



DESIGN THINKING FOR GLOBAL CHALLENGES

APA Program: Level Up

Language of instruction: French

US semester credits: 4.0

Term: Fall Semester / Spring Semester

Course Description

This Design thinking course immerses students in a real-world, design experience in the spirit of a Silicon Valley start-up teaching them to manage the ambiguity inherent in professional design. Teams of 3-4 students partner up to tackle an industry/public organization/start-up... design challenge to deliver breakthrough innovation prototypes. Students will learn human-centric Design-Thinking with the guidance of a teaching/coaching team that includes faculty, expert design thinking coach, and academic staff. Students will explore problem & solutions using strategic-foresight, design thinking, team-dynamics-management, rapid prototyping, and human-centric problem reframing. With this course, we offer students the opportunity to go beyond a «paper project» and have a real impact on societal, environmental, or industrial issues.

Schedule

Week 1: kick-off and meeting with the partner

- Program presentation
- Course: Design Thinking workshop: Deep Dive into design thinking!
 - Introduction to design thinking culture, values, and mindset (people, place, process). Understanding the culture of exploration vs. exploitation.
 - Why design thinking? And where does it come from? Understanding the origins of the method (IDEO, Stanford d.school, SAP...)
 - Design thinking methodology: process and big phases (inspiration, ideation, implementation)
 - How can DT help you in your career? Discover the added value of an approach designed to create new experiences and develop new products and services. This workshop is a mix of practice, use cases and theory.
- Get to know your innovation team and your challenge
 - Projects kick-off with Corporate partner / NGO.
 - First exchange with partners about the challenge / rough benchmark exercise and preparation of a list of question for partner organization.
- Visit partner organization
- Assignment: Quiz on Design thinking

Week 2: Get deeper into the understanding of your challenge

- Preparing for the groundwork
 - Understanding corporate culture, values of the company / NGO, and interaction between users and the partner organization.

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Syllabus subject to change.

- Know how to capture the overall view of a project and in-depth benchmarking: ask about market issues and trends, existing technologies, or services in order to understand what works and what doesn't.
- Course: Identify and define the right users to target and stakeholders: mapping of actors (experts, stakeholders, users...) and interactions between them. Understanding the definition of "extreme users".
 - 6Ws (Who? Why? Where? What? When? How?)
 - Identification of constraints, problems, dreams, and expectations
 - Research plan
- Assignment: Benchmark report, creating a stakeholder's map, identifying about 20 users to interview.

Week 3: Going out into the field, get in touch with users

- Discover user and business needs
 - Collecting data: basics of ethnographic research and understanding the importance of values such as empathy and benevolence.
- Course: Knowing how to conduct ethnographic research: presentation of some tools (how to run interviews, observation, dynamic conversation...)
 - Introduction to basics of human behavior and emotions
 - Field Immersion
- Assignment: photo reportage and "verbatim"

Week 4: Pursue your field research and meetings with users

- Initial analysis and interpretation of the field research
 - Sharing Stories: Sharing Discoveries
 - Preparation of new questionnaires / interview guides
- Course: Introduction to participatory video, an effective tool to identify needs
- Back in the field
 - Run more interviews, more observation with different users.
 - "live my life" exercise.
- Assignment: prepare a video of "live my life" for the sponsor

Week 5: Interpret your data

- Analyze and synthesize data & problem reframing
 - Identification and organization by major themes (clusters)
 - Finding development axes with tools such as Venn Diagram, 2x2 matrices, experience curves, photo essays, etc.
 - Identifying "insights" and latent needs of your audience
 - Addressing the notions of divergence / convergence
- Defining a need and creating a challenge: Form "How might we" questions, starting point for brainstorming
- Proposing design imperatives (Must Have solution)
- Assignment: Present the design requirements to the sponsor

Week 6: Ideation and Creativity phase

- Generate your first ideas
- Course: Understanding the contribution of creativity in any innovation process
 - The levers of creativity (individual, collective, methodological) and the obstacles to creativity.
 - Time management: a key ingredient for the success of creativity sessions
 - How to run a brainstorming session properly and introduction to the methods of idea generation (inversion, analogy...)
- Exercise 5E: Moving from Concept to User Experience

Week 7: Getting deeper into the creativity phase

- Generate more ideas
 - creativity sessions (special brainstorming)
 - use of a storyboard, a visual bridge between ideas and concepts
- Course: become a workshop facilitator! Discovery of the digital tool "Mural".
- Back to the field with concepts/ideas
 - first user tests and interviews
 - taking notes, collecting feedback
- Team analysis of the first user feedback
- Presentation to the sponsor: select and evaluate together ideas/concepts

Week 8: Prototyping phase

- "Quick and dirty" prototyping
- Course: Understanding the importance of prototyping in an innovation project
 - Different sorts of prototypes for different purposes: getting familiar with different definitions of prototyping
 - Use cases / presentation of different prototypes: digital / industrial / "quick & dirty"...
- Building your first "quick and dirty" prototypes
- Course: Digital prototyping and discovery of digital tools (invision, Adobe XD, Figma, Sketch)
- Assignment: creation of at least 3 prototypes

Week 9: More prototyping and first tests with users

- This week is dedicated to creating more prototypes
- Course: how to test with users
 - User testing steps and tips: understanding and discussing tests in a real context with users
 - Learning how to collect user feedback: best practices and detection of experimental hypotheses
- Running your first tests
- Assignment: photo report and "verbatim", user curve (before/after)

Week 10: Test & Learn

- Course: applying the "Test & Learn" approach
 - The circle of iteration: approach and challenges of "Test & Learn".
 - Introduction to the "Lean Start-up" approach
- Applying the "Test & Learn" approach in the field in contact with users
- Course: Discovery of the digital tool "Lookback".

Week 11: Iteration, improving your prototype

- This week is fully dedicated to improving solutions and prototypes and collecting more
- feedback from users

Week 12 & 13: Make it happen - Storytelling and Building the pilot

- Course: implementation and storytelling
 - Measuring the importance of storytelling in the development and launch of innovations
 - Discovering examples of great storytellers
 - "Start with why": the golden circle by Simon Sinek.
- Concept of Mini-pilot
 - Collecting more feedback from the pilot to demonstrate serious credibility
- Visit of a FabLab in Paris: applying pre-production manufacturing techniques dedicated to making your ideas real
- Course: "From Quick & Dirty" prototyping to the concept of "Pilot"
 - Understanding the transition from prototyping to launch
 - Understanding reflexivity or the importance of awareness to improve practice / skills
 - Identifying the differences between MVP, POC and Pilot
 - Understand the issues related to implementation through practical cases
 - The notions of service design
 - Combining design thinking, "lean startup" and "agile" approaches
- Assignment: Building your pilot for the final presentation (week 14)

Week 14: Sharing your concept and final presentation

- Course 1- Public speaking and how to make great slides and an effective presentation: identifying the key ingredients to effectively communicate your speech
- Course 2 - Introduction to video and to presenting your concept efficiently
- This week is fully dedicated to preparing the presentation and improving the solution if needed
- Workshop: The Learning story
 - Understanding reflexivity or the importance of awareness to improve practice/skills
 - Design thinking, what's next?