

CIS 234 - Systems Design & Development

Instructor: Pete Farrar

Phone: *not available by telephone*

E-mail: Peter.Farrar@edcc.edu

Office Location: Alderwood Hall, ALD 234A

Office Hours: *by appointment only*

Quarter: Spring 2010

Section: A

Location: (Mountlake Terrace) MLT 210

Meets: Saturdays, 1:00 p.m. – 4:00 p.m.

Credits: 5

COURSE DESCRIPTION

Students will work independently and in teams to complete the systems design and implementation of a case study that will be provided. This “capstone” course brings together skills learned throughout the entire CIS program of study. Much of the work is hands-on and self-directed, with specific deliverables to demonstrate learning objectives. Prerequisites are CIS 233 (Systems Analysis) and CIS 253 (Application Development) with ***minimum grades in both of these courses of 2.5 or instructor permission.***

COURSE OBJECTIVES

During this course, students will research solutions and apply many of the skills learned in previous CIS courses to develop and deliver a complete business application. Students will demonstrate the following skills, objectives, and abilities:

- ❖ Work in teams to determine systems lifecycle (SDLC) activities and define a *project plan*
- ❖ Prepare and deliver formal *written and oral status reports*
- ❖ Create a *system design document*, including database design, input and output design, process specifications, and user interface design standards
- ❖ Apply user-centered design principles to create a *prototype* of the user interface design that meets documented requirements, prepare a formal demonstration of this prototype
- ❖ Develop a *database application* that meets documented data and process specifications
- ❖ Write and implement a *test plan* for validating system functionality against requirements
- ❖ Write a *user manual and training plan*
- ❖ Prepare a *roll-out and maintenance plan* for project implementation
- ❖ Perform a *walk-through* and demonstration of a *complete working system*
- ❖ Perform final project wrap-up activities and compile *documentation* for all aspects of the systems design, development & implementation phases of the SDLC

REQUIRED TEXTBOOKS

- ❖ ***Systems Analysis and Design, 7th Ed.*** by Gary B. Shelly, Thomas J. Cashman, & Harry J. Rosenblatt. Thompson/Course Technology, Copyright © 2008, ISBN 1-4239-1222-5

RECOMMENDED SUPPLIES

- ❖ Jump/flash drive to submit deliverables
- ❖ Notebook for keeping project notes.
- ❖ Microsoft Visio (can be obtained from Misty Cline, CIS Program Assistant)
 - ***EMAIL mcline@edcc.edu with a copy of your schedule to get into the MSDNAA system***

COURSE DELIVERABLES

Achievement of the course objectives will be demonstrated through a combination of individual and team deliverables. Team deliverable dates may be scheduled by each team for completion within the team's project plan, but must be received by the "no later than" date parameters listed in the course calendar. Some deliverables will require scheduling an appointment during class time or office hours.

GROUND RULES regarding deliverables:

- ❖ **Deliverables:** Will be submitted electronically either through Blackboard or on a jump/flash drive, and will be due at the end of the class period unless otherwise specified.
- ❖ **Late Deliverables:** There is **NO grace period for late deliverables**, and they will be accepted only at the beginning of the next class period after the original due date. **50% will be deducted** from the total assigned points for deliverables received after the specified due date. Also, I cannot guarantee that you will receive instructor comments or feedback on any deliverable received late.

TEAM ASSIGNMENTS: **Eight (8) team-based** research projects are assigned and are outlined below/next page. Each project will be written-up in a formal report style and/or presented in a physical demonstration. The final system demonstration and documentation will be due on **Saturday, June 12th** (the last class day). **LATE PROJECTS WILL NOT BE ACCEPTED.** Specific details will be provided through a separate document detailing the instructions to complete each project. **Team projects account for 50% of your overall course grade.**

Team Assignments/Deliverables:

TA1	Project plan	You will turn in a team project plan for the quarter and then schedule an appointment with me to go over your plan with the team.
TA2	System Design Document	Specific guidelines will be provided. You will submit an initial draft, which will be reviewed by the instructor, who will provide feedback for the final version, according to your team's project plan.
TA3	Prototype walk-through	You will schedule class time to demonstrate and "walk-through" an initial prototype of your system for the stakeholders per your team's project plan. Keep in mind that you will have limited time with the client.
TA4	Test plan	Specific guidelines will be provided. You will schedule the due date according to your team's project plan.
TA5	Implementation Plan	Specific guidelines will be provided. You will schedule the due date according to your team's project plan.
TA6	User manual	Specific guidelines will be provided. You will schedule the due date according to your team's project plan.
TA7	Final project documentation	Specific guidelines will be provided. You will provide a comprehensive written summary of <i>all</i> your completed system documents and project deliverables.
TA8	Final system demonstration	Specific guidelines will be provided. You will provide an overview and demonstration of your complete working system.

INDIVIDUAL ASSIGNMENTS: Four (4) categories of individual course material and project-related assignments/deliverables are outlined below. **Individual assignments account for 50% of your overall course grade.**

***** Your individual team participation grade will be based on your contribution to the project throughout the quarter. The overall team project grade will be the same for everyone on the team and will be based on the quality of the final deliverables.**

Individual Assignments/Deliverables:

Practice Quizzes and Exams	Practice quizzes: The 5 chapter review practice quizzes can be taken multiple times to practice for the exams. The deadline for the last time to take these quizzes is 1:00 p.m. the day of each exam. Once the exams are given, the practice quizzes for each exam will no longer be available and you will forfeit those possible points. Exams: There will be two on-line exams. They will be closed-book/no notes and will be taken in Blackboard. <u>NO MAKE-UPS WILL BE GIVEN FOR THESE EXAMS.</u>
Written Status Reports	Each person will be required to write a brief status report on his/her individual accomplishments each week. A template will be provided in Blackboard for this purpose. There will also be one team status report presented in class to the entire group.
Team/Class Participation	This includes performance on individually assigned work. You are expected to be a dependable and active member of the team throughout the project. A portion of this grade will also be based on formal feedback from your peers.
Instructor Discretion	These points will be given at the instructor's discretion, based on completion of individual work, personal observation, class participation and attendance.

ASSIGNMENTS/PROJECTS AND GRADING

Ultimately, grades are not as important as the knowledge and experience you are able to carry forward into your careers. However, since this is how you are measured in academia, the following describes the grading methods used in this class:

Your overall grade will be based on the **weighted** percentage of total points earned on individual and team assignments. Deliverable scores will be averaged and weighted according to the % of points allocated for that deliverable category (see **Course Deliverables**). See the Grade Breakdown chart below for the exact grade point and percentage breakdown.

Please note that 5% of your grade is at the instructor's discretion. This means that there is a 5% (+ or -) "variance" from the grade you calculate yourself, based on points earned.

For team assignments, a team grade will be calculated for each deliverable, and all team members will receive the same grade for the deliverable. At the end of the quarter, each team will be given the opportunity to evaluate the participation of other members. The team can choose whether to do this individually or agree as a team on each individual's team grade.

This evaluation will contribute to the amount of points an individual earns for team participation. If there are severe problems with a specific team member who is not actively participating on the team throughout the quarter, the team leader may request a "disciplinary action" from the manager (instructor). Special procedures for this situation will be executed on a case-by-case basis.

GRADING BREAKDOWN

Description	Percentage of Total Grade
<u>INDIVIDUAL DELIVERABLES:</u>	
Chapter Review Quizzes	5%
Exams	20%
Weekly Written Status Reports	10%
Team/Class Participation	10%
Instructor Discretion	5%
	50%
<u>TEAM DELIVERABLES:</u>	
Project Plan	6.25%
System Design Document (Final only)	6.25%
Prototype Demo/Walkthrough	6.25%
Test Plan <i>DRAFT</i>	6.25%
Implementation Plan <i>DRAFT</i>	6.25%
User Manual <i>DRAFT</i>	6.25%
Final Working System Demo	6.25%
Final Project Documentation	6.25%
	50%
Grand Total	100%

*****Instructor's Discretion:**

I reserve the right to change deliverables and breakdown of percentages listed above, and will notify the class accordingly.

GRADING SCALE

Grade Points for Percentage of Points earned			Letter Grade Equivalency
4.0=95%	2.8=83%	1.6=71%	A = 4.0 - 3.9
3.9=94%	2.7=82%	1.5=70%	A- = 3.8 - 3.5
3.8=93%	2.6=81%	1.4=69%	B+ = 3.4 - 3.2
3.7=92%	2.5=80%	1.4=68%	B = 3.1 - 2.9
3.6=91%	2.4=79%	1.4=67%	B- = 2.8 - 2.5
3.5=90%	2.3=78%	1.3=66%	C+ = 2.4 - 2.2
3.4=89%	2.2=77%	1.2=65%	C = 2.1 - 1.9
3.3=88%	2.1=76%	1.1=64%	C- = 1.8 - 1.5
3.2=87%	2.0=75%	1.0=63%	D+ = 1.4 - 1.2
3.1=86%	1.9=74%	0.9=62%	D = 1.1 - 0.9
3.0=85%	1.8=73%	0.8=61%	D- = 0.8 - 0.7
2.9=84%	1.7=72%	0.7=60%	F = 0.6 and below

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 (i.e., "Walks on Water"). 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. 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 details 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.

BASIC EDUCATION REQUIREMENTS (COLLEGE WIDE ABILITIES)

This class supports the College-wide standards and objectives. While achieving the course objectives above, you will be applying and developing the following basic education requirements:

- ❖ Written and oral communications (through writing deliverables).
- ❖ Critical thinking and problem solving (through methods used to create individual projects).
- ❖ Group interaction (by helping each other get through projects).
- ❖ Quantitative Skills (through problem solving using mathematical notation, graphs, charts, tables, and symbols)

PARTICIPATION POLICIES

Students are expected to attend each class meeting. Up to 10% of your final grade will 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.

- ❖ CELL PHONES, PAGERS, etc. *MUST BE TURNED 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 and cannot be tolerated.
- ❖ *DO NOT SURF THE NET IN THIS CLASS!* 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 7 to 10 hours per week outside of class to complete reading and other activities. Class time will be spent in lectures, team activities, hands-on practice, and group 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
- ❖ **independently 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 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. No points will be awarded for individual deliverables found to contain work directly copied from others.

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