GEOMETRIC DIMENSIONING AND TOLERANCING
PER ASME Y14.5-2009
COURSE OUTLINE (4.0 Days)

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This course outline will be adjusted depending on the competency needs and expectations of the participants

Day One

- **Getting Started**
  - Course Purpose, Objectives, and Content
  - Personal Introductions (Participants and Instructor)
  - Explanation of Training Materials
  - Identifying Participant's Learning Needs and Expectations

- **Introduction**
  1. Drawing Standards
  2. Dimensions, Tolerances, and Notes Used on Drawings
  3. Coordinate Tolerancing and Geometric Dimensioning and Tolerancing
  4. General Dimensioning Symbols

  Exercises and Applications

- **GD&T Fundamentals**
  5. Key GD&T Terms
  6. Symbols and Modifiers
  7. GD&T Rules
  8. GD&T Concepts

  Exercises and Applications

Day Two

- **Form Controls**
  9. Flatness
  10. Straightness
  11. Circularity
  12. Cylindricity

  Exercises and Applications

- **Datum System**
  13. The Datum System
  14. Datum Targets
  15. Size Datum Features (RMB)
  16. Size Datum Features (MMB)

  Exercises and Applications

Day Three

- **Orientation Controls**
  17. Perpendicularity
  18. Parallelism
  19. Angularity

  Exercises and Applications

- **Position**
  20. Position Tolerance Introduction
  21. Position Tolerance – RFS and MMC
  22. Position Tolerance – Special Applications
  23. Position Tolerance – Calculations

  Exercises and Applications

Day Four

- **Runout, Concentricity, and Symmetry**
  24. Circular and Total Runout Tolerances
  25. Concentricity and Symmetry Tolerances

  Exercises and Applications

- **Profile Controls**
  26. Profile Tolerance Basic Concepts
  27. Profile Tolerance Applications

  Exercises and Applications

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