1. GENERAL COURSE INFORMATION AND SCHEDULING

Instructor: Brett Hooper, brett.hooper@carleton.ca
Room 2498, MacKenzie Building (ME)
Tel. 613 • 560 • 2600, ext. 8371

Teaching Assistants: Amina Balaal
Office Hours: During studio hours by appointment
Room 430, Azrieli Pavilion (AP)
Tel. 613 • 520 • 2600 ext 8960

Time Table: Section A1 – Studio: Mondays 9:30 – 12:30 / Lunch / 1:30 – 4:30
Room 3490, MacKenzie Building (ME)

2. GENERAL COURSE CONTENT

Basic Course Outline: Aspects of industrial design theory and practice, specifically those dealing with principles of product development, fundamentals of form and colour and case studies. Students will explore the design process with emphasis on creative problem-solving techniques and visual communication in design.

Course Objectives: Introductory studio objective is to introduce students to the skills required to undertake a design project and to initiate the material taught in the other courses of the School of Industrial Design undergraduate program.

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

1. Identify and apply the basic principles and tools of design
2. Perform and recognize the value of idea exploration – idea explanation
3. Carry out visualization and ideation sketching techniques through the use of line, value and colour
4. Identify the fundamentals of form and translate these principles in project-based assignments
5. Perform layout techniques to show product operation and use cycle
6. Investigate and conduct a range of modeling techniques though the use of solid materials
7. Understand the simple principles mechanical operation through analysis, then through the use of a General Arrangement technical drawing identifying the product specification
8. Participate as a team member in a basic research to identify product requirements
9. Conduct effective product presentation incorporating visual and oral communication techniques
10. Use basic CAD with emphasis on orthographic projection to explore the principles of surface development
11. Understand knowledge gained in projects and exercises through the writing of a basic learners report
3. PARTICULAR COURSE INFORMATION

Sketchbook: As in the first term the sketchbook is a vital design tool that will be used throughout the semester. To reiterate, the sketchbook will be personalized and used every day. The book should be filled by the end of the semester. As your skills have improved the quality of the illustration should demonstrate those improved skills – Quality work is essential

Sketchbooks can be made or purchased.


Recommended Text - SKETCHING - The Basics, Koos Eissen & Roselien Steur. BIS Publishers, 2011. (Used as reference and for exercises)

This is a recommended text; a series of assignments will be based on information supplied in this text. You could find the text as an excellent resource when doing you product sketching and rendering.

In regard to technical communication a series of handouts will be presented throughout the semester and should be affix to the sketchbook or inserted into a three ring binder.

Materials Required:
All design tools and material that were used in the previous term will also be required for the winter semester.

In addition students will require:
- Safety Glasses/Goggles will be required in all shop activities – a must to use the shops
- Dust Masks – Highly recommended
- HB bright-white inkjet paper or similar
- 11x17 tabloid paper
- Cool Gray Markers
- Two pastel coloured markers
- Black Markers – Chisel Tip – Medium Point
- Foam Core – (wait till assignment is presented to purchase)
- Styrofoam – Colour Blue - can be purchase from the shops (wait till assignment is presented to purchase)
- Urethane Foam – can be purchased from the shops (wait till assignment is presented to purchase)
- Presentation Board – for mounting of drawings and presentation materials
- Tool Box – Start assembling a basic modeling tool kit – suggested tools will be presented during studio

Computer Requirements:
Please refer to the computer requirements in the School of Industrial Design Web Site
http://www.id.carleton.ca/undergraduate/about-the-bid-program/computer-requirements

Students should purchase the Student Cloud Version of ADOBE CREATIVE SUITE.
Adobe Illustrator will be used through-out Introductory Products ii

Course Requirements:
- Technical Drawing
- Rendering Assignments
• Form Development with Desktop Modeling
• Ideation and Concept Development – sketching and visualization techniques
• Design Projects – rapid visualization and form development
• Photography Assignments
• Introduction Computing Concept Development, Technical Communication and Computer Modeling
• Sketch Book: As in the fall term students will be required to use the sketchbook to illustrate and record ideas, practice techniques, do in-class exercises, make notes, paste loose hand sketches, develop details, note daily observations and products that surround us. The quality of work, accuracy detail, 3D visualization, completion of work will be evaluated twice during the semester. Pride in work will be highly regarded, you must show that you are capable and your skills are developing.

SCHEDULING

*Scheduling changes may occur due to class progress and instructor evaluation

Dates:

WEEK 1 – Monday 7th January
Introduction / Review Last Term / Course Outline / Material Requirements
Presentation - Process / Product Rendering & Sketching
Sketching Warm-Up – Brain Storm Sketching - Analysis & Development Sketching – Context Sketching
One Week Drawing Assignment Presented

WEEK 2 – Monday 14th January
REVIEW – One Week Drawing Assignment
Presentation - Form Development / Highlights / Product Sculpture
Sketching Organic Form
Sculpture – In-Class Assignment
Safety / Technique Presentation by Walter Zanetti
Form Development Assignment Presented

WEEK 3 – Monday 21st January
Presentation - Form in Product Design / Presenting Form Technically / Sections
Modeling Assignment – Human Interaction
Presentation on Works-like Models / Looks-like Models
Major Project Presented • Ergonomic Design

WEEK 4 – Monday 28th January
REVIEW – Form Development Assignment
Presentation People in Action
Interaction Assignment
People in Context – drawing exercises
Presentation on Presentation Grids
Work Session – Ergonomic Design

WEEK 5 – Monday 4th February
Presentation on Recording, Presenting and Documentation
Presentation – Interface – Use Cycles
Interaction Design Assignment Presented
WEEK 6 – Monday 11th February

REVIEW – MAJOR PROJECT ERGONOMIC DESIGN
Presentation on Presentation Grids
Presentation on Photography and Photoshop
Studio Work - Interaction Design
HAND-IN Sketch Books

STUDY BREAK - Monday 18th to Friday 22th February

WEEK 7 – Monday 25th February
Presentation – Engineering Principles – Mechanical Design
Illustrator – Tech Drawings
Presentation on Computer Aided Design
Present Tech Drawing Assignment
Major Project Presented • Computer

WEEK 8 – Monday 4th March
REVIEW • Interaction Design Assignment
Presentation on Cross Sectional Models
Presentation on Wire Frame Drawing
Studio Work – Technical Drawing Assignment

WEEK 9 – Monday 11th March
HAND-IN • Technical Drawing Assignment
Lecture - Surface and Form Development / Drawings of Intent
Lecture – Complex Form – Mix Media
Three Dimensional Modeling Software Work Session

WEEK 10 - Monday 18th March
Three Dimensional Modeling Software Work Session

WEEK 11 – Monday 25th March
Present Mini Exhibit Project
Lecture • Tools for the Future
Studio Work- Form Project

WEEK 12 – Monday 1st April
Studio Work- Form Project

WEEK 13 – Monday 8th April
REVIEW – Form Project

Final Review by Project Committee  (Final date to be determined)
Sketch-book due following week
4. COURSE COMPLETION AND EVALUATION INFORMATION

Grading: 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% for each review)*
5. Participation, Attendance and Individual Development   5%

Individual/Group Work
Courses may include various combinations of individual and group work. Students must demonstrate individual aptitude. It is important where collaborative work is undertaken that students be able to clearly demonstrate that individual contribution has been made. Where the evaluation for individual work is below a passing grade, that grade will be awarded for the course.

Review Attendance
Attendance at scheduled SID reviews is mandatory. These are equivalent to exams in IDES courses when indicated in the course outline. Failure to attend will result in a grade of F. If you are not able to attend a review, please call the General Office (613-520-5672) and leave a message in advance. A comprehensive medical certificate or other documentation to substantiate the absence must be submitted as soon as possible after the review. The documentation must state the date of illness onset, the expected date of recovery, and the extent to which the student is incapacitated. A student not remaining for the complete session, or arriving late for the review, without approval from the instructor, will also receive a 10% grade reduction.

Late Submission of Deliverables

Course Deliverables
All deliverables submitted late will accrue a 10% per day deduction from the determined grade, to a maximum of 3 days, from the original deadline time and date. Failure to submit within 3 days, without approval from the instructor, will result in a grade of F.

Review Deliverables
Failure to hand in presentation deliverables at the specified time and to present as scheduled will also receive a 10% grade reduction.

Participation and Professionalism
Active participation and professional conduct are particularly important in studio courses and will be evaluated. At the same time, when the student’s work is reviewed at the end of the course, an evaluation will be made based on one or
more of the following: in class discussion; consultations with instructors; and work ethic. However, none of these evaluations will be used to raise an overall failing grade, to a passing one, based on the quality of the work.

5. STUDENT CONSIDERATIONS AND RESPONSIBILITIES

**Academic Accommodation** (Equity Services)
You may need special arrangements to meet your academic obligations during the term. For an accommodation request the processes are as follows:

**Pregnancy obligation**: write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details visit: [http://carleton.ca/equity/accommodation/](http://carleton.ca/equity/accommodation/)

**Religious obligation**: write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details visit: [http://carleton.ca/equity/accommodation/](http://carleton.ca/equity/accommodation/)

**Academic Accommodations for Students with Disabilities**: The Paul Menton Centre for Students with Disabilities (PMC) provides services to students with Learning Disabilities (LD), psychiatric/mental health disabilities, Attention Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorders (ASD), chronic medical conditions, and impairments in mobility, hearing, and vision. If you have a disability requiring academic accommodations in this course, please contact PMC at 613-520-6608 or pmc@carleton.ca for a formal evaluation. If you are already registered with the PMC, contact your PMC coordinator to send me your Letter of Accommodation at the beginning of the term, and no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with me to ensure accommodation arrangements are made. Please consult the [PMC website](http://carleton.ca/equity/accommodation/) for the deadline to request accommodations for the formally-scheduled exam (if applicable).

**Instructional Offenses / Plagiarism**
The regulations of the university require that we bring to your attention regulations on *Instructional Offenses*, descriptions of which can be found in the current *Academic Integrity Policy* available on the Student Affairs website. The policy governs the academic behavior of students. At the same time it seems that students do not always understand the meaning of plagiarism and how to avoid it.

In industrial design, ideas and concepts come from a multitude of sources to be modified and utilized in the design and development process. The student should reference sources appropriately.

**Student Responsibility**
The student is responsible for knowing the content of this course outline, the schedule of classes, assignments, and reviews; and material covered during any absence from scheduled classes.

Unless otherwise arranged, the class will meet during regularly scheduled studio hours. These meetings are mandatory; important issues and questions will be raised, and announcements might be made. Everyone is expected to be based in studio and to work during scheduled hours. The studio should be considered a professional design studio environment. Because of the special involvement of external professionals, scheduling changes for guest lectures, presentations, and reviews may occur at short notice; students should stay informed regularly.
Changes to the Course Outline
The course outline may be subject to change in the event of extenuating circumstances.

BEST OF LUCK