



## Public Training

### The Advanced GD&T Tactics Used to Design for Manufacturability & Inspection

The Advanced GD&T Public Training Course builds upon the core framework established in the GD&T Fundamentals course. Because GD&T standards cover every manufacturing application across every industry, the Advanced GD&T course gives students a more comprehensive understanding of GD&T standards and their application. This course fleshes out our Fundamentals framework to show students how the GD&T Symbols and Callouts are used for better design for manufacturability.

#### Course Objectives

- Expand upon the topics learned in the GD&T Fundamentals Course to understand advanced GD&T controls.
- Learn how advanced datum feature controls are to be interpreted and applied in measurement.
- Understand composite controls for position and profile tolerances and why they are beneficial.
- Design components with tolerances required to guarantee assembly while giving maximum amount of tolerancing to manufacturing.
- Learn cost saving techniques that benefit manufacturing processes and inspection.
- Perform boundary tolerance calculations on parts to detect minimum and maximum limits.
- Learn functional gauge design principles for inspection and understanding limits of a part.
- Gain a full understanding for industry-specific topics in the ASME Y14.5 that you may come across on your prints.

#### Pricing and Discounts

##### Training Price: \$699

- 10% Discount when registering 3 or more people from the same company
- Bundle our seminars and save! Receive a \$100 discount for each additional registration.
- In order to receive any discounts, please reach out to us for registration.

#### What's Included in the Training

- Virtual Training completed via Zoom
- Certificate of Completion
- Review Reference Packet
- Real-world Industry Drawing Examples
- 1-Year Access to Online Platform:
  - Advanced GD&T Online Course
- Real-Industry Example Webinars and Bonus Material access for 1 Year
- Detailed Reference Charts:
  - GD&T Premium Symbols Chart
  - Drill Tap Chart
  - ASME vs ISO Comparison Chart
  - ASME Y14.5 2009 vs 2018 Standard Comparison Chart
- 1-Year Access to our Instructor Question Line

#### Who Should Attend:

Our Advanced GD&T Training focuses on implementing and interpreting GD&T with an emphasis on design for manufacturability. This course is for anyone looking to expand upon their fundamental knowledge of GD&T. We highly recommend completion of our GD&T Fundamentals Course, or an equivalent GD&T course, before enrolling in our Advanced GD&T Training.

We promise, once you take our training & understand our GD&T framework, you will drastically improve the way you work with your drawings. We don't want you to just understand theory – we want you to apply what you learn!

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#### Unit 1: Revisiting Datums

- Datums Features and Simulators Review
- Using Patterns as Datums
- Datum Translation & Movable Targets
- Non Rectangular & Irregular Datums

#### Unit 2: Datum Modifiers and Functional Gaging

- Max Material Boundary (MMB) & Datum Modifiers
- Simultaneous Requirements
- Position Gaging Example
- Functional Gaging Basics

#### Unit 3: Composite Tolerances

- Composite Position
- Multiple Single Segment
- Composite Profile

#### Unit 4: Hole and Fastener Design

- Projected Tolerance
- Fixed Fastener Calculation
- Floating Fastener Calculation
- Zero Tolerance at MMC
- Hole Process Tolerancing

#### Unit 5: Envelope and Boundary Tolerance Formulas

- Envelopes and Boundaries at RFS
- Tolerance Calculations with RFS Boundaries
- Virtual Condition Review
- Resultant Condition Calculation
- VC/RC Tolerance Calculations

#### Unit 6: General Advanced Symbols and Concepts

- Tangent Plane Symbol
- Statistical Tolerancing Symbol
- Restrained & Free State Callouts
- Non-Uniform Profile Segments

#### Examples and Practice:

Review: Drawing Examples of Advanced GD&T Interpretation & Application (20+ Exercises located in online access Bonus Webinar Section).

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