

# SE101B MCAD – Engineering Graphics and Design

## Spring Semester 2019

**Instructor:** Molly Goldstein, PhD 309 Transportation 300-8169 [mhg3@illinois.edu](mailto:mhg3@illinois.edu)

**Teaching assistants:** Hossein Matin (Head TA), Bayan Hamdan, Albert Patterson, Dedy Suryadi

**Class times and location:** Lecture - Tuesdays & Thursdays, 11am-12pm, 100 Gregory Hall. Modeling lab and Sketching lab – as registered.

**Office hours and location:** Mondays 11am-12pm & Tuesdays noon-1pm, 309 TB. TA office hours are listed on Compass.

**Preferred method of contact:** My preferred method of contact is in-person during office hours. I will also respond to email messages and can set up separate appointment times, but please keep in mind that I make take a full day to respond. Please include SE101B in the subject line of all emails.

<b>Course structure:</b>	Credit hours	three
<b>(Credit &amp; contact hours)</b>	Lecture	twice a week for one-hour period
	Modeling Lab	once a week for two-hour period
	Sketching Lab	once a week for one-hour period

**Text:** *Engineering Design Graphics: Sketching, Modeling, and Visualization*, 2<sup>nd</sup> edition, by Leake and Borgerson

**Web:** Illinois Compass (<http://compass.illinois.edu>)  
[Autodesk Education Community](#)  
[Inventor 2019 Essential Training](#), John Helfen, Lynda.com

**Supplies:** Portable storage device (USB flash device or portable HD)  
Mechanical pencils - 0.5, 0.7 mm

**Software:** Autodesk Inventor Professional

**Hardware:**

Dimension SST 1200 3D printer	Microscribe G2X digitizer
iPad Air tablets	Wacom Cintiq 21ux interactive display
Creaform handheld laser scanner	HP T1100ps 44" DesignJet Printer
David SLS-2 structured light scanner	

**Grading:**

30%	2 Written exams
20%	2 Modeling exams
25%	Design project
17%	Lab assignments (modeling, sketching)
4%	Quizzes
4%	Participation

In this course, we will be assigning +/- letter grades.

## Course Goals:

1. To develop spatial visualization and reasoning skills.
2. To gain familiarity with the standards and conventions of engineering design graphics.
3. To use geometric modeling software (e.g., parametric) as a design and visualization tool. Emphasis placed upon learning general modeling concepts and techniques.
4. To gain exposure to digital simulation and prototyping tools commonly used in product design.
5. To develop sketching skills using pencil and paper, and digital tablets.
6. To introduce engineering design methodology, and to demonstrate the role of graphics in the engineering design process.
7. To provide insight into the product design process, in particular as it relates to the architecture and functionality of the product.

**Class Participation:** All students are expected to participate in class by regularly attending lecture and labs, by preparing adequately for class (through assigned readings and deliberate practice work), and by actively participating in class discussions and activities.

**Academic Integrity:** We will follow Articles 1-401 through 1-406 of the *Student Code* (beginning at [http://studentcode.illinois.edu/article\\_1\\_part4\\_1-401.html](http://studentcode.illinois.edu/article_1_part4_1-401.html)). This rule defines infractions of academic integrity, which include but are not limited to cheating, fabrication, and plagiarism. You are responsible for following these guidelines. If you have any questions about whether something would be an infraction, consult with the instructor before proceeding.

## Request for Special Accommodations:

To obtain disability-related adjustments and/or auxiliary aids, students with disabilities must contact the course instructor and the Disability Resources and Educational Services (DRES) as soon as possible. To contact DRES, you may visit 1207 Oak St., Champaign, call 217.333.4603, email [disability@illinois.edu](mailto:disability@illinois.edu) or go to the DRES website.

Please also schedule a private meeting with the course instructor to discuss your needs and requirements. All accommodations will try to be met once you self-identify. Please note accommodations are not retroactive to the beginning of the semester but begin the day you contact your professor with a current letter of accommodation from DRES.

## Diversity Statement

UIUC is committed to equal opportunity for all persons, regardless of race, ethnicity, religion, sex, gender identity or expression, creed, age, ancestry, national origin, handicap, sexual orientation, political affiliation, marital status, developmental disability, or arrest or conviction record. We value diversity in all of its definitions, including who we are, how we think, and what we do. We cultivate an accessible, inclusive, and equitable culture where everyone can pursue their passions and reach their potential in an intellectually stimulating and respectful environment. We will continue to create an inclusive campus culture where different perspectives are respected and individuals feel valued.