

Course Syllabus

MIS 6308

School of Management
The University of Texas at Dallas

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Course Information

Course

Course Number/Section MIS 6308
Course Title Systems Analysis and Project Management
Term and Dates

Professor Contact Information

Professor Srinivasan Raghunathan
Office Phone 972-883-4377
Email Address sraghu@utdallas.edu
Office Location SOM 3.425
Online Office Hours Wednesdays 6:30 – 7:30 PM
Other Information The quickest and easiest way to contact me is through email. If it is a topic that needs to be addressed over the phone you can call during my office hours or email me to set up a time to call/meet.

Course Pre-requisite

MIS 6326

Course Description

This class focuses on analysis and design of business information systems using object oriented methods. The objective of the course is to provide you with the concepts related to systems development and management activities and the tools required in these activities. The class will be conducted using a variety of methods including lectures, exercises, cases, and online discussions. Since this is a graduate course, I expect a great deal of participation from you in the form of discussions and active participation in a major project.

Student Learning Objectives/Outcomes

1. Understand object oriented analysis and design methods.
2. Be able to model an information system using Unified Modeling Language (UML) diagrams
3. Be able to analyze an existing system and identify the causes of an information related problem, and design a new system to mitigate these problems
4. Understand the unique issues of managing information systems development projects

Required Textbooks and Materials

Required Texts

“Object-Oriented Systems Analysis and Design” by Joey George, Dinesh Batra, Joe Valacich, and Jeff Hoffer, Pearson Prentice-Hall, 2004. ISBN: 0-13-113326-8
(Any other edition of this book will also be fine)

Recommended Software: Rational Software Modeler Software, can be downloaded for a limited trial period from
http://www.ibm.com/developerworks/downloads/r/rswm/?S_TACT=105AGX23&S_CMP=DWNL.
Though I prefer you use the Rational Software Modeler to do your project, you can use other software like Visio, if you are more comfortable using that software.

Textbooks and some other bookstore materials can be ordered online through [MBS Direct Virtual Bookstore](#) or [Off-Campus Books](#) online ordering site. They are also available in stock at the [UTD Bookstore](#) and Off-Campus Books.

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Technical Requirements

In addition to a confident level of computer and Internet literacy, certain minimum technical requirement must be met to enable a successful learning experience. Please review the important [technical requirements and the web browser configuration information](#).

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Course Access and Navigation

This course was developed using a web course tool called WebCT. It is to be delivered entirely online. Students will use their UTD NetID account to login to the course at:
<http://webct.utdallas.edu>. Please see the [course access and navigation information](#).

To get started with a WebCT course, please see the [Getting Started: Student WebCT Orientation](#).

If you have any problems with your UTD account or with the UTD WebCT server, you may send an email to: assist@utdallas.edu or call the UTD Computer Helpdesk at: **972-883-2911**. If you encounter any technical difficulties within the course site, please send an email to gmbasupport@utdallas.edu.

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Communications

This WebCT course has built-in communication tools which will be used for interaction and communication. Some external communication tools such as regular email and a web conferencing tool may also be used during the semester. Please see more details about [communication tool information](#).

Interaction with Instructor: I will communicate with students mainly using the Announcements and Discussions tools and WebCT email. Students may send personal concerns or questions to

me using the course Email tool. I will reply to student emails or Discussion board messages within 3 working days under normal circumstances. I generally check my email daily during the week. However, please remember that I am human like the rest of you, with family obligations and outside commitments. So, if I do not respond immediately to your email, please do not worry. I will get in touch with you as soon as I am able to. I take weekends off, so do not expect a response until Monday.

The other form of regular interaction will be through the discussion board. I will post one or more questions every week pertaining to the readings for that week. You will need to participate in the discussion function in order to get credit for participation.

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Student Assessments

Grading Information

Weights

Assignment 1	35	12%
Assignment 2	35	12%
Proctored Exam	100	33%
Project	100	33%
Participation	30	10%
Total	300	100%

Grading criteria

Scaled Score	Letter Equivalent
90-100	A
80-89	B
70-79	C
Less than 70	F

Accessing Grades

Students can check their grades by clicking “My Grades” under Course Tools after the grade for each assessment task is released.

Course Policies

The assignments are due by the date given on the syllabus. There are no make-ups or extra credit opportunities and I will not accept late work. If you know in advance that there will be a conflict, please inform me and we will try to work something out. I will not consider a change after the date.

Class Participation

Students are required to login regularly to the online class site. The instructor will use the tracking feature in WebCT to monitor student activity. Students are also required to participate in all class activities such as discussion board activities, chat or conference sessions and group projects.

Virtual Classroom Citizenship

The same guidelines that apply to traditional classes should be observed in the virtual classroom environment. Please use proper netiquette when interacting with class members and the professor.

Assignments

Assignments:

You will be assigned two assignments during the semester. Each assignment will be worth 12% of the total points each and will count for 24% of your grade. You can think of these as take home exams, since they will be looking for both knowledge of the key ideas and the ability to integrate them.

Project:

A very important part of this course is the semester long term project. A team will have a maximum of 5 members. The objective of this project is to analyze a real-life business system, identify problems and improvements, and recommend and design a new system to address the problems/improvements. The project synthesizes all tools and techniques you will be learning throughout the course. The exact nature of the project and requirements will be posted on WebCT at the beginning of the semester.

The project will be due on the last day of classes of the semester. The project will be worth 33% of your grade. The contribution of each person in a group will be evaluated and graded.

Participation:

You will be expected to participate regularly in online discussions. A great deal of learning takes place when you share your experiences with others. I will post questions and comments to the discussion board which you can respond to. In addition, I will post information from the reflections on experience papers for you to discuss. Participation is worth 10% of your grade.

The rules for participation in the discussion are as follows:

- 1) Participation points will be given for both responses to discussion postings by students and for responses to questions submitted by professor.
- 2) When a question is posted, the first five replies can answer the question directly, posts after that need to respond to the answers given by other students to mimic an in class discussion. Look at this as a conversation with one another rather than trying to impress me with the "right" answer.
- 3) I am grading on quality of responses, not quantity. So, posts such as "I agree" or "sounds good to me" do not count towards participation (although you can certainly use these to advance the conversation. In order to count as participation your post has to be well thought out and pertain to the topic for the week. You should reference some of the concepts we are currently examining in class, not just offer vague assessments such as "there was a problem motivation". You can also refer back to previous weeks material if relevant. Integration of concepts is key since none of the issues operate completely independent of one another. For

example, conflict is often caused by miscommunication, so you might refer to both in a discussion even if the question is about conflict.

4) Keep discussion on topic and factual in nature. No flaming allowed. Opinions are fine as long as they are supported by facts. For example, stating that you think that a specific course of action is correct because of x, y, z is acceptable. Stating that the previous poster is an idiot is not.

5) Grammar and spelling are not graded in the discussion section, so don't feel that you have to spend hours editing your response. However, please use full words, not acronyms and abbreviations – not everyone is familiar with the text message language.

6) Limit your response to 250 words – any more than that and readers lose the point (and interest).

7) In order to receive full participation points you must post 1-2 value-added comments to at least 5 discussions.

Online Assignments

You can access assignments by clicking the Assessments link on the course menu or see the quiz/exam icon on the designated page.

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Assignment submission instructions

You will submit your assignments (in the required file format with a simple file name and a file extension) by using the Assignments tool on the course site. Please see the Assignments link on the course menu or see the icon on the designated page. You can click each assignment name link and follow the on-screen instructions to upload and submit your file(s). Please refer to the Help menu for more information on using this tool. **Please note:** each assignment link will be deactivated after the assignment due time. After your submission is graded, you may click each assignment's "Graded" tab to check the results and feedback.

Academic Calendar

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WEEK/ DATES	TOPIC/LECTURE	READING	ASSESSMENT / ACTIVITY	DISCUSSION QUESTIONS
0	Course Access and Introduction	Syllabus	<ul style="list-style-type: none">• Intro. Video• Formation of groups and meeting (virtual) with team members	1. What is your academic and professional background? 2. What motivated you to take this course? 3. What do you expect to learn from this course?

1 May 25-31	<p>Module 1 – Introduction to Systems Concepts and Object Orientation</p> <p>Unit 1: Systems Concepts</p> <p>Unit 2: Object Concepts</p>	Read Chapter 1, 2	<ul style="list-style-type: none"> Lecture 	<p>1. The SDLC used to be the favored methodology to develop information systems. It is slowly being replaced by Rapid Application Development.</p> <p>a) What is the reason for the shift?</p> <p>b) Is there a preferred methodology irrespective of the type of system (viz., TPS, MIS, DSS, ES) being developed?</p> <p>2. How do object concepts such as encapsulation, aggregation, and polymorphism support systems concepts such as decomposition, modular design, coupling, and cohesion?</p>
2 June 1-7	<p>Module 2 – Systems Analysis</p> <p>Unit 3: Collecting Data about the Current System</p>	Read Chapter 5	<ul style="list-style-type: none"> Lecture 	<p>1. Why is it important to have an initial problem statement before the detailed analysis begins?</p> <p>2. In information systems, we distinguish between functional problems and</p>

				performance problems. Give some examples of the two types. Why is such a distinction important?
3 Jun 8-14	Unit 4: Process Modeling	Read Chapter 6	<ul style="list-style-type: none"> Lecture Use case diagram and use case descriptions for the Medco case 	<ol style="list-style-type: none"> The distinction between <<include>> and <<extend>> relationship is critical in use case modeling. Provide an example that illustrates the difference between these two. Use case descriptions look similar to pseudo code. Compare and contrast the two.
4 Jun 15-21	Unit 5: Data Modeling	Read Chapter 7	<ul style="list-style-type: none"> Lecture Use Case documentation and Class diagram for the Medco case 	The use case documentation and the class diagram for Medco has a number of errors such as inconsistency between the two. Identify at least one error. You cannot repeat what other have

				already identified.
5 Jun 22-28	Unit 6: Object Modeling and Analysis	Read Chapters 9	<ul style="list-style-type: none"> • Lecture • Sequence diagram for Medco case • Assign. 1 	<p>The sequence diagrams help us complete the class/object model for the system. Illustrate using an example, which could be the Medco case or any other, how sequence diagrams help us complete the class diagrams developed in the data modeling stage.</p>
6 Jun 29-Jul 5	Module 3- Systems Design Unit 7: Analysis of UML Models	Read Chapters 9 and 10	<ul style="list-style-type: none"> • Lecture 	<p>Now that we have the model of the current Medco system, we can analyze it against the problems we identified in unit 3.</p> <p>Study the UML model carefully, and answer the following.</p> <ol style="list-style-type: none"> 1. What could be the potential reason for each of the problems we identified. 2. What changes should we make to the processes

				<p>to solve these problems?</p> <p>3. What changes should we make to the UML models to incorporate the solutions?</p>
<p>7 Jul 6-12</p>	<p>Unit 8: Database Design</p> <p>Unit 9: Software Design</p>	<p>Read Chapter 8 and 11</p>	<ul style="list-style-type: none"> Lecture 	<p>1. Pose at least one question regarding cohesion and coupling in software design.</p> <p>2. Identify two methods in the Medco system using the sequence diagram given in the Medco documentation. For each of these methods, determine the signature and the logic.</p>
<p>8 Jul 13-19</p>	<p>Unit 10: Testing and Implementation</p>	<p>Read Chapter 14 Up to page 443</p>	<ul style="list-style-type: none"> Lecture 	<p>What data will you use to test the sample program given in unit 10 if you use (i) statement coverage, (ii) branch coverage, (iii) path coverage</p>
<p>9 Jul 20-26</p>	<p>Unit 11: Controls Design</p> <p>Module 4 –</p>	<p>Read Chapter 3</p>	<ul style="list-style-type: none"> Lecture Assign 2 	<p>Suggest an automated preventive control mechanism to</p>

	Information Systems Project Management			deal with the Scanner/Spammer example mentioned in unit 11.
10 Jul 27-Aug 2	Unit 12: IS Project Management Unit 13: Implementation and Maintenance	Read Chapter 4, Read Chapter 14, from page 443 to the end	<ul style="list-style-type: none"> • Lecture • Project Due on Aug 3 	Research cost estimation methods used in the software industry. Post a method not discussed in the lecture.
11 Aug 7/8	Proctored Exam			

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Scholastic Honesty

The University has policies and discipline procedures regarding scholastic dishonesty. Detailed information is available on the [Scholastic Dishonesty](#) web page. All students are expected to maintain a high level of responsibility with respect to academic honesty. Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and/or dismissal from the University. Since such dishonesty harms the individual, all students and the integrity of the University, policies on scholastic dishonesty will be strictly enforced.

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Course Evaluation

As required by UTD academic regulations, every student must complete an evaluation for each enrolled course at the end of the semester. An online instructional assessment form will be made available for your confidential use. Please look for the course evaluation link on the course Homepage towards the end of the course.

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University Policies

Student Conduct & Discipline

The University of Texas System and The University of Texas at Dallas have rules and regulations for the orderly and efficient conduct of their business. It is the responsibility of each student and each student organization to be knowledgeable about the rules and regulations which govern student conduct and activities. General information on student conduct and discipline is contained in the UTD publication, *A to Z Guide*, which is provided to all registered students each academic year.

The University of Texas at Dallas administers student discipline within the procedures of recognized and established due process. Procedures are defined and described in the *Rules and Regulations, Board of Regents, The University of Texas System, Part 1, Chapter VI, Section 3*, and in Title V, Rules on Student Services and Activities of the university's *Handbook of Operating Procedures*. Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations (SU 1.602, 972/883-6391).

A student at the university neither loses the rights nor escapes the responsibilities of citizenship. He or she is expected to obey federal, state, and local laws as well as the Regents' Rules, university regulations, and administrative rules. Students are subject to discipline for violating the standards of conduct whether such conduct takes place on or off campus, or whether civil or criminal penalties are also imposed for such conduct.

Academic Integrity

The faculty expects from its students a high level of responsibility and academic honesty. Because the value of an academic degree depends upon the absolute integrity of the work done by the student for that degree, it is imperative that a student demonstrate a high standard of individual honor in his or her scholastic work.

Scholastic dishonesty includes, but is not limited to, statements, acts or omissions related to applications for enrollment or the award of a degree, and/or the submission as one's own work or material that is not one's own. As a general rule, scholastic dishonesty involves one of the following acts: cheating, plagiarism, collusion and/or falsifying academic records. Students suspected of academic dishonesty are subject to disciplinary proceedings.

Plagiarism, especially from the web, from portions of papers for other classes, and from any other source is unacceptable and will be dealt with under the university's policy on plagiarism (see general catalog for details). This course will use the resources of turnitin.com, which searches the web for possible plagiarism and is over 90% effective.

Email Use

The University of Texas at Dallas recognizes the value and efficiency of communication between faculty/staff and students through electronic mail. At the same time, email raises some issues concerning security and the identity of each individual in an email exchange. The university encourages all official student email correspondence be sent only to a student's U.T. Dallas email address and that faculty and staff consider email from students official only if it originates from a UTD student account. This allows the university to maintain a high degree of confidence in the identity of all individual corresponding and the security of the transmitted information. UTD furnishes each student with a free email account that is to be used in all

communication with university personnel. The Department of Information Resources at U.T. Dallas provides a method for students to have their U.T. Dallas mail forwarded to other accounts.

Withdrawal from Class

The administration of this institution has set deadlines for withdrawal of any college-level courses. These dates and times are published in that semester's course catalog. Administration procedures must be followed. It is the student's responsibility to handle withdrawal requirements from any class. In other words, I cannot drop or withdraw any student. You must do the proper paperwork to ensure that you will not receive a final grade of "F" in a course if you choose not to attend the class once you are enrolled.

Student Grievance Procedures

Procedures for student grievances are found in Title V, Rules on Student Services and Activities, of the university's *Handbook of Operating Procedures*.

In attempting to resolve any student grievance regarding grades, evaluations, or other fulfillments of academic responsibility, it is the obligation of the student first to make a serious effort to resolve the matter with the instructor, supervisor, administrator, or committee with whom the grievance originates (hereafter called "the respondent"). Individual faculty members retain primary responsibility for assigning grades and evaluations. If the matter cannot be resolved at that level, the grievance must be submitted in writing to the respondent with a copy of the respondent's School Dean. If the matter is not resolved by the written response provided by the respondent, the student may submit a written appeal to the School Dean. If the grievance is not resolved by the School Dean's decision, the student may make a written appeal to the Dean of Graduate or Undergraduate Education, and the dean will appoint and convene an Academic Appeals Panel. The decision of the Academic Appeals Panel is final. The results of the academic appeals process will be distributed to all involved parties.

Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations.

Incomplete Grade Policy

As per university policy, incomplete grades will be granted only for work unavoidably missed at the semester's end and only if 70% of the course work has been completed. An incomplete grade must be resolved within eight (8) weeks from the first day of the subsequent long semester. If the required work to complete the course and to remove the incomplete grade is not submitted by the specified deadline, the incomplete grade is changed automatically to a grade of F.

Disability Services

The goal of Disability Services is to provide students with disabilities educational opportunities equal to those of their non-disabled peers. Disability Services is located in room 1.610 in the Student Union. Office hours are Monday and Thursday, 8:30 a.m. to 6:30 p.m.; Tuesday and Wednesday, 8:30 a.m. to 7:30 p.m.; and Friday, 8:30 a.m. to 5:30 p.m.

The contact information for the Office of Disability Services is:
The University of Texas at Dallas, SU 22
PO Box 830688
Richardson, Texas 75083-0688
(972) 883-2098 (voice or TTY)

Essentially, the law requires that colleges and universities make those reasonable adjustments necessary to eliminate discrimination on the basis of disability. For example, it may be necessary to remove classroom prohibitions against tape recorders or animals (in the case of dog guides) for students who are blind. Occasionally an assignment requirement may be substituted (for example, a research paper versus an oral presentation for a student who is hearing impaired). Classes enrolled students with mobility impairments may have to be rescheduled in accessible facilities. The college or university may need to provide special services such as registration, note-taking, or mobility assistance.

It is the student's responsibility to notify his or her professors of the need for such an accommodation. Disability Services provides students with letters to present to faculty members to verify that the student has a disability and needs accommodations. Individuals requiring special accommodation should contact the professor after class or during office hours.

Religious Holy Days

The University of Texas at Dallas will excuse a student from class or other required activities for the travel to and observance of a religious holy day for a religion whose places of worship are exempt from property tax under Section 11.20, Tax Code, Texas Code Annotated.

The student is encouraged to notify the instructor or activity sponsor as soon as possible regarding the absence, preferably in advance of the assignment. The student, so excused, will be allowed to take the exam or complete the assignment within a reasonable time after the absence: a period equal to the length of the absence, up to a maximum of one week. A student who notifies the instructor and completes any missed exam or assignment may not be penalized for the absence. A student who fails to complete the exam or assignment within the prescribed period may receive a failing grade for that exam or assignment.

If a student or an instructor disagrees about the nature of the absence [i.e., for the purpose of observing a religious holy day] or if there is similar disagreement about whether the student has been given a reasonable time to complete any missed assignments or examinations, either the student or the instructor may request a ruling from the chief executive officer of the institution, or his or her designee. The chief executive officer or designee must take into account the legislative intent of TEC 51.911(b), and the student and instructor will abide by the decision of the chief executive officer or designee.

Off-Campus Instruction and Course Activities

Off-campus, out-of-state, and foreign instruction and activities are subject to state law and University policies and procedures regarding travel and risk-related activities. Information regarding these rules and regulations may be found at the website address given below.

Additional information is available from the office of the school dean.
(http://www.utdallas.edu/BusinessAffairs/Travel_Risk_Activities.htm)

These descriptions and timelines are subject to change at the discretion of the Professor.

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