

IS436-0101

Structured Systems Analysis and Design

Spring 2007

Professor: Dr. Sreedevi Sampath

Office hours: Tuesdays 1 to 3pm and by appointment

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Class time: Monday and Wednesday 4 to 5.15pm

Class location: ITE 231

Teaching Assistant: Gokulanand Viswanath

Office Hours: Mondays 9 to 11am

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Required Textbook

Systems Analysis and Design by Dennis, Wixom and Roth. Third Edition. ISBN: 0-471-72257-X

Description

IS 436 examines the design of information systems by providing a methodological approach to developing computer systems. The approach includes requirements determination, use-case analysis, process modeling, data modeling, architecture design, user interface design, and program design. Other lifecycle activities that play a crucial role in project success, such as project planning and feasibility analysis are also examined. IS 436 is called a capstone class, and it has major importance in the undergraduate curriculum of the Information Systems Department because the knowledge and skill set given in this class are essential to survive and become successful when the IS students join the workforce.

Course Objectives

At the end of the semester, a student completing the course should have

- a solid knowledge of the following concepts
 - what is an information system and what is involved in developing and implementing an information system
 - the major phases of a system's development life cycle and techniques for identifying the information processing needs of an organization
 - how to use basic modeling tools to represent the analysis and design of an information system
- practical knowledge of designing and building an information system from the specifications for an organization
- improved team working skills

Blackboard site

A Blackboard site will be maintained for the course throughout the semester. It can be accessed through myUMBC or at

<http://blackboard.umbc.edu>

The page will contain all project deliverable descriptions, lecture slides, solutions to exams, grades and all announcements pertinent to the course. **Each student is responsible for checking the web page regularly, and for being aware of any information posted there.**

Class format and attendance

Students are strongly encouraged to ask questions and participate in class activities. While attendance is not required, you are strongly encouraged to attend. Please note that 5% of your total grade is derived from class participation. If you miss a class, you are responsible for getting the relevant notes and hand outs to help you prepare for the quizzes and exams. Please come to class on time. Tardiness will affect your class participation grade. There will be in-class discussions and material covered in lectures that will not be available on the textbook and on the Web page. You will be responsible for that material in the quizzes and the exams. You are therefore encouraged to attend all lectures.

In case of inclement weather, check the main UMBC Webpage (<http://www.umbc.edu>) to see whether UMBC is closed and classes are cancelled. In the event of such cancellation on an exam day, the exam will be rescheduled and announced to the students by Dr. Sampath. If there is a deliverable due on that day, there will be no extension for the deliverable. You should still submit the softcopy (in PDF) of your deliverable on time. If the assignment has a hard copy deliverable, the due date for the hardcopy of your deliverable will be automatically be before start of class on the day of the next class.

Grading

The University's Undergraduate Catalogue states that, "A, indicates superior achievement; B, good performance; C, adequate performance; D, minimal performance; F, failure". There is specifically no mention of any numerical scores associated with these letter grades. Consequently, there are no pre-defined numerical boundaries that determine final letter grades. These boundaries can only be defined at the end of the semester after all scores have been earned. At that point, numerical boundaries for final letter grades can be defined (usually using a "curve") such that they conform to the University's and Information System Department's official guidelines. This means that it is not appropriate to assume that a given numerical score corresponds to a particular letter grade.

It is also important to understand that final letter grades reflect academic achievement and not effort.

While I am more than happy to correct mistakes in the computation of grades and grade recording errors, in all other situations final letter grades are not negotiable.

Your final course grade will be based on scores received on the term project, exams, quizzes and class participation, as follows:

Project: 50%
Quizzes: 10%
Midterm: 15%
Final: 20%
Class participation: 5%

Project

You will be carrying out the complete analysis and design of an information system of your choice, along with a team of 3-5 other students in the class. There will be deliverables throughout the semester, as well as a final presentation. The grade for the project will be based

on a combination of the grades for each deliverable, the final presentation, and peer evaluations. More information on the project will be presented in class and on the class website later in the semester.

Quizzes

A 5 minute quiz will be given at the beginning of each **Monday** class. The quiz will cover material taught the previous week. The format of the quiz will be short answer, multiple choice, fill in the blanks, or true or false types of questions. Quizzes cannot be retaken and will be given out promptly at 4pm every Monday class. If you come late to class, you miss the quiz. Each student's lowest two quiz grades will not be counted toward their final grade. So, if you miss more than 2 quizzes, all additional quizzes missed and the corresponding quiz grades will affect your final grade.

Exams

There will be two exams in this course, a midterm and a final examination. Please check the schedule for the dates. In general, make up exams will not be given. If you know that you will have to miss an exam in advance, talk to me about it. If I am given sufficient notice, and I agree that your absence cannot be avoided, then I can arrange a makeup exam. If you miss an exam due to an unforeseen emergency, then we can arrange a makeup exam if I agree that your absence was due to a bona fide emergency and you can document that emergency to my satisfaction. In all cases, you should be warned that makeup exams are generally more difficult and more prone to errors and misunderstandings than the original exam, simply because I do not have the time to devote to writing a makeup exam as carefully as I do other exams.

Class participation

This portion of the grade is a subjective assessment of a student's class attendance, contribution to class discussions and exercises, the student's attendance, punctuality, willingness to seek help from classmates and from me, and *ability to conduct himself/herself appropriately*.

Getting Help - Questions and Concerns

Email is the BEST way to get in touch with me. I will try to answer your email as soon as possible. When I send out emails to the class on the class list, make sure you are receiving them.

You are encouraged to use your UMBC e-mail account for all e-mail correspondence.

Academic Honesty

By enrolling in this course, each student assumes the responsibilities of an active participant in UMBC's scholarly community in which everyone's academic work and behavior are held to the highest standards of honesty. Cheating, fabrication, plagiarism, and helping others to commit these acts are all forms of academic dishonesty, and they are wrong. Academic misconduct could result in disciplinary action that may include, but is not limited to a grade of 0 on the relevant assignment, failure of the entire course, suspension, or dismissal. To read the full Student Academic Conduct Policy, consult the UMBC Student Handbook, the Faculty Handbook, or the UMBC Policies section of the UMBC Directory. Every student should read and fully understand the information given at <http://www.umbc.edu/integrity>

In particular, for this course:

- Cheating will not be tolerated on the exams, assignments or project. Cheating includes gaining specific information about the exam before taking it (e.g. in the case of a make-up exam).
- Plagiarism (misrepresenting as your own work any part of the work performed by another person, including Internet sources) applies to the team project in that the team must actually work with a real (not fabricated) customer organization and must not

- fabricate any information that should come from that organization. Also, no part of any project completed for any other course or any other semester may be used as part of the project deliverables for this course this semester.
- Academic dishonesty also includes interfering with another student's work or aiding another student to commit academic dishonesty.

Cell Phones, Beepers, and Other Devices: All cell phones and beepers must either be turned off during class (not "vibrate" mode). If you must make a call, please leave the classroom. If you disrupt the class you will be asked to leave the classroom.

Tentative Schedule (subject to change)

Below is a tentative schedule of lecture topics, exams, and deliverable due dates. I reserve the right to adjust this schedule for any reason, but I will make every effort to advise you of any changes well in advance. The schedule will be updated on Blackboard, so please look at it frequently there to make sure you are aware of any changes.

Date	Topic	Reading	Deliverables and Quizzes
1/29	Course introduction, SA & D introduction	Chapter 1	
1/31	Introduction to Systems Analysis and Design	Chapter 1	
2/5	Project initiation	Chapter 2	Quiz 1
2/7	Project management	Chapter 3	
2/12	Requirements determination	Chapter 4	Quiz 2
2/14	Requirements determination	Chapter 4	D1: Project proposal
2/19	Use case analysis	Chapter 5	Quiz 3
2/21	Use case analysis	Chapter 5	
2/26	Process Modeling	Chapter 6	Quiz 4
2/28	Process Modeling	Chapter 6	D2: Project plan
3/5	Data Modeling	Chapter 7	Quiz 5
3/7	Data Modeling	Chapter 7	
3/12	Midterm		
3/14	Midterm and project discussion		
3/19	Spring Break		
3/21	Spring Break		
3/26	Moving into design	Chapter 8	No quiz
3/28	Moving into design	Chapter 8	D3: Structured Requirements
4/2	Architecture design	Chapter 9	Quiz 6
4/4	Architecture design	Chapter 9	
4/9	User Interface design	Chapter 10	Quiz 7
4/11	User Interface design	Chapter 10	
4/16	User Interface design	Chapter 10	Quiz 8
4/18	Program design	Chapter 11	D4: Systems proposal
4/23	Program design	Chapter 11	Quiz 9
4/25	Data Storage Design	Chapter 12	
4/30	Data Storage Design	Chapter 12	Quiz 10
5/2	Moving into implementation	Chapter 13	D5: Systems Design
5/7	Project presentations		
5/9	Project presentations		
5/14	Review for final		
5/21	Final Exam 3.30 to 5.30pm		