

**COURSE OUTLINE IDES 2302B • PROJECTS IIB • Winter (2025)**

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Location: 2496 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**

Introduction to the design principles associated with adapting products to an existing product semantic. Topics covered: principles of design, product semantics, design analysis, design synthesis, design evaluation, and modeling techniques. The design project(s) explore some or all of the design principles covered in the lectures.

Includes: Experiential Learning Activity.

Prerequisite(s): IDES 2300 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. Incorporate design analysis and synthesis as components within a design process.
2. Apply manufacturing theory utilizing wood and metal materials.
3. Integrate multi-sensory aspects of design.
4. Build on freehand orthographic and perspective sketching competency including construction, line-weight management, shading, and shadows to effectively demonstrate the idea generation process.
5. Analyze the visual language of a brand in terms of brand characteristics and design cues.
6. Incorporate design constraints in project standards.
7. Build on knowledge of technical drawings utilizing Computer Aided Design (CAD) software to produce General Arrangement drawings showing all parts and assembly including a Bill of Material.
8. Compile and present professional-looking presentation boards using analog and/or digital methods.
9. Work safely in labs and studios under supervision and develop physical prototyping and model-making knowledge and skills in medium to high-fidelity materials using analog tools.
10. Demonstrate professional behaviour as an industrial designer.

### **Course Deliverables**

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

<b>Project 1</b>	Organizer	35%	Class 5 – Feb 07th
<b>Project 2</b>	Product Re-Configuration	20%	Class 8 – Mar 7 <sup>th</sup>
<b>Project 3</b>	Product Brand Extension	35%	Class 12 – Apr 04th
<b>Participation &amp; Professionalism</b>		10%	

### **Student Access to Quiz, Test, and Exam Papers**

**Examinations are for evaluation purposes only and will not be returned to the student.**

## 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.

This list is intended to outline the required materials for reference purposes only. Students are not required to purchase new items if they already own suitable materials. The cost ranges provided are included to offer guidance in case purchasing is necessary.

These prices are approximate and can vary based on supplier, location, and market fluctuations. It's advisable to check with local suppliers in Ottawa or online retailers for the most current pricing. Additionally, consider the dimensions of your product when purchasing materials to minimize waste and cost. For more accurate budgeting, obtaining quotes from multiple suppliers is recommended.

**Project 1:** Product materials are primarily sheet wood and metal. Some plastic sheets (variety), fabrics (variety), extruded elements, dowels, and hardware are additionally permitted. Overall product dimensions must be smaller than a 2 ft cube. If a product larger than this size is anticipated, it should be discussed with the professor.

### **Sheet Wood (Plywood):**

- Common Sizes: 4 ft x 8 ft sheets.
- Thickness Options: 1/4 inch, 1/2 inch, 3/4 inch.
- Price Range: Approximately \$30 to \$80 per sheet, depending on thickness and grade.

### **Metal Sheets (Steel):**

- Common Sizes: 2 ft x 2 ft sheets.
- Thickness (Gauge): Varies; commonly 16 to 24 gauge.
- Price Range: Approximately \$15 to \$65 per sheet, depending on size and thickness.

### **Plastic Sheets (Acrylic or Polycarbonate):**

- Common Sizes: Varies; often sold in 12 in x 24 in or 24 in x 24 in sheets.
- Thickness Options: Varies; commonly 1/8 inch to 1/4 inch.
- Price Range: Approx. \$10 to \$50 per sheet, depending on size, thickness, and type.

**Fabrics:**

- Types: Cotton, polyester, nylon, etc.
- Price Range: Approximately \$10 to \$30 per meter, depending on fabric type and quality.

**Extruded Elements (e.g., Aluminum Extrusions):**

- Common Sizes: Lengths of 8 ft or more; cross-sectional dimensions vary.
- Price Range: Approximately \$20 to \$50 per piece, depending on size and profile.

**Dowels:**

- Materials: Wood or metal.
- Common Sizes: Lengths of 36 inches; diameters vary.
- Price Range: Approximately \$2 to \$10 per dowel, depending on material and size.

**Hardware (e.g., Screws, Nails, Hinges):**

- Price Range: Approximately \$5 to \$20 per pack, depending on type and quantity.

Project 2: Product materials for this deliverable are mostly paper sheets for sketching and final drawings, such as kraft paper, bond, and other drawing materials such as pens, pencils, coloured pencils, markers, crayons, etc.

**Paper Materials:**

1. Kraft Paper Rolls:
  - Sizes: 24 in x 1200 in (100 ft roll) or similar.
  - Price Range: \$10 to \$25 per roll.
2. Bond Paper:
  - Sizes: 8.5 in x 11 in (letter size), or 11 in x 17 in.
  - Price Range: \$5 to \$15 per ream (500 sheets).
3. Specialty Drawing Paper (e.g., Cartridge Paper, Bristol Board):
  - Sizes: 9 in x 12 in, 11 in x 17 in pads.
  - Price Range: \$10 to \$30 per pad, depending on brand and quality.

**Pencils (Graphite):**

- Types: Set of varying hardness (e.g., HB, 2B, 4B, 6B).

- Price Range: \$5 to \$15 per set.

**Coloured Pencils:**

- Brands: Crayola, Prismacolor, or Faber-Castell.
- Price Range: \$10 to \$50 per set, depending on the number of colours and brand.

**Markers:**

- Types: Alcohol-based (e.g., Copic, Promarker) or water-based.
- Price Range: \$15 to \$60 per set, depending on type and number of colours.

**Pens:**

- Types: Fine liners, gel pens, or technical pens (e.g., Micron, Staedtler).
- Price Range: \$10 to \$25 per set.

**Crayons:**

- Brands: Crayola or other art-specific brands.
- Price Range: \$5 to \$15 per set.

**Erasers:**

- Types: Standard and kneaded erasers.
- Price Range: \$2 to \$5 each.

**Rulers and Straightedges:**

- Types: Plastic, metal, or wooden.
- Price Range: \$5 to \$20 each.

**Blending Tools:**

- Types: Blending stumps, tortillons.
- Price Range: \$5 to \$10 per pack.

- **Project 3:** Product materials required for this deliverable are clay and clay tools for modelling; paper sheets for sketching and final drawings, such as kraft paper and bond, and other drawing materials, such as pens, pencils, coloured pencils, markers, crayons, etc., same as Project 2.

**Clay:**

Students will have the option to purchase clay directly from the School, as in previous years.

Additionally, a limited amount of used clay will be available for building up clay models, if needed.

**Clay – Modelling tools:**

New clay tool kits have been purchased for student use. Due to their high cost, a refundable deposit of \$25.00 will be required for each kit. The deposit will be reimbursed upon the return of the kit, provided all tools are clean and accounted for.

- Clay Cost: \$10.00 per billet
- Tool Kit Deposit: \$25.00

Students are encouraged to handle tools responsibly to ensure their availability for future use.

**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.

1<sup>st</sup> Year Studio Section A – Studio A

1<sup>st</sup> Year Studio Section B – Studio B

2<sup>nd</sup> Year Studio Section A – Studio A

2<sup>nd</sup> Year Studio Section B – Studio B

3<sup>rd</sup> Year Studio Section A & B – Studio C

4<sup>th</sup> 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.

**IDES 2302B PROJECTS IIB W25 - Juan Jimenez Garcia - Course Schedule.**

<b>Week / Date</b>	<b>Focus / Activities</b>	<b>Deliverables</b>
<b>Class 1</b> Jan. 10 <sup>th</sup>	<ul style="list-style-type: none"> <li>• Course Overview</li> <li>• Project 1 (P1): Contextual Analysis</li> </ul>	
<b>Class 2</b> Jan. 17 <sup>th</sup>	<ul style="list-style-type: none"> <li>• Project 1: Ideation, Concept Sketches &amp; Sketch Models</li> </ul>	
<b>Class 3</b> Jan. 24 <sup>rd</sup>	<ul style="list-style-type: none"> <li>• Project 1: Concept Development to a Single Direction. Make prototypes.</li> </ul>	
<b>Class 4</b> Jan. 31 <sup>st</sup>	<ul style="list-style-type: none"> <li>• Project 1: Final Design Development, Appearance Model &amp; Presentation Materials</li> </ul>	
<b>Class 5</b> Feb. 07 <sup>th</sup>	<ul style="list-style-type: none"> <li>• <b>Project 1: Final Review</b></li> <li>• Project 2 (P2): Product Analysis</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Project 1 Final Design Presentation (+upload)</b></li> </ul>
<b>Class 6</b> Feb. 14 <sup>th</sup>	<ul style="list-style-type: none"> <li>• Project 2: Concept Development</li> </ul>	
Feb. 17 <sup>th</sup> -21 <sup>rd</sup>	<i>WINTER BREAK</i>	
<b>Class 7</b> Feb. 28 <sup>th</sup>	<ul style="list-style-type: none"> <li>• Project 2: Final Design Development</li> </ul>	
<b>Class 8</b> Mar. 7 <sup>th</sup>	<ul style="list-style-type: none"> <li>• <b>Project 2: Final Review</b></li> <li>• Project 3 (P3): Brand Analysis</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Project 2 Final Design Presentation (+upload)</b></li> </ul>
<b>Class 9</b> Mar. 14 <sup>th</sup>	<ul style="list-style-type: none"> <li>• Project 3: Concept Development</li> </ul>	
<b>Class 10</b> Mar. 21 <sup>th</sup>	<ul style="list-style-type: none"> <li>• Project 3: Final Design Development</li> </ul>	
<b>Class 11</b> Mar. 28 <sup>th</sup>	<ul style="list-style-type: none"> <li>• Project 3: Final Design Development</li> </ul>	
<b>Class 12</b> Apr. 04 <sup>th</sup>	<ul style="list-style-type: none"> <li>• <b>Project 3: Final Review</b></li> <li>• Course Wrap-Up</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Project 3 Final Design Presentation (+upload)</b></li> </ul>