

INLS 582:002 System Analysis (Spring 2020)

- Dr. Selina Sharmin

01/08/2020	Class 1	<p>Introduction and set up for the semester</p> <ul style="list-style-type: none"> • Check Sakai access • Review course syllabus, requirements, and policies <p>Intro to Systems Analysis & Information Systems -- what are they?</p>	
01/15/2020	Class 2	<p>The Systems Development Life Cycle</p> <p>Readings:</p> <ul style="list-style-type: none"> • Beyer & Holtzblatt, <ul style="list-style-type: none"> - Chapter 1- Introduction - Chapter 2 -User Data Drives Design <p>Case Study 1</p> <ul style="list-style-type: none"> • Beyer & Holtzblatt, <ul style="list-style-type: none"> - Chapter 5, From Data to Insight: Contextual Design Models • Case Study 1: Batra, D., Xia, W., VanderMeer, D. & Dutta, K. (2010). Balancing agile and structured development approaches to successfully manage large distributed software projects: A case study from the cruise line industry. <i>Communications of the Association for Information Systems</i>, 27, Article 21, 379-394. 	Case Study 1 is assigned and due prior to the next class.
01/22/2020	Class 3	<p>Problem Definition, Feasibility Study</p> <p>Readings:</p> <ul style="list-style-type: none"> • Davis, W. (1999). The problem statement. In W. Davis & D. Yen, <i>The Information System Consultant's Handbook: Systems Analysis and Design</i>. Boca Raton: CRC Press. Chapter 12, 87-90. • Davis, W. (1999). The feasibility study. In W. Davis & D. Yen, <i>The Information System Consultant's Handbook: Systems Analysis and Design</i>. Boca Raton: CRC Press. Chapter 13, 91-96. <p>Contextual Inquiry and Information Gathering</p> <p>Readings:</p> <ul style="list-style-type: none"> • Swan, L., Taylor, A., & Harper, R. (2008). Making place for clutter and other ideas of home. <i>ACM Transactions on Computer-Human Interaction</i>, 15(2), Article 9. • Beyer & Holtzblatt, Ch. 3, Principles of Contextual Inquiry. <p>Intro to Project Charter Problem definition assignment</p>	Case study 1 discussion Problem definition is assigned and due prior to the next class (follow the format page 89, table 12.1).
01/29/2020	Class 4	<p>Contextual Inquiry; Information Gathering – Cont. Interpretation, Scenarios and Personas</p> <p>Readings:</p> <ul style="list-style-type: none"> • Beyer & Holtzblatt <ul style="list-style-type: none"> - Chapter 4, The Interpretation Session. - Using Contextual Data to Write Personas, 188-190. 	Case Study 2 is assigned and due prior to the next class. Problem definition discussion.

		<ul style="list-style-type: none"> • Case Study 2: Gellatly, A., Hansen, C., Highstrom, M & Weiss, J. (2010). Journey: General Motors' move to incorporate contextual design into its next generation of automotive HMI designs. <i>Proceedings of the Second International Conference on Automotive User Interfaces and Interactive Vehicular Applications</i>, 156-161. 	
02/05/2020	Class 5	Guest Lecture	
02/12/2020	Class 6	Intro to Lean Six Sigma – Value Stream Mapping and Risk Assessment Project selection and team organization Information gathering plan assignment	Case Study 2 discussion. Information Gathering Plan is assigned and due in next two weeks.
01/19/2020	Class 7	Affinity Diagram Readings: • Beyer & Holtzblatt, - Chapter 6, The Affinity Diagram. Traditional Models Readings: • Beyer & Holtzblatt - Chapter 8, Traditional Contextual Design Models.	Information Gathering Plans – group presentation
02/26/2020	Class 8	Experience Models Readings: • Beyer & Holtzblatt - Chapter 7, Building Experience Models.	Update project, interviews
03/04/2020	Class 9	Consolidation and Visioning • Beyer & Holtzblatt, Ch. 10 The Bridge from Data to Design • Beyer & Holtzblatt, Ch. 11 Ideation: Visioning and the Cool Drilldown	Update project
03/11/2020		Spring Break	
03/18/2020	Class 10	Guest lecture 2	Update project
03/25/2020	Class 11	Project preparation	Update project
04/01/2020	Class 12	Project preparation	Update project
04/08/2020	Class 13	Draft presentation and progress report.	
04/15/2020	Class 14	Project preparation	
04/22/2020	Class 15	Final presentation and progress report.	
04/29/2020	Class 16	Final report and team evaluation due.	

Systems Analysis (INLS 582-002)

This course, offered by the UNC School of Information and Library Science, will introduce the basic concepts underlying systems analysis, focusing on contextual inquiry/design and data modeling, and the application of those analysis techniques in the analysis and design of organizational information systems. We will also explore Lean Six Sigma thinking to aid system analysis and contextual inquiry.

Course objectives include:

- Develop an understanding of the role of information systems in modern organizations.
- Become familiar with a variety of information systems analysis and problem-solving approaches.
- Gain practical experience with information systems analysis, working as part of a project team.
- Apply Lean Six-Sigma thinking for system analysis and problem solving.
- Continue the development of your professional skills, such as technical writing, working with clients.

Time: Wednesday 5:45 pm - 8:30 pm

Place: Manning Hall, Room 001

Credits: 3 Hours

Instructor: Dr. Selina Sharmin

Office Hours: 30 minutes before class or at HSL 333E Tuesdays 11am - 12pm or make an appointment.

Email: sselina@email.unc.edu

The required textbook for this course is the following: Beyer, H. & Holtzblatt, K. (2nd edition). Contextual Design: Defining Customer-Centered Systems. San Francisco: Morgan Kaufmann.

Sakai: We will use Sakai in this course to assign and submit assignments, return grades, share lecture notes, and provide access to other class resources. Please be sure that you can access the Sakai site for this course. You can reach Sakai by visiting <https://www.unc.edu/sakai/>. In addition to the textbook, we'll read articles or selections from a variety of other sources.

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." Note that the threshold for an "H" (for High Pass) for graduate students requires exceptional performance, beyond what would be considered "A" work on the undergraduate grading scale.

Your grade for this course will be based on individual assignments, a team project, and participation. The approximate breakdown within those categories is as follows:

- 40% - Team project
- 20% - Information Gathering Plan
- 20% - Project draft models
- 10% - Problem definition
- 10% - Case study assignments

Resources

- Visio Model Drawing Software: You may 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.

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.

Digital Drawings for All Models

Many of the 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 and 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 theories 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 from 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 prior to class. As you read, think about what interests/surprises/informs/challenges 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.

In-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 practices exercises, in small groups or as a class.

Assignments

Individual assignments will provide more opportunities for practicing specific skills, and let you demonstrate to me 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.

Helpful Hints

- Plan ahead! Success in this course requires the same kind of project management that your team project does.
- Coordinate the work schedule for this class with the schedules for your other classes, work, and other activities. You are likely to have many deadlines toward the end of the semester, so it's important for you to keep up.
- Give yourself plenty of time to prepare for each class. If you are not prepared for class, you will not be able to fully participate in (and benefit from) the in-class activities.
- There is often more than one good or correct way to develop a model or design for a given situation. There are always many more bad and incorrect ways to do so!

By the end of the course, I hope you will have learned the fundamentals of systems analysis and design, developed an arsenal of tools and techniques as well as the knowledge of when to use them, and produced a proposal that will solve an information problem for a real client. Information system problems are pervasive in our society: what you learn here may help you in many aspects of your future endeavors.

Policies

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, write email, 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 class is not meeting) unless otherwise specified.

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 a special accommodation. If a problem is known about 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.

Office Hours

Those with questions about course material, having trouble with assignments, or seeking any other kind of assistance related to class are encouraged to meet with the instructor.

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 aspect 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 home work 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.