This syllabus is subject to change at the discretion of the instructor. Students will be notified and are responsible for any changes that are announced in class or via the class web site. Changes to the syllabus are posted in red!

MIS 674 Systems Analysis and Design

Instructor: Dr. Grant  
Meeting time: Tuesday 6 pm – 9:15 pm

Office Hours: Before class or by Appointment.

Office: DPC 6023  Phone: 312 362-6635  email: dgrant2@depaul.edu

Website: http://fac.comtech.depaul.edu/dgrant/  Fax: 312 362 6208

Student Responsibilities
Students are expected to be prepared for class.
Students are expected to be on time for class.
Students are expected to attend all class sessions and stay for the duration of class.
Students are responsible for delivering assignments on time.
Students are responsible for doing their fair share of work on group projects.
Students are responsible for familiarizing themselves with the syllabus.
Students are responsible for and staying abreast with any subsequent changes to the syllabus.
Students are responsible for printing and carrying a copy of the syllabus.
Students are responsible for providing pencil and eraser on exams or quizzes.
Students are responsible for doing the assign readings.
Students are responsible for fully contributing to the class discussion.
Students are responsible for signing the attendance sheet.
Students should read the notes pertaining to the HW before attempting it.
Students should do practice problems before attempting the HW.
Students are responsible for knowing how to use Microsoft Visio 2003. See file on how to use it
Students are responsible for any announcements made in class.

Course and Behavioral Objectives:
1. Students should be proficient in the use of techniques, methods, and tools for analyzing and designing information systems.
2. Students should understanding the fundamental concepts of Systems Analysis and Design
3. Students should be able to analyze and design information systems using UML.
3. Students should be familiar with issues and problems encountered by systems analysts.

Required Text:

Supplemental Readings:
Visio 2000: the official guide, Visio Dummy Series, Visio Step-by-Step. This text is not required but is recommended. Employers expect MIS professional to be able to use Visio, a commonly used computer aided software engineering (CASE) tool.

Students Class-room Expectations
Students enrolled in ACC or MIS courses are expected to follow the highest level of professional ethics in all of their dealings. Outlined are a set of academic expectations:

1. Students are expected to take significant responsibility for learning, class preparation, delivery of timely assignments, and quality of work.

2. Students are expected to attend class, be punctual, stay for the entire class period, and take breaks only as designated by the professor. Students may get permission in advance from their professor for being late, absent, or leaving early (due to specified circumstances). Students are expected to refrain from disruptive activity during class. For example, cell phones are to be turned off, and student discussions should be conducted only as designated by the professor (typically, for classroom discussions, only one person should be talking at a time).

3. It is considered unethical for a student to seek to influence a grading decision by sharing information with the professor that is outside the stated grading criterion. For example, it would be unethical to notify a professor that a student needs a specific grade or a higher grade for reasons related to employment, reimbursement, or qualification for a scholarship.

4. Students are expected to become conversant with the DePaul University Academic Integrity Policy. That policy is included in the DePaul University Code of Student Responsibility. Students can find the Academic Integrity Policy at:

   http://academicintegrity.depaul.edu/

5. Students are expected to represent themselves honestly in all communications, including all aspects of the job search process and scholarship applications.

Based on School of Accountancy & MIS Faculty Discussion in Fall 2012, examples of student classroom behaviors were discussed. Here are examples of classroom behaviors that were cited by faculty as being inappropriate:

- Talking in class when others are speaking
- Sleeping during class
- Excessive focus on grades instead of learning
- Use of laptops/ipads for non-classroom activities
- Cell phones ringing/sound not turned off
- Texting/emailing during class
- Arriving late to class/leaving early from class (unless excused, as per #2 above)
- Missing class and expecting faculty to replicate class material for individual student
- Students taking vacations during regularly scheduled dates of the quarter
• Bargaining/pleading for grades (in order to graduate or get employer reimbursement)
• Expecting curves on exams
• Expecting to told exactly what to study for an exam (just tell me what I need to know for the exam)
• Taking bathroom breaks during exams
• Low motivation for learning when nearing graduation

Course Orientation and Content
Information systems are crucial to the success of modern business organizations, and new systems are constantly being developed to make businesses more productive, efficient, and competitive. The primary purpose of system analysis and design is to analyze and design systems and applications that increase the efficiency and effective of the business. Systems analysis and design is highly dependent on the skills of individuals and the quality of their collective teamwork. Thus the purpose of this course is to provide students with an opportunity to develop the skills required for effectively analyzing and designing information systems. Students will be exposed to various methods, techniques, and tools available for systems analysis as and design along with fundamental theoretical concepts used in the process. The course will require significant amount of technical and analytical thought, all the while keeping business topics in mind (e.g., profit, customer satisfaction, politics, etc.). Discussions and exercises enhance the lectures so your full participation is very important. This course is designed to be useful to those who are potential system analysts, project managers, information consultants, and information system managers.

Grading Policy:
We will always be fair on our grading. It is not my intent to fail any student, especially if the student is really making a concerted effort to come to class, ask pertinent questions, do the assignments on time, and do the readings. However, if it seems that a student is not trying very hard, please do not expect me to be lenient with that student.

Grades will be rounded two one decimal place. Therefore, 92.95 will become 93. 0 = A while 92.94 will become 92.9 = A-.

Final course grade will be determined by:
1. Exam I 100 points (33.33%)
2. Exam II 100 points (33.33%)
3. Class Contribution 10 points (3.33%)
4. Group Project and Presentation 90 points * (30.00%)

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Grades will be posted in D2L.
Quality of work:
Getting an excellent grade requires high quality work. This includes, but is not limited to the following:
- The use of paragraphs to express each main idea
- The use of a spellchecker
- No typos
- Clear expression and organization of ideas
- Supporting detail for main ideas
- Thoroughness and completeness of the assignment

Grading Expectations:
This course is challenging for several reasons. First, the course requires the modeling of several business processes and in order to model a process one must understand it. Therefore, it is extremely important that you read up on business process and talk to people who perform them. If you do not have a thorough understanding of a business process, you will do a poor job modeling it. It is not recommended trying to model a process if you do not understand how it works. Second, UML is a language used to model business processes and like any language it has rules of syntax and semantics. Syntax is related to the symbols and how they are used to construct diagrams. Semantics have to do with the meaning that is conveyed to the user through the diagram. Therefore, for each assignment your grade will depend heavily on several factors including syntax, semantics, thoroughness of the process, completeness of the process, aesthetics, and the extent to which good business policy is reflected. Third, some students lack business process knowledge and so for the first time they are forced to think in business terms and model the business process at the same time. This is not an easy task for most students; hence research and an understanding of the business are required to do well.

Syntax: Points will be deducted for syntax related errors.
Semantics: Points will be deducted for instances when meaning is ambiguous.
Thoroughness and completeness: points will be deducted when the business process is missing or incomplete.
Aesthetics: This is related to how the diagram looks to the user. If the diagram is not appealing or aesthetically pleasing, points will be deducted. Therefore, avoid crisscross lines and make sure to apply symmetry.
Good business Policy: Good Business Policy should be reflected in the process, if not points will be deducted. Good business policies involve business rules that would cause a business to thrive for a very long time and lead to high levels of customer satisfaction.

How I Grade HW and other Assignments (grading philosophy):
This section is intended to shed light on what to expect when I grade your work by incorporating more objectives measures in the grading process. It is clearly an attempt to remove as much subjectivity from the process. Grading often involves a measure of subjectivity, and the level of subjectivity varies with the topic and/or subject matter. In analysis and design it is impossible to remove subjectivity entirely because there is no single right or wrong answer to a given business problem. Some parts of a solution are naturally subjective; evaluating the aesthetic beauty or the semantic meaning of a diagram will always be subjective.
Any business problem always has a range of possible solutions, some of which are clearly superior. My job is to determine the correctness of your solution and that is where my subject opinion and expertise play an important and inevitable role in the grading process. There are some parts of the grading process that lend themselves to more objective measures. I recognize that trying to be more objective has some limitations but I also recognize that moving to more objective measures has some merits. My intention is to incorporate more objective measures into the grading process. However, no matter what approach I use there are inherent limitations, hence the approach taken here is definitely a compromise yet somewhat imperfect. The upside to adopting more objective measures is that students know ahead of time how they will be evaluated. When they receive their graded assignments it would be clearer how they were graded especially on specific aspects of their solution. For example, every diagramming error will cost you a 2-point deduction (see list below). The down side to this approach is that some errors are more severe than others and I would have liked to reflect that in my grading. With this new approach that level of subjectivity is now removed by treating all errors as though they are equal. In reality, some errors are catastrophic while others are just insignificant.

In my attempt to objectify the grading process the best I can, here is how you will be evaluated. On a 100 point scale, two points will be deducted for every syntax or semantic error identified. Therefore, if an error is repeated you will lose 2 points every time. Here is an incomplete list of errors:

- Crisscross lines that could be avoided
- Confusing situation
- Missing process, activity, use case, class, object, etc.
- Inappropriate or poor labeling
- Part of the diagram is missing when printed
- Missing titles on diagrams
- Instances of poor business policy reflected in the diagram. Therefore, it is very important to provide a list of assumptions with explanations when necessary
- If the homework consists of two diagrams and you hand in only one, you will be graded out of 50%
- Missing systems boundary
- Missing actors
- Actors misplaced; actors should always be on the outside of the diagram
- Syntax or semantic violations not listed above

**NOTE:** 50 points will be deducted for submitting the wrong diagram. For example, submitting an overview use case diagram when the HW called for a detailed use case diagram. Please note that all the rules outlined here will be strictly enforced.

To do well on HW assignments, pay attention to these things:
1. Pay attention to the list of errors above
2. Spend a considerable amount of time researching and understanding the process before you model it
3. Pay strict attention to the syntax
4. Make sure each symbol of the diagram is correctly used and applied
5. Do not try to create the diagram in one attempt; allow time to reread and improve the diagram over several iterations
6. Check for completeness of the diagram
7. Follow directions
8. Avoid crisscross lines when possible because they detract from the beauty of the diagram and create confusion for the user. As the amount of confusion increases the amount of semantics decreases. It is also possible to have no crisscross lines yet the diagram is confusing (low on semantics).

**Exams**
The homework assignments provide the primary means of keeping students informed of their progress during the quarter. Students should use these as a vehicle for judging their strengths and weaknesses. The exams are made-up of multiple choice questions, and problems similar to the HW. There will not be any exam review sessions. Instead, students are strongly encouraged to ask questions at the beginning or end of each class. Preparing for the exam is an ongoing process which encompasses doing the HW, doing extra problems from the book, going over the review questions, studying regularly, asking questions in class, preparing for each class, and so on.

It is NOT enough to just read the book. Studying for exams require three things:
1. Reading the book for understanding
2. Studying is much more involved and complex than reading the book. It involves making connections between different and related concepts throughout the book. Identifying real world examples of concepts discussed in the book. Reflecting on what you have read and learned. Documenting the steps or process used to solve a problem. Making your own notes that make sense to you. Identifying other examples that reinforce concepts from the book. To accomplish these things often require you to consult Google, or other good sources such as text books.
3. Practicing, which involves solving problems from the review and problem section of each chapter?

Exam I will consist of about 60 multiple choice questions, and two problems (AD and UCD) similar to those in the book and the homework. The multiple choice questions will cover basic definitions and terms from the text and is worth 1 point each.

**Make-up Examinations**
Make-up examinations are not encouraged, and are given only at the discretion of the instructor. If you miss the exam, you should have a doctor's note to get a make-up. The only other reason for missing the final must be an emergency.

**Workload**
Students are advised to do all assignments that provide the necessary practice to become familiar with the material. It is inconceivable for students to do well in the class without expending sufficient effort and time practicing. Students should plan on spending about 9 hrs per week outside of class. I strongly recommend that students working full-time should not
take more than two classes and full-time students should not work more than 20 hrs. Students working full-time and going to school full-time is a recipe for failure.

**Home-Work Assignments**
All outside-of-class assignments (HW, project, etc.) are due at the beginning of class. Assignments not handed in by the end of class are considered late and will not be accepted and a grade of ZERO will be awarded. However, in exigent and extremely rare circumstances, the instructor reserves the right to apply a reasonable standard. Students may use any means necessary to get assignments in on time. All assignments not delivered in person should be postmarked and time-stamped. All assignments must be done with the aid of the computer. All diagrams MUST be done using Visio and text documents in Word. NO hand written assignments will be accepted; they will be returned to the student and late penalties will apply. When sending assignments via email, make sure to copy yourself and check the incoming email to ensure that the attachment was send correctly. Forgetting to attach your file will not be considered an excuse for late projects or assignments as penalties (grade of zero) for being late will apply. All Microsoft access files MUST be sent as a zip folder/file, ignoring this instruction will result in your file not being received. If ignoring these instructions results in your HW or project being late you will receive a zero. All students are responsible for knowing how to create and send zip files/folders. Microsoft Visio should be installed in Lewis on the 14th floor (1420). Free trial versions of Visio are available @ http://www.microsoft.com/office/visio/prodinfo/trial.mspx

There will be NO second chance on HW assignments so make sure to do your best on every assignment. Students are advised to do as many problems from the textbook or make up their own before attempting the homework. Learning how to model business requirements require lots of practice.

All homework assignments should include the name of the owner. This includes HW sent via email. It is not enough to have your name in the email; it must be on the HW.

**Group Project**
Team member information will be posted in D2L. Project will be described in a separate document. Each team member will be subjected to a peer evaluation. The peer evaluation forms are posted on the website. Fill out the form and present it to the instructor on the day the project is due. The evaluation plays an important role in determining each student’s project grade.

**Class Contribution:**
Class participation involves discussion items from the textbook, current news items, IT issues at work, journal and magazine articles related to systems analysis and design. Students are expected to study the assigned course readings for a given day before coming to class and actively participate in the class activities. During class, students may be asked to solve problems related to the assigned readings or called upon to discuss issues covered in the assigned readings. The quality of solving problems, answering questions, and discussing readings will significantly determine class participation credit. In addition, criteria for the credit include punctuality, attendance and attitude toward learning. Tardiness disrupts the flow of
class activities and often leads to having to repeat announcements or instructions. During class, we encourage you to engage in critical thinking, to challenge ideas without showing disrespect for other’s ideas. Please use judgment when raising issues in class – do not waste the class’s time on a personal matter – instead me after class. Effective participation has much more to do with the quality than with the quantity of your interaction. In other words, those who attempt to dominate air time for its own sake without contributing to the advancement of the discussion will not be rewarded for it. Those students who severely interrupt with or disrupt normal course activity will not be awarded participation points. Just being present is necessary but not sufficient to earn contribution points. Contribution is all about adding value to the class discussion so those who show up but add no value to the discussion will earn zero points. Every student starts off with zero points!

Please note that you are required to turn off your mobile phone before the class starts.

**Contract Agreement**

The agreement should include all team members and their responsibilities. All parties must sign the contract. All parties must keep a copy of the signed contract. Copy of contract must be on file with the instructor. It is a good idea to specify how team members will be evaluated on the peer review form. Criteria may include attending meetings, being on time, delivering items as planned, returning emails and phone calls in a timely manner, quality of work, and so on.

**Academic Misconduct**

The DePaul Student Handbook states:

Violations of academic integrity include but are not limited to the following categories: cheating; plagiarism; fabrication; falsification or sabotage of research data; destruction or misuse of the university's academic resources-alteration or falsification of academic records; and academic misconduct. Conduct that is punishable under the Academic Integrity Policy could result in additional disciplinary actions by other university officials and possible civil or criminal prosecution. Full text located at [http://condor.depaul.edu/~handbook/code17.html](http://condor.depaul.edu/~handbook/code17.html)

**Attendance**

Students are encouraged to attend all class sessions on time. Students missing classes are responsible for what took place in class and are encouraged to get the class notes and other assignments from fellow students. Missing a class is not an excuse for being uninformed about class materials, assignments, due dates, and so on.
NOTE: Excellent Resource for software videos:
There is a site called Lynda.com where you can find videos on various software including (SQL, Visio, Excel, etc). Type in lynda.com in your browser then select the login icon top right, then you will see the screen below. Use your DePaul acct to login using the option on the right by typing in www.depaul.edu follow the instructions to get to Lynda. Search for the software you want to learn.
UCD = Use Case Diagrams  
AD = Activity Diagram

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<th>Date</th>
<th>Topic</th>
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<tr>
<td>1 9/15</td>
<td>Intro to SAD Team project time</td>
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<td>Project Mgmt Chap 2 (ignore pg 69-end except for topics listed on pg 10 of syllabus). Requirements analysis (ignore pgs. 126-132; 136-end of chap)</td>
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<td>Functional &amp; Non functional Requirements (5); Info gathering strategy (6)</td>
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<td>Behavioral Modeling (cont’d) Moving to Design Team project time</td>
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<td>Activity Diag (7); Use Cases (8); Use Case Diag (9)</td>
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<td>Chap 8 Chap 9</td>
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<td><strong>Exam II</strong></td>
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Chap 4 Project mgmt.

Some topics in the chapter are deemphasized. Here are the sections that I concentrated on:
Project Initiation
Feasibility Analysis
Timeboxing
Case Tools

I also expect you to know this material for the exam.

- What are the major challenges of project managers?
- What are the steps to create a work plan for a project?
- What is the easiest and simplest way to estimate a project, especially for inexperienced project managers?
- Project management requires project managers to make tradeoff, what are the tradeoffs?
- You should know what % of the project time is spent on planning. Knowing this industry standard, you should be able calculate the estimated time of the entire project.
- What is timeboxing, when and why do you use it?

THINGS YOU SHOULD KNOW AND REMEMBER

NOTE: This page may be updated from time to time.

The Text book is not perfect and so there are things in the book that I disagree with so I am letting you know what they are and what I expect of you in reference to all assignments and exams. When these things are missing from any assignment or exam (any thing that is handed in or graded) you will lose points so it is important to have this list handy when doing assignments.

1. All activities must have input and output therefore all object nodes must be shown. The one exception is related to decision activities. We'll discuss how to deal with them. If I happen to forget it is your responsibility to remind me.
2. Show all parts of a class (name, attributes, methods).
3. Show return messages on sequence diagrams