

IT 461 – System Analysis and Design (exists as MSIS 461)

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Office Hours: Tuesday and Thursday 1:30 pm –3:00 pm and by appointment
Class Time: Tuesday and Thursday 11:30AM--12:45AM
Classroom: McCormack M01-0428
Section: 1
Term: Spring 2007
Online System: WebCT Vista

Required Text/Materials

- 1) Alan Dennis, Barbara Haley Wixon, and David Tegarden, Analysis and Design with UML Version 2.0: An Object-Oriented Approach, 2nd Edition, Wiley, 2005, ISBN 0-471-34806-6

Course Background

This course provides an introduction to the analysis and logical design of computer-based information systems. Information systems development is a process in which technical, organizational, and human aspects of a system are analyzed and changed in the hope of creating an improved system. In spite of the advanced technology that surrounds computer-based information systems, the process of systems analysis and design is still largely an art. There is a high dependence on the skills of individual analysts and designers even though there are principles, methods, techniques and tools to guide and assist in the processes involved. This course will give students an understanding of the tools and techniques that are available and will introduce the concepts and theory that underlie the processes.

Course Objectives

Upon successful completion of this course the student will be able to:

- Understand and use the Unified Modeling Language (UML) to visually model the requirements and architecture of a new or existing (object oriented) information system.
- Use a specific Computer Aided Software Engineering (CASE) tool to assist in systems analysis and Design.
- Understand various approaches to systems (life cycle) development.
- Understand the purpose, context, and commonly expected “deliverables” of systems analysis and design.

Topics

D: Dennis’s book: System Analysis and Design with UML Version 2.0

Week	Textbook reading	Topic	Major Events
1	Syllabus, D1	Syllabus, Introduction to System Analysis and Design	
1	D2 (p24-28; 29-34)	Introduction to UML	
2	D3, D5	Project initiation, Requirement determination	
2	D5	Requirement determination	
3	D6	Functional Modeling (Activity diagram)	Assignment 1 out
3	D6	Functional Modeling (Activity diagram, Use Case)	
4	D6	Functional Modeling (Use Case)	
4	D6	Functional Modeling (Use Case-case study)	Assignment 2 out
5	D6	Functional Modeling (Use Case- case study)	
5	D6	Functional Modeling (Use Case- case study)	Study guide for test 1 out
6	D7	Structure Modeling (Class Diagram)	
6	D7	Structure Modeling (Class Diagram)	
7	D7	Structure Modeling (Class Diagram-case study)	Assignment 3 out, Project out
7	D7	Structure Modeling (Class Diagram-case study)	
8		Spring break	
9	D7	Review for Test 1 Structure Modeling (Class Diagram-case study)	
9		Test 1	
10	D8	Post-test review Behavioral Modeling (Sequence Diagram/Communication Diagram)	
10	D8	Behavioral Modeling (Sequence Diagram/Communication Diagram)	
11	D8	Behavioral Modeling (Sequence Diagram/Communication Diagram— case study)	Assignment 4 out
11	D8	Behavioral Modeling (Sequence Diagram/Communication Diagram— case study)	
12	D8	Behavioral Modeling (State Chart Diagram)	
12	D9, D10 (288 - 297)	Moving on to design, Class and Method Design	
13	D11	Data Management (relational database)	

13	D1	Software development methodology, and RUP	
14	D1 and online material	Agile methods	
14	D4	Project Management	
15	D14, 15	Construction and Installation and Operation	
15	D13& D12	Physical Architecture & HCI Lay design	
16		Project day	
17		Final Exam	

Evaluation

Items	Points	Percent
Test 1	100	20%
Final exam	150	30%
Assignments (4)	150	30%
Group Project	70	14%
Peer Evaluation Form	5	1%
Participation	25	5%
Total	500	100%

Points	Percent	Grade
470-500	94-100	A
450-469	90-93	A-
435-449	87-89	B+
420-434	84-86	B
400-419	80-83	B-
385-399	77-79	C+
370-384	74-76	C
350-369	70-73	C-
335-349	67-69	D+
320-334	64-66	D
300-319	60-63	D-
0-299	<60	F

Participation

The instructor encourages everyone to participate in class activities, discussions, and respond to questions from other students. This type of class interaction will guarantee maximum points for participation. Participation points are based on:

1. Attending the entire class,
2. Being prepared to participate,

3. Asking and responding to questions, and
4. In-class activities.

Administrative Notes

- **Peer Evaluation**

In the end, students are required to complete a peer evaluation form to assess the effort and contribution of their team members. The information in the form is confidential. The final grades may be adjusted according to the peer evaluation.

- **Make-Ups**

NO make-ups will be given. It is impossible to create an equivalent experience without placing the student at either an advantaged or disadvantaged status.

If you cannot take exams/tests due to emergency, please contact the instructor within 24 hours and please bring paper documents to the instructor.

- **Assignments**

Each assignment has two deadlines, i.e., a regular deadline and late deadline. **Assignments submitted after the regular deadlines but before the late deadlines can receive only 2/3 of the credits at most. No assignments will be accepted after the late deadlines. The deadlines will be announced in class for each assignment.**

If you do not understand an assignment, it is your responsibility to seek clarification – there are resources available to you.

- **Reassessment**

If a request is made for any scored material to be reassessed, please recognize that it will be possible to retain, gain, or lose points in the reassessment process. Make any reassessment requests by e-mail within one (1) week of grading. Please make a follow-up appointment to meet the instructor during office hours for review of the results of any reassessment.

- **Attendance**

Class attendance is expected, anticipated and rewarded. The instructor is not a policeman and will not "excuse" anyone from class. All classes are important; therefore one cannot "make up" the experience of a class (see Participation).

- **Disability service**

The Lillian Semper Ross Center for Disability Services provides a full range of support services. The Ross Center is located in the Campus Center, 2nd floor; Tel: (617) 287-7430

- **Academic Honesty**

In this class, there will be zero tolerance for dishonorable or unethical conduct. Electronic or physical sharing of answers will be considered cheating and will not be tolerated.

Penalties: If a student is charged with Academic Dishonesty, for each charge, a zero (0) will be given for the assignment, a minimum of fifty (50) points will be deducted from the final course total points and a written Notice of Academic Dishonesty will be given to the Dean's office. The student will also receive a copy of the notice.