INLS 697
Information Science Capstone

Meets: Tuesdays, 11am – 1:45pm via Zoom
Instructor: Megan Winget
Schedule Meetings: https://calendly.com/megan-winget/15min

Course Objectives

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.

Assignments
Game Reviews

Student-Led Discussion: 30 points

After filling out the questionnaire, I will put people into groups of 4-5 people to conduct a game reviews, and lead a class discussion on that game. You may choose your own game, but it should be relevant to the games we're designing in this class – that is, it should have some characteristics that you think might be valuable to think about in terms of designing a virtual escape room, or some other sort of team-building collaborative game.

These reviews will be entered into the system as blog posts – we will figure out the specific expectations on the first day of class, but I'm generally expecting 500-1000 words, a video review, and information about the game that will be useful for you colleagues who are also developing games.

Elements of a Game Review

- How will you know you're finished writing / creating your game review?
- What are the components of a good game review?
- What should you talk about in your game review?

Criteria / Steps for a Successful Game Review

- Should be a forum post on our Sakai web site. The post should include:
  - Video of team members talking about the experience of playing the game. Be sure to include:
    - The basics: The name of the game, how many players, how long it takes to finish the game, what platform it's played on
    - A walkthrough: what's the game narrative? How is it presented? Is the narrative compelling? Does the narrative work well with the challenges?
    - The challenges: how many, how difficult, the skills needed in each challenge, whether the game provides challenges for people with different skillsets
    - Game purpose: what was it trying to do, was it trying to teach you something, entertain, build teams, make people laugh?
    - Behind the scenes: to the extent possible, what do you think was going on behind the scenes?
    - How might playing/thinking about this game help you and your colleagues build fun games for the final project?
    - Video does not need to be any longer than 10 minutes. You can record on Zoom and upload the .mp4 to the site, or you can post to YouTube and post the link. Also post the link (either to YouTube or the class website url) to Sakai.
  - Links to any relevant resources
    - link to the game itself,
    - any reviews you've read or some sort of interesting coverage

- Purpose of the game review is to give other people in the class some understanding of what game play is like

Book Club

Student-led discussion; 30 points.

Based on answers to a questionnaire I will put students in "book clubs" to read a book, and provide a book review for the rest of the class. The four book choices are: .

Book Choices

These are the books from which you can choose. All books are between 250 and 350 pages, and they're all relatively recent.

- Benjamin, R. (2019). *Race After Technology: Abolitionist Tools for the New Jim Code* (1st edition). Polity.
- Eubanks, V. (2019). *Automating Inequality: How High-Tech Tools Profile, Police, and Punish the Poor* (Illustrated edition). Picador.
- Frier, S. (2020). *No Filter: The Inside Story of Instagram*. Simon & Schuster.
- Gray, M. L., & Suri, S. (2019). *Ghost Work: How to Stop Silicon Valley from Building a New Global Underclass* (Illustrated edition). Houghton Mifflin Harcourt.
- Isaac, M. (2019). *Super Pumped: The Battle for Uber* (Reprint edition). W. W. Norton & Company.
- Lepore, J. (2020). *If Then: How the Simulmatics Corporation Invented the Future* (Illustrated edition). Liveright.
- Mullaney, T. S., Peters, B., Hicks, M., & Philip, K. (Eds.). (2021). *Your Computer Is on Fire*. The MIT Press.
- Susskind, D. (2020). *A World Without Work: Technology, Automation, and How We Should Respond*. Metropolitan Books.
- Wiedeman, R. (2020). *Billion Dollar Loser: The Epic Rise and Spectacular Fall of Adam Neumann and WeWork*. Little, Brown and Company..

Everyone will have at least 4 weeks to finish their books and create presentations.

Each group will present a "Book Review" in the second half of the semester. This presentation will, essentially, be the class presentation for that day.

Parts of a Book Review

- Recorded video presentation for students to watch before class.
- Reading / watching / listening list for students to engage with before class.
- In-Class discussion of the book.

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)

- Jeanne Liedtka and Tim Ogilvie *Designing for Growth: A Design Thinking Tool Kit for Managers* (Columbia University Press, 2011)
- Jeanne Liedtka, Tim Ogilvie, and Rachel Brozenske, *The Designing for Growth Field Book: A Step-by-Step Project Guide* (Columbia University Press, 2014)

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
  - Design Brief (Individual) (10 points)
  - Design Brief (Team – Project Manager) (15 points)
  - Design Criteria (Team – Technical Specialist) (15 points)
  - Napkin Pitch (Team – Creative Specialist) (15 points)
  - Key Assumptions (Team – Project Manager) (15 points)
- Final Project "Journey of Discovery" Submission (Team – Logistics Specialist) (30 points)

Course Project

Your challenge during the second half of the semester is to create a fun virtual escape room or collaborative virtual team-building game for other students in the class. You will apply the "Four Questions, Ten Tools" process introduced in *Designing For Growth* to work through the design process.

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.

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
- Technical documentation for each puzzle (description of puzzle, solution, estimated time to solve, number of participants required to solve, associated hint(s), and any relevant visuals). Teams will be responsible for the creation of 4 – 5 puzzles.
- Minutes from group meetings

Submissions of these materials will be posted to Sakai and can take form in any digital format (e.g., PowerPoint, Word, PDF) that "works" for your team.

Your project team will have an entire class period to present your game and any follow up material you'd like to provide.

Virtual Escape Room / Virtual Team Building Exercise Overview

For this project, you will work collaboratively to research, design, construct, and run a virtual escape room experience. A virtual escape room is an adventure game in which players have to use elements of a mystery to solve a series of puzzles and solve the mystery within a set time limit. Part of this process entails writing and compiling the escape room's accompanying technical documentation (detailed below). Because this project has many components, you will negotiate and select roles for each team member based on the descriptions below. Each team will have 4 members, assigned by me (because that's how the world typically works). While everyone on the team will work together to ensure the room is compelling, fun, and well-run, each team member will have specific duties.

Project Manager

Responsibilities	Deliverables
• Oversees team communications, meetings (agendas and notes), and deadlines • Reports any problems and provides project status updates • Discerns how to acquire props and materials (budget)	• Writes and turns in the **Design Criteria.** • Writes and turns in the **Key Assumptions**. • Creates meeting agendas and records meeting minutes during team meetings • Records workflow and team assignments through a project management program (e.g. Trello, Asana, etc.) • Responsible for communication with the CEO (Professor Winget)

Logistics Specialist

Responsibilities	Deliverables
• Works with technical specialist to plan and manage logistical/operational components of the escape room. • Organizes team's documentation/deliverables (e.g. Google drive folder) • Stores all documentation in a central location for team and instructor to view and access (send URL to CEO by week 4) • Streamlines all documents to ensure consistency in branding and formatting	• Create the rules for escape room attendees (conduct, materials that are off limits, etc.) • Prepares team documentation (including project manager's project summary) into a project portfolio for the "**Journey of Discovery**" Document at the end of class. Responsible for turning this in as well.

Technical Specialist

Responsibilities	Deliverables
• Create the online environment for the game. This can be as complicated as an app, if that's what you like, or it could be as simple as a google form, or a series of instructions delivered via PDF. • Overall vision of the game environment, from a technical standpoint. (working up from decision trees to wireframes, etc.)	• Writes & turns in the T**eam Design Brief** • Compiles all team documentation into a well-organized, easy-to-navigate final project portfolio • Creates a technical document template and formats all documentation accordingly. Receives feedback from team members and test users.

Creative Specialist	
Responsibilities	Deliverables
- Develops overarching narrative/story of the escape room - Integrates escape room theme across deliverables (e.g., puzzles, props, intro video, etc.) - Ensures puzzles and escape room follows a storyline trajectory (clear beginning, middle, and end) - Creates graphics for website, etc. - Manages, documents and drives the process of creating / developing the narrative story with props, tools, and puzzles.	- Writes and delivers the introductory script/spiel to participants. - Conducts research and provides storylines that the rest of the team can work from. - Writes creative-focused project summary - Compiles all creative team documentation to include in "Journey of Discovery" document at the end of the semester. - Writes and turns in the **Napkin Pitch**.

*This project is based almost entirely on Tim Zak's Design Thinking short-course at Carnegie Mellon University. I got the idea of escape rooms as final projects from Maggie Melo, my colleague at UNC – Chapel HIll. Thanks!

Grading

Students will be assessed on the following elements:

1. **Tool Review (30 Points)**: In groups of 3-4 people, you will choose some tools from your field to review and share with the class.
2. **Book Review (30 Points)**: In groups of 2, you will choose a book from a list and provide a book review to the class.
3. **Final Group Project (100 Points)**: Use design thinking framework to design a fix for EITHER issues raised in first part of the course OR some design / movement / navigation element in Manning Hall
   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 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 160 points possible in this course. Grades will be distributed as follows:

- A = 96%+ (153 points)
- A- = (90%) 144 – 152
- B+ = (87%) 139 – 143
- B = (83%) 132 – 138
- B- = (80%) 128 – 131
- C+ = (77%) 123 – 127
- C = (73%) 117 – 122
- C- = (70%) 112 – 116
- See meeee: under 111 points

Honor Code & Course Policies

Policies

Instructor communication

Feel free to email me at (megan.winget@unc.edu) with questions, but you ****must**** **include your current best answer to the question, or what you've tried so far.**

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 make an appointment to talk with me at a time that is convenient for you. I cannot discuss grades over e-mail; if you have a question about grading, you must talk with me via zoom.

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

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 barriers to fully accessing University courses, programs and activities.

Accommodations are determined through the Office of Accessibility Resources and Service (ARS) for individuals with documented qualifying disabilities in accordance with applicable state and federal laws. See the ARS Website for contact information: **https://ars.unc.edu** or email **ars@unc.edu**.

Counseling and Psychological Services

CAPS is strongly committed to addressing the mental health needs of a diverse student body through timely access to consultation and connection to clinically appropriate services, whether for short or long-term needs. Go to their website: **https://caps.unc.edu/** or visit their facilities on the third floor of the Campus Health Services building for a walk-in evaluation to learn more. *(source: Student Safety and Wellness Proposal for EPC, Sep 2018)*

Title IX Services

Any student who is impacted by discrimination, harassment, interpersonal (relationship) violence, sexual violence, sexual exploitation, or stalking is encouraged to seek resources on campus or in the community. Please contact the Director of Title IX Compliance (Adrienne Allison – **Adrienne.allison@unc.edu**), Report and Response Coordinators in the Equal Opportunity and Compliance Office (**reportandresponse@unc.edu**), Counseling and Psychological Services (confidential), or the Gender Violence Services Coordinators (**gvsc@unc.edu**; confidential) to discuss your specific needs. Additional resources are available at safe.unc.edu.

Online Class Statement

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.

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.

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.

When links to sites outside of the [unc.edu](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

Escape room idea is from Maggie Melo, and structure of design thinking project is directly from Tim Zak's Design Thinking short-course at Carnegie Mellon University.