

APPLICATIONS OF GD&T

COURSE DESCRIPTION

This course helps students apply GD&T to achieve the mating and functional requirements of their parts using a series of case study problems including sheet metal, machined parts, plastic parts, castings etc. Light on lecture and heavy on participation, calculations and exercises are performed individually and in teams. This course provides realistic design problems where students apply what they have learned while reinforcing their understanding of the fundamentals.

LEARNING OBJECTIVES

- Calculate linear, axial and orientation stack-ups using parts with geometric tolerancing
- Perform tolerance stack-up analysis to assign critical tolerances
- Combine the effects of different types of variation using the concept of boundaries, calculate boundary sizes and use boundaries properly in stack-up analysis
- Apply the geometric language to real parts
- Construct the appropriate functional datum reference frames for parts after analyzing the mating requirements
- Apply datum feature modifiers where appropriate based on analyzing the requirements
- Apply geometric tolerancing to control features and ensure mating requirements are met



APPLICATIONS OF GD&T

WHO SHOULD ATTEND

This course is designed for mechanical design engineers and engineering technicians supporting them in the design of mechanical components and definition of engineering requirements.

COURSE OUTLINE

- Linear Stack-Ups
- Stack-Ups Involving Profile, Flatness, and Perpendicularity
- Boundaries
- Axial Stack-Ups via Boundaries
- Orientation
- Application Practice Exercise
- Machined part exercise
- Two-piece turned part exercise
- Three-piece round machined part exercise
- Two-piece machined part exercise
- Seven-piece round machined part exercise

Prerequisites: Basic GD&T, Advanced GD&T, or the equivalent.

Course Format: 24 hours: 3 in-person sessions or 5 online sessions



DYNAMIC DESIGN CONSULTING, LLC

www.dynamicdesignconsulting.com

