

CARLETON UNIVERSITY SCHOOL OF INDUSTRIAL DESIGN

COURSE OUTLINE IDES 5103 A • INTERDISCIPLINARY DESIGN DEVELOPMENT STUDIO

• WINTER (2022)

Instructor: **WonJoon Chung**

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Location: **In-Person (TB 213)**

Office Hours: Office hours are by appointments. Please email me in advance.

Time and Location: Please refer to Carleton Central under Student Services – Registration – Search Schedule: https://central.carleton.ca/prod/bwysched.p_select_term?wsea_code=EXT

Course Description

Team-based studio projects draw on interdisciplinary design development methods in achieving a common design objective. Projects will be supervised by academic and industry advisors from a wide range of disciplines, and conducted in collaboration with professionals from external organizations. Open to students from other programs. Includes: Experiential Learning Activity. Prerequisite(s): IDES 5101 and IDES 5102 or permission of the School of Industrial Design.

Learning Outcomes

By the end of this course, students will be able to:

1. Understand what design methods, when and how may be applicable to various stages in the design development and improvement.
2. Employ appropriate design research methods and tools to synthesize and gain user insights.

3. Facilitate a team collaboration for an effective design process.
4. Enhance iterative design process to develop creative design solution in a team environment.
5. Apply design principles and theory to develop compelling design solutions for a given design project.
6. Apply generative research methodologies to conceptualize user needs and context in an interdisciplinary design project.
7. Prepare and present design research findings and insights for stakeholders involved in and contributed to the focus of research or project.
8. Adopt professional behaviour.

Course Deliverables

These are the deliverables for this course. Please see 'Appendix A Course Schedule' for more detailed information.

• Summary of articles (2% x 5 weeks)	10%
• Midterm exam (wk8)	20%
• Campaign design project*	20%
Scenario (wk6:10%)	
Presentation (wk8:10%)	
• Mural project for the Innovation Hub*	50%
Insight presentation (wk10: 10%)	
Idea sketch (wk11: 5%), prototype (wk11: 5%)	
Final report (wk14: 15%)	
Final Model (wk14: 15%)	
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Total	100%

*A detailed project guideline will be handed out when each project starts.

Course Objectives

This course focus on understanding and practicing the concept of Design Thinking such as the fundamental principles, key characteristics, and practical application through design projects. It mainly consists of three parts. The first part is to understand the theoretical principles of design thinking by reading and summarizing some of the carefully selected journal articles. Students will read an article each week, submit the summary as homework for further discussion about it in a class.

The second part focuses on identifying user insights and developing a creative campaign idea for the first project, “Campaign Design Projects”. In this project, you will work in a team to develop creative campaign design ideas for a given social issue through performing collective creativity.

Based on the experience of creative ideation in the 1st project, students will work on the 2nd project called, the “mural” project for the innovation hub” in the new Nicol building. This would be a university-wide consultative design project to redefine the concepts of INNOVATION and ENTREPRENEURSHIP in a creative visual representation. In this project, students will seek to capture diverse views of the two notions, innovation and entrepreneurship, across different disciplines and develop an ecosystem-based design concept that can represent the complexity of the system while providing potential pathways for greater student engagement around innovation and entrepreneurship.

In summary, you will learn how to utilizes the concept of design thinking to gain insights and develop innovative and compelling design solution from this course.

Course Format

Most classes will begin with a lecture describing each week’s theme followed by a group discussion of an article read the previous week and work on the given term project. Active participation in the class discussion is highly recommended. Studio time may be used to conduct fieldwork, participate in workshops, and team discussion and collaboration. The course instructor will be a guide for the students throughout this design project, however, the expectation is that the students will propose their process for developing a solution (e.g. adapting design methods, testing and using them, developing insights, etc.).

Attendance in all classes is required.

Student Access to Quiz, Test, Exam Papers or Assignments

Examinations are for evaluation purposes only and will not be returned to the student.

Required Materials

Materials required for the course are listed below. You may be asked by your instructor to refer to Brightspace for a more comprehensive list of required materials.

Standard design studio tools to enable note taking, design research, concept generation, sketching, design mock-ups, CAD design development and their presentation (slides/boards). You may be asked by your instructor to refer to Brightspace for a more comprehensive list of required materials.

Book (Recommended)

Jon Kolko (2012). Wicked Problems: Problems worth solving, Austin, Texas, Ac4d

(Link to read this book for free <https://wickedproblems.com/read.php>)

Articles

- Ineta Luka (2014). Design Thinking in Pedagogy, Journal of Education Culture and Society, No.2
- Jon Kolko (2010). Abductive Thinking and Sensemaking, Design Issues, Vol. 26, No. 1
- Tim Brown (2008). Design thinking, Harvard Business Review, June
- Viveka T., Valerie A. and John A. (2016), Tackling wicked problems through collective Design, Intelligent Buildings International, Vol. 8, No. 1, P 24–36
- Paul H. and Nazli C (2015), Handle with care! Why and how designers make use of product metaphors, Design Studies 40, p.196 – 217

Computer Requirements

Please refer to the computer requirements on the School of Industrial Design Website. You may be asked by your instructor to refer to Brightspace for other information or requirements related to computer work.

<http://www.id.carleton.ca/undergraduate/about-the-bid-program/computer-requirements>

Individual/Group Work

Courses may include individual and group work. It is important in collaborative work that students clearly demonstrate their individual contribution.

Review/Presentation Attendance

Attendance at scheduled SID Reviews/Presentations is **mandatory**. These are equivalent to exams when indicated in the course outline. Failure to attend the Review/Presentation without reasonable cause, will

result in a grade of F. Students arriving late for the Review/Presentation or not remaining for the complete session without approval from the instructor, will be addressed on a case-by-case basis at the discretion of the instructor.

If you are not able to attend a Review/Presentation, foresee arriving late or need to leave before it is complete, please email your instructor in advance explaining the reason for the situation. It is important that you provide a reasonable rationale for your absence, late arrival or early departure. In the event of an illness or death in the family, you will be required to sign a form verifying your claim and this form is available through the SID administration office.

Late Submission of Lecture & Studio Deliverables

Students who do not hand in deliverables on time will have their earned grade reduced by 10% per day up to a maximum of 3 days.

Regulation on Minimum Grade Requirements

A grade of B- or better must be obtained in each credit counted towards the master's degree. The School does not permit exceptions to this rule.

Students will be required to withdraw from the program if their grade point average falls below 7.0 (B-), or if they receive a grade of less than B- in any two courses that are eligible to be counted toward the Master's degree.

For more information on General Regulations, please refer to:

<https://calendar.carleton.ca/grad/gradprograms/design/#regulationstext>

Participation and Professionalism

Active participation and professional conduct (e.g. class discussion, consultations with instructors, work ethic, etc.) are important in lecture and studio courses and may be formally evaluated by a grade. Professionalism also includes Carleton's Policy on Academic Integrity described in more detail below with links to content which you are required to review.

Academic Integrity: Plagiarism and Other Violations

In the School of Industrial Design, students are expected to have read and understand the University's definition of plagiarism and related offences in Carleton's policy on Academic Integrity at <https://carleton.ca/registrar/academic-integrity/>

The definition of plagiarism extends to copying designs, design ideas, research tools, etc. in whole or in part belonging to someone else, failing to acknowledge the sources through the use of proper citations when using another's work in any medium.

The school takes these misconduct offences seriously and will take appropriate action as outlined in Carleton's Academic Integrity policy (see link above).

Requests for Academic Accommodation

You may require special arrangements to meet your academic obligations during the term. For an accommodation request for any of the following topics below, refer to the link provided for more information: <https://students.carleton.ca/course-outline/>

- *Parental Leave*
- *Religious/Spiritual Obligation*
- *Academic Accommodations for Students with Disabilities*
- *Survivors of Sexual Violence*
- *Accommodations for Student Activities*

Student Responsibility

The student is responsible for knowing the content of this course outline; the schedule of classes, assignments, and/or Reviews; and the material that was covered when absent. The studio is a professional environment and students should be working during the scheduled hours.

Unless otherwise arranged, the class will meet during scheduled class hours. Please note that attendance is important since issues and questions may be raised in class, and announcements made, along with information disseminated through Brightspace. As external professionals are often involved in

our work, scheduling changes for guest lectures, presentations, and Reviews may occur at short notice, requiring students to stay informed.

Changes to the Course Outline

The course outline may be subject to change in the event of extenuating circumstances.

Appendix A - Course Schedule

IDES 5103 Winter Appendix A – Course Schedule.

week	Topics	Assignments
Wk1 0111 Online	Introduction to the course Historical background of design thinking (Lec)	Summary "Design Thinking in Pedagogy" by Ineta Luka (2%)
Wk2 0118 Online	The characteristics of design thinking (Lec)	Summary "Abductive Thinking and Sensemaking" by Jon Kolko (2%)
Wk3 0126 Online	Out of the box thinking & Bisociation (Lec)	Summary "Design thinking" by Tim Brown (2%)
Wk4 0201	Random Ideation (workshop) Introduce the 1 st project, "Campaign design."	Summary "Tackling wicked problems through collective Design" (2%)
Wk5 0208	Wicked problem (Lec) Ideation of the campaign design ideas (workshop)	Summary "The Challenge of Increasing Pro-environment Behavior" (2%)
Wk6 0215	Design for behavior change (Lec) Team consultation (Stu)	Submit the scenario of the campaign design project (10%)
WK7 0222	Winter break	
WK8 0301	Midterm exam (20%) Introduce "The Mural project" at the Innovation hub. Team consultation for the campaign project	Transcription of Interview & survey
Wk9 0308	Presentation of the Campaign project (10%) Formula of Insight finding (Lec) Team collaboration to develop a moodboard (Stu)	Moodboard & Insight presentation
Wk10 0315	Insight presentation (10%) Design pattern combination (Lec)	Mindmap for ideation
Wk11 0322	Metaphor in Design (Lec) Further ideation in a group (Stu)	Idea sketches (5%) & Prototypes (5%)
Wk12 0329	Making visual representation in 3D (model) and 2D (report)	Work in progress
Wk13 0405	Team consultation (Stu)	Final presentation & report
Wk14 0412	Final report (15%) & Model (15%)	