



Advanced GD&T Certification Training (ISO GPS & ASME Y14.5-2018)

This advanced course is designed for engineers, designers, and quality professionals who already understand the basics of Geometric Dimensioning & Tolerancing (GD&T) and want to move to an expert level. It covers advanced modifiers, datum boundary conditions, positional and profile tolerancing, as well as fastener applications. Upon completion, participants earn the Excedify Advanced GD&T Certification.



Course Syllabus

Module 1: Modifiers & Boundary Conditions - Actual Mating Envelope (AME) - Maximum Material Condition (MMC) • External Feature of Size (FOS) • Internal Feature of Size (FOS) - Least Material Condition (LMC) • External FOS • Internal FOS - Regardless of Feature of Size (RFS) - Application of MMC, LMC, RFS - Virtual Condition • @MMC (External & Internal FOS) • @LMC (External & Internal FOS) - Resultant Condition - Inner Boundary / Outer Boundary - Worst Case Boundary - Multiple Boundary Condition - Bonus Tolerance @ MMC & @ LMC - Practical Examples	Module 2: Datum Boundary Conditions & Functional Gaging - True Geometric Counterpart - Physical Datum Feature Simulators - Datum Feature Modifiers: RMB, MMB, LMB - Application of MMB, LMB, RMB to Irregular Features of Size - Functional Datum Features - Simultaneous Requirement vs Separate Requirement - Movable Datum Targets
Module 3: Advanced Positional Tolerancing - Zero Positional Tolerance @ MMC - Bidirectional Positional Tolerancing of Features of Size - Composite Positional Tolerancing - Multi-Segment Positional Tolerancing	Module 4: Advanced Profile Tolerancing - Composite Profile Tolerancing - Multi-Segment Profile Tolerancing - Combined Controls - Dynamic Profile Applications
Module 5: Fasteners & Assemblies - Fixed Fasteners - Floating Fasteners - Applications in Assembly Tolerance Analysis	Bonus Module 1: Introduction to tolerance stack-up analysis Bonus Module 2: Comparison of ISO GPS and ASME Y14.5 2018

By the end of this course, participants will have a deep mastery of advanced GD&T applications under both ISO GPS and ASME Y14.5-2018 standards. This certification demonstrates professional expertise and enhances career opportunities in precision engineering, automotive, aerospace, and manufacturing industries.

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