

COURSE OUTLINE IDES 4310C • CAPSTONE PROJECT • FALL/WINTER(2021/2022)

Instructor: Michael McGinn

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Office Hours: By appointment

Location: In studio / remote

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Office Hours: By appointment

Time and Location: Please refer to Carleton Central under Student Services – Registration – Search Schedule: <https://admissions.carleton.ca/faqs/where-can-i-find-the-class-schedule/>

Course Description

Application of design principles in a comprehensive design project. Problem area chosen should be product oriented and of sufficient complexity. Normally undertaken in consultation with off-campus organizations and industry; supervised by faculty 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 in Winter.

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. Develop 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.

FALL SEMESTER 2021

(5%) Preliminary Design Brief and Executive Summary (SEP 30th) Students will share their initial ideas and theme directions via a round table discussion within their selected groups.

Presented:

- Thumbnail sketches illustrating flow and thought direction for “what if” scenarios. Will be discussed informally small subgroups. (no specified format)

Submitted:

- Initial product brief (individual) summarizing the desired design directions and value propositions. (1 page PDF, 8.5” x11”)
- executive summary (per/group) as an initial table of content for the research report. Will highlight all relevant topics for research and how info will be applied to the design direction (1 page PDF, 8.5”x11”)

(10%) Phase 1 Review and Report (OCT 21st) Student's will submit a draft report outlining their research and findings. Students will also loosely present their initial findings and assumption with support sketches and prototypes where relevant.

Presented:

- Loose iterative sketches of potential directions for multiple opportunities (in groups) (No specified format).
- Prototypes – showing testing and validation of design assumptions. Format will be dictated by design problem.

Submitted:

- Draft Research Report (per/group): Table of content complete with accompanied research so far. (PDF 8.5" x 11")
- Updated Brief (individual) discussing significant issues, concerns, and relevant changes. (PDF 8.5" x 11")

(15%) Phase 2 Review and Report (DEC 9th) Each student will do an Oral presentation to the larger theme group, highlighting their proposed design.

Presented:

- Panels showing the design direction and relevant exploration. Focus should be on the Why (problem/opportunity), what (potential product) and how (hurdles/challenges). Format will be a quick elevator pitch (3 min)

Submitted:

- Draft research report updated (per/group): A formatted document containing all relevant research done up to this point. (PDF, 8.5" x 11")

WINTER SEMESTER 2022

(20%) Phase 3 Preliminary Design (Feb 3rd) Each student will present a creative and compelling design direction based on the issues and challenges identified in the fall.

Presented:

- Test models and relevant discoveries/iterations. (In groups)
- Sketch Presentation panels showing form development (Sketching and/or Sketch CAD) – Should highlighting new discoveries with potential solutions, and specific details/ features of the design. (In groups)

(20%) Phase 4: Definitive Design (March 10th) Each student will present the final version of their design direction, illustrating that that all problems are resolved, and objectives met.

Presented:

- Panels that show CAD model and detail development of form and function. (In groups)
- Technical drawings showing an understanding of assembly and manufacturing hurdles.
- Scale model or tactile representation

Submitted

- Final Rough draft of report (individual) (PDF, 8.5" x 11")

(25%) Phase 5 Final Presentation and Report (April 7th) Each student will give a formal presentation of their design to the larger theme group.

Presented:

- Final presentation panels.
- High fidelity appearance model

Submitted

- Final Formatted Report (PDF, 8.5" x 11") submitted April 12th – electronically.
- Final Design Book (PDF, 8.5" x 11") submitted April 28th – electronically

(5%) Conduct, professionalism and participation Assessed at the end of the winter term.

*Note: All deliverables for either presentation or submission must be submitted to the Instructor or TA by 9:00am on the date mentioned in each of the above phases.

Student Access to Quiz, Test and Exam Papers

Choose an item

Required Materials

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

Required project materials will be dependent on each independent design direction.

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 cuLearn 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.

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

Carleton's Policy on Academic Integrity is available at: <https://carleton.ca/registrar/academic-integrity/> and covers the following topics:

Plagiarism (e.g. submitting work 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 (e.g. attempting to read another student's exam paper, speaking to another student even if the subject matter is irrelevant to the text, using material not authorized by the examiner).

Other Violations (e.g. improper access to confidential information, disruption in classroom activities, 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 prior to conducting any work at the University.

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.

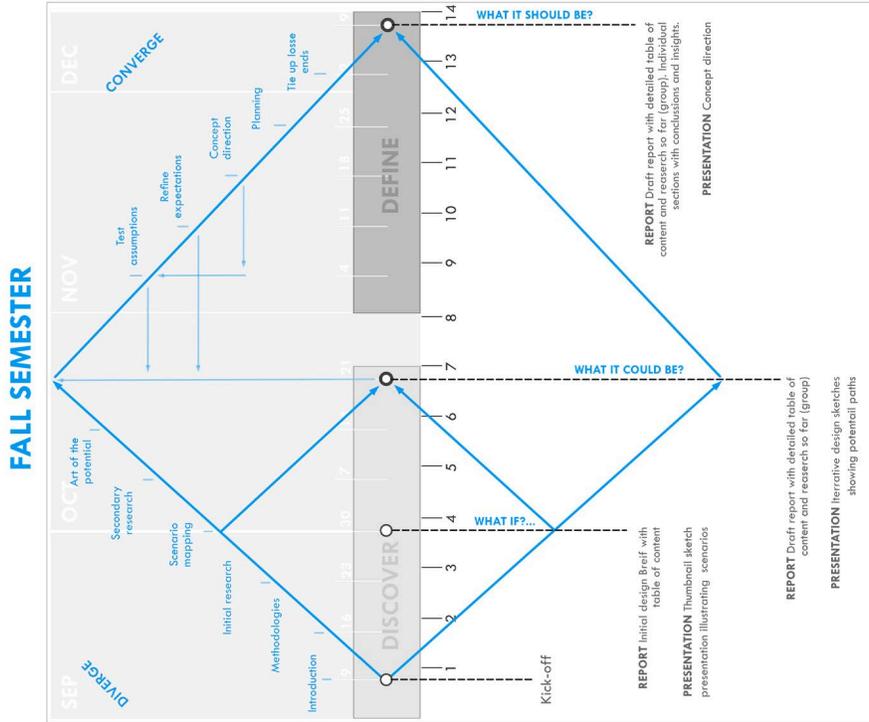
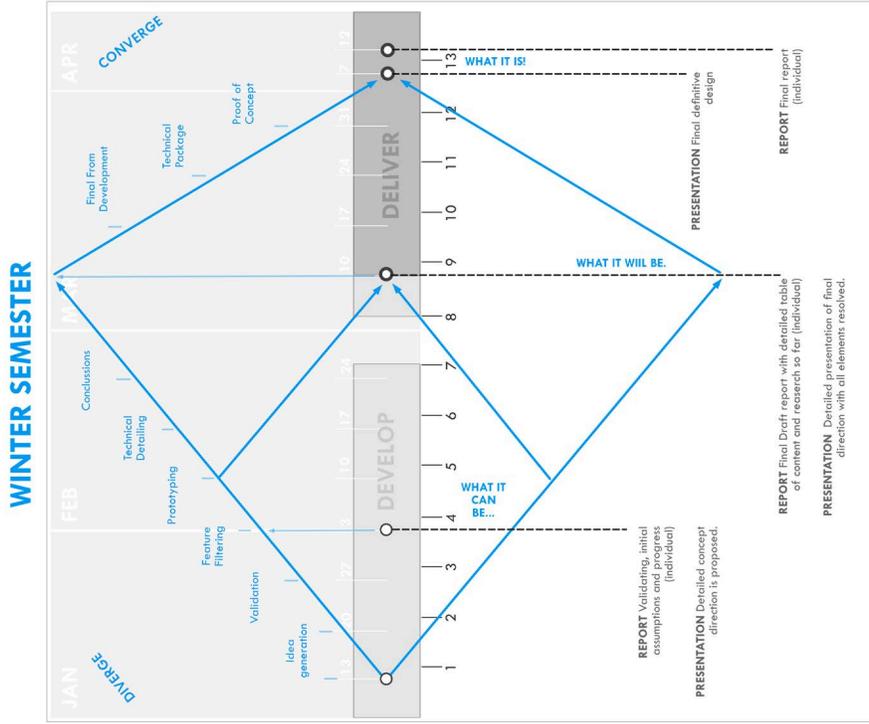
Unless otherwise arranged, the class will meet during scheduled class hours. Please note that attendance is important since issues and questions may be raised in class, and announcements made,

along with information disseminated through cuLearn. 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



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