

COURSE OUTLINE IDES 1300A • PROJECTS IA • Fall (2022)

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Location: **434 Azrieli Pavilion**

Office Hours: Wednesday 9:30 am – 11:00 am, Friday mornings by appointment

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Office Hours: TBD

Course Time and Location: Please refer to Carleton Central under Student Services – Registration or Search Schedule: https://central.carleton.ca/prod/bwysched.p_select_term?wsea_code=EXT

Course Description

An introduction to the skills and processes of industrial design including drawing and sketching as an aid to design, basics of line, shape, ideation, and visualization, product drawing, presentation techniques, basic model making, studio equipment and practices, introduction to the design process.

Includes: Experiential Learning Activity.

Prerequisite(s): IDES 1000 (may be taken concurrently).

Studio and lectures six hours a week.

Learning Outcomes

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

1. Demonstrate and apply the basic principles and tools of design.

2. Carry out basic visualization and ideation sketching techniques through the use of line drawing in context, shading, and shadow.
3. Employ the rules of perspective and measured perspective drawing.
4. Gain the ability to identify the fundamentals of colour theory and translate these principles into project-based assignments.
5. Perform layout techniques to recognize the basic principles of graphic language and presentation.
6. Explore the role of analog model-making in the design process.
7. Use and understand the rudimentary rules of structure and material properties through the use of sheet material hand modeling techniques.
8. Interpret form through the application of removal modeling techniques
9. To be aware and apply the principles of technical drawing through scale orthographic projection based on drawing standards through CAD.
10. Recognize, then develop good communication skills through in-class visual and oral presentations.

Course Deliverables

Grading: The final grade for the course will be based on:

1. Five (5) Minor Assignments (1-5%, 4-10%)	45%
2. Major Project 1	20%
3. Major Project 2	20%
4. Sketchbook – (1 <i>midterm progress check-in</i>)	10%
5. Participation, Attendance, and Professionalism	5%

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.

Paper:

- One pack of HP Bright White Ink Jet paper or Similar 8 ½ x 11" or A4
- Sketchbook / Notebooks -unlined – spiral lays flat but fragile – hardcover is practical but harder to scan flat

Drawing Media:

- Verithin Pencils – singles – Non-Repo Blue (minimum 2) – optional additional dark blue or black
- One (1) White Prismacolor Pencils
- One (1) White Conte or White pastel pencil
- Box of BIC Crystal Black Roller Ball Pens,
- Cool Gray Designer Markers – Cool Gray #1, 3, 5 or 7
- Two (2) Pastel Colour Designer Markers – you get to pick the colours you want to use.
*Optional: get a matching Prismacolor chalk and colour pencil for one of the colours.

Technical Instruments:

- Roll of masking/drafting tape (25mm) – Blue Masking is Great. *** Good to have
- 2 Cork back steel rulers – Preferably 12" & 24" (if possible)

Cutting and Modeling Tools:

- Small Toolbox - more and more tools will be added to the toolbox as the years go by.
- **Segmented Knife – Olfa - (needed first class)**
 - replacement blades required, a pack of 50 is recommended
- **X-acto blade #11 and 5 refills**
- **Cutting Mat – Small 30cm x 45cm or equivalent (needed first class)**
- Hot Glue Gun and Glue Sticks.... (Small craft glue guns are not sufficient)
- 100 and 220 Grit Wet Dry Sandpaper with a Sanding Block
- Rasp
- Small File Set

Safety Materials:

- **One set of Safety Glasses (MANDATORY – Bring to first Class) if you wear glasses – they must be safety glasses that go over your prescription glasses**

- Dust mask

Modelmaking / Presentation materials:

- Foamcore sheets (30"x20") – Staples, Dollarstore (3/16" thickness or metric equivalent)
 - 2-3 Black
 - 2-3 White
- Plasticene – any kind

Books:

- *Recommended not mandatory* (check availability as electronic versions may be available for purchase)
"Drawing Ideas: A Hand Drawn Approach for Better Design."

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 Brightspace 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 Brightspace. 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

Week 1 – Sept 13 – Come to class with Safety Glasses, Cutting Matt, Steel Ruler, and X-Acto

- Introduction - Course Outline – Studio Rules
- Presentation – A typical product – The Forks
- Let's get to know who you are through a sketch / Name Tags

- Sketching Demo / Desktop modeling – scoring and cutting
- Warm-up Exercises / Cubes and Geometric Shapes - Basic theory on perspective
- The Cube Project
- Safety / Techniques
- Prepare for next week's Jamming Session
- Material list presented for next week

Bring for next class: Sketching materials

Week 2 – Sept 20

- REVIEW – Cube Project – buddy system
- Jamming Session Presentation *
- ***Buy newsprint from Lab \$4 (on Campus Card)***
- Mechanics of Sketching
- Instructing students on different sketching techniques
- Jamming Session in-Class exercises / pin-ups
- Minor 1 – Presented
- Major 1 - Presented

Bring for next class: X-Acto, Steel Ruler, Cutting Matt, Sandpaper, and Safety Glasses

Week 3 – Sept 27

- REVIEW – Minor 1
- Introduction to Orthographic Projection - Demo
- Exercises Orthographic
- Presentation Sketching, Warm-ups, Shapes
- Demo Sketching, Side Views, Exploratory, Investigative
- Rectilinear Forms / Proportions Presentation
- Minor 2 – Rectilinear Presented
- Demonstration – Orthographic Drawings
- Measured Perspective Demo
- Presentation Ergie
- In-Class Project – Ergie – paper models
- Scale and Measurement
- Working with Styrene Demo
- ***Buy Ergie Kit from Lab \$4 (on Campus Card)***

Bring for next class: X-Acto, cutting board, sandpaper, plasticene, and Safety Glasses

Week 4 – Oct 04

- REVIEW – ERGIE
- Presentation – Design Process
- Group Work - Major 1
- Brainstorming / Speed Storm
- Desk Top Modeling - Foam Core, Foam
- Orthographic Projections
- Demo 30-60
- ***Buy Foam blocks from Lab \$4 (on Campus Card)**
- Work Session Rectilinear
- Presentation Shadows
- How to Present Finished Work – Layout, mounting, presentation
Bring for next class: Handheld Tool of your choice, and a straight edge or steel ruler

Week 5 – Oct 11

- REVIEW Minor 2 – Rectilinear
- Presentation Ellipse
- Work Session Ellipse
- Presentation – Sketching Hands
- Minor 3 - Presented
- Work Session – Hand Tool part 1
- Presentation – Sketching / Layout
- Consultation session
- Work Session Major 1

Week 6 – Oct 18

- REVIEW Minor 3 – Hand Tool Phase I - Drawings
- Digitize / Scan / Photograph the Hand Sketches
- Making a PDF
- Orthographic Projection
- Technical Drawing
- Movie “Between the Folds”
- Work Session Major 1
- Consultation Session
- **Hand In Sketchbook by 4pm Friday October 21**

October 24-28th Reading Week -- --- Install Adobe Illustrator over the break

Week 7 – Nov 01

- REVIEW – Major 1 – Review
- Presentation – Pictograms

- Introduction Illustrator
- Minor 3 – Hand Tool icon Presented
- Midterm Mark Review

Bring for next class: beautifully silhouetted object to the next class for an in-class exercise

Week 8 – Nov 08

- REVIEW – Minor 3 – Hand Tool Phase II - Icon
- Demo Shading Product Shading
- Presentation Design Principles/Elements of Design
- Presentation Composition
- Work Session Illustrator
- Presentation – Colours
- Work Session 2D Design / Expression
- Minor 4 – Silhouettes Presented
- Introduction to Major Project #2

Week 9 – Nov 15

- REVIEW – Minor 4 – 2D Design
- Presentation Structures
- Presentation Collapsible
- Presentation Art of Communication
- Presentation Descriptive Drawing
- Presentation: Descriptive Information
- Newton – In-class assignment – eval after lunch
- Presentation – Making
- Presentation – Human Factors
- HOLES – Presentation

Week 10 – Nov 22

- Minor 5 – Holes Presented
- Safety
- ***Buy Project Kit from Lab \$4 (on Campus Card) *****
- Student Lab – 50/50
- Discussion on Phone Stand
- In-class project due at 4:30 PM

Week 11 – Nov 29

- REVIEW – Minor 5 – Holes

- Presentation People
- Presentation/ Exercise Arrows
- Movie Helvetica
- Work Session
- Discussion – the Walk Around and the next few weeks
- ***Buy Corrugated cardboard e-flute Kit from Lab \$4 (on Campus Card)**

Week 12 – Dec 6

- Major Project 2 Work Session – Major Project B
- **Final Review TBD**
- **Hand In Sketchbook by 5pm Friday December 9th**

Fall Semester Walk Around – Date TBD

*** Materials specified for purchase may be changed.**