

COURSE OUTLINE IDES 4310D • CAPSTONE PROJECT • Fall-Winter (2024-25)

Instructor: Steven Pong

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Location: **2492 ME**

Office Hours: **Available upon request**

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Course Time and Location:

Course locations are no longer displayed on the public class schedule and are subject to change. For the latest information please refer to Carleton Central under Student Services – Registration – Student Timetable.

Course Description

Application of design principles in a comprehensive design project. Problem area should be product-oriented and of sufficient complexity. Normally undertaken in consultation with off-campus organizations and/or industry. Supervised by faculty and/or sessional members.

Includes: Experiential Learning Activity.

Precludes additional credit for IDES 4300 (no longer offered).

Prerequisite(s): IDES 3302 or permission of the School of Industrial Design.

Studio and lectures six hours a week in Fall and twelve hours a week i

Learning Outcomes

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

1. Apply research methods to define a unique design problem.
2. Bridge their research to the development of an appropriate design proposal.

3. Evaluate their proposed design solution with relevant stakeholders reflective of practitioner behaviour.
4. Demonstrate a basic understanding and need for ethics to develop and evaluate appropriate designs.
5. Use appropriate methods and materials to develop and assess design solutions.
6. Produce a range of appropriate professional deliverables at each phase as reflected in the fields of design.
7. Establish a good working relationship with external partners, which includes receiving and incorporating feedback from partner groups.

Course Deliverables

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

This is a year-long course. Marks assigned during the fall semester will count for 35% of the final grade. Marks assigned during the winter semester will count for 65% of the final grade. Feedback on work and progress will be provided throughout the semesters.

Fall Term – 35% of Final Grade

Phase 01: Discovery	10%
Phase 02: Concept	10%
Phase 03: Preliminary Design	15%

Winter Term – 65% of Final Grade

Phase 04: Definitive Design	15%
Phase 05: Final Design	20%
Phase 06: Final Documentation	25%
Professionalism:	5%

Student Access to Quiz, Test, and Exam Papers

Examinations will be returned to students with comments and explanations.

Required Materials

All Materials required for the course and their costs are listed below. Please note some materials costs are dependent on the project and the materials chosen so a range listing minimum and maximum values will be given.

Virtual Reality headsets and controllers (provided). All other materials and equipment will be determined by each individual student project. You will be required to source and purchase necessary supplies throughout the year.

The range of costs for this course are \$100 - \$1000, determined by the requirements of each individual student project.

Technology Requirements

Please refer to the technology 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 coursework.

<https://carleton.ca/id/student-info/computer-it-support/computer-requirements/>

Individual/Group Work

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

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 instructor's discretion.

If you are unable 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.

Late Submission of Assignments

Students who do not hand in assignments on time will have their earned grade reduced by 10% per day at the instructor's discretion. If you foresee not meeting the submission due date and are requesting an extension, please provide your instructor with a minimum of 24 hours' notice.

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 that you are required to review.

Health and Safety

Students must participate in training to access all the SID Labs and Maker Space. Apart from this training, students are required to follow the health and safety standards of the School of Industrial Design as well as Carleton's health and safety standards. All materials related to SID health and safety are available here [Health and Safety](#) and it is expected that students review and understand these materials and apply these standards throughout their studies.

Use of Studio Spaces

Access to studio space to attend courses and complete assignments is an important part of student success. To support access, specific studios have been designated to certain years and/or sections.

1st Year Studio Section A – AP448-A

1st Year Studio Section B – AP448-B

2nd Year Studio Section A – AP448-A

2nd Year Studio Section B – AP448-B

3rd Year Studio Section A & B – AP430

4th Year Studio All Sections (Capstone and Minor) – AP432

MDes Studio – ME3490

Students are welcome and encouraged to use their designated spaces to work during non-studio hours. Out of respect for your colleagues, instructors, and Carleton cleaning staff, ensure you leave the space in good condition. This includes cleaning your area and storing your items in your designated storage space. The School will not be responsible for items that are not stored properly.

Academic Integrity

Carleton's Policy on Academic Integrity is available at: <https://carleton.ca/registrar/academic-integrity/> and covers the following violations, but is not limited to:

- *Plagiarism*
 - *Submitting work written in whole or in part by someone else*
 - *Failing to acknowledge sources through the use of proper citations when using another's work*
- *Test and Exam Rules*
 - *Attempting to read another student's exam paper*
 - *Speaking to another student (even if the subject matter is irrelevant to text)*
 - *Using material not authorized by the examiner*
- *Other Violations*
 - *Improper access to confidential information such as exams or test questions*
 - *Disruption of classroom activities or periods of instruction*
 - *Misrepresentation of facts for any academic purpose*

This policy governs the academic behavior of students. In industrial design, ideas, and concepts come from a multitude of sources and may be modified and utilized in the design and development process. The student should reference such sources appropriately and it is strongly advised that you read Carleton's Policy on [Academic Integrity](#) before conducting any work at the University.

USE OF ARTIFICIAL INTELLIGENCE (AI) TECHNOLOGIES

To effectively address the incorporation of AI technologies, specifically generative AI tools, into courses, we have instituted the following guidelines. Further information can be found here -

<https://carleton.ca/tls/teachingresources/generative-artificial-intelligence/recommendations-and-guidelines/>. Another useful resource is the Library's guide on AI tools - <https://library.carleton.ca/guides/subject/artificial-intelligence-ai-tools>.

1. Academic Integrity Standards: In the absence of explicit permission from the instructor within a given course, the use of generative AI tools to create content, (e.g., text, code, images, summaries, videos, etc.), is deemed a breach of academic integrity standards.
2. Instructor's Discretion: Instructors have the authority to grant permission for the use of generative AI tools, (e.g., ChatGPT and similar tools), based on alignment with the course's educational objectives and learning outcomes. Assignment and examination guidelines will be written to explicitly reflect this granted permission.
3. Clear Instructions: Should instructors choose to permit the use of generative AI tools, an assessment guideline will provide students with clear and detailed direction, including;
 - i. Identification of specific generative AI tools that are acceptable for use.
 - ii. Clarity on the approved applications of these tools.

These measures aim to create a balanced and transparent educational environment, ensuring both academic integrity and the responsible integration of AI technologies into the learning experience.

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 below topics, refer to this link - <https://students.carleton.ca/course-outline/> and open the needed section.

Topics:

- *Pregnancy Obligations*
- *Religious/Spiritual Obligation*
- *Academic Accommodations for Students with Disabilities*
- *Survivors of Sexual Violence*
- *Accommodations for Student Activities*
- *Academic Considerations for Medical and Other Extenuating Circumstances*
- *Scheduling and Examination Support*

Statement on Student Mental Health

As a university student, you may experience a range of mental health challenges that significantly impact your academic success and overall well-being. If you need help, please speak to someone. There are numerous resources available both on- and off-campus to support you, refer to this link - <https://wellness.carleton.ca/> and open the needed section.

Topics:

- *Counselling*
- *Resource Guide*
 - *Thriving on Campus*
 - *Everyday Stress*
 - *Mild Mental Health Concerns*
 - *Moderate Mental Health Concerns*
 - *Complex Mental Health Concerns*
- *Umbrella Project*

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, or valuable information may be shared, all of which can greatly benefit the student's learning experience. As external professionals may be 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

Week 01: Sept 06: **Intro to Virtual Reality (VR) at Experiential Learning Hub (ELH)**

Week 02: Sept 13: SoftLab, **TCPS-2 CORE-2022 Certificate DUE**

Week 03: Sept 20: SoftLab, **Research/Project Plan DUE**

Week 04: Sept 27: SoftLab, Work Week

Week 05: Oct 04: **Research/Framing + Design Brief1 DUE**, VR@ELH

Week 06: Oct 11: Work Week

Week 07: Oct 18: Work Week

Break: Oct 25: No Class

Week 08: Nov 01: **Concept/Research Update + Design Brief2 DUE**, VR@ELH

Week 09: Nov 08: Work Week

Week 10: Nov 15: Work Week

Week 11: Nov 22: Work Week

Week 12: Nov 29: **Preliminary Design, Prototypes, Testing Plan + Design Brief3 DUE**, VR@ELH

Winter Holidays: No Classes

Week 13: Jan 10: First Class

Week 14: Jan 17: Work Week

Week 15: Jan 24: Work Week

Week 16: Jan 31: **Definitive Design and Supporting Materials DUE**

Week 17: Feb 07: Work Week

Week 18: Feb 14: Work Week

Break: Feb 21: No Class

Week 19: Feb 28: Work Week

Week 20: Mar 07: **Final Design, Final Prototypes, & Technical Package Draft DUE**

Week 21: Mar 14: Work Week

Week 22: Mar 21: Work Week

Week 23: Mar 28: Work Week

Week 24: April 04: **Presentation of Complete Project. Poster, Final Design Model DUE**

Note: 1) Community Partner meetings and presentations will occur throughout the year. Associated dates and times will be communicated in-class and through Brightspace. 2) Dates for Capstone Walkarounds and for Grad Show are TBD.