Carleton University

School of Industrial Design
Course Outline
Fall 2025

IDES 3310A • PROJECTS IIIA

Instructor: **Tim Haats**
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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

Introduction to the design principles associated with the evaluation and re-design of an existing product. Topics include: user/machine relationship, component packaging, and manufacturability. The design project(s) explore some or all of the design principles covered in the lectures.

Includes: Experiential Learning Activity.

Precludes additional credit for IDES 3300 (no longer offered).

Prerequisite(s): IDES 2302 or permission of the School of Industrial Design.

Studio and lectures six hours a week.

Learning Outcomes

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

1. Use a systematic design process in a comprehensive design project, utilizing multiple design phases with specific deliverables.
2. Apply product analysis methods to identify product shortcomings and design opportunities.
3. Incorporate design principles and relevant theory from previous design courses.
4. Apply industrial design sketching techniques and methods to demonstrate the breadth of ideation, and refining concepts through iterations that are appropriately presented.
5. Create physical prototypes at different levels of fidelity to explore, test, and verify design solutions.
6. Apply digital design software in the design process, with emphasis on testing alternative ideas through professional rendering, and technical drawings to communicate the final design intent.
7. Create documentation that illustrates the design process and execution.
8. Communicate progress to peers and advisors through in-class presentations.
9. Demonstrate professional behavior as an industrial designer.
10. Exhibit the ability to receive and respond to peer and instructor evaluation.

Course Deliverables

These are the deliverables for this course. For more detailed information, please see the Course Schedule, **IDES 3310A PROJECTS IIIA F25 - Tim Haats - Course Schedule**, in Brightspace.

Phase 1: Product Analysis *Documentation of Research + Design Brief*	15%
Phase 2: Concept Development *Documentation of Idea Generation & Concepts*	15%
Phase 3: Prototyping & Testing *Prototypes & Testing Materials*	20%
Phase 4: Detailed Design *Documentation of Design Refinement & Final Design + Technical Drawings*	20%

Phase 5: Final Documentation *Design Model + Process Book*	20%
Working Project Documentation *Ongoing Documentation of Process*	5%
Participation & Professionalism *Attendance, Teamwork & Overall Studio Performance*	5%

Student Access to Exam

No exam

Cost of Educational 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.

Books:

The following books are not required, but will be useful references to support your work throughout this course (some are available online through Ares library reserves, accessible from Brightspace):

Baskinger, M. & Bardel, W. (2013). *Drawing ideas: A hand-drawn approach for better design.* Watson-Guptill Publications. [$46.00]

Hallgrimsson, B. (2019). *Prototyping and modelmaking for product design* (Second edition). Laurence King Publishing. [$75.00]

Henry, K. (2012). *Drawing for product designers.* Laurence King Publishing. [$60.00]

Martin, B. & Hanington, B. (2019). *Universal methods of design (expanded and revised): 125 ways to research complex problems, develop innovative ideas, and design effective solutions.* Rockport Publishers. [$46.00]

Milton, A. & Rodgers, P. (2013). *Research methods for product design.* Laurence King Publishing. [$60.00]

Terstiege, G. (Ed.). (2009). *The making of design: From the first model to the final product*. Walter de Gruyter GmbH. [$64.00]

Weinschenk, S. (2020). *100 Things Every Designer Needs to Know About People* (Second edition). New Riders. [$38.00]

Tools & Mediums:

Utilize the tools that you have accumulated from previous years' studio courses. Over time, you have discovered mediums that you feel work for you. You must have the most relevant subset of these mediums with you for every studio class.

The following tools and mediums are some suggestions:

- One pack of 8 ½ x 11", 20lb bright white ink jet paper or similar [$10.00]
- Roll of masking/drafting tape (24mm) [$4.00]
- Various nylon-tipped, rollerball, and/or ball-point pens (e.g., BIC Crystal, medium point) [$4.00]
- Colored drawing pencils (e.g., Verithin non-repro blue, indigo blue, and/or black) [$30.00]
- Designer markers (gray scale and preferred accent colors) [$50.00]
- Cork-back steel ruler (14" minimum) [$8.00]
- Self-healing cutting mat (12" x 18" minimum) [$25.00]

- Segmented utility knife and replacement blades (a pack of 50 is recommended) [$22.00]
- Hot glue gun and glue sticks (small craft glue guns are not sufficient) [$30.00]
- Engineer square or equivalent [$13.00]
- 100 and 220 grit wet-dry sand paper and a sanding block [$16.00]
- Safety goggles/glasses [$10.00]
- Dust masks [$6.00]

Computer Software:

The latest versions of the following software (provided by the School of Industrial Design) must be installed on your personal laptop computer:

- SolidWorks
- KeyShot
- Illustrator
- Photoshop
- InDesign

It is also recommended to have an image scanning application on your mobile device(s) to allow for quick and easy digital capture of in-progress analog work.

Project Specific Materials:

Other specific materials will be dependent upon each individual project. You will be required to purchase or acquire the appropriate materials necessary for you to complete your own unique design activities throughout the term. This can range anywhere from $50.00 to $300.00.

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 to refer to Brightspace for other information or requirements related to coursework.

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 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. 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

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

- Brainstorming ideas (e.g., generating essay topics with ChatGPT, using Microsoft Word's Smart Lookup 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, e.g., using Microsoft Word's Researcher tool to find relevant information)

Documenting Use of AI: It is necessary to document your use of AI in this course, using the following guidelines:

- Clearly identify and cite AI-generated text (e.g., 'The following paragraph was generated by ChatGPT/Microsoft Word's Researcher tool')
- Review, edit, and ensure accuracy and originality of final submissions
- AI-generated content should not exceed 30% of the total assignment length

Why have I adopted this policy? This policy supports the use of AI as a supplementary tool, helping students develop ideas and structure their work while emphasizing the importance of transparency and personal engagement with the content. AI can be used for inspiration and foundational support and can encourage students to critically assess and refine AI-generated material.

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 3310A PROJECTS IIIA F25 - Tim Haats - Course Schedule**.