Adverse Conditions: Reduced Campus Operations and Services

INLS 697 – Spring 2020
Capstone – Professor Megan Winget

Course Objectives

From the SILS catalog:

INLS 697: Information Science Capstone: Contemporary topics of information science, information systems, information technology, information design, and information management. Assessment of future impact of new developments.

What that means in terms of this class:

Information Science is a vibrant and rapidly transforming field of study. New issues, topics, technologies, applications and terminologies are continually emerging. One of the key skills you must have as a BSIS major is the ability to analyze these emerging topics and assess new solutions within the context of the information age.

This section of INLS 697 will focus on three issues, which I think will launch students into the professional world with confidence and success:

1. Skills: I have developed a final group project that will allow students to bring together and use all of the skills they’ve learned throughout their SILS undergraduate coursework.

2. Theory: We will be reading a book and related articles regarding the technical, cultural, and economic foundations of social media, and how our society is reacting to those challenges.
3. **Creativity**: In my experience, one of the greatest skills in the workplace (or in graduate study, if that’s what you’re hoping to do) is the ability to think creatively and solve problems though an iterative process of trial and error. We will spend time every class on creativity, making things, and solving problems under unusual circumstances.

Each week we will introduce several new topics that will enable students to integrate and apply their academic background and experience. The primary objective of this course is to raise awareness and curiosity about contemporary and emerging topics of information science, information systems, information technology, and information management. As a result, students will be able to assess the future impact of new developments, and to envision the future of our field.

**Learning objectives**

At the end of this course, students will:

- Have experience integrating fundamental concepts and concerns associated with information studies into a creative project.
- Be able to relate theoretical concepts and concerns to current events, situations, and technologies.
- Be prepared to succeed after graduation.
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Grading

Students will be assessed on the following elements:

1. **Class Discussions (100 Points):**
   1. Throughout the course students will team up with different classmates to *lead class discussions* (x3),
   2. When not leading discussions, students will post personal reflections to the *class blog* that will add to understanding and enhance the in-class discussion.
   3. Students not leading the discussion will *actively participate* in the discussion.

2. **Final Group Project (100 Points):** Design Thinking
   1. I will assign groups based on different skill sets (project managers, creative thinkers, makers)
   2. We will develop a set of expectations for the design thinking project in the first few weeks of the semester.
   3. We will spend time in every class working on this final project; I am conscious that this is a different kind of project, and will require a support mechanism to allow students to succeed.

There are 110 points possible in this course. Grades will be distributed as follows:
- A = 96%+ (192 points)
- A- = (90%) 180 – 191.9
- B+ = (87%) 174 – 179.9
- B = (83%) 166 – 173.9
- B- = (80%) 160 – 165.9
- C+ = (77%) 154 – 159.9
- C = (73%) 146 – 153.9
- C- = (70%) 140 – 145.9
- See meeee: under 140 points
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Class Discussions

Structure:
The discussion in each class revolves around three groups with different roles (Scientists, Engineers and Devil’s Advocates). In each class, 2–3 students are assigned to each group. Please check the schedule regularly for group assignments.

Group 1: Scientists (2-3 students)
Scientists provide a summary of the key ideas presented in the viewing(s) or reading(s).

- Highlight what you find interesting and novel in the reading.
- You can defend the key ideas by using other scholarly sources to support them.
- You must prepare a 10 minute presentation and/or discussion.

Group 2: Engineers (2-3 students)
Engineers focus on the application of key ideas and explain how we can use them to address other types of problems in our society or in organizations.
• Your group of three will be expected to provide at least two examples of events/news items/case studies/fictional examples/personal stories that illustrate in a meaningful manner one or more of the topics. Try to pick something that goes beyond a trivial example, one whose significance becomes more apparent in light of the class readings or viewings.

• You can use your own experience, and should articulate in a creative way how we can apply the concept/idea elsewhere.

• You must prepare a **10 minute discussion.**

**Devil’s advocates (2-3 students)**

Devil’s advocates are expected to critique the topic, key ideas, and their common applications. You may discuss alternatives.

• Using a critical perspective, you should examine possible side-effects, challenges and broader negative social impacts.

• You can use other scholarly sources that oppose the key ideas

• You must prepare a **10 minute discussion.**

**Group 4 – Participants – The Rest of the Class**

Anyone who is not in the discussion groups will be a participant in the discussion.

1. Post 250–500 word personal reflections on the readings to the class blog (15 points),
   1. Personal reflections, thoughts, ideas...
   2. Share relevant news items/case studies/videos – whatever.
   3. You could comment on another student’s post if it makes you think something interesting;

4. Please post by **Friday at 9pm** for the next Tuesday’s class
   • Your reflections/links/etc. might help your colleagues prepare for their discussion section
5. (I will ask you to submit a “blogging proof” at the end of the class – you should have 5 posts/comments)

2. Engage and participate in the class discussions (15 points).
   
   1. There is no good reason to be on your computer during class time. If you take notes on your computer, please let me know before the first note-taking class.

Each of these elements will be worth 25 points, for a total of 100 participation points.
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Final Project

Design Thinking

“Discovery consists of seeing what everybody has seen and thinking what nobody has thought.”
~Albert Szent-Gyorgyi, Nobel Prize winning biochemist and discoverer of Vitamin C

“A great many people think they are thinking when they are really rearranging their prejudices.”
~William James, American philosopher and psychologist

“A designer knows he’s achieved perfection not when there is nothing left to add, but when there is nothing left to take away.” (Related to the gospel of German industrial designer and Steve Jobs’ mentor Dieter Rams (Braun): “Weniger aber besser” = “Less but better”)
~Antoine de Saint-Exupery, author of The Little Prince

“You can dream, design, create, and build the most wonderful place in the world, but it requires people to make the dream a reality.”
~Walt Disney

Project Overview
Design Thinking is a problem solving methodology especially well suited for investigating complicated problems. It uses methods derived from the field of design to match people’s needs with what is technically and organizationally feasible, and converting business strategy into customer / stakeholder value in a way that is financially viable. Design thinking is a mixture of needs / feasibility / strategy / value / $$.$

Initially corporations developed this process so that they could quickly, creatively, and effectively develop new products and services. But this process is also very useful for the public and social sectors as well.

This project provides an introduction to design thinking for budding business titans, policy makers, social innovators and anyone else interested in learning more about an approach that can be applied to a variety of “wicked” problems.

We’ll begin with a review of the history and context of design thinking, then we’ll take a deep dive into the discipline using a step-by-step methodology used in a variety of settings. Design thinking is valuable for academic work, start-ups, and in large organizational settings. We’ll focus on four questions and ten key activities – we’ll complete some pre-defined templates and exercises, we’ll get experience with the design thinker’s toolkit and we’ll put theory into practice.

Design thinking touches on topics ranging from psychology and neuroscience to visual thinking and drawing pictures to work through problems.

In this part of the class we’ll have some lectures, discussions, readings, in-class exercises and a series of formal and informal design reviews that will encourage reflection on students’ process and insights. Success will depend on the degree of involvement in observing, listening, analyzing, storytelling and otherwise engaging key stakeholders to develop and prototype meaningful and transformative designs for products, services or other relevant outcomes.
Here is the challenge for this project: This is the first time I’ve taught this material. I’m intentionally about 80–90% prepared. I’ve done this purposefully because I want to allow room for adaptation and co-design with each student cohort so the material is consistently updated and relevant to students’ needs and expectations.

Additionally, design thinking is a vast field. There are lots of topics, applications, methodologies and tools. This project will therefore act as an introduction to the main concepts, methods and general uses of design thinking in the public, private and social sectors. It’s directed to future problem solvers, and those who will be leading and overseeing their efforts.

I want this project to give students a good foundation: the concepts, tools and techniques that will be relevant and valuable for their career plans.

**Required Readings (Available online through the library)**


**Sample Reading List**
• Tim Brown, Change by Design: How Design Thinking Transforms Organizations and Inspires Innovation (HarperBusiness, 2009)
• Nigel Cross, Design Thinking: Understanding How Designers Think and Work (Bloomsbury Academic, 2011)
• Bruce Hannington and Bella Martin, Universal Methods of Design: 100 Ways to Research Complex Problems, Develop Innovative Ideas, and Design Effective Solutions (Rockport Publishers, 2012)
• Don Norman, The Design of Everyday Things (Basic Books, 2013)

Other Design-Thinking Frameworks and Methodologies
• Human-Centered Design Toolkit (IDEO); https://www.ideo.com/post/design-kit
• Design Thinking Boot Camp Bootleg (Stanford D-School); https://dschool.stanford.edu/resources/the-bootcamp-bootleg
• Collective Action Toolkit (frogdesign); https://www.frogdesign.com/wpcontent/uploads/2016/03/CAT_2.0_English.pdf
• Design Thinking for Educators (IDEO); https://designthinkingforeducators.com/

Project Outline
The part of the course is organized into 6 modules (one module per week):

- **Why Design Thinking and The Design Process** provides context and an introduction to key concepts, terminology, and structure for the course.
- **Scoping, The Design Brief and Visualization** introduces ways to clarify the scope of a project and its intent, questions to explore, target stakeholders, and establishes the importance of pictures and storytelling in the overall process.
- **Fundamentals of Ethnography** and Identifying Insights reviews how to observe users in their “natural habitat” and efficiently extract useful patterns from collected data.
- **Establishing Design Criteria and Brainstorming** shows how to develop a succinct expression of the ideal end state of a project, and deliberately generate many fresh alternatives to the status quo.
- **Concept Development and The Napkin Pitch** details how to choose the best ideas, assemble them into detailed solutions, and rationally evaluate them, as well introduce a simple, consistent format for summarizing and communicating new concepts.
- **Assumptions Testing and Prototyping** introduces a tool for surfacing key assumptions underlying the attractiveness of a new concept and using data to assess the likelihood that they are true, as well as ways to create visual manifestations of concepts.

Design thinking is an inherently collaborative process with a particular emphasis on team-centric activities. As a result, the majority of your final grade will be based on the results that your team produces and your contribution to those results with a smaller portion dedicated to solely individual work:
• Project Templates
  o Design Brief (Individual) (10 points)
  o Design Brief (Team) (15 points)
  o Design Criteria (Team) (15 points)
  o Napkin Pitch (Team) (15 points)
  o Key Assumptions (Team) (15 points)
• Final Project “Journey of Discovery” Submission (30 POINTS)

Course Project

Your challenge during the second half of the semester is to identify EITHER 1) a product, service, environment, process, or journey (i.e., practically anything) within Manning Hall that your team believes can be better; OR 2) a product, service, environment, process or journey (i.e., practically anything) having to do with the challenges we identified and talked about in the first part of the semester. Students will apply the “Four Questions, Ten Tools” process introduced in Designing For Growth to investigate that hypothesis.

To provide structure and rigor to the effort, as well as accelerate progress, individuals and teams (as appropriate) will submit a series of design thinking templates at key junctures of investigation.

Templates, along with evaluation criteria, will be available via Sakai.

Specific feedback will ideally be provided within one week or less to allow for thoughtful refinements and iterations.

At the conclusion of the course, teams will synthesize all of their research, activities, templates, methods, artifacts, conclusions, and any other relevant materials to represent their “journey of discovery”. At a minimum, this deliverable should incorporate the following elements:
• Statement of the design challenge and overview of the problem solving approach
• Insights based on the design research conducted
• Key themes and opportunity areas drawn from research insights
• Visualized concepts that address the opportunity areas
• A plan to make the solution concepts actionable and measurable

Submissions will be posted to Sakai and can take form in any digital format (e.g., PowerPoint, Word, Adobe) that “works” for your team.

*This project is based almost entirely on Tim Zak’s Design Thinking short-course at Carnegie Mellon University. Thanks!
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Schedule

Week 1: January 14: Introductions / Getting to Know You / Syllabus & Etc.
1. Slides: INLS697-SP20_001-Intro

Week 2: January 21: Field Trip and Book Making
Class will take place in the Carmichael Residence hall Maker Space. Please read through these instructions (Stab-BindingPDF) so you have some idea what we’ll be doing. I will provide all of the materials.

It will be your responsibility to have taken the initial BEAM training before this class (found here: https://beam.unc.edu/trainings/). You only need the basic “Orientation” training.

Week 3: January 28: Tech Culture
1. Required:
   - Tufekci, Z. (2017, September). We’re building a dystopia just to make people click on ads. Ted. https://www.ted.com/talks/zeypetufekci_we_re_building_a_dystopia_just_to_make_people_click_on_ads
2. Optional
3. Class Discussion
   - Scientists: Megan
   - Engineers: Megan
   - Devils Advocates: Megan
4. In-Class Activities

**Week 4: February 4: Artificial Intelligence**

1. Required

2. Optional

3. Class Discussion
   - Scientists: Nesreen, Kayla, Esha, Rahul
   - Engineers: Jared, Stephen, Lydia Zoe
   - Devil’s Advocates: Rishi, Torin, Saumil, Azeem

4. In-Class Activities

**Week 5: February 11: Social Instability and The Future of Work**

1. Readings

2. Optional


3. Class Discussion
   - Scientists: Chia Ling, Jeet, Michael, Karley
   - Engineers: Nesreen, Carson, Janavie, Rachel
   - Devils Advocates: Jared, Stephe, Kayla, Neil

Week 6: February 18: Health Data

1. Readings

2. Optional

3. Class Discussion
   - Scientists: Rishi, Torin, Lydia, Saumil
   - Engineers: Chia-Ling, Jeet, Michael, Esha
   - Devils Advocates: Carson, Zoe, Rachel, Rahul

4. In-Class Activities

Week 7: February 25: Data, Human Rights & Society

1. Readings

2. Optional
3. Class Discussion
   - Scientists: Stephen, Rachel, Azeem
   - Engineers: Torin, Neil, Karley, Rahul
   - Devils Advocates: Nesreen, Jeet, Michael, Esha

4. In-Class Activities

**Week 8: March 3: Media Manipulation**

1. Readings

2. Class Discussion
   - Scientists: Jared, Janavie, Neil, Zoe
   - Engineers: Rishi, Kayla, Saumil, Azeem
   - Devil’s Advocate: Chia Ling, Lydia, Esha, Karley

3. In-Class Activities

**Week 9: March 10 – Spring Break**

Week 10: PANDEMIC (March 17)

**Week 10: March 24: Why Design Thinking? & The Process (Welcome Back) (Lecture)**

1. Readings:
- Designing for Growth: A Design Thinking Tool Kit for Managers
  - Chapter 1: Why Design?
  - Chapter 2: Four Questions, Ten Tools
  - Chapter 3: Visualization
- The Designing for Growth Field Book: A step-by-step project guide
  - Step 1: Identify an Opportunity
- Design Thinking: Get a Quick Overview of the History (Interaction Design Foundation, December 2019); https://www.interaction-design.org/literature/article/designthinking-get-a-quick-overview-of-the-history

2. Optional Blog Posts: March 24: Write a blog post on what you’ve been doing since March 10. This can be a poem, it could be a video, it could be a scanned piece of art, a drawing, a video that speaks to you – you could communicate via gifs. You could make/share a tiktok – whatever.

**Week 11: March 31: Scoping, The Design Brief, and Visualization (Lecture)**

1. Readings:
   - Designing for Growth: A Design Thinking Tool Kit for Managers
     - Chapter 4: Journey Mapping
     - Chapter 6: Mind Mapping
   - The Designing for Growth Field Book: A step-by-step project guide
     - Step 2: Scope your project
     - Step 3: Draft your design brief
   - Video: Review the 4 instructional videos associated with the book Back of the Napkin (Dan Roam)
     - Process of Visual Thinking (Look / See / Imagine / Show): https://www.youtube.com/watch?v=aGns7VqMug
     - Seeing Part 2: Imagine: https://www.youtube.com/watch?v=oZfFKW7UU
     - Introduction to Showing: https://www.youtube.com/watch?v=QphzPHGmbYk

2. Optional Blog Post: March 31: Can you find any examples of people using technology in ways that might help lessen the loss of senior spring? Are there any technologies out there that could help? I envision a blog post that points to innovative use of existing technologies. (For example, I read an article about some students holding their cancelled commencement in Minecraft – https://www.ign.com/articles/japanese-school-cancels-graduation-students-hold-it-inside-minecraft-instead)

**INDIVIDUAL DESIGN BRIEF DUE—WEDNESDAY, MARCH 25TH**

**TEAM DESIGN BRIEF DUE—FRIDAY, MARCH 27TH**

**Week 12: March April 7: Fundamentals of Ethnography and Identifying Insights (Lecture)**

1. Readings:
- Designing for Growth: A Design Thinking Tool Kit for Managers
  - Chapter 7: Brainstorming
  - Chapter 8: Concept Development
- The Designing for Growth Field Book: A step-by-step project guide
  - Step 4: Make Your Plans
  - Step 5 Identify Insights and Tools

2. Optional Blog Post: After this pandemic is over, I suspect that remote work will be more the norm than going into an office. Find a remote working tool (broadly construed: this could be an app or a piece of software, or a framework, or methodology for running meetings, or a general behavior modification), try to test it out to the extent possible, find reviews, and write a blog post pointing to the tool and maybe giving a little review.

Week 13: April 14 – Establishing Design Criteria, Brainstorming, Concept Development (Lecture: )

1. Readings:
- Designing for Growth: A Design Thinking Tool Kit for Managers
  - Chapter 9: Assumption Testing
  - Chapter 10: Rapid Prototyping
- The Designing for Growth Field Book: A step-by-step project guide
  - Step 7: Establishing Design Criteria
  - Step 8: Brainstorm Ideas
  - Step 9: Concept Development
- Better Brainstorming (Harvard Business Review, March–April 2018); https://hbr.org/2018/03/better-brainstorming

2. Optional Blog Post: We identified a whole lot of problems in the first half of the semester. The class was designed so that we would work towards finding solutions to those problems in the second half of the semester using Design Thinking. Not going to happen! So – What are some solutions that are already out there? What are some tools / apps / methodologies / frameworks that people have developed that might address some of these problems? Write a blog post pointing to the solution, and describing what it’s all about.

TEAM DESIGN CRITERIA DUE—MONDAY, APRIL 13TH

Week 14: April 21 – Assumptions Testing & Prototyping (Lecture: )

1. Readings:
- The Designing for Growth Field Book: A step-by-step project guide
  - Step 11: Surface Key Assumptions
  - Step 12: Make Prototypes

2. Optional Blog Post: What are some innovative, fun ways that people are connecting with each other online? Virtual happy hours? Netflix with Friends? Test it out, and report back to us.

Week 15: April 21 – Team Pitches
TEAM NAPKIN PITCH DUE – IN CLASS

TEAM KEY ASSUMPTIONS DUE—MONDAY, APRIL 20TH

*Individual “Journey of Discovery” Reflection*
*DUE Noon, Monday April 27*
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Honor Code

Policies
Instructor communication

For specific, concrete questions, e-mail is the most reliable means of contact for me. During the week (Monday 9 a.m. – Friday 5 p.m.) You should receive a response within 24 hours. Weekends or holidays might take 2 or 3 days. If you do not receive a response by Monday at noon, please follow up. Please keep this in mind when you are scheduling your own activities, especially those related to discussion / escape room preparation. If you wait until the day before an something is due to ask me a clarification question, there is a good chance that you will not receive a response in time.

It is always helpful if your e-mail includes a targeted subject line that begins with “INLS 697.” Please use complete sentences and professional language in your e-mail.

For more complicated questions or help, come to office hours (right before class, and Thursdays 12:30 – 4pm) and / or make an appointment to talk with me at a different time (email: megan.winget@unc.edu). I cannot discuss grades over e-mail; if you have a question about grading, you must talk with me in person.
You are welcome to call me by my first name (“Megan”). However, you may also use “Dr. Winget” if that is more comfortable for you. Either is fine. Three forms of address that are not fine: “Ma’am” and “Mrs.” or “Ms.”

**Academic integrity**

The UNC Honor Code states that:

It shall be the responsibility of every student enrolled at the University of North Carolina to support the principles of academic integrity and to refrain from all forms of academic dishonesty...

This includes prohibitions against the following:

- Falsification, fabrication, or misrepresentation of data or citations.
- Unauthorized assistance or collaboration.

All scholarship builds on previous work, and all scholarship is a form of collaboration, even when working independently. Incorporating the work of others, and collaborating with colleagues, is welcomed in academic work. However, the honor code clarifies that you must always acknowledge when you make use of the ideas, words, or assistance of others in your work. This is typically accomplished through practices of reference, quotation, and citation.

If you are not certain what constitutes proper procedures for acknowledging the work of others, please ask the instructor for assistance. It is your responsibility to ensure that the honor code is appropriately followed. (The UNC Office of Student Conduct provides a variety of honor code resources.)

The UNC Libraries has online tutorials on citation practices and plagiarism that you might find helpful.

**Students with disabilities**

Students with disabilities should request accommodations from the UNC office of Accessibility Resources and Service (https://accessibility.unc.edu/).
Online Class Statement

1. By enrolling as a student in this course, you agree to abide by the University of North Carolina at Chapel Hill policies related to the Acceptable Use of online resources. Please consult the Acceptable Use Policy on topics such as copyright, net etiquette and privacy protection.

2. As part of this course you may be asked to participate in online discussions or other online activities that may include personal information about you or other students in the course. Please be respectful of the rights and protection of other participants under the UNC–Chapel Hill Information Security Policies when participating in online classes.

3. When using online resources offered by organizations not affiliated with UNC-Chapel Hill such as Google or YouTube, please note that the Terms and Conditions of these companies and not the University’s Terms and Conditions apply. These third parties may offer different degrees of privacy protection and access rights to online content. You should be well aware of this when posting content to sites not managed by UNC-Chapel Hill.

4. When links to sites outside of the unc.edu domain are inserted in class discussions, please be mindful that clicking on sites not affiliated with UNC-Chapel Hill may pose a risk for your computer due to the possible presence of malware on such sites.

Acknowledgements and thanks

This syllabus includes elements of INLS 697 sections taught by Mohammad Jarrahi, and Tim Zak’s Design Thinking short-course at Carnegie Mellon University.