

Geometric Dimensioning & Tolerancing

Length: 2 Days

Course Content

Module 1

- Introduction
- Y14.5 2009 Dimensioning and Tolerancing standard
- Part production
- Design
- Tooling / production
- Inspection
- Machine equipment and measuring instruments
- GDT (Geometric Dimensioning and Tolerancing) chart

Module 2

- Datums
- Datum brief
- Datum features
- Datum relationships
- Datum combinations
- Irregular size datum features
- Customized datum reference frame

Module 3

- Flatness
- Flatness Brief
- Surface Flatness
- * Design
- * Tooling / production
- * Inspection
- Size Feature Flatness
- * Design
- * Tooling / production
- * Inspection

Module 4

- Straightness
- Straightness Brief
- Line Element Straightness
- * Design
- * Tooling / production
- * Inspection
- Size Feature Straightness
- * Design

- * Tooling / production
- * Inspection

Module 5

- Circularity/ Cylindricity
- Circularity / Cylindricity brief
- * Design
- * Tooling / production
- * Inspection

Module 6

- Orientation
- Orientation Brief
- Line Element Orientation
- * Design
- * Tooling / production
- * Inspection
- Surface Orientation
- * Design
- * Tooling / production
- * Inspection
- Size Feature Orientation
- * Design
- * Tooling / production
- * Inspection

Module 7

- Runout
- Runout Brief
- * Design
- * Tooling / production
- * Inspection

Module 8

- Profile
- Profile Brief
- * Design
- * Tooling / production
- * Inspection
- Conical Surfaces

Module 9

- Position Tolerance Theory
- Position theory
- Coordinate dimensioning
- The 57% myth
- Position dimensioning

Module 10

- Position: General
- Position brief
- * Design
- * Tooling / production
- * Inspection

Module 11

- Coaxial Controls
- Coaxial Controls
- * Design
- * Tooling / production
- * Inspection

Module 12

- Coaxial Controls
 - Noncircular Feature Control
 - * Design
 - * Tooling / production
 - * Inspection
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