

Objectives and Unit Hints

Unit 1 – Basic Lines and Views

Objectives

Upon completion of this unit students will be able to:

1. Identify and describe the usage for the following line types:
 - i. Object Line
 - ii. Hidden Line
 - iii. Center Line
 - iv. Extension Line
 - v. Dimension Line
 - vi. Leader Line
 - vii. Cutting Plane Line
 - viii. Section Line
 - ix. Chain Line
 - x. Short Break Line
 - xi. Long Break Line
 - xii. Phantom Line
2. Identify two different methods in which an object is represented on a print
3. Identify the proper orientation of the views used in an orthographic projection
4. List the different views used in an orthographic projection

Unit Hints

Bring to class several different prints of mechanical parts. Point out to the student that although the different prints may vary in complexity, they still contain the same basic line types and other common elements.

Point out the distinction between the front of an object and the face of an object presented in the front view. Provide several additional examples of objects for which the front would not be presented in the front view.

Ask the students to choose the face of several objects to be presented in the front view.

Incorporate the predefined PowerPoint presentation with the Unit One lecture.

Using a computer and LCD projector, show Unit One AVI presentations on first angle, third angle and isometric drawings.

The handouts for unit one demonstrate to the student the differences between first and third angle drawings. Explain to the student that first angle drawings are used extensively in Europe, while third angle drawings are used extensively in the United States.