

Systems Analysis and Design (IS 350) - Spring 2007; Room: BC 106; Day/Time: MW 10:30-11:20 p.m.

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Office Hours: Monday & Wednesday 9:00-10:00 a.m.

WebCT: <http://salsa.nmsu.edu/>

Tuesday 1:30-3:30 p.m.

Classes: MWF 10:30-11:20, IS 350 (540), BC 106

MWF 11:30-12:20, IS 475 (595), BC 115

MWF 2:30-3:20, IS 450 (580), BC 115

Text: *Essentials of Systems Analysis & Design*, 3rd edition (or 4th), J. S. Valacich, J. F. George, J. A. Hoffer, Prentice Hall

Course Description - This course teaches the application of software engineering techniques in the information system life cycle. There is an emphasis on project management and formal analysis, design, implementation and evaluation techniques. Use of various software engineering analysis and design tools and techniques are covered: information gathering for defining system requirements, entity-relationship diagrams, data flow diagrams, data dictionaries, and prototyping. The course will also present current topics, such as extreme programming, rapid application development (RAD), and the capability maturity model (CMM). This course will provide hands-on practice with project management and systems development through exercises in PERT/CPM and the design and prototyping of inputs/outputs, data structures, program modules, and documentation. Prerequisite: IS 222 (or taken concurrently).

Course Objectives - The student who completes this course should know:

1. The traditional and RAD (Rapid Application Development) systems development methodologies.
2. Traditional analysis and design techniques: entity-relationship diagrams, data flow diagrams, and data dictionaries.
3. How to use prototyping in the analysis and design phases of systems development.
4. Project planning: defining the scope, purpose and activities of a project; setting up a project management web page.
5. PERT/CPM project management techniques, including the use of Microsoft Project software.
6. How to use a CASE tool (Oracle's Designer).

Examinations - There will be three exams. The exams will cover material from the textbook and lectures. The third exam is the final exam. It covers the material since the second exam and any material, such as systems modeling, that is studied throughout the semester. Exams will be a combination of multiple choice, short answer, and problems.

If you miss an exam due to illness, work, or a university-sponsored activity, you must provide proper notification to the instructor as soon as possible. If no valid excuse is provided the student will receive a score of zero for the missed exam.

Individual and Team Exercises and Quizzes - Teams will be assigned at the beginning of the semester and these teams will remain throughout the semester. There will be individual and team exercises given during the first half the semester to enable each student and each team to practice the techniques being taught. The team exercises will be done in class and must be turned in by the end of the class period, unless otherwise specified.

There will be some individual and team quizzes that cover concepts presented in the textbook and class. The individual quiz will always be given first, followed immediately by your team taking the same quiz. Everyone on the team gets the team score, as well as his/her individual quiz score, unless a team member is absent. A team member that is absent for more than one team quiz will receive team quiz points for a maximum of one team quiz--the first team quiz for which the student is absent.

Late individual exercises will be accepted but there will be a 10% penalty for each day an exercise is late. Note: An exercise due at the beginning of class will have a 5% penalty if it is turned in at any time later that same day. All individual exercises must be completed but exercises more than 10 days late will be worth zero points.

Note: A student will not receive a passing final grade until all assignments have been submitted, even if the late penalty reduces the points possible for an assignment to zero. All late assignment must be turned in by 5 p.m. Friday before the last week that classes are held (that's the last week classes are held, NOT exam week). Why are all assignments required even if an assignment may no longer receive any points? The reason is that assignments help you build a set of skills you'll continue

to use throughout this course, as well as in other courses. What you learn in this course is used extensively in the second semester of systems analysis and design (IS 450) and in the database class (IS475). So, skipping an assignment really isn't an option.

Individual Project and Group Project - Individual Project: There will be an individual project assignment near mid-semester. This project will give each student practice developing a system prototype before working in a team environment. The individual project will be to complete a prototype in MS Access, with associated design documents.

Group Project: There will be a group project your team will work on over approximately three weeks near the end of the semester. In addition to learning technical skills in this course, it is important for you practice these technical skills while working with colleagues as part of a systems analysis and design team. Being able to work effectively with others on a team project is essential to successful systems analysts and teamwork experience is quite important (this is something employers have mentioned often).

Peer Evaluation: At the end of the project, team members will complete confidential peer evaluations. These evaluations will be used in calculating each student's overall score for the project, so it is likely that team members won't receive the same score for their project.

Project Web Site: The group project will be posted on a project web site that is created and maintained by the team. By the end of the semester all the project material must be properly documented and organized on the project web site. Some project documents must also be printed and submitted to the instructor and the project prototype submitted through WebCT. The printed documents submitted to the instructor will remain with the instructor even after the completion of the course.

Recommendation: At the end of the group project, the entire project web site will be downloaded by the instructor. If you want a CD of your team's project, you can notify the instructor near the end of the semester. I recommend you keep a copy of your team's work. That way you have a complete record of what your team did and it will be a useful reference for future courses, such as IS 450, as well as something you can take to job interviews to illustrate the work you've completed during your studies.

Attendance Policy - Attendance is important to doing well in this class. Lecture, discussion, and exercises are an essential part of learning the concepts and skills in this course. If a student misses a class, it is up to the student to find out what was covered by talking to other students, getting someone's notes, and checking the class WebCT site. The student may get specific assignments from the instructor or ask the instructor specific questions after the students has reviewed the notes for the missed class. During the group project, attendance will be required because considerable in-class time will be given to teams to work on their project.

Class Procedures - The teaching method for this course will include lecture/discussion, in-class exercises, and homework assignments and a group project. All individual assignments are to be done independently.

Students with Disabilities - If you have, or believe you have, a disability and would benefit from accommodations, you may wish to self-identify. You can do so by providing documentation to the Services for Students with Disabilities (SSD) Office located at Garcia Annex (Phone: Voice 646-6840, TTY 646-1918). If you are already registered with the SDD Office and need accommodations please provide your Accommodation Memo from the SSD within the first two weeks of class.

If you have a condition that may affect your ability to exit safely from the premises in an emergency or that may cause an emergency during class, you are encouraged to discuss this in confidence with the instructor and/or the Coordinator for SSD. Call 646-3333 with any questions about the Americans with Disabilities Act (ADA) and/or Section of the Rehabilitation Act of 1973. All medical information will be held in strict confidence.

Scholastic Dishonesty - Scholastic dishonesty will not be tolerated. The penalty for dishonest behavior can range from receiving a zero for an assignment or exam to censure from the University.

Point Distribution and Grades - The points possible for this course will be approximately as follows:

	Estimated Pts	Est. % of Overall Grade
Exam 1	100	13%
Exam 2	100	13%
Final Exam	100	13%
Individual & Team Quizzes	100	13%
Individual & Team Exercises	120	16%
Individual Project	100	13%
Team Project*	<u>130</u>	17%
Total Points	750	

Note: All individual assignments must be completed. A student will not receive a passing final grade until all assignments have been submitted, even if the late penalty reduces the points possible for an assignment to zero. Completed assignments that are too late to receive points must still be turned in by noon of the Friday before the final week of classes.

* Each student's project score will be a combination of the team score for the project (70%) and an individual score (30%) based on team members' peer evaluations.

Grades will be assigned as follows:	90% through 100%	A
	80% through 89%	B
	70% through 79%	C
	60% through 69%	D
	Below 60%	F