

Design Thinking

Course Syllabus

Design Thinking

Design Thinking (2 Credits)

Lecturers:

Dr. JIN Jun

junjin@zju.edu.cn

Dr. ZHOU Lingqiang (Chinese cohort)

zhoulingqiang@zju.edu.cn

Dr. ZHOU Yongguang (Chinese cohort)

yongguang67@zju.edu.cn

Dr. DENG Mingrong (Chinese cohort)

dengmr@zju.edu.cn

Time: Summer Semester 夏学期

Course Materials:

Textbook

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Recommended readings

- Lewrick, M. et al. Design Thinking Playbook, Wiley, 2018
- Brown, T., Katz, B. M. Change by Design: How Design Thinking Transforms Organizations and Inspires Innovation. HarperBusiness, 2009

Course Description and Objectives:

Focusing on the customers, the design thinking is used as an approach to provide creative solutions to the events and future improvements. Through the project-oriented cooperation, in the course, students will understand the basic theories and knowledge of design thinking, aware and master the tools and principles of design thinking, and their application. The course will contribute to the self-confidence on creativity of students, improve the awareness of innovation and entrepreneurship of students, and cultivate the creative thinking and design capabilities.

Through three projects, students will understand and master the methods, tools, and the process of design thinking, and know how to use them in projects design. In sum, three learning objectives will be met.

- LO2.1 (LG2 LO1): 能多角度识别问题 Able to identify problems from different perspectives
- LO2.2 (LG2 LO2): 能够产生不同的解决方案 Able to propose possible solutions along with the risks and benefits with each one
- LO3.2 (LG3 LO2): 能理解如何运用资源去解决问题 Understand how to utilize resources to solve business problems

In short, after the course, students will master the design thinking method and its implication in new product development. It will improve the teamwork capability and the creativity of students.

Course Outline

The course is divided into three modules with three projects. The design thinking process and tools are practiced through these three projects.

In the summer semester of 2020, the three projects are:

Project 1: Redesign to improve the learning or living experience during the period of combating COVID-19 for your partner.

Project 2: Find an innovative way to resolve a problem in the dormitory

Project 3: Find a solution to improve the learning efficiency except the traditional study in the campus (offline learning).

During the course, students are working in groups, 8 students/group. Sometimes, the work will be in pairs.

Session 1: Module 1 Introduction of Design Thinking (4 Teaching Hours)

Through a small project, students will aware the definition of design thinking, the process of design thinking, importance of design thinking method, and the relationship between design thinking and innovation & entrepreneurship. Students are working in pairs.

Students are asked to form groups.

Project 1: Redesign to improve the learning or living experience during the period of combating COVID-19 for your partner. The project will be finished in half hour. Then share your ideas with other pairs.

Game in the class: Draw a portrait of your partner. Know your partner, especial the feature of your partner.

Module 2: Awareness of the five stages of design thinking (Session 2 to Session 4, 12 Teaching Hours)

Project 2: Find an innovative way to resolve a problem in the dormitory (Group Work, 8 persons/group)

Session 2: Stage 1, Empathize and Part of Stage 2, unpack your interview

Introduce the tools and user research in the stage of empathy. Emphasize the skills and tactics of interviews. Explain how to unpack the data from interviews. The empathy map, AEIOU method and others are introduced.

Practice in the class: for the project 2, in group, each member should practice as an interviewee, interviewer, and recorder. Take record of the interview process. A group can collect information from the other group.

Session 3: Stage 2 and 3, Define and Ideate

In these two stages, students will understand the importance of the point of view, and the way to propose the POV, and the method to define the problem and ideate the possible solution. The project 2 continues. Through the project, students will know how to propose the point of view (POV) statement based on the analyses of data from user research via the brainstorm and others. Students are asked to submit ideas as many as possible.

Note in POV practice: please define the problem which each group is finally going to resolve. The practice process: unpack the interview data, select one interviewee as analysis target and solution. Make inferences to generate ideas and POV statement.

Please remember: No any solution in the POV statement.

Session 4: Stage 4 and 5, Prototype & Test

The session is for the stages of prototype and test. The role of prototype and test in the innovation and entrepreneurship is introduced. The session demonstrates how to design and show a prototype and the way to test, such as the role play, visualization of ideas.

The project: groups design the prototype to show ideas about the innovative way to resolve the problem in the dormitory life.

Concerning the test practice: Ask other group to visit your group and test your prototype, and then in turn.

Homework after the second project: Interview and data collection for the project 3, the way to improve the learning efficiency except the traditional study in the campus (offline learning). Note: at least one interview per person.

Module 3: Master the design thinking method and tools (Session 5 to 8, 16 Teaching Hours)

Project 3: the way to improve the learning efficiency except the traditional study in the campus (offline learning).

Session 5: Identify problem (the reinforcement of tools used at the stages of empathy and definition)

More tools for the user research, such as the profile, journey map, interview criteria, stakeholder map, and observation, are introduced.

The keyword replacement is suggested to be used for the ideas and discussion.

Project: students use different tools to draw the profile, journey map, and decide the target customer of the research project. Each student self-evaluates the quality of interviews and makes suggestions for the next time of interview. The inferences are evaluated in this session too. Voting method is practiced.

Session 6: Define problem, and propose ideas (the reinforcement of tools used at the stages of definition and ideation)

The PEST and other research method are mentioned in this session to identify the trend of technology and society. Based on the analysis of the user research and technology and society trends, groups define problem, and state their POV. In addition, students can consider technology/scene matrix as the project scenario. Students are asked to master the way to propose ideas with constraints. At the end of the session, the final idea is decided by each group.

Students are asked to self-evaluate the performance of brainstorm.

Session 7: Prototype design and test

Considering the feasibility and profitability of demo in the process of designing prototype. The way of introducing and marketing the prototype or idea is important in the innovation process.

During the test process, students are tested prototype to potential users or strangers in the campus. The feedbacks from test can be used to measure if the prototype meet the target or not and to iterate the prototype with the comments from users.

Notice: please make photo or video record of the test process.

Session 8: Roadshow of your project 3

Each group show their final projects and give comments to other groups. Target users are going to be invited in this session. Then it is a debrief of the project. Each group must summarize and review the projects and what will do for the next time.

Student Evaluation

- Attendance (10%)
- Participation in the class (10%)
- Individual work (20%): Project 1 (10%) + participation in group projects (10%)
- Group Work (60%): Project 2 (20%) + Project 3 (40%)