

COURSE OUTLINE

CADD-100

Principles of Drafting

3 Credits

HOWARD COMMUNITY COLLEGE

Description

The objective of this course is to introduce the student to the language of graphics used in engineering and technology. The student will acquire an understanding of orthographic projections, sections, conventions, threads and fasteners, pictorial drawings, auxiliaries and revolutions. Mechanical assembly and detail drawings, architectural plans and elevations and elements of electrical/electronic and printed circuit drawings are discussed and illustrated. Other topics covered are lettering, scaling, dimensions, holes, fillets, rounds fasteners, fittings and title block specifications. Students use drawing instruments, such as the triangle, ruler and compass and do some free-hand sketching. (2 hours lecture, 2 hours lab)

Overall Course Objectives

Upon completion of this course, the student will be able to:

1. Properly use drawing tools.
2. Develop the techniques for sketching and conceptualization.
3. Use the techniques for portraying an object in two or three dimensions.
4. Apply the drawing and dimensioning conventions.
5. Create drawings containing sectional views.
6. Apply the principles of descriptive geometry.
7. Develop an understanding of the principals of drafting and the techniques and conventions of drawing creation.
8. Apply industry specific techniques of drafting.
9. Use reference material for the design applications.
10. Create industry specific symbols for application.
11. Create multiview drawings (details, etc.).

Major Topics

- I. Introduction to Drafting
 - A. Purpose
 - B. History
 - C. Current Practices

- II. Drafting Tools and Equipment
 - A. Purpose
 - B. Leads, lead holders, and sharpeners
 - C. The drawing medium
- III. Lettering and Text Presentation
 - A. Styles of lettering
 - B. Spacing and sizes
 - C. Mechanical lettering aids
- IV. Technical Sketching
 - A. Purpose
 - B. Types of technical sketching
 - C. Multiview sketches

Course Requirements

Grading/exams: Grading procedures will be determined by the individual faculty member with emphasis on the following:

Final grades will be based on lab exercises, homework, quizzes and unit test.

Writing: Drafting-specific writing assignments will be assigned to students by a faculty member.

Other Course Information

This course is a course in the Computer Aided Design program.