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Office Hours: During studio/lecture hours or by appointment.

Time and Location: Please refer to Carleton Central under Student Services – Registration – Search Schedule: https://admissions.carleton.ca/faqs/where-can-i-find-the-class-schedule/

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 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 as to recognize the basic principles of graphic language and presentation.
6. Explore the role of analog model making in 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 to apply the principles of technical drawing through scale orthographic projection based on drawing standards through the use of computer aided design.
10. Recognize then develop good communication skills through in-class visual and oral presentation.

Required Materials:

Materials required for the course are listed below. You may be asked by your instructor to refer to cuLearn and ARES for a more comprehensive list of required materials.


*Paper:*
- Newsprint Pad – 14” x 17” or larger – purchased in student modeling lab
- One pack of HP Bight White Ink Jet paper or Similar 8 ½ x 11”
- 1 pack of 11” x 17” (whole class can share)

**Drawing Media:**

- Verithin Pencils – color selection – Non-Repo Blue (minimum 2), Indigo Blue, and/or Black (minimum 6)
- Two (2) White Prismacolor Pencils
- Various Nylon Tipped or Roller Ball Pens - investigate different pens, you will get a feel for what you like. Purchase pens with black ink. My personal favorite for drawing is the BIC Crystal, medium point.
- Cool Gray Designer Markers – Series 1 to 10 (Kits with a selection of markers can be purchased in sets of 5)
- Markette Markers, one (1) chisel point, one (1) Thinrite.
- Two (2) Pastel Colour Designer Markers – you get to pick the colours you want to work with.

**Technical Instruments:**

- Eraser (pencil)
- A good pencil sharpener (electric would be best)
- Roll of masking/drafting tape (25mm)

**Cutting and Modeling Tools:**

- Small Toolbox - more and more tools will be added to the toolbox as the years go by.
- Segmented Knife – Olfa - replacement blades required, a pack of 50 is recommended
- Cork back steel ruler – 15+”
- Cutting Board – Small 30cm x 45cm
- Hot Glue Gun and Glue Sticks…. (Small craft glue guns are not sufficient)
- Rubber Cement & Rubber Cement Pick-up
- Engineer Square or equivalent
- 100 and 220 Grit Wet Dry Sand Paper with a Sanding Block

**Safety Materials:**

- One set of Safety Goggles, A must to work in modeling shop
- If you have sensitive hearing I would also suggest ear plugs
- If you need dust masks they can be purchased at shops.

Listed here is the minimum of materials required in the Lab/Studio environment. Instructors will be presenting different visual techniques using a variety of materials throughout the semester. You personally may want to experiment with other visual mediums after these presentations.
Computer Requirements:

Please refer to the computer requirements on the School of Industrial Design Website:

http://www.id.carleton.ca/undergraduate/about-the-bid-program/computer-requirements

Course Deliverables:

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

Course Requirements: The students will be required to complete a series of:

- Five (5) short assignments: exploring line, 2-D & 3-D design and colour.
- Two (2) major projects:
  • First Major Design Project – The focus of this project will be on Human Centered Design
  • Second Major Design Project – The focus of this project will be on structure
- Sketch Books – will be reviewed twice during semester

Course Evaluation Information: The final grade for the course will be based on:

1. Five (5) assignments 45%
2. Major Project 1 – 20%
3. Major Project 2 20%
4. Sketchbook – two reviews 10%
5. Attendance, Participation and Individual Development 5%.

Individual/Group Work

Courses may include individual and group work. It is important in collaborative work that students clearly demonstrate their individual contribution.

Studio Review Attendance
Attendance at scheduled SID Reviews is mandatory. These are equivalent to exams when indicated in the course outline. Failure to attend the Review without reasonable cause, will result in a grade of F. Students arriving late for the Review 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, 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.

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

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

**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/](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

**Academic Integrity**

Carleton’s Policy on Academic Integrity is available at: [https://carleton.ca/registrar/academic-integrity/](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).

The 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.

**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 cuLearn. 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

Introduction - Tuesday September 3rd

Let’s get acquainted – Get together at the studio – Material list - Meet Brett Hooper – Review materials that will be required for next class.

1st Week

- Introduction - Course Outline – Lets get to know who you are through a sketch
- School of Industrial Design tour.
- Presentation – A typical product
- Sketching/ Desk Top Modeling – Warm-up Exercises / Cubes and Geometric Shapes - Basic theory on perspective - Decorate the cube exercise – Cube will be presented at next class
- Prepare for next weeks Jamming Session

2nd Week - JAMMING SESSION

Instructing students on different sketching techniques

- Material list presented for next week –Styrene can be purchased from SID shops
- Jamming Session Assignment Presented (Assignment #1)

3rd Week
• REVIEW – Jamming Session assignment (Assignment #1)
• Introduction to Orthographic Projection
• Presentation – Sketching, Side Views
• Form groups of 2 to 3 people – Ergie Development (Ergie Assignment- Part of Major Project #1)
• Working with Styrene Demo
• Major Project 1 Presented – Part A & B

4th Week

• REVIEW – ERGIE
• Major Project – Speed Storming
• Presentation – Design Process
• Presentation – The Hand
• Desktop Modeling – Foam Board
• Handtool Drawing Assignment Presented (Assignment #2 – Part A)

5th Week

• REVIEW – Handtool Drawing (Part A)
• Descriptive/Technical Drawings
• Demonstration – Desktop Modeling – Orthographic Drawings
• Consultation session / In-class major project work session
• Intro to Adobe Illustrator
• Handtool Drawing Assignment Presented (Assignment #2 – Part B / Icon)

Monday 14th October

• Holiday – Thanksgiving – NO CLASS
• Tuesday – Handtool Icon (Assignment #2 – Part B) Due at 3:30

6th Week

• Work Session
• HAND IN - Sketch Book: Friday October 18th
STUDY BREAK – October 21st to October 25th

7th Week – Tuesday 29th October

- REVIEW – Major Project #1
- Form Project Lecture
- Midterm mark review – consultation session – one-on-one
- Rectilinear Form Project (Assignment #3)
- Measured Perspective Demo / Lecture

8th Week – Tuesday 5th November

- REVIEW – Rectilinear Form Project (Assignment #3)
- Presentation – Colour
- Presentation – Descriptive drawing
- Work Session
- 2D Design / Expression Assignment Presented (Assignment #4)

9th Week – Tuesday 12th November

- REVIEW – 2D Design (Assignment #4)
- Newton – In class assignment
- Introduction to Major Project #2

10th Week – Tuesday 19th November

- HOLES – Presentation
- Assignment #5 Presented.
- In class project due at 4:30PM

11th Week – Tuesday 26th November

- REVIEW – HOLES Assignment #5
- WORK SESSION - In-Class Work on Major Project #2

12th Week – Tuesday 4th December

- Work Session – Major Project #2
13th Week – Friday 6th December

- **FINAL REVIEW** – Major Project B

**FIRST YEAR WALK-AROUND** – to be determined

All work will be displayed by 9:30.