Mechanical Fundamentals
This five-day course provides participants with a working knowledge of blueprints and mechanical drawings, measuring devices, hydraulics, pneumatics, mechanical drive systems, fasteners, and bearings.

I. Blueprints and Mechanical Drawings
   - Blueprints
   - Mechanical Drawing Views
   - Arrangement of Views
   - Thread Dimensioning
   - Tapered & Machined Surface Dimensioning
   - P&ID Drawings

II. Mechanical Measuring Devices
    - Rules
    - Calipers
    - Micrometers
    - Dial Indicators

III. Hydraulics
    - Hydraulic Theory
    - System Components
    - Hydraulic Symbols
    - System/Circuit Troubleshooting

IV. Pneumatics
    - Pneumatic Theory
    - System Components
    - Pneumatic Symbols
    - System/Circuit Troubleshooting

V. Mechanical Drive Systems
    - Belts
    - Chain Drives
    - Gear Systems
    - Conveyors

VI. Fasteners
    - Classes of Fit
    - Mechanical Properties
    - Fastener Materials
    - Torque and Tension
    - Tightening Methods
    - Measuring Fastener Torque
    - Overview of Bolted Joints

VII. Bearings
    - Bearing Design and Construction
    - Bearing Types
    - Bearing Lubrication
    - Bearing Inspections
    - Bearing Removal
    - Overview of Journal Bearings
    - Bearing Care
    - Bearing Failure Analysis