Instructor: Gerry Kanter
Office: Sessional Instructor Office
Email: gerardo.kanter@carleton.ca
Office Hours: Office hours are by appointments, please send an email to schedule
Teaching Assistants: TBD
Time and Location:
- Lecture A: Friday 08:35 -10:55 3101 Canal Building
- Lab A1: Friday 10:05 -11:25 3101 Canal Building

Course Description
This course provides Industrial Design students with a working knowledge of computers and their applications. Topics covered include computer fundamentals and the use of application packages in design. Sample applications may include text/word processors, graphics manipulation, authoring software, computer-aided design and 3-D modellers. Precludes additional credit for COMP 1004. Prerequisite: IDES 1301. Lecture and tutorials three hours a week.

Course Objectives
This class will focus on developing basic skills of 3D modeling and graphical image manipulation. To develop these skills, students will be asked to do a set of exercises and practices during lab hours as well as homework assignments. Upon the successful completion of the course, students will be able to demonstrate proficiency in the creation of medium-level 3D digital models and visual presentations.

Course Format
Course materials for this class will be delivered to students through lectures and lab sessions. Typically, during the lecture portion of this class, course materials will be presented to students via exercises and slide decks, followed by live demonstrations. For the lab portion of the class, students will complete an in-class assignment. Additional homework assignments will be required for specific weeks and must be completed at specified dates.

Assignments:
- **Project 1 (Robot Character)** The objective of this project is to create a model of a humanoid robot/Toy based on a sketch, a photo or an existing toy. Students will be required to apply the tools and techniques learned in class to generate individual parts, assemblies, renderings and drawings of their models. Special attention will be focused on quality of assemblies and ease of production.
- **Midterm (Take Home Exam)** A midterm examination will be administered during a class session and will require students to complete a given assignment within the lecture time slot (1.5 hrs.)
- **Class Presentation (Group Assignment)** Students will work in groups of two to research and deliver a short presentation or live demo on a topic related to specific software tools and applications discussed as part of the course.
- **Project 2 (Rendering Package)** For this project students will choose a common object and produce a rendering and presentation package using the tools, techniques and software packages discussed in class. Special attention will be given to using Illustrator and Photoshop in conjunction with 3D CAD tools.
## Course Schedule

<table>
<thead>
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<th>Week</th>
<th>Date</th>
<th>Lecture</th>
<th>Lab Topics</th>
<th>Labs &amp; Projects</th>
<th>Main HW Assignment</th>
<th>Alternate HW Assignment</th>
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<td>Week 1</td>
<td>Jan 12</td>
<td>Algorithms</td>
<td>Interface &amp; Sketch Tools</td>
<td>Dice</td>
<td>Lolipop Man</td>
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<td>Week 2</td>
<td>Jan 19</td>
<td>Software</td>
<td>Basic Features</td>
<td>Lego Block</td>
<td>Trace Key</td>
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<td>Week 3</td>
<td>Jan 26</td>
<td>Hardware</td>
<td>Advanced Features</td>
<td>Super Slide</td>
<td>Mug</td>
<td>Robot Leg</td>
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<td>Week 4</td>
<td>Feb 2</td>
<td>Strategy</td>
<td>Assembly &amp; Drawings</td>
<td>Coffee Lid</td>
<td>Dish Rack</td>
<td>Robot Body</td>
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<td>Week 5</td>
<td>Feb 9</td>
<td>Interface</td>
<td>Rendering &amp; Modifiers</td>
<td>Tria Marker</td>
<td>Part Render</td>
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<td>Week 6</td>
<td>Feb 16</td>
<td>A.I + Automation</td>
<td>T-Splines + Booleans</td>
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<td>Week 7</td>
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<td>Week 8</td>
<td>Mar 2</td>
<td>MIDTERM</td>
<td>Photosop (1)</td>
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<td>Week 9</td>
<td>Mar 9</td>
<td>Project 1 due</td>
<td>Photoshop (2)</td>
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<td>Week 10</td>
<td>Mar 16</td>
<td>Presentations</td>
<td>Illustrator (1)</td>
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<td>Illustration 1</td>
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<td>Week 11</td>
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<td>Presentations</td>
<td>Illustrator (2)</td>
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<tr>
<td>Week 12</td>
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<td>Presentations</td>
<td>Surfacing in MOI</td>
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<td>Illustration 2</td>
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<td>Week 13</td>
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<td>Presentations</td>
<td>Direct Modeling</td>
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<td>Open</td>
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<td>Project 2 due</td>
<td>No classes (Exams)</td>
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### Required materials

- Students will require a computer (PC or MAC), Adobe Photoshop CS3 (or higher), Adobe Illustrator CS3 (or higher), and access to SolidWorks & Rhino through the school’s network.
- We also recommend that students obtain a network LAN cable, a wired mouse with a wheel, and a set of measuring calipers.

### Grading

- Project 1 (Robot Character): 40% (Labs + Homework + Robot)
- Mid Term Exam: 20% (In class Examination)
- Group Presentation: 20% (Group Project)
- Project 2 (Model + Render): 20% (Homework + 3D Model + presentation)

Total: 100%
LATE SUBMISSION OF DELIVERABLES
All deliverables submitted late will accrue a 10% per day or part of 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 ATTENDANCE & EXAMINATIONS
Attendance at scheduled SID reviews is mandatory as they cannot be rescheduled. These are equivalent to exams in IDES courses when indicated in the course outline. Failure to attend, to hand in presentation deliverables at the specified time, and to present as scheduled will result in a grade of F for that review. If you are not able to attend a review, please call the General Office (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. Such documentation must state the date of illness onset, the expected date of recovery, and the extent to which the student is incapacitated.

A grade of F can be modified only if a student submits such documentation and completes the project requirements on a date agreed upon with the instructor. A student not remaining for the complete session, or arriving late for the review, without approval from the instructor, will earn a maximum grade of D+.

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 Carleton University Undergraduate Calendar.

At the same time, it seems that students do not always understand the meaning of plagiarism and how to avoid it. In industrial design, true and unique originality is difficult. Ideas and concepts come from a multitude of sources to be modified and utilized in the design and development process. A mature designer understands the need to seek out and acknowledges other successful solutions. The challenge for the student of industrial design is to learn how to develop this understanding.

ACADEMIC ACCOMMODATION (PAUL MENTON CENTRE)
Students with disabilities requiring academic accommodations must register at the Paul Menton Centre for Students with Disabilities (PMC, 500 University Centre). After registering with the centre, an appointment with the instructor to discuss accommodations must be made at least two weeks before the first in-class test or CUTV midterm exam. The student is responsible for submitting completed forms to the PMC for formally scheduled exam accommodations before the published deadlines (available at the PMC and online at http://www.carleton.ca/pmc/).

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.