CARLETON UNIVERSITY
SCHOOL OF INDUSTRIAL DESIGN

COURSE OUTLINE IDES 3310A • PROJECTS IIIA • Fall (2024)

Instructor: **Stephen Field**

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Location: **3476 ME**

Office Hours: During studio hours or by appointment

Teaching Assistant: **Isabel Dukes**

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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. Please see 'Appendix A Course Schedule' for more detailed information.

Grading Document:

TWO DAY WARM-UP PROJECT	10%
Introductions to the design process principles that will be followed in the major project.	
MAJOR PROJECT	
RESEARCH DOCUMENTATION:	
Group and individual research	15%
PRELIMINARY DESIGN / CONCEPT DEVELOPMENT / USER TESTING	15%
DEFINITIVE DESIGN	10%
Final revisions have been made and design meets to all objectives	
FINAL DESIGN	30%
Model/s and Poster	
FINAL DOCUMENTATION OF DESIGN	15%
Working drawings and process documents	
STUDIO PERFORMANCE	5%
TOTAL	100%

Student Access to Quiz, Test, and Exam Papers

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.

Please refer to **Appendix B** Drawing Materials and Mediums, **Appendix C** – Prototyping Tools and Materials

It must be noted that you will be required to purchase modeling materials which will be dependent on your project and final deliverables. Many of these materials can be purchased from the school but there may be the requirement for you to source and purchase from an outside vendor.

Utilize the tools that you have purchased for previous years studios. Over time you have discovered mediums that you feel work for you. You must have the most relevant subset of these for every studio session.
Visit http: //www.idsketching.com/thesketchlab/materials-guide/ as a reminder of some the sketch materials designers' use.

Readings (recommended readings include, but not limited to)

Baskinger, M. and Bradel, B. Drawing Ideas. Watson-Guptill Publications, 2013.

Crouch, C and Pearce, J. Doing Research in Design. London: Berg,2012

Eissen, K. and Steur, R. Drawing Techniques for Product Designers. BIS Publishers, 2007.

Hallgrimson, B. Prototyping and Model Making for Product Designers. Laurence King Publishing Ltd., 2012

Henry, K. Drawing For Product Designers. Laurence King Publishing Ltd., 2012

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

Milton, A. and Rodgers, P. Research Methods for Product Design. Laurence King Publishing Ltd., 2013

Rodgers, P. and Milton, A. Product Design. Laurence King Publishing Ltd., 2011

Terstiege, G. The Making of Design, Basel; Boston: Birkhauser, 2009

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

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/

Software

Software that should be installed on laptop:

Adobe Suite - Photoshop, Illustrator, InDesign (Schools of Industrial Design versions).

SolidWorks and KeyShot (Schools of Industrial Design versions).

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.

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 – Studio A
1st Year Studio Section B – Studio B
2nd Year Studio Section A – Studio A
2nd Year Studio Section B – Studio B
3rd Year Studio Section A & B – Studio C
4th Year Studio All Sections (Capstone and Minor) – Studio D
MDes Studio – MDes Studio

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

IDES 3310A PROJECTS IIIA F24 - Stephen Field – a hard copy presented and on Brightspace

Appendix B – Drawing Materials and Mediums

Appendix C – Prototyping Tools and Materials