Engineering Drawing Requirements, based on ASME Y14.100 and Y14.24

The interpretation of an engineering drawing has a direct impact on the final product. This course teaches how to correctly prepare and interpret engineering drawings in accordance with ASME Y14.100 Engineering Drawing Practices and Y14.24 Drawing Types and Applications resulting in more effective communication.

Who Should Attend

Individuals who create or interpret engineering drawings including product, manufacturing and quality engineers, inspectors, machinists, production personnel and purchasing agents.

Skill Level Needed

Students should have basic understanding of engineering drawings and print reading skills.

Course Agenda and Highlights

- **Engineering Drawings**
  Purpose of Engineering Drawings; Drawing Standards; Drawing Types - Layout, Detail, Assembly, Control Drawings – Altered Item, Design Parameters, Envelope, Interface, Procurement, Selected Item, Source and Vendor Item; and Diagram Drawings.
- **Drawing Formats**
  Drawing Sheet Sizes and Zones, Title and Revisions Blocks, Projection Angles, Drawing Units, Parts Lists, General, Local, and Flag Notes, Drawing Scale, Multi-Sheet Drawings.
- **Line Conventions and Lettering**
  Line Types, Line Type Representations, Hierarchy of Line Types, Lettering.
- **Drawing Views**
  Orthographic Projection, Projection Systems, Single View and Multiview Drawings, Detail, Auxiliary, and Assembly Views.
- **Section Views**
  Eight Types of Section Views, Conventional vs. True Geometry, Revolution of Features, Sectioning of Assemblies.
- **Dimensioning and Tolerancing**
  Practices for Metric and English Unit Dimensions, Expressing Tolerance, General Tolerances, Implied and Coaxial Relationships, General Symbols and Abbreviations, Thread, Gear, and Spline Representation and Specifications, GD&T Standards and Symbols, Uses of GD&T.
- **Surface Texture**
  Surface Texture Standards, Definition of Surface Texture, Surface Texture Symbols.
- **Weld Symbols**
  Weld Specifications, Common Weld Types, Common Weld Joints.
- **Electrical and Electronic Diagrams**
  Components on Electrical and Electronic Diagrams, Cables and Conduits on Electrical and Electronic Diagrams, Wiring Conventions and Terminal Conventions, Types of Electrical and Electronic Diagrams.

Learning Outcomes

You will gain a better understanding of view representation, dimensions, tolerances, and symbols used on prints. Numerous practice problems are presented throughout the class.