GD&T BASICS & Mitutoyo

2-Day GD&T Fundamentals Public Training

Date: **June 20th & 21st, 2023 -- 8:30am - 4:30pm**

Location: **Mitutoyo America Corp.**

11515 Vanstory Drive. Suite 140 , Huntersville, NC. 28078

Learn the Simplified Framework Behind the Tolerances on your Prints

With the GD&T Fundamentals Public Training Course, you will learn a simple framework that will allow you to understand how GD&T is used and why GD&T improves the manufacturing process. This course focuses on practical knowledge and uses real-world drawing examples throughout the class to practice what is learned.

We don't throw every concept at you - we focus on the concepts and terminology necessary to do your job better and improve your manufacturing operation.

Course Objectives

- Learn best practices that represent how GD&T is used in real-world design and production.
- Simplify the main requirements and terminology of the ASME Y14.5 Standard into plain English.
- Break down the majority of all concepts in the GD&T Standards into one simple unified GD&T Basics Framework.
- Learn all 14 major symbols & how to use them, which ones are most useful & which ones to avoid.
- Understand what datums do & how they are applied on drawings for design, manufacturing, & inspection.
- Discover how Max Material Condition creates bonus tolerance while maintaining a functional part.
- Reinforce all concepts by showing them on realistic manufacturing-ready engineering prints.
- Clarify all your GD&T questions, concerns, and coworker debates with our expert ASME certified instructor.
- Retain key concepts using our included resources so you will be able to apply what you learn after training.

Pricing:
$1,299 per person

** Price does not include travel or lodging costs

What's Included in the Training

- ·2 Days of training hosted by Certified ASME Senior-Level Instructor
- Certificate of Completion
- Review Reference Packet
- Real-world Industry Drawing Examples
- 1-Year Access to Online Platform:
  - GD&T Fundamentals Online Course
  - Real-Industry Example Webinars and Bonus Material
- 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 training is designed to be very approachable and geared towards everyone from entry level to those with intermediate experience. To take this training, you should have some experience in a design, production or inspection environment working with engineering drawings. You should also be able to understand how parts are represented and viewed on a print. No prior GD&T knowledge is required though.

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!

GD&T Basics – Engineer Essentials ©

📞 1-800-495-0991   ✉ info@gdandtbasics.com   🌐 www.GDandTBasics.com

GD&T Fundamentals

2-Day GD&T Fundamentals Public Training

Learn the Simplified Framework Behind the Tolerances on your Prints

Section 1: Course Introduction

- Course Overview
- What is GD&T?
- Basic Terminology

Section 2: GD&T Framework

- The Feature Control Frame
- The GD&T Basics Framework

Section 3: Size Tolerances

- Features & Material Conditions
- Rule #1 - The Envelope Principle

Section 4: Datums

- Datums Introduction
- Primary Datum Controls
- Datum Reference Frame
- Datum Targets

Section 5: Position

- Position Tolerance
- Position vs. Coordinate Conversion

Section 6: Orientation (Axis/Midplane)

- Parallelism (Axis/Midplane)
- Perpendicularity (Axis/Midplane)
- Angularity (Axis/Midplane)

Section 7: Material Modifiers

- Maximum Material Condition (MMC)
- Least Material Condition (LMC)
- Regardless of Feature Size (RFS)

Section 8: Surface Profile

- Surface Profile
- Profile Modifiers
- Profile of a Line

Section 9: Surface Orientation

- Surface Parallelism
- Surface Perpendicularity
- Surface Angularity

Section 10: Surface Form

- Straightness (Surface)
- Flatness (Surface)
- Circularity
- Cylindricity

Section 11: Runout Controls

- Circular Runout
- Total Runout

Section 12: Derived Element Controls

- Straightness Derived Median Line (DML)
- Flatness Derived Median Plane (DMP)
- Concentricity
- Symmetry

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