

IDES 4310B • CAPSTONE PROJECT

Instructor: **Rob Watters**
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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 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. 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. For more detailed information, please see the Course Schedule, **IDES 4310B CAPSTONE PROJECT F26 - Rob Watters - Course Schedule**, in Brightspace.

Fall Term – 40% of Final Grade

Phase 1: Discovery & Ideation (Comprehensive) 10%

TCPS 2: CORE-2022 Certificate
User Research Plan
Review Presentation

Phase 2: Concept Design (Comprehensive) 15%

Design Brief v.1.0 Review Presentation	
Phase 3: Preliminary Design (Comprehensive)	15%
Test Plan Design Brief v.2.0 Review Presentation Process Book (Draft)	
Winter Term – 60% of Final Grade	
Please 4: Definitive Design (Comprehensive)	15%
Review Presentation	
Phase 5: Final Design (Comprehensive)	15%
Review Presentation Technical Package (Draft)	
Phase 6: Final Documentation	25%
Design Poster or TBD Year End Show format Design Model Design Video Technical Package Process Book	
Participation & Professionalism (covers both terms)	5%

Student Access to Exam, Quizzes, and feedback on Academic Work

Carleton University is committed to providing students with appropriate and timely feedback on their work. Please see [undergraduate regulations Article 5.3](#) for more information.

First assigned academic work will be evaluated and returned prior to the 25 teaching day of term.

Students have the right to have questions regarding their grades addressed and to view all material, including material that has not been returned such as final examinations (see [undergraduate regulations Article 3.3.4](#)).

This course has no exam.

Cost of Educational Materials

All materials required for the course and their costs are listed below. Materials costs are dependent on the project and the materials chosen so in some case a range will be given with min-max values.

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Standard design development materials to support a full range of desktop design processes will be required. These are items you are already familiar with from previous studio design work and will be required on an ongoing basis throughout the SID program.

There will be project-specific materials directly relevant to your Capstone topic for the research, development and actualization of your comprehensive design. This may include competitive or comparable products for reference and items for testing and evaluating your design iterations. Materials for making your mockups, prototypes and final model should also be anticipated as well as the printed material for presentation and a process book. **An estimate of these expenses is \$250–\$1000**, but every project is different and each student can make decisions that affect their project's cost. Some funding may be applied for through FED at the beginning of each term (follow your email re. KEFC funding).

Note: *Learning material* is defined as either a physical or digital material that students may need to fully participate in a course. This could include publisher learning and assessment tools, course packs, online subscription-based platforms and services, and software not provided by the University, Faculty, Department or School.

Technology Requirements

Please refer to the technology requirements on the School of Industrial Design Website (<https://carleton.ca/id/student-info/it-support/technology-requirements/>).

You may be asked by your instructor in Brightspace for other information or requirements related to coursework.

Note: Carleton University will no longer provide Adobe Creative Cloud access starting September 2026. School of Industrial Design students are required to purchase their own license/subscription to the Adobe Creative Cloud service for the 2026-2027 academic year.

Individual/Group Work

Courses may include individual and group work, and the majority of the grade must reflect individual work. This will support the assessment of individual performance, which may be difficult to determine in group projects. It is also 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](#) which you are required to review.

The School hosts two mandatory major events each academic year: **DisPlay** (December) and **ConnectID** (April). For those where studio is part of their curriculum, students may be required to exhibit their studio projects and are expected to actively assist with both the setup and tear-down of these events. **By remaining enrolled in a studio course and attending these events, you provide your implied consent to participate in these mandatory academic activities. Please refer to your course outline, course schedule and Brightspace for specific instructor information related to these events.**

If you have a legitimate conflict, accommodation requirement, or do not wish to participate, you must proactively consult with your studio professor before the event date to discuss alternative arrangements.

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. Students are welcome and encouraged to use available studio 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 whenever you are leaving the 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

Moderate Use – Content Generation with Attribution

AI use in this course: Students may use AI tools for ideas, clarifying challenging concepts or getting started on projects. Some acceptable uses include:

- Sounding board (e.g. generating essay topics with ChatGPT, using Microsoft Word's Smart Lookup or Copilot to find inspiration and related topics)
- Creating outlines (e.g. using AI to structure an essay or presentation flow, using Microsoft Word's Outline View with AI suggestions)
- Providing definitions or explanations of complex concepts (e.g. using AI to explain a difficult theory or to find relevant information)

Some Activities/Deliverables will allow Enhanced use: – Support for Process-based Activities

- **AI use in permissible activities:** Students are encouraged to use AI tools in this course for support in completing several process-based activities. Some acceptable uses include:
- AI-generated content should not exceed X per cent (instructor to modify – we recommend no more than 30 per cent) of the total assignment length

As our understanding of the uses of AI and its relationship to student work and academic integrity continue to evolve, students are required to discuss their use of AI in any circumstance not described here with the course instructor to ensure it supports the learning goals for the course. Students can access resources related to citing Generative AI on the [MacOdrum Library website](#). Plus, additional AI resources are also available on Carleton's [Artificial Intelligence Hub](#).

Requests for Academic Accommodation

Carleton is committed to providing academic accessibility for all individuals. You may require special arrangements to meet your academic obligations during the term. The accommodation request processes, including information about the *Academic Consideration Policy for Students in Medical and Other Extenuating Circumstances*, are outlined on the Academic Accommodations website (students.carleton.ca/course-outline). The website covers the below topics.

Topics:

- Pregnancy Obligations
- Religious/Spiritual Obligation
- Academic Accommodations for Students with Disabilities
- Survivors of Sexual Violence
- Accommodation 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.

Course Schedule

Please refer to Brightspace for a detailed Course Schedule: **IDES 4310B CAPSTONE PROJECT F26 - Rob Watters - Course Schedule**. This is a Draft. This is an active highly participatory course with many external advisors. If/as changes to this schedule are required students will be involved where possible and will be given as much advanced notice as possible.

School of Industrial Design 2024/2025 DRAFT		
IDES 4310B Capstone Studio Project Schedule (General) v0.1		
Date	Focus of in-class activities	Deliverables / Presentations
PHASE1: Discovery + Ideation		
Week 1 Sept. 10	Introductions & Project Kick-Offs • Course overview • Discovery & ideation overview • Team organization • Project scoping • Background research • Research ethics	
Week 2 Sept. 17	Problem Finding • User & product research overview • Progress meetings • Background research • User research planning	
Week 3 Sept. 24	Problem Finding • Design briefs overview • Progress meetings • Background research • User research & idea-generation	DUE: TCPS-2 CORE-2022 certificate DUE: Research + Project Plan
Week 4 Oct. 01	Problem Framing • Design analysis & synthesis overview	

	• Progress meetings • User research & idea-generation • Preparation of deliverables	
Week 5 Oct. 08	Phase 1 Review • Discovery & ideation presentations • Feedback & discussions • User research & concept development	DUE: Presentation: Research + Opportunity Framing
PHASE 2: Concept Design		
Week 6 Oct. 15	Problem Solving • Concept design overview • Progress meetings • User research & concept development	
Week 7 Oct. 22	Problem Solving • Progress meetings • User research & concept development	
Break 26- Fall Break 30th		
Week 8 Nov. 05	Problem Solving • Progress meetings • User research & concept development	
Week 9 Nov. 12	Phase 2 Walk and Talk Review • Open review with possible visitors to AP • Explain project and gain feedback	DUE: Presentation: Concept Design + Research Update DUE: Design Brief v.1.0
Week 10 Nov. 19	Planning Pototypes • Concept design presentations • Feedback & discussions • Concept refinement	
Week 11 Nov. 26	Prototyping + Test Planning • Preliminary design overview • Progress meetings • Concept refinement & prototype development • Test planning	
Week 12 Dec. 03	Prototyping + Testing • Progress meetings • refinement & prototype development • Testing • Preparation of deliverables	
Week 13 Dec. 10	Phase 3 Review • Preliminary design presentations • Collect feedback with partner	DUE: Presentation: Preliminary + Prototypes + Testing. DUE: Design Brief v.2.0, DUE: Test Plan v2.0 DUE: Process Book (draft)
Dec. 12 - 23th	Exams Period. Generally no SID LAB access. Great opportunity to prototype at home.	

Break	Year End Break	
PHASE 4: Definitive Design		
Week 14 Jan. 07/08	Design Development and Testing • Definitive design overview • Prototype testing & evaluation	
Week 15 Jan. 14/15	Design Development and Testing • Progress meetings • Prototype testing & evaluation	
Week 16 Jan. 21/22	Review Preparation • Progress meetings • Preparation of deliverables • Prototype testing & evaluation • Design revisions	
Week 17 Jan. 28/29	Phase 4 Review (Walkaround) • PinUp style presentation - Friday, Jan31st. • Setup 10am -11am. Teardown 4-5pm. • Be at your station 11-4pm/ also interview others	DUE Jan 31st (NEW): Presentation: Definitive Design + Supporting Materials. 'Poster Session Style' Walk and Talk DUE: Process Book (draft)
Week 18 Feb. 04/05	Detailed Design Development • Preparation of deliverables	
	Detailed Design Development • Definitive design presentations • Feedback & discussions • Detailed design development	
Week 19 Feb. 11/12	Detailed Design Development • Final design overview • Progress meetings • Detailed design development	
Break 15- Winter Break 19		
Week 20 Feb 25/26	Review Preparation • Progress meetings • Detailed design development	
Week 21 Mar. 04/05	Phase 5 Review • Final design presentations	DUE: Presentation: Final Design, Prototypes DUE: Draft Technical Package
PHASE6: Final Documentation/Communication		
Week 22a Mar. 11/12	Final documentation Preparation • Preparation of deliverables	

	Final documentation Preparation • Preparation of deliverables	
Week 23 Mar. 18/19	Design Communication • Final documentation overview • Final poster in-progress working session • Preparation of deliverables	DUE - Draft Poster (tiled prints)
Week 24 Mar. 25/26	Review Preparation • Progress meetings • Preparation of deliverables	
Week 25 Apr. 01/02	Review Preparation • Progress meetings • Preparation of deliverables	
Week 26 Apr. 08/09	Phase 6 Review • Final documentation presentations • Feedback & discussions	DUE - Review Mini Presentation of Complete Project. Design Poster, Final Design Model, Video (consider unique aspect for some), Process Book, Technical Package. (TBD tuning of deliverables could change)
Apr.23 2025	Exam period	
After Exams (TBD)	46th Annual SID Exhibition - Connect-ID	If approved to attend, prepare and ready space with materials displayed.