

NORTHWESTERN CONNECTICUT COMMUNITY COLLEGE

COURSE SYLLABUS

Course Title: Blueprint Reading

Course #: MFG 124 51

Course Description:

This is the first course in blueprint reading. It starts with the study of orthographic projection. Topics include lines and their uses, auxiliary views, sectional views, basic and special dimensioning, dimensioning practices for holes, chamfers, angle, tapers, keyways diameters and radii. Also, geometric tolerancing and dimensioning is discussed.

Credits; 2.0

Pre-requisite/Co-requisite: None

- **Goals:**
- Determine the information conveyed using Title Blocks, Linework & Symbols.
- Determine the information conveyed using Orthographic Projection, One View Drawings, Two View Drawings.
- Determine the information conveyed using Three-Viewed Drawings and Auxiliary Views
- Understand standard practices for Decimal Dimensions, Angle Dimensions, Hole Dimensions and Metric Dimensions.
- Determine the information conveyed using Full Sections and Half Sections.
- Determine the information conveyed using Revisions or Change Notes.
- Understand standard practices for Counterbores, Countersinks, and Spotfaces.
- Understand standard practices for Fillets, Rounds, and Slots.
- Understand standard practices for Machining Symbols, Bosses, and Pads.
- Understand standard practices for Tapers, Chamfers, and Bevels.
- Understand standard practices for Necks and Knurling.
- Understand standard practices for Keyseats and Flats.
- Understand standard practices for Screw Thread Specification and Representation.
- Understand standard practices for Assembly Drawings.

Outcomes:

Upon course completion students shall be able to do the following:

Describe the purpose of a blueprint.

- Identify the dimensions on the blueprint.
- Describe the appearance and use of notes.
- Explain how to use scale information on a print.
- Explain the tolerance information on a print.

Explain the appearance and use of views.

- Identify the types of section views.
- Define orthographic views.
- Identify the six possible views of a box.
- Identify how section views are displayed.

Understand the importance of linework.

- Describe the appearance and use of center lines.
- Describe the appearance and use for break lines.

Describe the relationship between prints and inspection.

- Describe how surface finish is specified in a common print.
- Describe proper methods for checking surface finish on a part.
- Identify common methods for specifying a thread in a print.
- Describe a thread based on its standard specification.