

Syllabus

MIS 5100 and 5110

Systems Analysis and Design & Project Management

Fall 2009

T-Th, 10:30-11:45 a.m. (class)

T-Th, 12:00-1:15 p.m. (lab)

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Course Goal

The purpose of this class is to educate senior MIS students in the growing field of Project Management and Systems Analysis and Design. The primary goal of this course is to prepare students to create information systems effectively and efficiently using concepts learned in earlier MIS classes and the system development techniques and approaches taught in this class.

Required Text

Title: System Analysis and Design with UML Version 2.0 -
An Object-Oriented Approach, 3rd Edition

Authors: A. Dennis, B. Wixom, & D. Tegarden

Publisher: Wiley

ISBN 978-0-470-07478-7

Prerequisites

MIS 3330 (Database Management). MIS 5100 should be one of the last MIS classes you take in your program.

Course Organization

Working with a real-world client, we will cover the entire systems development life cycle (SDLC) in this class, from initiation of a project to final delivery of a functional system. Each class day will include a discussion/lecture session and a lab session. Usually, we will spend the discussion/lecture session introducing analysis, design, and project management concepts that you need to understand in order to successfully develop a full-scale system. Then, we will use lab time to put the concepts into practice. Every day, you will apply the concepts directly to the system you are developing. That is why it is important for you to attend both the class and lab sessions (see attendance policy discussion).

Your prior MIS classes have emphasized database development and programming, so I assume that you already have those skills. Since that is what you already know, most of you will be eager to start programming as soon as you find a client. **Don't!** These skills are useful in the

latter half of the SDLC, but you also need to understand analysis and design techniques. Good analysis and design techniques form the front-end of the SDLC and ensure that you develop a system solution that meets your client's needs. In other words, this class provides you with:

- skills and tools useful early in the SDLC,
- project management skills necessary to manage a team that needs to cooperatively develop an application,
- combined with skills and tools you have learned in other classes that are especially relevant in the latter stages of the SDLC,
- so that you can develop a professional information system for your client.

The three deliverables that you prepare over the course of the semester to document progress in developing an application will form the "star" or "diamond" in your professional MIS portfolio. Your portfolio is a collection of all the projects completed as part of your MIS degree that illustrates your accomplishments and skills as an MIS professional. The portfolio is an excellent tool to share with prospective employers since it shows the work you are capable of doing.

Software

We will use MS Project for some assignments. You may use MS Visio or any other drawing tool for other assignments. Free student versions can be downloaded at: <http://msdnaa.usu.edu>.

Assignment and Grading Policies

Our textbook covers the most current object-oriented analysis and design techniques used by systems development professionals worldwide. In addition to reading assigned chapters BEFORE each class session, you should thoroughly review the PowerPoint slides posted to Blackboard BEFORE each class session. The slides will introduce new concepts, especially about project management, as well as address material from the textbook. The upcoming week's PowerPoints will be posted to Blackboard no later than 7 p.m. on Sunday.

Late work will not be accepted. Submit your work on time. Part of project management is to anticipate the unexpected and build appropriate contingency into the work plan. Do likewise when creating personal work plans to complete assignments.

If you "have" to have a particular grade in this class, "earn" it. Don't tell me you need an "A" the last week of class when you have earned a low "C" all semester. It is your responsibility to earn whatever grade you need.

Grading Scale

Grades will be assigned as follows and posted on Blackboard.

A >=93% B+ >=87% C+ >=77% D+ >=67% F <60%
A- >=90% B >=83% C >=73% D >=63%
B- >=80% C- >=70% D- >=60%

Final grades will be determined as follows.

Homework: MS Project Exercise	5%
Homework: UML Diagrams	5%
Test 1	15%
Test 2	15%
Project Deliverable 1: Proposal & Poster	10%
Project Deliverable 2: Diagrams	10%
Project Deliverable 3: Application & Supporting Documentation	25%
Special Topic Presentations	10%
Executive Presence	5%

Tests

There are two tests, each worth 15% of your final grade. You may bring one 8½ x 11 sheet of paper with notes that you prepared (both sides can be used). It cannot have anything stapled, glued, taped or otherwise affixed to it. The tests may consist of multiple choice, true-false, and/or short essay questions. Tests cover material covered in the textbook, PowerPoints, lectures, class discussions, and material presented by guest speakers, including student presentations. They will emphasize interpretation and application of course material, not rote memorization. As much as possible, each test will cover material in the portion of the class that precedes it. However, knowledge is cumulative, and successful completion of a test may require mastery of material covered earlier in the semester.

Take tests during the scheduled time. If, due to emergency or illness, you know you will miss a scheduled test, it is your responsibility to let me know ahead of time or worst case, within 24 hours of the missed test. Make up examinations may be oral, essay, or another format, as determined by the instructor.

Project

Heavy emphasis is placed on the project. You need to find a real company to work with. Your stakeholder has to be present for the final presentation. The content of the project is up to you, but it has to involve techniques and software development tools you learned in your MIS and CS classes. Everything you learn in this class should be applied to the project. Include as many project management tools as possible; for example, one of the first things to create for your project will be a Gantt chart. Specific guidelines for projects will be discussed in class and posted on Blackboard.

Project ideas from the past:

- Development of a fixed asset tracking system for both technology & tangible assets
- Development of a web-based system to search a database of toxic plants with more than 20,000 tuples
- Development of a social networking site for runners in Utah
- Development of a tracking system for a Logan after-school program

Evaluations of the contributions of both you and your teammates to the overall project will be completed by team members three times over the course of the semester. I expect everyone to be active contributors to the project, in terms of quality and quantity of input and by helping other team members to do their best. Unprofessional performance and free-riding will be reflected in a student earning a lower grade for the project and its associated deliverables, and may mean that one or more members of the team will receive a failing grade.

Special Topic Presentation

Two people who are in different project teams will select a topic, conduct research about the topic, and make a presentation to the class. If appropriate to your topic, include an interactive element to your presentation. In addition, you must create two questions about the material covered in your presentation that are appropriate for inclusion on one of the two tests. Presentations should be 12-15 minutes long. PowerPoint slides and questions must be sent to me no later than 9 a.m. on the day of your presentation. I will post your presentation to Blackboard so that it is available to your classmates.

Executive Presence

Much of your learning will occur as you prepare for and participate in class discussions. Most people in business are evaluated on what they say, how they say it, and how they present themselves. The classroom gives you the opportunity to hone your discussion, debating, and impression management skills. Your participation will be evaluated based on what you contribute, not just what you know. Effective participation has much more to do with quality than quantity. In other words, those who dominate air time without contributing to the advancement of the discussion will not be rewarded. Executive presence also includes not engaging in activities that show disrespect to me or to your fellow students, including talking on cell phones, texting, or browsing the Internet during class.

I realize that individuals come to this class with different backgrounds in technology topics. The field is constantly changing. No one can possibly know all there is to know. The way to learn is to dive right in. As long as your comments reflect the fact that you have studied the day's materials before class, they will be considered pertinent and may help your participation grade. You can expect to receive the following grades for executive presence if your contributions are concise and illustrate critical thinking (that is, they go beyond the stated facts.)

- 90+% - Almost always well prepared and has something relevant to say.
- 80-89% - Well-prepared and contributes during the majority of class sessions.
- 70-79% - Adequately prepared and contributes on an occasional basis.
- 60-69% - Adequately prepared but seldom volunteers to speak.
- Below 60% - Inadequately prepared and never voluntarily contributes.

I evaluate performance after each class. If I believe that preparation is not up to my standards, I reserve the right to administer unannounced quizzes. These quizzes will cover the material assigned for the class session and no make-up quizzes will be given. The quiz scores will be used to partly determine the executive presence grade.

Attendance Policy

Arrive on time and stay for the duration of each class. The Utah State University General Bulletin states that "A student is expected to attend all meetings of a class for which he or she

is registered. A student may be dropped from a course by the Dean if absences are repeated and the instructor recommends this action. A student can gain re-admission only with permission of both the Dean and the instructor. A student dropped from a course receives an "F" which counts as work attempted whenever grade point ratio calculations are made. Students with absences in excess of 10% of scheduled class meetings may be administratively withdrawn from the class with a grade of F which will count as work attempted whenever grade point ratio calculations are made."

You are allowed to miss three classes and three labs during the semester without losing any credit. Missed classes can be for any reason (e.g., job interview, religious observance, illness, oversleeping, etc.). After that, your final grade will be reduced by 1% for every class or lab you miss.

Course Fees

The course fee of \$45 (class + lab) is used to maintain technology for class and project activities.

Comfortable Learning Environment

USU, the MIS Department, and I are all committed to maintaining an inoffensive, non-threatening learning environment for every student. Class members (including the instructor) are to treat each other politely, both in word and deed. Offensive humor and aggressive personal advances are specifically forbidden. If you feel uncomfortable with a personal interaction in class, see me for help to solve the problem. The MIS Department head, the Dean of the Huntsman School of Business, and USU's Affirmative Action Office are also available to help as needed.

Disability Accommodation

Students with ADA-documented physical, sensory, emotional or medical impairments may be eligible for reasonable accommodations. Veterans may also be eligible for services. All accommodations are coordinated through the Disability Resource Center (DRC) in Room 101 of the University Inn, (435)797-2444 voice, (435)797-0740 TTY, or toll free at 1-800-259-2966. Please contact the DRC as early in the semester as possible. Alternate format materials (Braille, large print or digital) are available with advance notice.

Ethical Conduct

Ethical conduct means communicating honestly and politely with fellow students and with the instructor; it means planning and writing your own projects, and it means relying solely on your own memory to answer test questions. Students who engage in unethical behavior connected with this class will receive a grade of F for the course and may be referred to other appropriate authorities.

Grievance Process (Student Code)

Students who feel they have been unfairly treated [in matters other than (i) discipline or (ii) admission, residency, employment, traffic, and parking - which are addressed by procedures separate and independent from the Student Code] may file a grievance through the channels and procedures described in the Student Code:

http://studentlife.tsc.usu.edu/stuserv/pdf/student_code.pdf (Article VII. Grievances, pages 25-30).

**MIS 5100 and 5110
Tentative Schedule – Fall 2009**

Date		Content Covered in Class	Preparation
Tuesday	8/25	Discuss syllabus Introduction: SDLC & Team building	PPs
Tuesday Lab		Think about project and form teams. Discuss potential projects. Develop meeting template. Think about topic presentations and form dyads. Select presentation topics.	
Thursday	8/27	SAD 1: The systems development life cycle	Chapter 1 + PPs
Thursday Lab		Discuss potential projects. Develop questions to ask potential stakeholder(s).	
Tuesday	9/1	PM: Setting goals and securing commitment Introduction to MS Project	PPs
Tuesday Lab		Decide on project Develop goal statement and project name Design logo	
Thursday	9/3	SAD 2: Project initiation	Chapter 2 + PPs
Thursday Lab		MS Project questions Develop feasibility analysis plan MS Project Homework assigned	
Tuesday	9/8	SAD 4: Requirements determination	Chapter 4 + PPs
Tuesday Lab		Develop requirements gathering plan/questionnaire/interview plan	
Thursday	9/10	SAD 3: Project management	Chapter 3 + PPs
Thursday Lab		Develop WBS and Gantt chart MS Project Homework due before class. Submit as email attachment.	
Tuesday	9/15	PM: Project Control	PPs
Tuesday Lab		Create stakeholder report and poster	
Thursday	9/17	SAD OO: Intro to OO SAD	Appendix (available online) + PPs
Thursday Lab		Work on project	
Tuesday	9/22	Presentations, written report, and posters due: Project proposal	
Tuesday Lab		Peer eval #1 due	
Thursday	9/24	SAD 5: Functional modeling	Chapter 5 + PPs
Thursday Lab		Develop use-cases, use case diagram,	

Date		Content Covered in Class	Preparation
		and activity diagrams	
Tuesday	9/29	SAD 6: Structural modeling/SAD	Chapter 6 + PPs
Tuesday Lab		Develop class or ER diagram <i>UML Diagrams Homework assigned</i>	
Thursday	10/1	<i>Test #1</i>	Chapters 1-5 + OO + PM
Thursday Lab			
Tuesday	10/6	SAD 7: Behavioral modeling SAD 8: Moving on to design	Chapter 7 (pp. 238-245), Chapter 8 + PPs
Tuesday Lab		Develop sequence diagram	
Thursday	10/8	SAD 12: Physical architecture layer design <i>UML Diagrams Homework due before class. Submit as email attachment.</i>	Chapter 12 + PPs
Thursday Lab		Develop network model, hardware and software specifications	
Tuesday	10/13	SAD 11: Human-computer interaction layer design	Chapter 11 + PPs
Tuesday Lab		Work on project	
Thursday	10/15	Fall Break – Friday Schedule	
Thursday Lab		Fall Break – Friday Schedule	
Tuesday	10/20	<i>Presentations & written report: Project diagrams Peer eval #2 due</i>	
Tuesday Lab			
Thursday	10/22	PM: Change	PPs
Thursday Lab		Work on project	
Tuesday	10/27	PM: Communication, Leadership and motivation	PPs
Tuesday Lab		Work on project	
Thursday	10/29	SAD 13: Construction	Chapter 13 + PPs
Thursday Lab		Develop test plans, user documentation, and implementation plan	
Tuesday	11/3	PM: Diversity	PPs
Tuesday Lab		Work on project	
Thursday	11/5	SAD 14: Installation and Operations	Chapter 14
Thursday Lab		Develop lessons learned assessment	
Tuesday	11/10	<i>Test #2</i>	Chapters 6-8, 11-14 + PM
Tuesday Lab			

Date		Content Covered in Class	Preparation
Thursday	11/12	Work on project	
Thursday Lab		Work on project	
Tuesday	11/17	Work on project	
Tuesday Lab		Work on project	
Thursday	11/19	Bug Hunt	
Thursday Lab		Bug Hunt	
Tuesday	11/24	Work on project	
Tuesday Lab		Work on project	
Thursday	11/26	Thanksgiving Holiday	
Thursday Lab		Thanksgiving Holiday	
Tuesday	12/1	Final project presentations, written report, & application (clients must attend) Peer eval #3 due	
Tuesday Lab		Final project presentations, written report, & application (clients must attend)	
Thursday	12/3	Final project presentations (if necessary)	
Thursday Lab		Final project presentations (if necessary)	
Tuesday	12/8	Teams resolve programming and documentation issues ID'ed by Instructor	
Tuesday Lab			
Thursday	12/10	Approval given by Instructor to transfer projects to clients	
Thursday Lab			