INLS 382-002 Fall 2019 Syllabus

Overview

Analysis of organizational problems and how information systems can be designed to solve those problems. Application of database and interface design principles to the implementation of information systems.

The details

Course: INLS 382-001

Semester: Spring 2020

Time: 5:45-8:30 p.m., Tuesday

Location: Manning 014

Instructor: Ron T. Brown, Ph.D (ront@email.unc.edu)

Textbook and readings: "Software Requirements, Third Edition" by Karl Wiegers and Joy Beatty. Additional readings are required as posted on the course website.

Optional textbook: "Agile Estimating and Planning" by Mike Cohn. A print copy is available on reserve in the SILS Library.

Online course environment: Sakai (I sometimes say Blackboard, I apologize for this)

Office hours: By appointment. Quickest way to reach me is by email followed by virtual apt via Zoom/Skype. Generally within the hours of 5pm-9pm

Objectives

At the conclusion of the course, you should have a good understanding of how to approach the task of mapping an information technology solution onto an organizational information requirement. You will not be a seasoned systems analyst; that's something that comes with time and experience. However, you'll be able to be an active participant for your organization on a systems design team, or able to make more informed decisions from a management perspective.

After completing this course you should be able to:

- Understand the role information has in solving business information problems;
- Identify and document system requirements for projects in various settings.

- Decompose complex systems into simpler components for analysis and modification.
- Analyze the project requirements for these systems in context, working with users to identify constraints and opportunities.
- Apply several project management and systems design techniques to implement new systems as well as to modify existing systems.

Grading

Requirement	Portion of grade
Classroom activity	13%
Individual assignment (3)	27%, (9% each)
Group project assignments (1)	23%
Project presentations and critique	7%
Final exam	30%

Grades will be posted in Sakai.

Course grade	Minimum %
A	95%
A-	90%
B+	87%
B	83%
B-	80%
C+	77%
C	73%
C-	70%
D+	67%
D	63%
F	less than 63%

Assignments

Individual assignments

Throughout the semester I will assign three individual assignments, which will be posted to Sakai. More instructions for these assignments will be provided after completing the unit to which the assignment is related.

Group project assignments

Throughout the semester groups will conduct a larger scoped project related to a system or organization. This project will have updates throughout the semester. This will culminate in a class presentation.

Classroom activity

- Classroom activity consists discussion and attendance. If you do not attend you cannot participate. I do take attendance for every face-to-face class.
- Our classes will rely heavily on classroom discussion and group activities. You will receive credit for enhancing your colleagues' classroom experience in some way during the week.
- You should show up to class on time and stay until class is dismissed.

Exams

The final exam will include a mix of questions (multiple choice, essay, etc.) based on the readings and classroom activities. The final exam will be a take home exam released as normal assignments are using Sakai.

Policies

- Refer to school policy on excused absences.
- Written and project assignments are due by the start of class on the due dates.
- **Late work will have 10 percentage points subtracted from the grade for each 24-hour period it is overdue.** In other words, the maximum possible grade for an assignment submitted between 1 and 24 hours overdue is 90%, and then 80% for the next 24 hours, and so on. **After 3 day late assignments are no longer accepted. This means assignments due on Tuesday should be turned in no later than Friday by 5:45pm.**

Honor code

It shall be the responsibility of every student at The University of North Carolina at Chapel Hill to obey and support the enforcement of the Honor Code, which prohibits lying, cheating, or stealing when these actions involve academic processes or University, student or academic personnel acting in an official capacity.

Campus Code

It shall be the further responsibility of every student to abide by the philosophy of the code; namely, to conduct oneself so as not to impair significantly the welfare or the educational opportunities of others in the University community.

Faculty Responsibilities

I have a role to play as well, and I will fulfill these responsibilities.

What it means to us

The system rests on several central tenets:

- The university community, including faculty and students, share a commitment to the pursuit of truth, and the dissemination of knowledge to succeeding generations of citizens devoted to the high ideals of personal honor and respect for the rights of others.
- These goals can only be achieved in a setting in which intellectual honesty and personal integrity are highly valued; other individuals are trusted, respected, and fairly treated; and the responsibility for articulating and maintaining high standards is widely shared.
- Both students and faculty must play active roles in fostering a culture in which honor is prized and acting to remedy violations of community norms relating to academic misconduct, injuries to members of the University community, and conduct that adversely affect University operations and resources.
- The principles of academic honesty, integrity, and responsible citizenship govern the performance of all academic work and student conduct at the University as they have during the long life of this institution

Your acceptance of enrollment in the University presupposes a commitment to the principles embodied in the Code of Student Conduct and a respect for the most significant Carolina tradition. Your reward is in the practice of these principles.

Your participation in this course comes with the expectation that your work will be completed in full observance of the Honor Code. You are encouraged to work together with your fellow students and to share knowledge and learning. However, academic dishonesty in any form is unacceptable, because any breach in academic integrity, however small, strikes destructively at the University's life and work.

Classroom code of conduct

We are a learning community and should treat each other with the respect we would expect of others. Constructive disagreement is encouraged, but please attempt to balance critiques with efforts to build and maintain a welcoming classroom community. I will try my best to do the same, but I welcome any suggestions for improvements or even general statements of discomfort.

Our classroom is dedicated to providing a harassment-free course experience for everyone, regardless of gender, gender identity and expression, age, sexual orientation, disability, physical appearance, body size, race, ethnicity, religion (or lack thereof), or technology choices. Harassment includes offensive verbal comments related to gender, gender identity and expression, age, sexual orientation, disability, physical appearance, body size, race, ethnicity, religion, technology choices, sexual images in public spaces, deliberate intimidation, stalking, following, harassing photography or recording, sustained disruption of talks or other events, inappropriate physical contact, and unwelcome sexual attention. We do not tolerate harassment

of course participants in any form. Sexual language and imagery is not appropriate for any course setting or products.

If you are being harassed, notice that someone else is being harassed, or have any other concerns, please contact your instructor or another SILS faculty member immediately.

Adapted from http://confcodeofconduct.com/.

Valuing, Recognizing, and Encouraging Diversity

Promoting and valuing diversity in the classroom enriches learning and broadens everyone's perspectives. Inclusion and tolerance can lead to respect for others and their opinions and is critical to maximizing the learning that we expect in this program. This may challenge our own closely held ideas and personal comfort zones. The results, however, create a sense of community and promote excellence in the learning environment.

Diversity includes consideration of (1) the variety of life experiences others have had, and (2) factors related to "diversity of presence," including, among others, age, economic circumstances, ethnic identification, disability, gender, geographic origin, race, religion, sexual orientation, social position.

This class will follow principles of inclusion, respect, tolerance, and acceptance that support the values of diversity.

Taken from the UNC Department of Health Policy and Management's HPM Diversity Syllabus Statement 2011.

Accommodations

The University of North Carolina at Chapel Hill facilitates the implementation of reasonable accommodations, including resources and services, for students with disabilities, chronic medical conditions, a temporary disability, or pregnancy complications resulting in difficulties with accessing learning opportunities.

All accommodations are coordinated through the Accessibility Resources and Service Office. In the first instance please visit their website http://accessibility.unc.edu, Tel: 919-962-8300 or Email: accessibility@unc.edu. A student is welcome to initiate the registration process at any time, however, the process can take time. ARS is particularly busy in the run-up to Finals and during Finals. Students submitting Self-ID forms at that time are unlikely to have accommodations set until the following semester.

Please contact ARS as early in the semester as possible.

Schedule

Due to my need to travel for business the schedule and readings are subject to change. Stay tuned for announcement via Sakai and email. When changes are made, I will work to update Sakai and syllabus to reflect the new schedule.

Week 1: Introduction, case study

14 January

- Course orientation

Optional

- Mike Cohn, "Agile Estimating and Planning", A Case Study: Bomb Shelter Studios [e-reserves]

Week 2: Agile

21 January

Readings

- (if you did not read prior to first class) Mike Cohn, "Agile Estimating and Planning", A Case Study: Bomb Shelter Studios [e-reserves]
- W&B, Chapter 20
- Agile Manifesto
- Principles behind the Agile Manifesto
- Matthew Guay, Project Management 101: The Complete Guide to Agile, Kanban, Scrum and Beyond
- Lyssa Adkins, Seven Agile Coach Failure Modes

Optional

- Ken Schwaber and Jeff Sutherland, The Scrum Guide
- Martin Fowler, The New Methodology

Week 3: Systems Development Life Cycle (SDLC) and the role of the business analyst

28 January

Readings

- W&B, Chapter 1
- W&B, Chapter 4 W&B, Chapter 3
- Introduction to Software Engineering/Process/Life Cycle
- SELECTING A DEVELOPMENT APPROACH

- Davis, William. (1999). The problem statement. In W. Davis & D. Yen, The Information System Consultant's Handbook: Systems Analysis and Design. Boca Raton: CRC Press. Chapter 12, 87-90. [e-reserves]

Optional

- Graeme Philipson, A Short History of Software
- Nayan B. Ruparelia, Software development lifecycle models
- Russell Kay, System Development Life Cycle

Week 4: User requirements

4 February

Readings

- W&B, Chapter 2
- Jerry Cao, User Analysis Before Diving Into Design (Part 1)
- W&B, Chapter 6
- Georg Strom, Sense-Making Methodology: Learn What Users Understand is Important

Assignment

- Written assignment 1, due 2/11

Week 5: Estimation and Planning

11 February

- Form project groups.

Readings

- W&B, Chapter 5
- W&B, Chapter 32
- C Chapter 1
- C Chapter 2
- C Chapter 4
- C Chapter 5
- C Chapter 6

Week 6: Personas and requirements

18 February

Readings

- W&B, Chapter 7
- W&B, Chapter 8
- W&B, Chapter 9
- W&B, Chapter 10
- W&B, Chapter 11
- Davis, William. (1999). The feasibility study. In W. Davis & D. Yen, The Information System Consultant's Handbook: Systems Analysis and Design. Boca Raton: CRC Press. Chapter 13, 91-96. [e-reserves]
- Holtzblatt, et al., "Rapid Contextual Design: A How-To Guide to Key Techniques for User Centered Design", Chapter 9: Using contextual data to write personas [e-reserves]
- Head, Alison J., "Online", Chapter 4: Personas setting the stage for building usable information web sites [e-reserves]

Optional

- Artscape DIY, A Guide to Feasibility Studies
- Shlomo Goltz, A Closer Look At Personas: What They Are And How They Work (Part 1)
- Alan Klement, Replacing The User Story With The Job Story

Week 7: Modeling Part 1

25 February

Readings

- W&B, Chapter 12
- Hoffer, et al., "Modern Systems Analysis and Design", Chapter 7: Process Modeling [e-reserves]
- Alhir, Sinan Si, "UML in a nutshell: a desktop quick reference", Chapter 4: Unified modeling language tutorial [e-reserves]
- Alhir, Sinan Si, "UML in a nutshell: a desktop quick reference", Chapter 8: Use case diagrams [e-reserves]

Assignment

- Written assignment 2, due 3/3

Week 8: Modeling Part 2

3 March

Readings

- Scott Wambler, Data Modeling 101
- W&B, Chapter 13

- Elmasri, et al., “Fundamentals of Database Systems”, Chapter 3: Data Modeling Using the Entity-Relationship (ER) model [e-reserves]
- Ed Yourdon, Data Flow Diagrams

Optional

- Sophia Voychehovski, Object-Oriented UX
- Page Laubheimer, Wireflows: A UX Deliverable for Workflows and Apps

Week 9: No Class Spring Break

10 March

Week 9: Quality Attributes

17 March

Readings

- W&B, Chapter 14
- W&B, Chapter 16
- W&B, Chapter 17

Optional

- Andressa Chiara, Defining your MVP: the ever-raging war
- Melissa Perri, Rethinking Product Roadmaps
- Melissa Perri, Effective product Roadmaps

Week 10: Real life systems – guest speakers

TBD

- Group checkpoint #1

Readings

- None (Read ahead or catch up on readings)

Week 11: Value sensitive design and Tools

24 March

Readings

- W&B, Chapter 15
- Friedman, Batya. (1996). Value-sensitive design. interactions 3(6), 17-23.
- Shilton, Katie. (2010). Technology development with an agenda: Interventions to emphasize values in design. Proceedings of the ASIS&T 2010 Annual Meeting. [e-reserves]
- Example of Value Sensitive Design: WeWalk Smart Cane

Optional

- Introduction to the Design with Intent toolkit
- Take a quick look at the Design with Intent cards
- UXPin, The Hands-On Guide to Wireframing (site asks for email)

Assignment

- Written assignment 3, due 3/31

Week 12: Requirements process

31 March

Readings

- W&B, Chapter 28
- W&B, Chapter 31
- W&B, Chapter 19

Week 13: Implementation

7 April

- Group checkpoint #2

Readings

- W&B, Chapter 21
- W&B, Chapter 22
- W&B, Chapter 23

Week 14: Types of projects

14 April

Readings

- W&B, Chapter 24
- W&B, Chapter 25

- W&B, Chapter 26

Assignment

- Final exam assigned

Week 15: Last day of class - Semester review and presentations

21 April

- Last day of class
- Presentations
- Semester review

1 May, All assignments and final exams, are due. Submit assignments before 7:00pm