

School of Information & Library Science
University of North Carolina, Chapel Hill
INLS 382-003 Information Systems Analysis & Design
Spring 2023

Time: Thursday – 5:45-8:30 pm

Instructor: Prithima Reddy Mosaly (prithimamosaly@bacteam.com)

Instruction Mode: Remote only-synchronous via zoom, meeting ID:

Office Hours: T/Th: 5:00 -5:45 pm. I'll also be available to schedule in-person, Google Hangouts, or Skype calls if required with reasonable notice.

Phone: 732-604-4465 (cell)

Course Material

1. “Systems Analysis and Design in a Changing World” – Satzinger, Jackson, Burd. 6th Edition 2012. The pdf version is available in Resources on the Sakai course site.
2. “Systems Analysis and Design” - Tilley, Scott, 12th Edition, 2021. The pdf version is available in Resources on the Sakai course site.
3. Assigned reading material, resources, and selected videos for this course will also be posted on Sakai.

OVERVIEW

The focus of this course is on studies of specifications of the information systems development process. Students will become familiar with a set of widely used techniques, methods, and tools for designing and improving information systems. Systems analysis and design is not primarily a technical process. It is more a human process, requiring technical, management, team development, and interpersonal skills

Learning Objectives

1. Develop an understanding of the role of information systems in modern organizations.
2. Become familiar with a variety of information systems analysis and problem-solving approaches
3. Cognitive skills (thinking and analysis). - Solve a wide range of problems related to the analysis, design, and construction of information systems - Analysis and Design of systems of small sizes
4. Continue the development of your professional skills, such as technical writing, and working with clients.

GRADING

Grades for all assignments will be returned via Sakai. Individual assignment grades will combine to determine your final semester grade. Semester grades will follow the standard UNC grading system as outlined by the [Office of the University Registrar](#). The grading scale will be curved, with the highest grades reserved (as outlined by the Registrar) for those with "the highest level of attainment that can be expected."

Your grade for this course will be based on Quizzes/individual assignments, mid-term, team projects, and participation. The approximate breakdown within those categories is as follows:

Quizzes – 20%

Assignments – 15%

Final exam – 20%

Active Participation – 10%

Team Project – 35%

TIME REQUIREMENTS:

If this course were offered on campus, you would be in class for 2.5 hours/week plus travel time. The online version is no different in terms of expectations for your involvement. This is an active online course that requires 3 hours of your time each week in addition to the time it takes you to read the required materials, watch the videos, and complete the assignments. That means that you need to plan to spend a minimum of 6 hours every week up to 9-10 hours a week) on activities related to this course.

RESOURCES

Visio Model Drawing Software: You will need a graphics tool for drawing models for several assignments. Microsoft Visio provides templates for the UML models we'll be drawing, as well as many other useful features. It is also available for free to students enrolled in this class. [Click here to learn more](#), or contact the SILS IT Help Desk.

ASSIGNMENTS

Format Requirements for your Assignments

All assignments (group and individual) must be prepared and submitted electronically as PDF files via Sakai. For group assignments, only one team member should submit the assignment to Sakai. In addition, the assignment must have the required header on the first page. If that header is missing, points will be deducted from your assignment. For detailed instructions, including the required header, please refer to the "SubmittingAssignments.pdf" document posted to the Resources section of Sakai.

Digital Drawings for All Models

Many of the homework assignments for this course involve the creation of models to represent information systems from various perspectives. All models submitted as part of either group or

individual assignments must be drawn using a computer program. Hand-drawn models are not acceptable. See the links above (under Resources) to learn more about what software is available to help you draw your models.

Electronic Submission via Sakai

All assignments must be submitted electronically via Sakai. Sakai will record the time of your submission, and the time recorded by Sakai will be used to determine if a submission was turned in on time.

COURSE DESIGN APPROACH

Systems Analysis is all about problem-solving.

- What is the information system doing now?
- What should it be doing?
- What needs to change to make it do the right thing?
- How can we best implement the changes?

These are the fundamental questions whether you're fixing a broken system, adding new functionality to an existing system, or designing an entirely new system. The purpose of this course is to help you gain the knowledge, tools, and skills you need to answer these questions and design effective information systems.

The material we cover includes the concepts that help explain information systems and people's interaction with them, tools and techniques for analysis and design, and best practices for systems analysis projects. Readings include research articles, case studies, and documentation for specific modeling techniques. A major part of the work for this class is analyzing an information system problem and designing a solution for a real client. This group project gives real-life experience in information system problem-solving. Individual assignments provide additional practice on specific techniques.

Your work for this class falls into 3 categories: (1) preparation for class, (2) in-class activities, and (3) individual and group assignments.

Preparation

The schedule describes what you should do to prepare for each class meeting. Typically, this involves readings from your textbook or other sources linked to the schedule.

Your preparation for each class meeting is the key to getting the most out of each class's activities. It is therefore essential that you complete the assigned readings before class. As you read, think about what interests/surprises/informs/challenge you. Consider what questions I might ask about the material, or what questions you will bring to our discussion. Be prepared to ask--don't assume that I'll answer an unasked question.

(Remote) Class Activities

Class meetings will typically consist of 3 sections:

- Business: operational questions, assignments, and other administrative issues.
- Instruction: an overview of the material for the day, including examples. This is also your opportunity to ask questions about the assigned readings.
- Activities: discussions and practice exercises, in small groups or as a class.

Assignments

Individual assignments will provide more opportunities for practicing specific skills, and let you demonstrate what you have learned. Team assignments are the deliverables for your semester project, which provides you with the opportunity to work on a larger systems analysis effort.

PROJECTS SELECTION

Students will form teams and each team will work on a systems analysis and design project. This project is an integral part of the course since it allows students to apply the concepts, methodologies, and tools in the context of a real-world application.

Each team will select a real-world application during the first week of the course. The application/system may come from the team's collective work experience. The following are important guidelines for selecting a system.

- The system must offer good potential for systems analysis work. Indicators for such potential are: problems/deficiencies with the current information systems in the organization; unfulfilled information needs; and new information requirements (e.g. as a result of a new product/service in response to competition and a changing environment).
- Each team must identify key users in the target organization. These users will be the source for most of the information that the team needs to successfully perform systems analysis. Therefore, it is important to consider a user's commitment and involvement with the project. Accessibility to information and the user are important considerations.
- The size and scope of the application/system must be manageable so that the project work would be completed by the end of the semester.

PROJECT MILESTONES

Each team will submit a Problem Statement in Milestone #1. I will review the problem statement and provide each team feedback, if necessary, the proposal will be revised and modified. I will continue to be the project manager and review each team's progress on the project. As quality assurance, I will review the team's documentation for completeness and accuracy. The project will be divided into milestones. Milestones are due on the dates indicated in the course schedule. Additionally, I will be asking for status updates periodically.

There are penalties for late milestones. There are four milestones in the form of four mini projects:

Mini project #1: Problem Statement

Mini project #2: Information gathering

Mini project #3: Analysis - Systems Modeling: Draft Models, proposed system design (prototype), and Testing

Mini project #4: Final specs and Presentation

Participation

Class participation is a key element of this course. All students are expected to come to class prepared to be engaged, to participate in all class exercises, and to contribute to group discussions. In addition:

- Be on time for class.
- If you know in advance that you will miss a class, arrive late to class, or leave early from class, please let me know ahead of time.
- If you miss class unexpectedly, please let me know why you were absent before the next class meeting.
- Repeated absences or late arrivals will negatively impact your class participation grade.
- If you don't understand something from class, **ask questions!** You can ask in class, you can stop by my office during office hours, or you can make an appointment to meet with me.
- "Quality is better than quantity." Class participation is part of your grade for this course. However, there are many ways to participate.

Assignments

Assignments are due by the start of class on the day they are due unless otherwise specified. For assignments that are due on days when class is not scheduled, they must be submitted by the normal class starting time (even though the class is not meeting) unless otherwise specified.

The required format for your assignments, as well as other submission tips, can be found in the "SubmittingAssignments.pdf" document posted to the Resources section of Sakai.

Assignments are to be submitted electronically using [Sakai](#). Sakai enforces the late policy described below. Therefore, be sure you submit your assignment early to avoid last-minute technical problems.

Late assignments will be penalized 10% for each day late, up to a maximum of three days. A "day" here refers to a 24-hour period, or fraction thereof, after the due date. For example, a late assignment turned in 25 hours late will be penalized as two days late. No assignments will be accepted if more than 72 hours (3 days) late.

Start early and ask questions. Many assignments may turn out to be more time-consuming than expected. It is strongly suggested that you start working on assignments as soon as they are assigned. In this way, you'll have time to ask questions and complete your assignment before the due date.

Exceptions due to special circumstances will be considered on a case-by-case basis. When deemed appropriate, limited extensions may be granted. However, be sure to inform the instructor AS SOON AS POSSIBLE should you require special accommodation. If a problem is known in advance, then the instructor should be told before it occurs. Exceptions are much less likely to be provided if requests for accommodation are not made in a timely fashion.

Due Dates

All due dates are posted in the class schedule. Here is the high level topics and due dates.

Activity	Topics	Points (% of total grade)	Due Dates
Assignments			
1	Running Cases: Sandia Medical Devices (Satzinger Chapter 2, Page 65)	100 (5%)	1/24/2023
2	Running Cases: Sandia Medical Devices (Satzinger Chapter 3, Page 89)	100 (5%)	2/7/2023
3	Running Cases: Sandia Medical Devices (Satzinger Chapter 5, Page 149)	100 (5%)	2/28/2023
Quizzes			
1	Content covered in classes 1-7	100 (10%)	2/28/2023
2	Content covered in classes 8-11	100 (10%)	4/4/2023
Mini Projects			
1	Problem Definition*	100 (5%)	1/31/2023
2	Information Gathering Plan	100 (10%)	2/21/2023
3	Draft Models and design prototypes (1**&2)	100 (20%)	3/7/2023 & 3/28/2023
4	Presentation and Final Specs		
Final Presentation			4/18/2023 & 4/25/2023
Final Spec	Final project submission and Team evaluation	100 (10%)	5/5/2023
Final Exam	Comprehensive	100 (20%)	5/5/2023 @7:00pm

* - Individual submission (assignment)

** - Ungraded

Academic integrity and Diversity

UNC-Chapel Hill has had a student-administered honor system and judicial system for over 100 years. Because academic honesty and the development and nurturing of trust and trustworthiness are important to all of us as individuals, and are encouraged and promoted by the honor system, this is a most significant University tradition. You are responsible for being familiar with the UNC-Chapel Hill [Honor System](#).

- If your team is having difficulty with some aspects of your project, please come to see me. One of the educational outcomes of this class should be an increase in your effectiveness in getting advice from more experienced colleagues.
- The Honor Code, which prohibits giving or receiving unauthorized aid in the completion of assignments, is in effect in this class. The Instrument of Student Judicial Governance gives examples of actions that constitute [academic dishonesty](#). There are also some specific guidelines for this class:
 - You may give and receive assistance regarding the use of hardware and software.
 - You are welcome to work together on class preparation; discussing articles, walking through examples, working on exercises, etc. You may also ask your classmates for clarification of class notes.
 - All work you submit should be your own.
 - Individual homework assignments are to be done individually. You may consult the course readings and slides, your notes, and even other print or web sources. (Keep in mind, however, that what you find in other sources may not be consistent with what I want you to do.) You may not consult your classmates or other people; all questions should be addressed to me.
 - Team assignments are to be done as a team, with the team taking responsibility for all products. Work on the project should be distributed equitably among team members. I expect team members to discuss, consult, and even debate with each other about the project throughout the term.

In support of the University's diversity goals and the mission of the School of Information and Library Science, SILS embraces diversity as an ethical and societal value. We broadly define diversity to include race, gender, national origin, ethnicity, religion, social class, age, sexual orientation, and physical and learning ability. As an academic community committed to preparing our graduates to be leaders in an increasingly multicultural and global society we strive to:

- Ensure inclusive leadership, policies, and practices;
- Integrate diversity into the curriculum and research;
- Foster a mutually respectful intellectual environment in which diverse opinions are valued;
- Recruit traditionally underrepresented groups of students, faculty, and staff; and
- Participate in outreach to underserved groups in the State.

The statement represents a commitment of resources to the development and maintenance of an academic environment that is open, representative, reflective, and committed to the concepts of equity and fairness.

