Michael F. Price College of Business
Division of Management Information Systems
MIS 4413 -- Object Oriented Systems Development
Fall 2002
10:30 - 11:45 a.m. TR
Classroom: AH, 112

Instructor: Dr. Jasperson
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Office Hours: 4:30 - 5:30 p.m. TR and by appointment

> *"The University of Oklahoma exists for the students . . . but the university cannot give you an education -- it can only help you acquire one for yourselves. The main effort must be made by the students."*
>
> (Former OU President George Lynn Cross -- 1952)

Course Overview and Objectives

As an advanced systems analysis and design course, this course will build upon the concepts that you studied in the database course and the systems analysis/design theory course. However, in contrast to the structured development lifecycle studied in these previous courses, we will focus on the concepts and principles of object-oriented systems development.

A portion of this course will be spent learning the Unified Modeling Language (UML). This is a general-purpose modeling language used to document the artifacts of a software system. You will learn to apply UML concepts in modeling information about the static structure and dynamic behavior of a computer-based information system.

At the end of the course, successful students should be able to:

- Understand the difference between structured systems development and object-oriented systems development
- Apply common modeling techniques of the UML to represent the specifications of an information system
- Understand the impact of object orientation and component-based development on the systems development field

Prerequisites

The posted prerequisite for this course is MIS 3373 or permission of the instructor. Please see the instructor if you have not completed MIS 3373 (Systems Analysis and Design Theory).

Course Texts

Fowler, M. and K. Scott. *UML Distilled: A Brief Guide to the Standard Object Modeling Language*, Addison-Wesley Longman, Inc., Reading, MA, 2000.

Schneider, G. and Winters, J. P. *Applying Use Cases: A Practical Guide*, 2nd ed., Addison Wesley, Boston, MA, 2001.

Additional readings and study from outside sources will be required and recommended. These sources will include, but are not limited to, recent newspapers, business journals, trade publications, and the World Wide Web. The required readings from additional sources can be accessed via the Blackboard system (see the "Electronic Course Support" section for the URL). The instructors will announce additional recommended reading assignments in class.

Grading and Course Requirements

The course requirements and evaluation of each student's work in the course are based upon performance in five areas: exams, research paper, class participation, quizzes, assignments, and a team project. Grade contributions and letter grade determination are shown below.

Midterm Exams (2)	50%
Final Exam	5%
Research Paper	15%
Class Participation	5%
Quizzes	5%
Assignments	10%
Team Project	10%
Total	100%

Percent	Grade
91-100	A
81-90	B
71-80	C
61-70	D
0-60	F

This course will require a significant amount of group work. To prevent a student from receiving a passing grade for the course just because his or her group receives very high grades on the team project, the following policy applies:

If a student's average score across the three exams is less than 70%, the highest grade the student can earn for the course is a "D." The "D" grade applies regardless of the student's performance in other areas of the course. If a student's average exam score is

less than 70%, the student will earn a final grade of "D" or "F" based on the student's average exam score.

Midterm Exams. There will be two midterm exams. Each midterm exam is worth 25% of your final grade. Examinations will include materials from the textbook, reading assignments, handouts, and classroom discussion. The examinations will emphasize interpretation and application of course material, not rote memorization.

Knowledge is cumulative and material discussed at the end of the semester will draw from earlier course material. Therefore, the second examination will draw upon, (and may even ask questions about), material covered during earlier portions of the course. The structure of the examinations will include short answer and problem solving. You will be allowed to use one 8½ x 11 page of notes for each midterm exam.

Final Exam. The final examination will cover current topics in systems development. These topics will be explored during the readings portion of the course. The final exam will be given as per the University Final Exam Schedule. The date and time of the final exam is listed in the daily schedule.

Research Paper. In the realm of object-oriented systems development, many organizations are moving toward what has been labeled component-based development. The last few weeks of the semester will be devoted to discussion of component-based development. Each student will complete a research paper on the topic of component-based development.

For any student who would like to get a jumpstart on this project, trade journals regularly feature articles focused on this topic. Additional details regarding the specific format and requirements for the paper are available on the Blackboard system (see the "Electronic Course Support" section for the URL). The research paper is due on December 6, 2002 at 4:35 p.m. in my office.

Class Participation. Class participation is based on participation in and contribution to in-class discussions. Students are expected to contribute to classroom discussions and activities. Five percent of your total course grade will be determined by your participation. There are two criteria for determining participation:

1. Participation in in-class exercises. This class utilizes a number of in-class exercises. Each student is expected to participate actively and thoughtfully in the class exercises. This means either getting up and putting solutions on the board or providing feedback and/or comments on work that is presented.
2. Preparation of homework assignments. During some class periods we will discuss the assigned homework. Students will have an opportunity to present their work. Again, this means getting up and sharing your solution with the class or providing commentary on work that is presented.

I will provide you with feedback regarding your class participation score at various points throughout the semester. I understand that some students are more hesitant than others to get in front of the class and share their solutions to problems. I will provide some opportunities to present group solutions, but you should make an effort to contribute to class discussion individually as well.

Quizzes. Quizzes will be given during each class period that has assigned reading. The quizzes will cover material from the assigned reading for the current class period. The purpose of the quizzes is to provide you incentive to keep up with the assigned reading. Quizzes will be given at the start of the class period, and no make-ups will be given. This course works best when all students are prepared, but I know that sometimes things come up -- so I will drop one quiz score at the end of the semester.

Assignments. The purpose of assigned homework is to reinforce the material covered in class. Unless otherwise stated, *homework is to be an individual effort*. Homework is always due at the beginning of class on the due date. Submitted homework assignments should look professional (i.e., have correct spelling, grammar, consistent format from page to page, good writing style, etc.).

The requirements for these assignments are available through the Blackboard system. You will be expected to view and use the documents online or download and print the assignment from the web (see the "Electronic Course Support" section for the URL). I will not distribute handouts for the assignments in class.

You should make every effort to complete the homework assignments early. Those who wait until the last minute risk delays with the computer facilities (i.e., down time, printer jams, computer crashes, etc.) and availability of the instructor.

Team Project. The team project will give you hands-on experience designing a computer-based information system. The project will be completed in phases that correspond to the systems development activities we will discuss in class. Projects will be graded using the following criteria.

- Completeness: are all steps complete and well documented
- Integration: does the documentation for each phase match the output of previous phases
- Thoroughness: are phases-to-date included, all concepts modeled
- Presentation: is the system documented in such a way as to be understood by those who need to understand it

Office Hour Policy

Office hours provide an opportunity for you to obtain specific guidance and help with your understanding of the material. I expect you to use them as your needs demand. I tend to be unsympathetic toward individuals with grade problems at the end of the semester who have never attempted to get help via office hours.

During office hours, I will not answer questions regarding any to-be-graded assignments (i.e., homework or the group project). Questions regarding to-be-graded assignments (i.e., homework and projects) must be asked in class or e-mailed to the instructor. I will e-mail my response to each question to the class distribution list (stripped of any information that would identify the question poser). This policy has two purposes: 1) it forces you to articulate your questions, and 2) it allows all students to have the same information for completing the assignment.

The purpose of office hours is for you to obtain assistance in understanding the course material. I will gladly respond to questions that you may have regarding material that was covered during a class discussion and/or provide feedback on diagramming or modeling efforts that do not pertain to assigned homework or projects.

Electronic Course Support

I will rely extensively on electronic communication with the class. As information professionals, you should have the habit of regularly checking your e-mail. When I send e-mail message to the class, I will use the distribution list that the university has established for the course. This list will only send messages to your university account. If you use a different e-mail account, it is your responsibility to have messages forwarded from your university account to another account.

Links to the syllabus and other pertinent course information such as handouts and assignments can be found in the OU Blackboard system. You should check this website regularly to be informed of what is happening in the class. You can login to the Blackboard system at the following URL: (https://ou.blackboard.com).

Students with Disabilities

The University of Oklahoma is committed to providing reasonable accommodation for all students with disabilities. Students with disabilities who require accommodations in this course are requested to speak with the instructor as early in the semester as possible. Students with disabilities must be registered with the Office of Disability Services prior to receiving accommodations in this course. The Office of Disability Services is located in Goddard Health Center, Suite 166, phone 325-3852 or TDD only 325-4173.

Religious Holidays

It is the policy of the University to excuse absences of students that result from religious observances and to provide without penalty for the rescheduling of examinations and additional required course work that may fall on religious holidays. Students **must** notify the instructor **in advance** of any such observances.

Academic Conduct

The University of Oklahoma has an Academic Misconduct Code that governs student academic performance in and out of the classroom. The Academic Misconduct Code can be reviewed online at http://www.ou.edu/provost/pronew/content/miscond.html.

Academic misconduct is defined as “any act that improperly affects the evaluation of a student’s academic performance or achievement.” All students are responsible for submitting their own work for evaluation by the instructor. The steps and procedures as outlined in the Academic Misconduct Code will be followed in all cases of academic misconduct in this class.

Food and Drink in the Classroom

The Price College has spent a great deal of private and state funds to provide nicely furnished classrooms and computer labs. No food or drinks will be allowed in the classroom.

Course Policies

- *Assignments:*
  - *Take exams during the scheduled time.* If, due to emergency or illness, you know you will miss a scheduled exam, it is your responsibility to let me know ahead of time. Make-up exams may be oral, essay, or another format, as determined by the instructor.
  - *Turn assignments in when they are due.* **I will accept one late assignment for grading**. “Late” means anytime after the assignment has been collected in class by the instructor. To be considered for grading, the assignment must be submitted by the beginning of the class period following the date the assignment was due. Use this policy wisely, **no exceptions will be made**.
- *Attendance:*
  - *Attend class*. If you must miss class, it is your responsibility to find out what material, homework assignments, schedule changes, etc. you missed. Do not come to the instructor’s office a week later and ask, “Did I miss anything?” (Assume that I would answer “yes” to this question.)
  - *Arrive on time and stay for the duration of each class.* If you must be late to or leave early from class, please let me know beforehand and be as unobtrusive as possible. It is very disruptive to have students walking in and out during class time.
  - *Be prepared*. Each student is expected to come to class fully prepared to discuss the material from the assigned readings. I will expect students to have read the text before class and rely on their preparedness to drive class discussions.
- *Do not engage in disruptive behavior in the classroom*. Interfering with your fellow students' ability to learn will not be tolerated.
- *Backups.* All students are expected to keep a backup copy of any material submitted to the instructors.

Miscellaneous Class Notes

Problems. This is a very difficult course. Let me know, as early as possible, if you have trouble with the material, assignments, project, team members, etc. Ask questions during class. Come see me during office hours. Send e-mail messages. In short, if you are doing the work and need help, get it! I cannot help you if I am not aware of the problem. If you find yourself in a team that is causing problems which you and the team cannot work out, please come see me as soon as possible.

Privacy of grades. Scores and grades will be posted in the Blackboard system. If you would like to have your scores and grades posted, please indicate your desire on the student information sheet. I do not discuss scores or grades over the phone or via e-mail.

Syllabus changes. The topics and dates as outlined in the course schedule are subject to change. All necessary changes will be announced and discussed in class. You are responsible for making sure you are aware of any such changes.

Daily Schedule

Date	Topic	Readings	Assignments Due	Project Phase
Aug 27	Introduction to course			
Aug 29	Introduction to OO concepts	Articles 1		
Sep 3	Introduction to UML and the Process	UML 1, 2; Articles 2 (skim)		
Sep 5	Event Tables and Use Cases	Articles 3 PrimeTech Case		
Sep 10	Use Case Diagram	UML 3; UC 1 (p. 1-5), 2 Articles 4 (skim)		
Sep 12		UC 3 Articles 5		
Sep 17		UC 8	Homework 1	
Sep 19	Activity Diagram	UC 5; UML 9 Articles 6 (skim)		
Sep 24				
Sep 26				
Oct 1				Project 1
Oct 3	Review for Exam		Homework 2	
Oct 8	**Examination 1 (All material covered to date)**			
Oct 10	Class Diagrams	UML 4 Articles 7 (skim)		
Oct 15				
Oct 17	CRC Cards and Class Behavior	Articles 8	Homework 3	
Oct 22	Sequence Diagrams	UML 5 Articles 9		Project 2
Oct 24				
Oct 29				
Oct 31				
Nov 5				Project 3
Nov 7	Review for Exam		Homework 4	
Nov 12	**Examination 2 (All material covered to date)**			
Nov 14	Current Systems Development Topics	Articles 10		
Nov 19		Articles 11		
Nov 21		Articles 12		
Nov 26		Articles 13		
Nov 28	**Thanksgiving Holiday -- No Class**			
Dec 3		Articles 14		Project 4
Dec 5		Articles 15		Research Paper (due Dec 6)
Dec 10		Articles 16		
Dec 12	Graduate Student Presentations and Course Feedback			
Dec 19	**Final Exam -- 8:00-10:00**			