# *Online Course Syllabus*

# Course Information

*Course Number/Section*  MIS 6308/ACCT 6340 OW1

*Course Title*Systems Analysis and Project Management

*Ter**m* Summer 2022

# Professor Contact Information

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# Course Pre-requisites, Co-requisites, and/or Other Restrictions

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

“Systems Analysis and Design in a Changing World” by John Satzinger, Robert Jackson, and Stephen Burd, Cengage Learning, Seventh Edition. ISBN-13: 9781305117204

(Sixth edition of this book will also be fine; however, chapter sequences are different in the two editions)

Recommended Software: Visual Paradigm, which can be downloaded from www.visual-paradigm.com. The community edition of this software can be freely downloaded for unlimited educational use. For parts of the course related to BPMN, you need at least Visual Paradigm Modeler Edition. You can get a 30-day free trial or you can buy it on a subscription basis.

Textbooks and some other bookstore materials can be ordered online or purchased at the [UT Dallas Bookstore](http://www.bkstr.com/texasatdallasstore/home).

# Technical Requirements

In addition to a confident level of computer and Internet literacy, certain minimum technical requirements must be met to enable a successful learning experience. Please review the important technical requirements on the [Getting Started with eLearning](https://ets.utdallas.edu/elearning/students/current/getting-started) webpage.

# Course Access and Navigation

This course can be accessed using your UT Dallas NetID account on the [eLearning](https://elearning.utdallas.edu/) website.

Please see the course access and navigation section of the [Getting Started with eLearning](https://ets.utdallas.edu/elearning/students/current/getting-started)  webpage for more information.

To become familiar with the eLearning tool, please see the [Student eLearning Tutorials](https://ets.utdallas.edu/elearning/students/current/tutorials) webpage.

UT Dallas provides eLearning technical support 24 hours a day, 7 days a week. The [eLearning Support Center](https://ets.utdallas.edu/elearning/helpdesk) includes a toll-free telephone number for immediate assistance (1-866-588-3192), email request service, and an online chat service.

# Communication

This course utilizes online tools for interaction and communication. Some external communication tools such as regular email and a web conferencing tool may also be used during the semester. For more details, please visit the [Student eLearning Tutorials](https://ets.utdallas.edu/elearning/students/current/tutorials) webpage for video demonstrations on eLearning tools.

Student emails and discussion board messages will be answered within 3 working days under normal circumstances.

# Distance Learning Student Resources

Online students have access to resources including the McDermott Library, Academic Advising, The Office of Student AccessAbility, and many others. Please see the [eLearning Current Students](https://ets.utdallas.edu/elearning/students/current) webpage for more information.

# Server Unavailability or Other Technical Difficulties

The University is committed to providing a reliable learning management system to all users. However, in the event of any unexpected server outage or any unusual technical difficulty which prevents students from completing a time sensitive assessment activity, the instructor will provide an appropriate accommodation based on the situation. Students should immediately report any problems to the instructor and also contact the online [eLearning Help Desk](https://ets.utdallas.edu/elearning/helpdesk). The instructor and the eLearning Help Desk will work with the student to resolve any issues at the earliest possible time.

# Academic Calendar

| WEEK/  DATES | TOPIC/LECTURE | READING | ASSESSMENT / ACTIVITY | DISCUSSION QUESTIONS |
| --- | --- | --- | --- | --- |
| 1  May 23 - 29 | Course Access and Introduction  Module 1 – Introduction to Systems Concepts and Object Orientation  Unit 1:  Overview and Basic Systems Concepts  Unit 2: Approaches to Systems Development | Chapter 1: From Beginning to End: An Overview of Systems Analysis and Design  Online Chapter A:  Role of Systems Analyst  Chapter 10: Approaches to Systems Development | Intro. Video  Formation of groups and meeting (virtual) with team members  Lecture | 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?  The SDLC used to be the favored methodology to develop information systems. It is slowly being replaced by Rapid Application Development.  a) What is the reason for the shift?  b) Is there a preferred methodology regardless of the type of system (viz., TPS, MIS, DSS, ES) being developed? |
| 2  May 30 – June 5 | Unit 3: Object Concepts  Module 2 – Systems Analysis  Unit 4: System Proposal and Collecting Data about the Current System | Class slides for Unit 3 (the material is distributed in various chapters such as Chapter 4 and Chapter 12)  Chapter 2: Investigating System Requirements  Gas Buddy Case | Lecture | How do object concepts such as encapsulation, aggregation, and polymorphism support systems concepts such as decomposition, modular design, coupling, and cohesion?  Why is it important to have an initial problem statement before the detailed analysis begins?  In information systems, we distinguish between functional problems and performance problems. Give some examples of the two types. Why is such a distinction important? |
| 3  June 6 –12 | Unit 5: Process Modeling | Introduction to BPMN – reading material  Chapter 3: Identifying User Stories and Use Cases | Lecture  BPMN Models, Use case diagrams and use case descriptions for the Gas Buddy case | 1. The distinction between <<include>> and <<extend>> relationship is critical in use case modeling. Provide an example that illustrates the difference between these two. 2. Use case descriptions look similar to pseudo code. Compare and contrast the two. |
| 4  June 13-19 | Unit 6: Data  Modeling | Chapter 4: Domain Modeling | * Lecture   Use Case documentation and Class diagram for the Gas Buddy case | The BPMN, and UML models for Gas Buddy has a number of errors and limitations such as inconsistency between the different models. Identify at least one error. You cannot repeat what other have already identified. |
| 5  June 20-26 | Unit 7: Dynamic Modeling | Chapter 5: Use Case Modeling | Lecture  Sequence diagram for Gas Buddy case | The sequence diagrams help us complete the class/object model for the system. Illustrate using an example, which could be the Gas Buddy case or any other, how sequence diagrams help us complete the class diagrams developed in the data modeling stage. |
| 6  June 27-July 3 | Test 1: June 28  Unit 8: Analysis of Gas Buddy UML Models  Module 3 – Systems Design | Chapter 6: Foundations of Systems Design | * Lecture | Now that we have the model of the current Gas Buddy system, we can analyze it against the problems we identified in Unit 3.  Study the UML model carefully, and answer the following.   1. What could be the potential reason for each of the problems we identified? 2. What changes should we make to the processes to solve these problems?   What changes should we make to the UML models to incorporate the solutions? |
| 7  July 4-10 | Unit 9: Systems Design and User Interface Design  Unit 10: Database Design | Chapter 8: Designing the User Interface  Chapter 9: Designing the Database | Lecture |  |
| 8  July 11-17 | Unit 11: Software Design | Chapter 12: Object-Oriented Design: Fundamentals  Chapter 13: Use Case Realizations | Lecture | Pose at least one question regarding cohesion and coupling in software design.  Identify two methods in the Gas Buddy system using the sequence diagram given in the Medco documentation. For each of these methods, determine the signature and the logic. |
| 9  July 18-24 | Unit 12: Systems Architecture  Unit 13: Testing and Implementation | Chapter 7: Defining the System Architecture | Lecture  Chapter 14: Deploying the new system  Class notes | What data will you use to test the sample program given in unit if you use (i) statement coverage, (ii) branch coverage, (iiii) path coverage |
| 10  July 25-31 | Module 4 – Information Systems Project Management  Unit 14: Project Management | Chapter 11: Project Planning and Project Management  Online Chapter C | Lecture |  |
| 11  August 1-7 | Unit 15: IS Project Management | Class Notes | Lecture | Research cost estimation methods used in the software industry. Post a method not discussed in the lecture. |
| 12 | Test 2: August 9  Project Report Due: August 10. |  |  |  |

This course requires two online examinations

**Grading Information**

Weights

|  |  |  |
| --- | --- | --- |
| Test 1 | 100 | 30.8% |
| Test 2 | 100 | 30.8% |
| Project | 100 | 30.8% |
| Participation | 25 | 7.6% |
|  |  |  |
| Total | 325 | 100% |

Tentative Grading criteria (The grading criteria are subject to change. The final grade will depend on the overall class and individual performance)

|  |  |
| --- | --- |
| Scaled Score | Letter Equivalent |
| 90-100 | A |
| 87-89 | A- |
| 84-86 | B+ |
| 80-83 | B |
| 77-79 | B- |
| 74-76 | C+ |
| 70-73 | 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 eLearning 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.

Project:

A very important part of this course is the semester long 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 eLearning 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 30.8% 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. Participation is worth 7.6% of your grade.

**Guidelines for participation in the discussion**:

1. Both responses to discussion postings by students and for responses to questions submitted by professor will be considered in evaluating participation.
2. When a question is posted, the first few replies can answer the question directly, posts after should generally 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. Both quality and quantity of responses will be evaluated. 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 our 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 on the average of 2 value-added comments to all discussion questions. These comments should be received in a timely manner, and before the last day of classes. Posting comments to several earlier discussions toward the end of the semester will not be viewed positively.

**Proctored Exams**

This course will use [Honorlock](https://nam02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fhonorlock.com%2F&data=02%7C01%7Csfl130030%40utdallas.edu%7Cec43b1cce8934a635fc608d83b3164d3%7C8d281d1d9c4d4bf7b16e032d15de9f6c%7C0%7C0%7C637324430620270860&sdata=dfVwrFebH7%2FZTw%2Ba2%2FEPk7xUYhu8JFDom7u%2BpnNhG28%3D&reserved=0) – an online exam proctoring tool. To successfully take an exam, you must have a web camera with microphone, a laptop or desktop computer (no tablets/phones), Chrome browser, a reliable internet connection and your photo ID. You will be prompted to install the Honorlock Chrome Extension (which you can remove after you finish the test). You will then access the exam within your eLearning course and go through the authentication process. The web camera will monitor you throughout your test. Please see the [Testing Guidelines](https://nam02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fdrive.google.com%2Ffile%2Fd%2F1-UPNwioHh4fmnKVv_8X48KipG9rnQ8DD%2Fview&data=02%7C01%7Csfl130030%40utdallas.edu%7Cec43b1cce8934a635fc608d83b3164d3%7C8d281d1d9c4d4bf7b16e032d15de9f6c%7C0%7C0%7C637324430620280856&sdata=19mdadlG0DRwHtnn0mHjG4qVbmM5nGfaQG4%2FI4UQKyw%3D&reserved=0) and [Support Information](https://nam02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fhonorlock.com%2Fsupport%2F&data=02%7C01%7Csfl130030%40utdallas.edu%7Cec43b1cce8934a635fc608d83b3164d3%7C8d281d1d9c4d4bf7b16e032d15de9f6c%7C0%7C0%7C637324430620280856&sdata=Ql9CMfyZHqZvAcgOrONx18un0hRKbwjXFP88BFVzwlg%3D&reserved=0) for additional information.

**Comet Creed**

*This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:*

“As a Comet, I pledge honesty, integrity, and service in all that I do.”

# Academic Support Resources

The information contained in the following link lists the University’s academic support resources for all students.

Please go to [Academic Support Resources](http://go.utdallas.edu/academic-support-resources) webpage for these policies.

# UT Dallas Syllabus Policies and Procedures

The information contained in the following link constitutes the University’s policies and procedures segment of the course syllabus.

Please go to [UT Dallas Syllabus Policies](http://go.utdallas.edu/syllabus-policies) webpage for these policies.

***The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.***