

Division of Emerging Interdisciplinary Areas (EMIA),
The Hong Kong University of Science and Technology

EMIA2020 Cross-disciplinary Design Thinking

Fall 2022-2023

Course outline

Course description:

Design thinking is a design mindset and creative approach adopted from design discipline, which aims at enabling others, non-designers, think like designers for creative problem solving.

The approach generates inclusive solutions achieving usability and functionality to solve real-world problems in a new way. In the discovery journey, students are introduced to basic design methods, such as field research and empathic character to gain user insights, visual thinking to generate new and creative ideas, design probing and other user engagement methods to deepen user problems, prototyping ideas and testing with users and last, creating tangible outcomes to solve the defined problems.

Adopting design thinking targets to explore the right solution for the right problem. This pulls a diverse knowledge to enhance cross-disciplinary problem solving.

Intended Learning Outcomes (ILOs):

On successful completion of the course, students will be able to:

1. Explain and practice design thinking in problem defining and problem solving.
2. Adjust mindset to explore problems under uncertainties.
3. Develop empathy through applying user research and design methods.
4. Formulate the real problem and translate the defined problems into design opportunities.
5. Generate ideas and solutions in creative and rational ways.
6. Decision making and justification based on a chain of first-hand evidence.

Course instructors:

Dr. MOK, Luisa

Dr. ZHANG, Rong

Course schedule:

Week 1:	Course introduction. Key concepts of Design thinking.
Week 2:	Understand: Field trip [Assignment A1 submission]
Week 3:	Understand: Observation
Week 4:	Understand: Interview [Assignment A2 submission]
Week 5:	Define: Insights, Problem statement and Design opportunities
Week 6:	Define: A defined problem

Midterm presentation: A defined problem

- Week 7: **Ideate:** Visual thinking
Week 8: **Ideate:** Design concepts [[Assignment A3 submission](#)]
Week 9: **Prototype:** Low fidelity modelling, quick prototyping
Week 10: **Prototype:** Functional aesthetics. Design development
Week 11: **Test:** User testing in context [[Assignment A4 submission](#)]
Week 12: **Solve:** Solve the defined problems
Week 13: **Solve:** The final solution

Final Presentation: the right solution solving the right problem

Grading scheme:

1. Participation:	5%
2. A1 & A2 (individual work) and A3 & A4 (teamwork):	40%
3. Midterm (teamwork):	15%
4. Final (teamwork):	<u>40%</u>
5. *Peer review	
Total: 100%	

*Peer review: 5-Point Peer Review. It affects your final grade. 4-points and above: no effect; 3-4: one grade down (e.g. A- becomes B+); below 3: two grades down (e.g. A- becomes B).

End.