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

MIS 762 Analysis, Modeling and Design
Fall 2020

Course Information

Course Title: Systems Analysis and Design
Course No.: MIS 762
Lecture: online on WebCampus, asynchronous

Course Content and Learning Outcomes

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** available on WebCampus

- **Diagramming Tools**
  We will need 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 any software; instead you can access use the free online version of Lucidchart (http://www.lucidchart.com) or any other UML-capable diagramming tool you chose.

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

1. Midterm Exam (40 pts.)
2. Semester Project
   i) Milestone 1 (20 pts.)
   ii) Milestone 2 (20 pts.)
   iii) Milestone 3 (40 pts.)
3. Advanced Topic Online Presentation (35 pts.)
4. Module Activities (Quizzes, Discussion, and Assignments) (30 pts.)
5. Introductions Online Discussion (5 pts.)
6. Professional Participation Requirement (10 pts.)

Total Course Score: 200 pts.

A score of 186+ is an A grade, 180-185.9 is an A- grade,
174 to 179.9 is a B+ grade, 166 to 173.9 is a B grade, 160 to 165.9 is a B- grade,
154 to 159.9 is a C+ grade, 146 to 153.9 is a C grade, 140 to 145.9 is a C- grade ,
134 to 139.9 is a D+ grade, 126 to 133.9 is a D grade, 120 to 125.9 is a D- grade,
below 120 is an F grade.

Contingent on the overall class performance, the instructor maintains the right to adjust the scale.

Office Hours
Office hours are held online via WebEx. Appointment must be made in advance for WebEx meetings during the office hours stated at the top of this syllabus. You can make appointments by clicking on the Office Hour link provided in the Questions Module of the Course pages on WebCampus.
 If you cannot see me during regular office hours and need to make an appointment at a different time, please contact me by email.

Assignment Schedule
Below is a schedule of topics and assignments. The instructor reserves the option to make deviations from the schedule as and when necessary. Deadlines posted on WebCampus supersede the schedule below.

Week	Date	Module / Topic	Chapter	Scheduled Due Dates for Group Projects and Advanced Topic Presentations
Week 1	8/24	Getting Started: Syllabus and other information Module 1: Intro to Systems Analysis	1	
Week 2	8/31	Module 2: Project Mgmt.	2	
	9/1			Module 1 Activity Due Presentation Preferences Due **Project Group Assignments Due**
Week 3	9/7	Module 2 continued		
Week 4	9/14	Module 3: Requirements Determination	3	
	9/15			Module 2 Activity Due *Presentation: Resistance to Change*
Week 5	9/21	Module 3 continued		
	9/22			**Project Milestone 1 Due** *Presentation: Capability Maturity Model Integration (CMMI)*
Week 6	9/28	Module 4: Business Process & Functional Modeling	4	
	9/29			Module 3 Activity Due *Presentation: ERP System Adoption*
Week 7	10/5	Module 4 continued		
	10/6			*Present.: Software Vendor Selection*
Week 8	10/12	Module 5: Structural Modeling	5	
	10/13	Behavioral Modeling		Module 4 Activity Due *Prsnt: S/w Development Outsourcing*
Week 9	10/19	Module 6: Behavioral Modeling	6	
	10/20			Module 5 Activity Due *Presentation: Component-Based S/w Development*
Week 10	10/26	Module 6 continued		
	10/27			*Presnt: Agile Development /SCRUM*
Week 11	11/2	Module 7: Moving on to Design & Class and Method Design	7 & 8	

	Date	Topic	Ch.	Assignments Due
	11/3			Module 6 Activity Due **Project Milestone 2 Due** *Presentation: Service-Oriented Architecture (Web Services)*
Week 12	11/9	Module 7 Continued		
	11/10			*Presentation: IS Integration*
Week 13	11/16			
	11/17			Module 7 Activity Due *Presnt: Mobile App Development*
	11/18	**Mid-Term Exam Available**		
	11/19			***Mid-Term Exam Due***
Week 14	11/23	Module 8: Data Mgmt. Layer Design & HCI Layer Design	9&10	
	11/24			*Presentation: DevOps*
Week 15	11/30	Module 9: Construction & Installation and Operations	12&13	
	12/1			Module 8 Activity Due **Project Milestone 3 Due**
Week 16	12/7			
	12/8			Module 9 Activity Due

Module Activity

The Module Activities are either Quizzes, Assignments, or Discussions on the materials covered in the respective module. They are due on the Tuesday after the conclusion of each module and reinforce what you will have learned in the current chapter(s).

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. Five to Six-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. (25% of Project Grade)
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

Milestone 2: Systems Requirements (25% of Project Grade)
- Revision of Milestone 1
- As-Is Organization
  - Use Case Diagram
  - Use Cases
  - Class Diagram
  - Sequence Diagrams (for each use case)
- To-Be Organization
  - Use Case Diagram
  - Use Cases
  - Class Diagram
  - Sequence Diagrams (for each use case)
- Initial Design of To-Be Information System
  - Use Case Diagram
  - Use Cases
  - Class Diagram

Milestone 3: Systems Design (50% of Project Grade)
- 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 an online 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. Four to Five person teams (not identical with the semester project teams) will be assigned by the instructor based on the preferences submitted. Presentations are due throughout the semester (see schedule).

Each team will make the presentation power point file available to the other students. Uploaded presentation files will be made available on WebCampus.

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
- Mobile App Development
- DevOps

Professional Participation Requirement

In the following courses, there will be a graded professional participation component:

• IS 210, 372, 380, 471, 475, 489, 491
• MIS 740, 744, 746, 760, 762, 764, 766, 781

Students enrolled in any of these courses will need to attend a minimum of 5 events during the semester. (Exemption: If you currently work full-time within the technology profession and have more than 3 years of experience, then your requirement is limited to 2 events. However, we would strongly encourage that you attend the networking events as it not only serves to bolster your networking opportunities but as a working professional, you can help to expand the network of your classmates. To request an exemption, you must email misgradprogram@unlv.edu at the beginning of each semester.)

Events

Events will be announced through emails and by professors. Such events include:

• [MIS Society workshops and events](#)
• [Graduate College workshops and events](#)
• [LBS Speaker Series events](#)
• [Career Services workshops and events](#)
• MIS sponsored speaking events
• UNLV internship/job fairs or networking events
• Student competition (double points are awarded for successfully placing in a national competition)

You may also attend events outside of UNLV. If you have any questions about whether an event can count towards participation, please email the Assistant Coordinator.

Because of COVID, you are encouraged to attend online events, rather than in-person events. MIS Society events are held online this semester. However, if you cannot find a sufficient number of online events, please email me at marcus.rothenberger@unlv.edu and I will be able to waive the requirement for this course, however, you may need to make separate arrangements for other courses.

Tracking
To get credit, you are required to submit this [Google Form](#) for each event you attend throughout the semester. (You are not required to submit this form for MIS Society sponsored events. At these events, you will be asked to sign in and this information will be provided to the Assistant Coordinator). The Assistant Coordinator will keep a record of your event attendance. At the end of the semester, the Assistant Coordinator will send the number of events you attended and the number of events you were required to the necessary professors. The professors will then evaluate your participation for grading.

Netiquette
Netiquette, a set of rules for behaving appropriately online. Your instructor and fellow students wish to promote a safe online learning environment. All opinions and experiences must be respected in the context of academic discourse. You are expected to comment, question, or critique and idea but you must not attack an individual.

Netiquette Guidelines:
a. Be aware of possible miscommunication when face-to face interaction is absent; compose your responses in a positive, supportive, and constructive manner
b. Do not dominate the discussion

c. Give other students the opportunity to join the discussion
d. Do not use offensive language
e. Present ideas appropriately
f. Do not capitalize all letters, doing so suggest shouting
g. Avoid using slang language
h. Share tips with fellow students
i. Keep an open mind and be willing to express even your minority opinion. Minority opinions must be respected
j. Think and edit before you push the send button
k. Do not hesitate to ask for feedback

Course Structure

This online course will be a blend of self-paced and group activities using WebCampus/Canvas and other Web sites. Activities will consist of discussion forums, email, assignments, and web posting.

This course is designed to be entirely delivered online. You will use your ACE account to login to the course on Webcampus. If you have not set up an ACE account yet, please contact the OIT Help Desk.

Technology Needed

Because this course is being delivered 100% online, you will need to have acceptable technology. For this course you will need:
1. A computer/laptop/tablet
2. A web browser that is up-to-date
3. Canvas requires the following browser components:
    i. Flash is required for media recording, streaming, viewing, and uploading.
    ii. The Java plug-in is required for several features in Canvas.
    iii. Adobe Acrobat Reader is required to view documents in your browser.

Campus Resources

1. Academic policies, visit the UNLV's academic integrity policies
2. To learn more about UNLV policies, go to the University's policy page
3. For all technical help, contact the Office of Information Technology / IT Help Desk with your questions. The telephone number is (702) 895-0777.
4. For support with WebCampus (powered by Canvas), review the Canvas Student Guide for guidance.
5. For supplemental resources, visit LinkedinLearning.com.

Online Activity Expectations

The key to a successful course is active participation from both the instructor and students. Active participation looks like:

1. Class Expectations
    i. Keep up with the material covered every week
    ii. Seek help when you do not understand a topic (Instructor, discussion boards)
2. Discussion Board
    i. Discussion assignments must be completed by the assignment due date and time
    ii. Responding in the (weekly/bi-weekly - change this to the correct frequency) discussion board with your thoughts, comments, and response to the discussion prompt.
    iii. Reading the responses on the discussion board
    iv. Responding to your classmates via the discussion board
    v. My role as the instructor is to moderate the discussion and provide guidance on the topic
    vi. Responses can be submitted in the form of a text, a video, a link to an online resource,a picture or any other medium you might deem appropriate. Try to use a variety of media to enrich the content and expand your technological knowledge
3. Assignments
    i. All assignments are to be submitted electronically in Canvas
    ii. Review the posted assignments ahead of time to be sure you understand the requirements
    iii. Be sure to pay close attention to deadlines (date and time), as late work is not accepted without a serious reason and instructor approval
    iv. Submit the assignments on time
    v. Due dates time zone is Pacific Standard time
4. Assessments (Quizzes, tests, etc.)
    i. Quizzes in this class will be open book
    ii. Exams in this class will be closed book
    iii. Respondus Monitor will be used for the exams, therefore you will need a webcam or comparable video recording device

University Policies

Public Health Directives Face coverings are mandatory for all faculty and students in the classroom. Students must follow all active UNLV public health directives while enrolled in this class. UNLV public health directives are found at https://www.unlv.edu/coronavirus/health-requirements. Students who do not comply with these directives may be asked to leave the classroom. Refusal to follow the guidelines may result in further disciplinary action according to the UNLV Code of Student Conduct, https://www.unlv.edu/sites/default/files/page_files/27/StudentConduct-Code.pdf, including being administratively withdrawn from the course.

Academic Misconduct Academic integrity is a legitimate concern for every member of the University community. We 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 to always take the ethical path whenever faced with choices. Students enrolling at UNLV assume the obligation to conduct themselves in a manner compatible with UNLV's educational mission. An example of academic misconduct is plagiarism. Plagiarism is using the words or ideas of another person, from the Internet or any other source without proper citation of the source(s). See the Student Conduct Code, https://www.unlv.edu/studentconduct/student-conduct.

Auditing Classes Auditing a course allows a student to continue attending the lectures and/or laboratories and discussion sessions associated with the course, but the student will not earn a grade for any component of the course. Students who audit a course receive the same educational experience as students taking the course for a grade, but will be excused from exams, assessments, and other evaluative measures that serve the primary purpose of assigning a grade.

Classroom Conduct Students have a responsibility to conduct themselves in class and in the libraries in ways that do not interfere with the rights of other students to learn, or of instructors to teach. Use of electronic devices such as pagers, cellular phones, or recording devices, or potentially disruptive devices or activities are only permitted with the prior explicit consent of the instructor. The instructor may rescind permission at any time during the class. If a student does not comply with established requirements or obstructs the functioning of the class, the instructor may initiate an administrative withdrawal of the student from the course.

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 copyright policy information is available at https://www.unlv.edu/provost/copyright.

Disability Resource Center (DRC) The UNLV Disability Resource Center (SSC-A, Room 143, https://www.unlv.edu/drc, telephone 702-895-0866) provides resources for students with disabilities. Students who believe that they may need academic accommodations due to injury, disability, or due to pregnancy should contact the DRC as early as possible in the academic term. A Disabilities Specialist will 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.

Final Examinations The University requires that final exams given at the end of a course occur on the date and at the time specified in the Final Exam schedule. The Final Exam schedule is typically available at the start of the semester, and the classroom locations are available approximately one month before the end of the semester. See the Final Exam Schedule, https://www.unlv.edu/registrar/calendars.

Identity Verification in Online Courses All UNLV students must use their Campus-issued ACE ID and password to log in to WebCampus-Canvas.

UNLV students enrolled in online or hybrid courses are expected to read and adhere to the Student Academic Misconduct Policy, https://www.unlv.edu/studentconduct/misconduct/policy, which states that "acting or attempting to act as a substitute for another, or using or attempting to use a substitute, in any academic evaluation or assignment" is a form of academic misconduct. Intentionally sharing ACE login credentials with another person may be considered an attempt to use a substitute, and could result in investigation and sanctions, as outlined in the Student Academic Misconduct Policy.

UNLV students enrolled in online courses are also expected to read and adhere to the Acceptable Use of Computing and Information Technology Resources Policy, https://www.it.unlv.edu/policies/acceptable-use-computing-and-information-technology-resources-policy, which prohibits sharing university accounts with other persons without authorization.

To the greatest extent possible, all graded assignments and assessments in UNLV online courses should be hosted in WebCampus-Canvas or another UNLV-managed platform that requires ACE login credentials for access.

Incomplete Grades The grade of "I" (Incomplete) may be granted when a student has satisfactorily completed three-fourths of course work for that semester/session, but cannot complete the last part of the course for reason(s) beyond the student's control and acceptable to the instructor, and the instructor believes that the student can finish the course without repeating it. For undergraduate courses, the incomplete work must be made up before the end of the following regular semester. 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 period indicated, a grade of "F" will be recorded, and the student's GPA will be adjusted accordingly. Students who are fulfilling an Incomplete grade do not register for the course, but make individual arrangements with the instructor who assigned the "I" grade.

Library Resources Librarians are available to consult with students on research needs, including developing research topics, finding information, and evaluating sources. To make an appointment with a subject expert for this class, please visit the Libraries' Research Consultation website, https://guides.library.unlv.edu/appointments/librarian. You can also ask the library staff questions via chat and text message at https://ask.library.unlv.edu/.

Missed Classwork Any student missing class, quizzes, examinations, or any other class or laboratory work because of observance of religious holidays will be given an opportunity during that semester to make up the missed work. The make-up opportunity will apply to the religious holiday absence only. It is the responsibility of the student to notify the instructor within the first 14 calendar days of the course for Fall and Spring courses (except for modular courses), or within the first 7 calendar days of the course for Summer and modular courses,

of their intention to participate in religious holidays which do not fall on state holidays or periods of class recess. For additional information, please visit the Missed Work policy, under Registration Policies, on the [Academic Policies](https://catalog.unlv.edu/content.php?catoid=29&navoid=7326) webpage, https://catalog.unlv.edu/content.php?catoid=29&navoid=7326.

In accordance with the policy approved by the Faculty Senate regarding missed class time and assignments, students who represent UNLV in any official extracurricular activity will also have the opportunity to make up assignments, provided that the student provides official written notification to the instructor no less than one week prior to the missed class(es).

The spirit and intent of the policy for missed classwork is to offer fair and equitable assessment opportunities to all students, including those representing the University in extracurricular activities. Instructors should consider, for example, that in courses which offer a "Drop one" option for the lowest assignment, quiz, or exam, assigning the student a grade of zero for an excused absence for extracurricular activity is both contrary to the intent of the Faculty Senate's policy, and an infringement on the student's right to complete all work for the course.

This policy will not apply in the event that completing the assignment or administering the examination at an alternate time would impose an undue hardship on the instructor or the University that could be reasonably avoided. There should be a good faith effort by both the instructor and the student to agree to a reasonable resolution. When disagreements regarding this policy arise, decisions can be appealed to the Department Chair/School Director, College/School Dean, and/or the Faculty Senate Academic Standards Committee.

For purposes of definition, extracurricular activities may include, but are not limited to: academic recruitment activities, competitive intercollegiate athletics, fine arts activities, liberal arts competitions, science and engineering competitions, and any other event or activity sanctioned by a College/School Dean, and/or by the Executive Vice President and Provost.

Rebelmail Rebelmail is UNLV's official email system for students and by University policy, instructors and staff should only send emails to students' Rebelmail accounts. Rebelmail is one of the primary ways in which students receive official University communications, information about deadlines, major Campus events, and announcements. All UNLV students receive a Rebelmail account after they have been admitted to the University. Emailing within WebCampus-Canvas is also acceptable.

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, please visit the [ASC website](https://www.unlv.edu/asc), https://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 SSC A, Room 254. Drop-in tutoring is located on the second floor of the Lied Library, and on the second floor of the College of Engineering building (TBE A 207).

UNLV Writing Center One-on-one or small group assistance with writing is available free of charge to UNLV students at the [Writing Center](https://writingcenter.unlv.edu/), https://writingcenter.unlv.edu/, located in the Central Desert Complex, Building 3, Room 301 (CDC 3–301). Walk-in consultations are sometimes available, but students with appointments receive priority assistance. Students may make appointments in person or by calling the Center, telephone 702-895-3908. Students are requested to bring to their appointments their Rebel ID Card, a copy of the instructions for their assignment, and two copies of any writing they have completed on their assignment.

Diversity Statement As an institution of higher learning, UNLV represents a rich diversity of human beings among its faculty, staff, and students, and is committed to aspiring to maintain a Campus environment that values that diversity. Accordingly, the University supports understanding and appreciation of all members of its community, regardless of race, sex, age, color, national origin, ethnicity, creed, religion, disability, sexual orientation, gender, gender identity, marital status, pregnancy, genetic information, veteran status, or political affiliation. Please see [University Statements and Compliance](https://www.unlv.edu/about/statements-compliance), https://www.unlv.edu/about/statements-compliance.

A successful learning experience requires mutual respect and trust between the students and the instructor. Accordingly, the instructor asks that students be willing to listen to one another's points of view, acknowledging that there may be disagreements, keep discussion and comments on topic, and use first person, positive language when expressing their perspectives.