

MECH 130 Intro to CAD

Course Objectives

1. Develop an understanding of the fundamentals of engineering graphics. These fundamentals include the standard practices applied to graphical communication regarding: engineering lettering, scales, multiviews, pictorial, sectional and auxiliary views, dimensioning and tolerancing, fasteners, welds and production drawings.
2. Demonstrate the ability to apply these engineering graphic fundamentals both by hand sketching techniques **and** the use of CAD software (both 2D and 3D) that is available in the computer laboratory.
3. Develop an understanding of computer-aided drafting/design software and its use in creating engineering graphics and in engineering design.
4. Develop and demonstrate the ability to visualize objects in 3D. This includes the ability to interpret the standard graphics and picture the object represented. It also includes using CAD solid modeling to develop three-dimensional solid models from which standard graphics are then obtained.

Topics Covered

1. Engineering Graphics and CAD: Overview of standards and use of CAD
2. Scales and Scaled Drawings, Lettering, Coordinate Systems
3. Multiviews: Sketching and Projection, Visualization of Object, Standard Layout
4. Pictorials
5. Sectional Views
6. Dimensioning
7. Tolerancing
8. Spatial Analysis
9. Auxiliary Views
10. Fasteners, Welds and Production Drawings
11. Rendering, Animation and Analysis of Solid Model

NOTICE:

Students with disabilities are encouraged to contact the instructor for a confidential discussion of their individual needs for academic accommodation. It is the policy of the University of Nebraska-Lincoln to provide flexible and individualized accommodation to students with documented disabilities that may affect their ability to fully participate in course activities or to meet course requirements. To receive accommodation services, students must be registered with the Services for Students with Disabilities (SSD) office, 132 Canfield Administration, 472-3787 voice or TTY.