

Design Thinking 2019 Fall

Instructors:

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Time: Wednesday, 2pm to 5pm, Place: ICID 5153. Office hour: by appointment

Course Description

Design thinking is a formal method for practical, creative resolution of problems or issues, with the intent of an improved future result. In this regard it is a form of solution-focused thinking which starts with a goal (a better future situation) instead of solving one specific problem. Design thinking integrates empathy for the context of a problem, creativity in the generation of insights and solutions, and rationality in analyzing and fitting various solutions to the problem context. The goal of Design Thinking is "matching people's needs with what is technologically feasible and viable as a business strategy" Students expect to learn by knowing about how designers approach problems and the methods which they use to ideate, select and execute solutions, individuals and businesses will be better able to improve their own problem solving processes and take innovation to a higher level.

Design thinking is an iterative problem solving process of discovery, ideation, and experimentation that employs design based techniques to gain insight and yield innovative solutions for virtually any type of organizational or business challenge, prominently including those within public service. In "Design Thinking" course, we will unpack each step of the design thinking process and become familiar with the design thinker's toolkit. Students will develop skills as ethnographers, visual thinkers, strategists, and storytellers through a hybrid of seminar discussions and collaborative projects. Over the course, students will directly apply what they have learned to cultural and creative industries, in particular social innovation.

Course Projects

Students will engage in a series of skill developing assignments that build upon each other throughout the duration of the course. The class will culminate in a final project that will allow students to apply what they have learned to a specific social and policy challenge they are passionate about. More specific details around course projects will be discussed in the first class.

Final Presentation

A final presentation will be a key deliverable for this course. In each session, students will learn different tools and ways of thinking that advance project work on their design challenge and build toward the final presentation. Highlights of the presentation include:

- 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

Reading Assignments

There will be a combination of required and optional readings throughout the course. Students will be expected to contribute to discussions via comments on a course blog as well as in class.

Content: supporting readings for each topic are based on *Maurício Vianna et, al. (2013) Design Thinking: business innovation 1st e-edition. MJV Press.*

Practice: methods used in each practice derived from *toolkits of Stanford D School and IDEO design cards.*

Recommended reading:

- *Change by Design* by Tim Brown
- *Design for the Real World* by Victor Papanek
- *This is Service Design Thinking* by Marc Stickdorn and Jakob Schneider
- *Applied Imagination: Principles and Procedures of Creative Problem Solving* by Alex F. Osborn
- *The Designful Company* by Marty Neumeier
- *Unstuck: A Tool for Yourself, Your Team, and Your World* by Keith Yamashita and Sandra Spataro
- *Wicked Problems in Design Thinking* by Richard Buchanan
- *Designing for Service: Creating an Experience Advantage* by Hugh Dubberly and Shelley Evenson

Schedule

Week	Date	Topic	Content	Practice
Week 1	09/11	Introduction of course	Methods (Stanford D methods, IDEO cards) Readings and exercise	Team building
Week 2	09/18	What, why and how is design thinking	Human centered design thinking	Team project
Week 3	09/25		Modes for process of design thinking Mindset of design thinkers	
Week 4	10/02	Empathize: know your users and care about their lives	Immersion 21	Assume a Beginner’s Mindset
Week 5	10/09		Preliminary immersion 24	What? How? Why?
Week 6	10/16		Reframing 24	User Camera Study
			Exploratory Research 28	Interview Preparation
		Desk Research 32	Interview for Empathy	
		in-Depth immersion 36	Extreme Users	
		Interviews 37	Analogous Empathy	
		Cultural Probes 39	Story Share-and-Capture	
		Generative sessions 43	Saturate and Group	
		A Day in the Life 49	Empathy Map	
		Shadowing 53		
Week 7	10/23	Team project Discussion		
Week 8	10/30	Define: Frame the right problem	<u>Analysis and Synthesis 65</u>	Journey Map
Week 9	11/06		Insight Cards 65	Composite Character Profile
			Affinity Diagram 72	Powers of Ten
			Conceptual Map 74	2x2 Matrix
			Guiding Criteria 78	Why-How Laddering
		Personas 80	Point-of-View Madlib	
		Empathy Map 83	Point-of-View Analogy	
		User’s journey 85	Point-of-View Want Ad	
		Blueprint 87	Critical Reading Checklist	
Week 10	11/13	Ideate: generate creative solution	<u>Ideation 99</u>	Design Principles
Week 11	11/20		Brainstorming 101	“How Might We” Questions
			Co-creation workshop 105	Stoke
			Idea Menu 109	Brainstorming
		Decision Matrix 111	Facilitate a Brainstorm Selection	
			Bodystorming	
			Impose Constraints	
Week 12	11/27	Prototype: build to think	<u>Prototyping 121</u>	Prototype for Empathy

Week 13	12/04	and test to learn	Paper Prototyping 126 Volumetric Model 130 Staging 133 Storyboard 135 Service Prototyping 138	Prototype to Test Testing with Users Prototype to Decide Identify a Variable User-Driven Prototyping Wizard of Oz Prototyping
Week 14	12/11	Test: learn about your solution and your user.	Feedback Capture Grid Storytelling	Shooting Video Video Editing I Like, I Wish, What If
Week 15	12/18	Team project proposal	Project development	Team discussion
Week 16	12/25	Team project proposal	Project development	Team discussion
Week 17	01/01			
Week 18	01/08	Team project presentation/ workshop	Conference of Design Thinking for Social Innovation	Team discussion One- day workshop with Invited mentors

Grades

Students will be graded on their final presentations as well as their participation in class and completion of assignments. Grading is based on NCKU criteria:

The grading breakdown is as follows:

20% Class participation and attendance

40% Exercise assignments

20% Project work

20% Final presentation