Print Reading and Engineering Drawing Principles

2-day workshop on the fundamentals of Engineering Drawing

Students will develop skills to visualize and to draw parts using orthographic projection (multi-view drawings) and will understand the importance of title blocks, bill of materials, drawings notes, revisions etc. The course will also cover the application and interpretation of dimensions, surface finishes, screw threads/fasteners, and welding symbols. Training in drafting/print reading will also include discussion of the various manufacturing processes that are used to produce mechanical parts and assemblies. In addition, students will be provided with a basic introduction to geometric dimensioning and tolerancing with symbols and terms.

**Audience:** Entry level designers, drafters, machinists or quality control and inspection personnel and entry level engineers. The course may also be used as a refresher course in the ASME standards

**Training Time:** **16 hrs**, split into two days, a month apart.

**Prerequisites**
Basic math: addition, subtraction, multiplication and division.

**Program Content**

- **Drawing Management**
  - Title Blocks, Revisions,
  - Bills of Materials
- **Intro to Drafting Techniques**
  - Sketching
  - Multiview Drawings
  - Orthographic Projections
- **Dimensioning and Drawing Rules**
  - General Practices and Rules
  - Tolerances
- **Cutting Planes and Sectional Views**
  - Types of Section Views
  - Material Symbology
- **Auxiliary Views**
- **Threads and Fasteners**
  - Types and Notation Standards
- **Manufacturing Processes**
  - Machining
  - Plastics Molding
  - Sheet Metal
  - Castings
- **Surface Finishes**
  - Symbology and Interpretation
- **Welding**
  - Symbology and Representation
- **Geometric Dimensioning Introduction**
  - Symbols
  - Applications