



Critical Concepts of Tolerance Stacks, 3-Day Advanced Workshop

Using tolerance stacks ensures that parts fit together properly, reducing scrap and rework, thereby increasing value. This advanced course explains how to use tolerance stacks to analyze product designs and how to use geometric tolerances in stacks.

Who Should Attend

This course is ideal for individuals who create or interpret engineering drawings including design, manufacturing, assembly, checking and inspection personnel.

Skill Level Needed

Please be aware this is not an introductory course. To qualify you must already know how to read a blueprint and have completed a 3 or 4-day Fundamentals of GD&T course.

Course Agenda and Highlights

- Introduction to Tolerance Stacks
- Introduction to One-Dimensional (1D) Stack Methods
- Part and Assembly Stacks Using Coordinate Dimensions
- Part and Assembly Stacks Using Runout and Concentricity Tolerances
- Part and Assembly Stacks Using Profile Tolerances
- Part and Assembly Stacks Using Position Tolerances
- Part and Assembly Stacks Using Position at RFS and MMC
- Part and Assembly Stacks Using Position with Datum Features Referenced at MMB
- Part and Assembly Stacks Using Multiple Geometric Tolerances
- Assembly Stacks Using Form and Orientation Tolerances Applied to a Surface
- Assembly Stacks Using Form and Orientation Tolerances Applied to Features of Size
- Stacks Using Orientation Controls Applied to a Feature
- Stacks Using Orientation Controls Applied to a Feature of Size

Learning Outcomes

You'll learn the essential methods used for creating 1D part and assembly tolerance stacks, including these six critical concepts:

- 1.The importance of stacks
- 2.The two-column stack method using the SAE stack spreadsheet
- 3.Determining a stack path
- 4.Creating 1D part and assembly stacks
- 5.Interpreting GD&T
- 6.Resolving assumptions and inane tolerances