

# GD&T BASICS

## Make Better Decisions with GD&T on your Drawings

2-Day GD&T Fundamentals Public Workshop  
June 19th & 20th, 2019 • Downtown Greenville, SC • The Aloft Hotel

With the GD&T Basics Fundamentals 2-Day Workshop, you will learn a simple framework that will allow you to understand how GD&T is used and why. We don't throw every concept at you – we make absolutely sure that what we teach is what you will actually need in the real world.

Our #1 goal is that you retain the information you learn and make a noticeable impact at your company when you get back from training!

### Course Objectives:

- Understand the simple GD&T framework that simplifies 95% of all GD&T.
- Breaks down the main requirements and terminology of the ASME Y14.5 Standard into simple English.
- Learn all 14 major symbols & how to use them, which ones are most useful & which ones to avoid.
- Discover how Max Material Condition creates bonus tolerance while maintaining a functional part.
- Understanding what datums do & how they are applied on drawings for design, manufacturing, & inspection.
- Study real drawings to understand how GD&T is applied on actual parts.
- Learn best practices that represent a realistic approach on getting started using GD&T.
- Retain key concepts using our included resources so you will be able to apply what you learn after training.

• Please see our training curriculum on the next page.

• Limited Seats Available! [Register Here](#)  
or visit our website at [workshop.gdandtbasics.com](http://workshop.gdandtbasics.com)

### Pricing and Discounts:

Training Price: \$899

\*\* \$100 OFF if registered before May 19<sup>th</sup>, 2019

\*\* 10% Discount when registering 3 or more people from the same organization

\*\* Price does not include travel or lodging costs

\*\*Discount Room Rate at Aloft Hotel (Training Venue) if registered before May 19<sup>th</sup>, 2019

### What's Included in the Training:

- 2 Days of training hosted by Tom Geiss – Certified ASME Senior-Level Trainer
- 6 Months of Online Access to our GD&T Fundamentals Training (\$299 Value!)
- Printed Premium GD&T Wall Chart
- GD&T Pocket Guide
- Review Handout Packet
- Certification of Completion
- 16 PDHs (Personal Development Hours)
- Continental Breakfast & Lunch both days
- Evening reception Tuesday, June 19<sup>th</sup> – Immediately following training

### 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 – Pareto Learning, LLC

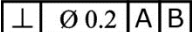
1-800-495-0991 • [www.gdandtbasics.com](http://www.gdandtbasics.com) • [info@gdandtbasics.com](mailto:info@gdandtbasics.com)

# Syllabus for the GD&T Basics Fundamentals Course



## Section 1: Introduction

- Course Introduction – Why This Course is Different
- What is GD&T?
- Terminology & Basic Rules

## Section 2: Features and Rules of GD&T

- Intro to Features and Material Conditions
- Rule #1 of GD&T (Envelope Principle)
- Maximum Material Condition (M)
- Least Material Condition (L)
- Regardless of Feature's Size & Rule #2
- The Feature Control Frame 







## Section 3: Datums Control

- Intro to Datums
- Datum Reference Frame 
- Primary Datum Controls 
- Datum Targets
- Intro to MMB and LMB






## Section 4: Adding GD&T to a Design

- SLOF for Drawings (Size, Location, Orientation & Form)
- Choosing Datums
- Virtual Condition Calculations




## Section 5: Form Tolerances

- Straightness (Surface) 
- Straightness (Derived Median Line) 
- Flatness (Surface) 
- Flatness (Derived Median Plane) 
- Circularity 
- Cylindricity 





## Section 6: Orientation Tolerances

- Parallelism (Surface) 
- Parallelism (Axis) 
- Perpendicularity (Surface) 
- Perpendicularity (Axis) 
- Angularity (Surface and Axis) 



## Section 7: Profile Tolerances

- Profile of a Surface - Basics 
- Profile In-Depth (Modifiers) 
- Profile of a Line 

## Section 8: Location Tolerances

- True Position – Basics 
- Position – In-Depth 
- Intro to Functional Position Gauging
- Why Use Position Over Coordinate Dimensions
- Concentricity 
- Symmetry 

## Section 9: Runout Tolerances

- Runout/Circular Runout 
- Total Runout 

## Real-World GD&T Examples

- Receiver Hitch Design Example
- Work Bench Assembly Example
- Bicycle Sprocket Example
- Axle Shaft Example
- Design Review of Any Student Drawings\*

**\*Feel free to bring 1-2 drawings you can publicly share that will be relevant to the discussion.**