approaches
- Locate, acquire, evaluate, and apply information in response to an identified need or problem
- Analyze data by reshaping it as a quantitative model or other analytic framework in order to deepen understanding of information and to solve problems
- Use facts or premises to form conclusions, judgments, or inferences
- Use new observations, interpretations, and perspectives to reexamine or revise initial conclusions or to reconsider perspectives
- Engage in imaginative and critical inquiry to explore concepts and perspectives and to construct new knowledge, insights, or models
- Analyze, synthesize, integrate, and evaluate ideas and information from multiple perspectives in order to make complex decisions, solve problems, evaluate actions, adapt to changing situations, and plan for the future
- Use appropriate tools, techniques, and technology to solve problems

Explore critically and creatively the diversity of cultures, ethics, values, and ways of thinking across communities
- Recognize and evaluate one's own and others' values, ethics, actions, and perspectives and their potential effects on others
- Demonstrate the ability to make and follow through with responsible commitments
- Distinguish among personal, ethical, aesthetic, cultural, and scientific values
- Demonstrate an understanding of the practical need for and value of respecting differences among cultures and perspectives
- Demonstrate an understanding of the tools, techniques, and technology that facilitate cultural and aesthetic appreciation

ATTENDANCE POLICIES

Students are expected to attend each class meeting. Up to 5% of your final grade may be based upon attendance and participation in class (or online). I believe that _attendance is vital to your success in this class_. It has been proven that students who attend every class session better position themselves to not only comprehend and master the course material, but also receive a higher overall course grade.

ACCESS TO COURSE MATERIALS

Successful completion of student responsibilities in this class requires access to BlackBoard via an Internet browser. You are expected to login to the BlackBoard classroom _at least_ 3 to 4 times per week. Instructions for access to Blackboard may be located online at the following address: http://online.edcc.edu/study/Bb_login.html. Toll-free technical support (24/7 service) is available at http://blackboard.edcc.edu (click on the HELP button).

A Blackboard classroom will be set up on the Web for this class and will be a central repository of the course assignments and discussions, as well as material you will need during the course. You are responsible for checking this site regularly for announcements and other information. More information and instructions for setting up and accessing your Blackboard account will be provided during the first week of class.

CLASSROOM CONDUCT IN THE LABS

Classrooms are shared environments where each individual pays dearly to hear all of the information presented. A few courtesies are required for everyone to have a quality experience.
- ❖ PLEASE TURN CELL PHONES and PAGERS _OFF_ while in the classroom.
- ❖ Please be on time. I will make every effort to start class on time and don't believe students who make the effort to be on time should be penalized.
- ❖ Please avoid side discussions with your neighbors unless instructed to do so, as they are highly distracting for others around you.
- ❖ _If you surf the web during class, PLEASE MAKE IT RELEVANT_ TO THE TOPICS BEING PRESENTED! I won't prohibit this, but if the computers become too big a distraction, I may ask that you turn them completely off until needed.

EXPECTATIONS

This course involves a high level of independent problem solving and analytical thinking. You can expect to spend at least 6 to 9 hours per week outside of class to complete reading and other activities. Class time will be spent in team activities, hands-on practice and discussion.

I expect you will:

- ❖ assume an **active role** in your own learning process
- ❖ take responsibility for understanding what each deliverable entails
- ❖ complete reading/discussion/assignment deliverables **on time** and be prepared for in-class discussion
- ❖ share information freely with others and **actively participate** in team projects
- ❖ not distract others (see _the Classroom Conduct section above_) –
- ❖ ***NOTE: I reserve the right to DEDUCT class participation points during the quarter for activities or behaviors that detract from a productive classroom environment.
- ❖ deliver **high quality work** that is correctly spelled, neat, and readable

❖ i**ndependently learn** necessary tools and seek out relevant resources

My role is to be your guide through this material, and therefore you can expect that I will do my best to:

❖ plan relevant "real-world" learning activities to meet course objectives
❖ clearly define expectations and deliverables
❖ adjust the pace and schedule as needed to assure understanding and meet objectives
❖ explain difficult concepts in a manner that allows you to understand them
❖ give you meaningful feedback to help with your learning process
❖ assign grades in a fair and consistent manner

POLICY ON CHEATING

Discussing the course topics with your classmates is underlined encouraged. Helping your classmates solve problems is also encouraged. However, all quizzes, exams, and individual lab and project work turned in for a grade must be done independently unless otherwise specified for the assignment. No points will be awarded for individual deliverables found to contain work directly copied from others without attribution.

Plagiarism and/or cheating are totally unacceptable and will be dealt with severely and on an individual basis.

SPECIAL ACCOMMODATIONS

If you require an accommodation for a disability, please contact Services for Students with Disabilities, MLT 159, (425) 640-1320, ssdmail@edcc.edu

EMERGENCY CLOSURE:

Because this is a weekend class, it's important that you check Blackboard Announcements each week before coming to class on Saturday morning. Whenever possible, emergency class cancellations will be posted by 7:30 am. In case of inclement weather, please access the following web site for information: http://www.schoolreport.org/ and or call this phone number: 425-640-1459.