University of Nevada, Las Vegas
Department of Management, Entrepreneurship, and Technology

MIS 762 Analysis, Modeling and Design
Fall 2016

Course Information:

> Course Title: Systems Analysis and Design
> Course No.:   MIS 762
> Lecture: in BEH 212
>   Mondays and Wednesdays 5:30pm – 6:45pm

Course Content and Learning Objectives:

The course will provide the student with an understanding of the systems analysis and software development process. The goal is to expose the student to various methodologies and techniques for the design and development of information systems, including structured and object-oriented methodologies. The course will also raise the awareness of possible pitfalls of the process and discuss emerging opportunities and new trends in software development. The course will also explore scenarios in which the adoption of ready-made systems should be preferred to custom application development (e.g., ERP systems). Upon successful completion of the course, you should be able to:

- Explain and apply the concepts associated with the analysis, design, and implementation of business information systems.
- Be able to assess how major issues related to software development, such as process maturity, reuse, and agile development can improve the software development process.
- Understand how systems analysis and design methods apply to the customization and implementation of commercial off-the-shelf systems, including ERP software.
- Understand systems thinking and ways that information technology can be used to enhance effectiveness of the individual and organizations.
- Plan and control the activities associated with an information system's project management, apply them in a team project, and communicate the results.

Materials:

- Required Textbook: Systems Analysis & Design – An Object-Oriented Approach with UML, Allen Dennis, Barbara Haley Wixom, David Tegarden, fifth edition, © 2015 John Wiley & Sons, Inc., ISBN 978-1-118-80467-4

- Class Notes handed out in class and available on course web site

- Diagramming Tools
  We will use diagramming software for the course project. However, its use will not be the primary focus of this class. You don't need to buy the software; instead you can access the VISIO software in the lab.

Grading Policy:

The course grade will be based on the overall weighted average as follows:

1. Midterm Exam 25%
2. Final Exam 25 %
3. Semester Project 30%
3. Advanced Topic Presentation 20%

A weighted score of 93+ is an A grade, 92 to 90 is an A- grade,
87 to 89 is a B+ grade, 83 to 86 is a B grade, 80 to 82 is a B- grade,
77 to 79 is a C+ grade, 73 to 76 is a C grade, 70 to 72 is a C- grade , etc.
Contingent on the overall class performance, the instructor maintains the right to adjust the scale.

Office Hours:

Office hours are scheduled on a regular basis (see the top of this syllabus). You may stop by during these office hours or you may ask questions by email. If you would like to see me outside the scheduled office hours, please make an appointment by email.

Assignment Schedule:

Below is a schedule of topics and assignments. You are expected to read the material prior to class to gain familiarity with the topic. The instructor reserves the option to make deviations from the schedule as and when necessary. Keep up to date on the course schedule. Don't get behind and don't miss class.

Week	Date	Topic	Chapter	Scheduled Due Dates
Week 1	8/29	Syllabus		
	8/31	Introduction	1	
Week 2	9/5	LABOR DAY – No Class		
	9/7	Project Management	2	Presentation Preferences Due (email)
Week 3	9/12			Project Group Assignments Due
	9/14			
Week 4	9/19	Requirements Determination	3	Presentation: Resistance to Change
	9/21			Project Milestone 1 Due
Week 5	9/26			Presentation: Capability Maturity Model Integration (CMMI)
	9/28	Bus. Proc.& Functional Modeling	4	
Week 6	10/3			Presentation: ERP System Adoption
	10/5	Exam Review		Present.: Software Vendor Selection
Week 7	10/10	Mid-Term Exam		
	10/12			Prsnt: S/w Development Outsourcing
Week 8	10/17	Web Campus-based instruction		
	10/19	Web Campus-based instruction		(Presidential Debate at UNLV)
Week 9	10/24			Presentation: Component-Based S/w Development
	10/26	Structural Modeling	5	
Week 10	10/31			Presnt: Agile Development /SCRUM
	11/2	Behavioral Modeling	6	
Week 11	11/7			Presentation: Service-Oriented Architecture (Web Services)
	11/9	Moving on to Design	7	Project Milestone 2 Due
Week 12	11/14			Presentation: IS Integration
	11/16	Class and Method Design Data Management Layer Design	8 9	
Week 13	11/21	HCI Layer Design	10	
	11/23	Web Campus-based instruction		
Week 14	11/28			Presentation: DevOps
	11/30	Construction	12	
Week 15	12/5	Installation and Operations	13	Project Milestone 3 Due
	12/7	Exam Review		
Week 16	Wed 12/14	Final Exam 6pm-7:30pm		

Semester Project:

The primary purpose of the project is to provide an opportunity for each student to apply the techniques learned in class in an actual systems development project. Four or five-person teams will be formed by the third week of the semester. Specific learning objectives include:

- project management
- requirements analysis
- systems design
- application development
- quality assurance (including testing)
- documentation

Groups will select their own projects. The instructor must approve the project selected. You may choose a real world problem (e.g., from the workplace of one of the group members) or come up with your own project.

Deliverables

Milestone 1: Project Proposal & Specifications. (10%)
A written proposal including background information and objectives. It will be evaluated on content, completeness, and the use of appropriate business writing style and good grammar.

The proposal will serve as a "contract" between you and the instructor and should include the following:

- Problem definition and analysis, description of company;
- systems request;
- feasibility analysis (e.g., technical, organizational, and economic)
- function point estimate
- work plan (i.e., time and cost estimates)
- requirements determination - describe the specific needs that motivated the project; i.e., how will this application help the organization attain specific objectives (incl. Analysis Plan and Interview Reports as applicable);

Milestone 2: Systems Requirements (10%)
- Revision of Milestone 1
- A formal, written presentation of the requirements analysis
- As-Is Organization
    o Use Case Diagram
    o Use Cases
    o Class Diagram
    o Sequence Diagrams (for each use case)

- Initial Design of To-Be Information System
  - Use Case Diagram
  - Use Cases
  - Class Diagram

Milestone 3: Systems Design (10%)
- Revision of Milestones 1 & 2
- Final Systems Design of To-Be Information System consisting of:
  - Use Case Diagram
  - Use Cases
  - Class Diagram
  - Sequence Diagrams (for each use case)
  - Behavioral State Machine Diagrams (for classes where it is applicable)
- User Interface Design
- Conversion Strategy

Advanced Topic Presentation:

Completion of this assignment involves independent research on one of several topics offered. Students will prepare a 20-30 minute presentation. The instructor will provide the teams with some papers on the topic that may be helpful to get started.

Each student should email the instructor his/her preferences before the class meeting time in the second week of the semester. Two-person teams (not identical with the semester project teams) will be assigned by the instructor based on the preferences submitted. Presentations are held throughout the semester (see schedule).

Each team should make the presentation power point file available to the other students. If the file is emailed to the instructor the day before the presentation, it will be made available on the course web page before the beginning of the class.

Presentation Topics:
- Resistance to Change
- Capability Maturity Model Integration (CMMI)
- ERP System Adoption
- Software Vendor Selection
- Software Development Outsourcing
- Agile Development / Extreme Programming / SCRUM
- Component-Based Software Development
- Service-Oriented Architecture (Web Services)
- Information Systems Integration
- DevOps

University Policies:

Academic Misconduct—Academic integrity is a legitimate concern for every member of the campus community; all share in upholding the fundamental values of honesty, trust, respect, fairness, responsibility and professionalism. By choosing to join the UNLV community, students accept the expectations of the Student Academic Misconduct Policy and are encouraged when faced with choices to always take the ethical path. Students enrolling in UNLV assume the obligation to conduct themselves in a manner compatible with UNLV's function as an educational institution.

An example of academic misconduct is plagiarism. Plagiarism is using the words or ideas of another, from the Internet or any source, without proper citation of the sources. See the *Student Academic Misconduct Policy* (approved December 9, 2005) located at: https://www.unlv.edu/studentconduct/student-conduct.

Copyright—The University requires all members of the University Community to familiarize themselves **with** and to follow copyright and fair use requirements. **You are individually and solely responsible for violations of copyright and fair use laws. The university will neither protect nor defend you nor assume any responsibility for employee or student violations of fair use laws.** Violations of copyright laws could subject you to federal and state civil penalties and criminal liability, as well as disciplinary action under University policies. Additional information can be found at: http://www.unlv.edu/provost/copyright.

Disability Resource Center (DRC)—The UNLV Disability Resource Center (SSC-A 143, http://drc.unlv.edu/, 702-895-0866) provides resources for students with disabilities. If you feel that you have a disability, please make an appointment with a Disabilities Specialist at the DRC to discuss what options may be available to you. If you are registered with the UNLV Disability Resource Center, bring your Academic Accommodation Plan from the DRC to the instructor during office hours so that you may work together to develop strategies for implementing the accommodations to meet both your needs and the requirements of the course. Any information you provide is private and will be treated as such. To maintain the confidentiality of your request, please do not approach the instructor in front of others to discuss your accommodation needs.

Religious Holidays Policy—Any student missing class quizzes, examinations, or any other class or lab work because of observance of religious holidays shall be given an opportunity during that semester to make up missed work. The make-up will apply to the religious holiday absence only. It shall be the responsibility of the student to notify the instructor **within** the first 14 calendar days of the course for fall and spring courses (excepting modular courses), or **within** the first 7 calendar days of the course for summer and modular courses**,** of his or her intention to participate in religious holidays which do not fall on state holidays or periods of class recess. For additional information, please visit: http://catalog.unlv.edu/content.php?catoid=6&navoid=531.

Transparency in Learning and Teaching—The University encourages application of the transparency method of constructing assignments for student success. Please see these two links for further information:

https://www.unlv.edu/provost/teachingandlearning

https://www.unlv.edu/provost/transparency

Incomplete Grades—The grade of I—Incomplete—can be granted when a student has satisfactorily completed three-fourths of course work for that semester/session but for reason(s) beyond the student's control, and acceptable to the instructor, cannot complete the last part of the course, and the instructor believes that the student can finish the course without repeating it. The incomplete work must be made up before the end of the following regular semester for undergraduate courses. Graduate students receiving "I" grades in 500-, 600-, or 700-level courses have up to one calendar year to complete the work, at the discretion of the instructor. If course requirements are not completed within the time indicated, a grade of F will be recorded and the GPA will be adjusted accordingly. Students who are fulfilling an Incomplete do not register for the course but make individual arrangements with the instructor who assigned the I grade.

Library—Students may consult with a librarian on research needs. For this class, the subject librarian is https://www.library.unlv.edu/contact/librarians_by_subject. UNLV Libraries provides resources to support students' access to information. Discovery, access, and use of information are vital skills for academic work and for successful post-college life. Access library resources and ask questions at https://www.library.unlv.edu/.

Tutoring and Coaching—The Academic Success Center (ASC) provides tutoring, academic success coaching and other academic assistance for all UNLV undergraduate students. For information regarding tutoring subjects, tutoring times, and other ASC programs and services, visit http://www.unlv.edu/asc or call 702-895-3177. The ASC building is located across from the Student Services Complex (SSC). Academic success coaching is located on the second floor of the SSC (ASC Coaching Spot). Drop-in tutoring is located on the second floor of the Lied Library and College of Engineering TEB second floor.

UNLV Writing Center—One-on-one or small group assistance with writing is available free of charge to UNLV students at the Writing Center, located in CDC-3-301. Although walk-in consultations are sometimes available, students with appointments will receive priority assistance. Appointments may be made in person or by calling 702-895-3908. The student's Rebel ID Card, a copy of the assignment (if possible), and two copies of any writing to be reviewed are requested for the consultation. More information can be found at: http://writingcenter.unlv.edu/.

Rebelmail—By policy, faculty and staff should e-mail students' Rebelmail accounts only. Rebelmail is UNLV's official e-mail system for students. It is one of the primary ways students receive official university communication such as information about deadlines, major campus events, and announcements. All UNLV students receive a Rebelmail account after they have been admitted to the university. Students' e-mail prefixes are listed on class rosters. The suffix is always @unlv.nevada.edu. **Emailing within WebCampus is acceptable.**

Final Examinations—The University requires that final exams given at the end of a course occur at the time and on the day specified in the final exam schedule. See the schedule at: http://www.unlv.edu/registrar/calendars.