

Course Syllabus

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Syllabus subject to change.

Course No: 94-866

Course Name: Design Thinking

Section: A1

Day: Tuesdays and Thursdays

Time: 1:25 - 2:45 PM

Location: Hamburg Hall - 1208

Professor

Chris Goranson (cgoranso@andrew.cmu.edu), Hamburg Hall 2105B, Office Hours by appointment.

Teaching Assistant

Mary Kubinski (mkubinsk@andrew.cmu.edu), Office Hours to be posted on Canvas.

Course website

<https://canvas.cmu.edu/courses/24993/>

About this course

Design Thinking is a method by which we work to better understand and serve our intended users. In a public policy setting these "users" are often citizens and others impacted by our tools, processes and other ways government attempts to deliver services.

In this course we'll learn and apply Design Thinking to challenges that are representative of real-world problems. We'll learn how to develop insights around those we need to serve, identifying and mapping out the real problem we're trying to solve for, and identify ways to provide and test solutions quickly through an iterative approach. We'll also work to investigate solutions that are equitable and work for as many people as possible - making sure that we account for extremes in our dataset and those that otherwise might be overlooked by our own assumptions.

Once we've developed our insights, we'll go through Design Thinking processes to rapidly prototype and test our ideas until we can settle on a solution or two that we think will work. We'll continue to refine our best ideas and abandon those that don't appear to hold as much promise as we originally thought. As we continue through this process, we'll learn how to develop personas and begin engaging

representative users so that we can test our ideas and see if what we think shows promise really meets the needs and expectations of real people.

Finally, we'll discover Design Thinking approaches to ensuring that we educate our partners and fellow citizens as we go, so that in the end we all benefit from a new way of diving into issues. Students interested in testing their new-found skillsets with real-world partners and challenges are encouraged to also enroll for the Policy Innovation Lab, which follows this course. The Policy Innovation Lab is a new initiative that connects students with actual policy challenges and introduces an agile, design-driven framework to rapidly create solutions to those challenges. Students will work to solve pressing challenges by redefining the problem in terms of understanding the affected users of systems, conducting user-centered research, designing solutions, testing those same solutions, and iteratively improving those outcomes. Students of the Design Thinking class will therefore get hands-on experience leading mini-workshop exercises and assisting fellow students in the lab with the approaches they learn through this class.

Students will be expected to embrace a culture that expects and encourages rapid iteration, express a willingness to fail early in order to discover a solution that ultimately works, and a flat structure that provides students with an opportunity to work and explore amongst themselves and across different teams.

A note on COVID-19: Design Thinking is highly experiential, meaning that it often involves close-contact workshop settings for many of the activities we'll explore. However, given the pandemic, we may not always be able to hold in-person workshops or exercises. If you can learn to also master these approaches in a remote-friendly setting as may be necessary for this course, you'll be even more prepared for future consultant and leadership roles. Mastering these skills for any environment and feeling comfortable using the tools we'll cover will serve you well down the road.

Prerequisites

This course is designed for graduate-level experience that have at a minimum basic computer proficiency skills. This means you should feel comfortable working with data in spreadsheets, an ability to write clearly and organize materials well, an interest in exploring new programs and present a willingness to learn something outside of your comfort zone.

Learning outcomes

1. Understand how to apply Design Thinking methods to understand what your users need, and how to meet those needs.
2. Learn how to solicit input from users in creative ways and generate new ideas quickly.
3. Learn how to test your ideas and develop rapid prototypes.
4. Apply methods to develop better public-facing tools and resources that result in better execution of public policy goals.

Learning Resources

These are the required texts you'll need for this course:

Lewrick, Michael, Patrick Link, and Larry J. Leifer. 2018. *The design thinking playbook: mindful digital transformation of teams, products, services, businesses and ecosystems*.

Lewrick, Michael, Patrick Link, and Larry J. Leifer. 2020. *The design thinking toolbox: a guide to mastering the most popular and valuable innovation methods*.

Other reference materials include:

- Readings and videos provided on Canvas
- Slides used in lectures for note-taking on Canvas
- Data or other materials provided on Canvas or through external links

Calendar

Week one

First class begins on Tuesday, August 31.

Assignments:

- **Workshop: "Intro to Design Thinking"**
- Assignment / graded discussion due Monday, September 6th, 11:59 PM

Assigned readings and other reference materials are on Canvas.

Week two

- **Workshop: "Observing users through field research"**
- Turning observations into findings
- Assignment / graded discussion due Monday, September 13th, 11:59 PM

Assigned readings and other reference materials are on Canvas.

Week three

Assignments:

- **Workshop: "How might we"**
- Defining the problem we're trying to solve
- Assignment / graded discussion due Monday, September 20th, 11:59 PM

Assigned readings and other reference materials are on Canvas.

Week four

Assignments:

- Workshop: "Customer Journey Map"

- Understanding all the pieces that make up an experience.
- Assignment / graded discussion due Monday, September 27th, 11:59 PM

Assigned readings and other reference materials are on Canvas.

Week five

Assignments:

- Workshop: "Prototyping"

- Understanding all the pieces that make up an experience.
- Assignment / graded discussion due Monday, October 4th, 11:59 PM

Week six

Assignments:

- Workshop: "Conducting User Research"

- Checking to see if your ideas address real user needs.
- Assignment / graded discussion due Monday, October 11th, 11:59 PM

Assigned readings and other reference materials are on Canvas.

Week seven: Final Delivery

Assignments:

- Demos: "The Minimum Viable Product" and Concept Pitch

- Final presentations of the MVP will be on October 12th (October 14th is a mid-semester break day).

Assigned readings and other reference materials are on Canvas.

Assessments

The final course grade will be calculated using the following categories:

Assessment	Percentage of Final Grade
Assignments, incl. graded discussion board	60%
Design Thinking Final Project	20%
Workshop / class participation	20%

Assignments, including discussion board - 60%

Assignments will be posted on Canvas. In some weeks there may be assignments that also include a discussion component. Both will include directions on how to complete the assignments and / or the graded discussion board.

Design Thinking Final Project - 20%

The Design Thinking Final Project is where you'll be taking what you learned and applying it to a real challenge by facilitating your own design thinking workshop. During the last week you'll present your method and approach to the class as well as any lessons learned that can be used by you and others to improve future outcomes.

Workshop / class participation - 20%

The workshops will be our opportunity to set the stage for managing projects throughout the duration of the course. During these workshops we'll cover a number of topic areas that will be relevant, including defining the need, customer journey maps, user research, sketching and prototyping, and delivery.

You will be expected to fully participate in the workshop to develop resources and approaches that you'll apply throughout the duration of the course. Some of the resources you develop may constitute assets you'll later turn in as part of an assignment related to introductory workshops.

Timely class participation and attendance for this course is important. If you have conflicts in time zone please let me know and we'll try to work out an appropriate accommodation where possible.

Grading Policies

Late-work policy: Late work for this course will not be accepted after the due date unless previously arranged with the professor to do extraordinary circumstances (for example, illness, family emergency, out of town). It is important to stay up-to-date on assignments since much of the work builds on previous assignments and will impact your ability to be effective in providing solutions for projects.

Re-grade policy: If you think there has been a technical error in the grading of your assignment, you should e-mail the grader within one week of receiving the grading assignment, otherwise the assignment will not be regraded. You must provide justification for the re-grade in writing along with your request.

Course Policies

Attending an in-person class during the COVID-19 pandemic

In order to attend class in person, you are expected to abide by all behaviors indicated in [A Tartan's Responsibility](https://www.cmu.edu/coronavirus/students/tartans-responsibility.html) [_ \(https://www.cmu.edu/coronavirus/students/tartans-responsibility.html\)](https://www.cmu.edu/coronavirus/students/tartans-responsibility.html), including any

timely updates based on the current conditions. In terms of specific expectations for in-person students, this includes:

- entering the classroom via the designated ingress route with appropriate physical distancing,
- wearing a facial covering throughout class,
- sitting in the seats with appropriate spacing (and not moving furniture),
- following good social distancing practices at all times,
- using the sanitizing wipes available in the classroom to wipe surfaces (e.g., your desk, tablet arm) upon entry and exit,
- exit the classroom at my direction, proceeding in a row-by-row fashion, following the designated egress route and maintaining proper distancing.

Facial coverings. If you do not wear a facial covering to class, I will ask you to put one on (and if you don't have one with you, I will direct you to a distribution location on campus). If you refuse to wear a facial covering, remove it during class, or otherwise behave in a way that I believe puts others around you at risk, you will be asked to leave. Please remember that you will be subject to student conduct proceedings, up to and including removal from CMU. Accordingly, I will be obliged to take other measures for the safety of the whole class.

Academic Integrity & Collaboration

This course will follow Heinz College policies on ethics and discipline as stated in student handbooks. Specific policies of this course are outlined below:

Homework assignments: This course will involve both individual and group-work since you will be working together in teams to complete assignments. In the case of individual work, do not copy or modify homework solutions for your homework solutions. You may consult each other on clarification, technical and conceptual issues, but you must do individual problem solving and derive your own solutions, including your own computer work. You are not permitted to be in possession of any assignments from another student or other source either from the current semester or from past semesters whether they are electronic or paper. Possession of or sharing such files constitutes an infraction of the academic integrity policies of this course.

Accommodations for students with disabilities: If you have a disability and have an accommodations letter from the Disability Resources office, I encourage you to discuss your accommodations and needs with me as early in the semester as possible. I will work with you to ensure that accommodations are provided as appropriate. If you suspect that you may have a disability and would benefit from accommodations but are not yet registered with the Office of Disability Resources, I encourage you to contact them at access@andrew.cmu.edu (<mailto:access@andrew.cmu.edu>).












Statement on student wellness: As a student, you may experience a range of challenges that can interfere with learning, such as strained relationships, increased anxiety, substance use, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may

diminish your academic performance and/or reduce your ability to participate in daily activities. CMU services are available, and treatment does work. You can learn more about confidential mental health services available on campus at: <http://www.cmu.edu/counseling/> [\(http://www.cmu.edu/counseling/\)](http://www.cmu.edu/counseling/). Support is always available (24/7) from Counseling and Psychological Services: 412-268-2922.

Laptops Mobile Devices: In general this is a course that uses a lot of technology, so it's expected that on most days you'll have your laptop and phone with you. With that said, it's your responsibility to be respectful when using these devices. Keep your phone on silent, don't talk on the phone while in class, don't distract others by viewing content on your laptop not relevant to the course, and no technical devices are allowed for any quizzes or tests administered through this course unless explicitly stated by the professor.

Course Summary:

Date	Details	Due
Tue Aug 31, 2021	 Week zero: Tell us about you! (https://canvas.cmu.edu/courses/24993/assignments/394051)	due by 1:30pm
Thu Sep 2, 2021	 Problem statement workshop (https://canvas.cmu.edu/courses/24993/assignments/394071)	due by 11:59pm
Fri Sep 3, 2021	 Assignment: Day One Project (https://canvas.cmu.edu/courses/24993/assignments/394057)	due by 11:59pm
Mon Sep 6, 2021	 Design Brief and Problem Statement: Retooling Civics Education for a New Generation (https://canvas.cmu.edu/courses/24993/assignments/394052)	due by 11:59pm
	 Part I: Day One Public Interest Tech Accelerator (https://canvas.cmu.edu/courses/24993/assignments/394054)	due by 11:59pm
	 Week one graded discussion: Design Thinking (https://canvas.cmu.edu/courses/24993/assignments/394055)	due by 11:59pm
	 Conducting TOPx User Research (https://canvas.cmu.edu/courses/24993/assignments/394066)	due by 11:59pm
Sat Sep 11, 2021		
Mon Sep 20, 2021	 Assignment: How might we... (https://canvas.cmu.edu/courses/24993/assignments/394058)	due by 11:59pm

Date	Details	Due
Thu Sep 30, 2021	 Assignment: The first prototype https://canvas.cmu.edu/courses/24993/assignments/394065	due by 11:59pm
Sun Oct 10, 2021	 Assignment: Testing and updating the prototype https://canvas.cmu.edu/courses/24993/assignments/394064	due by 11:59pm
Tue Oct 12, 2021	 Final Project: Run your own design thinking workshop https://canvas.cmu.edu/courses/24993/assignments/394067	due by 11:59pm
	 Assignment: Observing users in the field https://canvas.cmu.edu/courses/24993/assignments/394059	
	 Assignment: Reimagine a government service https://canvas.cmu.edu/courses/24993/assignments/394060	
	 Assignment: sprint five https://canvas.cmu.edu/courses/24993/assignments/394061	
	 Assignment: sprint four https://canvas.cmu.edu/courses/24993/assignments/394062	
	 Assignment: sprint two (week three) https://canvas.cmu.edu/courses/24993/assignments/394063	
	 Final sprint: MVP delivery https://canvas.cmu.edu/courses/24993/assignments/394068	
	 Intro Workshop #1: "How might we..." exercise https://canvas.cmu.edu/courses/24993/assignments/394056	
	 Intro Workshop #2: Partner Workshop (Includes Mural Links) https://canvas.cmu.edu/courses/24993/assignments/394069	