



## Advanced Geometric Dimensioning and Tolerancing

This advanced course in geometric dimensioning more thoroughly covers some of the more used geometric dimensioning controls used on mechanical engineering drawings. The basic applications of position are explained in greater detail (fixed and floating fastener, zero tolerance, size feature datums, and composite vs. two single segments). Several possibilities of how to control the size and location non-size features with profile are explained. Coaxial relationships and control of rectangular features is also covered. All nine modules include a quiz. For most modules there are drawing assignments and supplementary information. The parts of an Idler Wheel assembly are used as platforms for the geometric controls. The assembly includes a shaft, pulley, weldments, bushings, and threaded fasteners. Possession of the ASME Y14.5 Dimensioning and Tolerancing standard is required.

Gain an in-depth understanding of GD&T  
Improve your work skills at your own pace and convenience  
Learn-by-doing enhance learning experience  
Acquire practical tools that you can apply on the job  
Network with others in your field  
Earn 2.25 CEUs

### Who Should Take?

The main audience is employees working in design, drafting, quality, procurement, tooling, production, and manufacturing. Multiple employees from these different areas working for the same company are encouraged to take the class together.

### Learn

- Per Unit Length Straightness
- Per Unit Area Flatness
- Extended Principles
- Profile
- Size Feature Control
- Size Datum Conditions
- Non Bilateral Zones
- Position
- Composite
- Size Datums
- Paper Gaging
- Counter Bores / Countersinks
- Non Standard Tolerance Zones
- Dimensional Analysis Procedures
- Worst Case
- Root Sums of Squares
- Monte Carlo
- Dimensional Management