

Fundamentals of GD&T Training

(3 days – 19.5 hrs/excluding lunch and tea breaks)

Course Outline

1. GD&T Introduction /Overview
 - Rule#1
 - When and Why GD&T
 - Advantage of Symbols

2. Definitions/ Concepts Overview
 - Geometric Characteristics
 - Sample Drawing without GD&T
 - Sample Drawing with GD&T
 - Completing the Drawing

3. 3 Big Concepts Overview
 - Features & Basic Dimensions
 - 3 Big Concepts

4. Material Condition Modifiers Overview
 - Maximum Material Condition
 - Least Material Condition
 - Regardless of Feature Size
 - Maximum Material Boundary & Least Material Boundary

5. Virtual Condition/Feature Control Frames Overview
 - MMC Virtual Condition
 - Feature Control Frames

6. General Rules Overview
 - General Rules

7. Datum Theory Overview
 - Datum Theory

8. Datums: Theory-to-Reality
 - Degrees of Freedom –1
 - Degrees of Freedom –2
 - Datum Reality
 - Datum Reference Frames
 - Drafting the Datum Feature Symbol
 - Geometric Design Process

9. Position Tolerancing Overview

- Position Tolerance
- 3 Big Concepts Review

10. Form Controls (Straightness) Overview

- Surface Straightness
- Derived Median Line Straightness

11. Form Controls

- Flatness
- Circularity
- Cylindricity

12. Orientation Controls Overview

- Perpendicularity
- Angularity
- Parallelism

13. Profile Controls Overview

- Profile
- Unequal Profile

14. Runout Controls Overview

- Circular Runout
- Total Runout

15. Concentricity/Symmetry Controls Overview

- Concentricity
- Symmetry