University of Maryland, College Park
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Syllabus

Course	INFM613	LBSC 603
Section	0101	0101
Title	Systems Analysis and Design	Library Systems Analysis
Time & Place	Mondays, 6-8:45 p.m., HBK 2119	
Instructor	Dr. Ping Wang [pwang@umd.edu]	
Office hours	By appointment in Hornbake 2118B	
Prerequisite	INFM 603	

Description Contemporary information systems are extremely complex and varied. Consequently, developing effective and robust information systems call for a systematic analysis and planning effort on the part of system development teams. Systems analysis and design process spans the entirety of the information system lifecycle, which starts with the conception of the need for a specific information system and ends with the total replacement of the system with a next generation one. This course will introduce the systems analysis and design process in its entirety, and focus on each major step within the process. System analysis and design is still both an art and a science. The course will cover both the science and the art components by introducing essential tools that are used for systems analysis and design, and by offering perspectives that the students can transfer to team projects within the scope of the master's programs and to real life projects they will venture as information professionals after graduation.

Goals Upon completing the course, students will:
- Understand the nature and importance of the systems analysis and design process
- Identify and model basic business processes and requirements
- Design database structures based on business requirements
- Conceptualize and design basic user interfaces for communicating with systems
- Identify necessary stages and tools of software development for a given system design
- Plan implementation and support strategies for a given system
- Take part and satisfactorily perform in a systems analysis and design project team in a real-world setting.

Text Hoffer, J.A., J.F. George, and J.S. Valacich, *Modern Systems Analysis and Design*, 6th edition, Prentice Hall (ISBN-10: 0-13-608821-X; ISBN-13: 978-0-13-608821-9)
Book website: http://www.mypearsonstore.com/bookstore/product.asp?isbn=013608821X

Course Wiki http://infm613-lbsc603-2013spring.wikispaces.com
All course materials (except the textbook) and assignments will be posted in the course wiki.

Activity	Weekly lectures and team assignments provide for a common background and round out the schedule. This offering is built in particular around student team projects. Students will work in teams of five to undertake design studies of information services of their own choosing, as described further below.
Requirements	(i) <u>Class participation</u> Students are expected to participate actively in class for the benefit of all. This implies being well prepared for and contributing to the discussion of the week's readings. Those with prior background in the subject area are invited to share their knowledge with us as may be appropriate. Students are graded on a two-point scale for their participation in each session: two points are earned for very good participation; one point for satisfactory participation; no points for unsatisfactory participation (i.e., attending the class session but making insignificant or no contribution) or absence. Summed across all the sessions, class participation counts toward 20% of the course grade.
	(ii) <u>Team assignments</u> Four half class sessions (see course schedule below) will be dedicated to team assignments. Each student team will prepare a short presentation in the format of its own choosing. All teams should submit their works to the course wiki by 6 p.m. the day before the assignment is scheduled to be discussed in class. For instance, the first team assignment is due at 6 p.m. on Sunday, February 3. Each presentation should have materials for at least 10 minutes, but the length of the presentation may vary depending on the questions raised by the rest of the class and the instructor during and after the presentation. All team assignments will be presented and graded on a ten-point scale (with all team members receiving the same grade). Slides should be substantive and self-explanatory. Four assignments will count toward 25% of the course grade.
	(iii) <u>Team project</u> Each student team is to undertake a design study of a new or improved information service. Students are encouraged to go beyond the capabilities of today's technology and create new services or re-invent old services enabled by technologies expected to have important impacts in the next five to ten years. The projects should progress in parallel with the topical areas of the lectures and assignments. On February 25, each team should submit to the course wiki a one-page proposal to describe the project. The completed study will be presented orally to the class, in terms of what has been learned by exploring the design space. Each presentation should include a unifying vision for the service, how the service is embedded in the community using it, and various design features of the service (data, process, interface, etc.). Oral presentations will be limited to 25 minutes excluding discussion, and are scheduled for the last two class sessions. Additionally, 4 team project workshops (see schedule below) will be held in class to help teams make progress. The project will be graded based on professional criteria discussed in class. The project will count toward 25% of the course grade.
	(iv) <u>Familiarity test</u> It will be a closed-book test based on the readings and lectures. It will not be a comprehensive final examination. Rather, it will aim simply to assess the extent to which the student is now familiar with basic systems analysis and design concepts and terminology. The test will count toward 30% of the course grade.
Grading	Summarizing from above, student grades will be determined as follows:

Class participation	20%
Team assignments	25%
Team project	25%
Familiarity test	30%

Work completed late without a legitimate reason discussed with the instructor in advance will be given no higher than a "B" grade for the whole course.

Bonus credit As indicated in the course schedule below, six tutorials will be scheduled this semester. One or two students can teach a 30-mintute tutorial to earn bonus credit, which will move the student's final grade up by one slot (e.g., from A- to A, or from B+ to A-). Interested students should sign up in person at the first class meeting. Each student can sign up for teaching only one tutorial.

Honor code Students should abide by the University's Code of Academic Integrity. For details, please visit: www.shc.umd.edu/code.html.

Special needs Students with disabilities should inform the instructor of their needs at the beginning of the semester. Please also contact the Disability Support Services (301-314-7682 or www.counseling.umd.edu/DSS). DSS will make arrangements with the student and the instructor to determine and implement appropriate academic accommodations. Students encountering psychological problems that hamper their course work are referred to the Counseling Center (301-314-7651 or www.counseling.umd.edu) for expert help.

CourseEvalUM Participation in the evaluation of courses through CourseEvalUM is a responsibility that students hold as members of our academic community. Student feedback is confidential and important to the improvement of teaching and learning at the University. Please go directly to the website (www.courseevalum.umd.edu) to complete the evaluations at the end of the semester.

Course schedule

Session 1. January 28, 2013 *Introduction*	Readings: None Complete student profile on course wiki before class.
Session 2. February 4, 2013 *Software origins*	Readings: ○ Chapters 1 & 2 Team assignment 1
Session 3. February 18, 2013 *Project management*	Readings: ○ Chapter 3 Tutorial 1: Using Microsoft Project Team assignment 2
Session 4. February 25, 2013 *Planning*	Readings: ○ Chapters 4 & 5 Team assignment 3 **One-page team project proposal is due before class.**
Session 5. March 4, 2013 *Determining requirements*	Readings: ○ Chapter 6 Team assignment 4
Session 6. March 11, 2013 *Modeling process*	Readings: ○ Chapter 7 Tutorial 2: Drawing data flow diagrams with Microsoft Visio Mid-term course evaluation
March 18, 2013	**Spring Break**

Session 7. March 25, 2013 *Modeling data*	Readings: o Chapter 8 Tutorial 3: Drawing entity relationship diagrams Team project workshop
Session 8. April 1, 2013 *Designing databases*	Readings: o Chapter 9 Tutorial 4: Open source software development Team project workshop
Session 9. April 8, 2013 *Designing interfaces*	Readings: o Chapters 10 &11 Tutorial 5: Service-Oriented Architecture (SOA) and Software as a Service (SaaS) Team project workshop
Session 10. April 15, 2013 *Distributed & Internet Systems*	Readings: o Chapter 12 Tutorial 6: Big Data Systems Development Team project workshop
Session 11. April 22, 2013 *Implementation and Maintenance* *Project presentations*	Readings: o Chapters 13 & 14
Session 12. April 29, 2013 *Project presentations* *Course conclusion*	
Session 13. May 6, 2013 *Familiarity test*	

Updated January 27, 2013