

ISO Geometrical Tolerancing Two-Day Workshop

Based on ISO 1101:2004 and companion standards



Course Developer: Alex Krulikowski, President of Effective Training Inc.

Learn GD&T from the experts. Professionals across the globe turn to ETI for training in geometric dimensioning and tolerancing. ETI's president, Alex Krulikowski, has helped more than 60,000 students learn GD&T through his textbooks, self-study courses, computer-based training programs, and online learning center. Now you have the opportunity to learn GD&T in a course developed by Alex at an ETI public workshop.

Learning to interpret and apply GD&T properly will help you and your company:

- Save money at the design stage
- Enable global sourcing
- Reduce drawing errors
- Increase productivity
- Increase part tolerances
- Assure that mating parts will assemble
- Eliminate scrap
- Improve inspection accuracy

About the Course

Understanding dimensioning and tolerancing on engineering drawings is critical to being able to make parts that satisfy their functional requirements. This two-day workshop will help you to understand engineering drawings that use the ISO standards. Enable global sourcing for your organization and learn to read drawings created in other countries. The course covers:

1. Requirements on a good (standard-compliant) drawing
2. Geometrical tolerances based on the ISO standards
3. Dozens of ISO standards combined and explained in a logical, understandable manner

Westland, Michigan

April 18-19
October 15-16

Who Should Attend

This workshop is a valuable tool for individuals who create or interpret engineering drawings: product and gage designers; process, product, and manufacturing engineers; supplier quality engineers; CMM operators; buyers/purchasers; checkers; inspectors; technicians; and sales engineers.

Workshop Highlights

The ISO geometrical tolerancing course will help you to understand engineering drawings that use the International Standards Organization (ISO) standards. The course includes *Alex Krulikowski's ISO Geometrical Tolerancing Reference Guide*, a unique, organized resource that will help you to learn about dimensioning and tolerancing and provide a handy reference for you on the job.

Skill Level Needed

Attendees must have a basic understanding of Y14.5-1994 Dimensioning and Tolerancing practices.

Each workshop participant receives:

- *Alex Krulikowski's ISO Geometrical Tolerancing Reference Guide*
- An ISO Geometrical Tolerancing Workbook
- Class handouts
- An official certificate of completion
- Continental breakfast, morning and afternoon snacks



Quantity discounts available.

ETI offers a 10% discount on three or more registrations. Call 1-800-886-0909 for more information.



www.etinews.com

Enrollment is limited to 15 seats. Call 1-800-886-0909 or visit our website to register, today.

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Course Highlights

ISO Standards and Drawing Conventions

The ISO standards system used on technical drawings
ISO drawing practices

GPS Basics

Modifiers and symbols used in geometrical tolerancing
Fundamental ISO geometrical tolerancing concepts
Feature types and levels
Linear size and material conditions
Independency and envelope principles
Key geometrical tolerancing concepts: maximum, least, & reciprocity requirement; virtual condition; bonus tolerance

Limits and Fits

The ISO 286 system of limits and fits

The Datum System

The datum system (planar datums)
Datum target specifications
Datum specifications

Form Controls

Flatness, straightness, roundness, cylindricity

Orientation Controls

Perpendicularity
Angularity
Parallelism

Location Controls

Position RFS, MMR, and LMR
Concentricity
Symmetry

Location Controls

Circular run-out
Total run-out
Profile tolerance
Profile any surface tolerance
Profile any line tolerance

General Tolerances

ISO system for general tolerances for linear and angular dimensions
ISO system for general tolerances for geometrical tolerances (ISO 2768-2)

Workpiece Edges

Interpret workpiece edge specifications

Surface Texture and Surface Imperfections

Surface texture and surface imperfection requirements

ISO/ASME Comparison

Major differences between the tolerancing standards

Complete 2012 ETI public workshop schedule:

Advanced Concepts of GD&T (ASME Y14.5M-1994) 2-Day: March 28-29, September 19-20

ASME Y14.5 1994 to 2009 Update 1-Day: May 17

Engineering Drawing Requirements (ASME Y14.100-2004) 1-Day: May 16

Fundamentals of GD&T 2-Day:

1994 Standard: March 26-27, September 17-18

2009 Standard: April 16-17, October 8-9

Fundamentals of GD&T for Inspectors (ASME Y14.5M-1994) 2-Day: May 14-15

ISO Geometrical Tolerancing (ISO 1101:2004) 2-Day: April 18-19, October 15-16

Solid Model Tolerancing (ASME Y14.41-2003) 1-Day: May 18

Statistical Tolerance Stacks 1-Day: April 25, October 12

Tolerance Stacks 2-Day: April 23-24, October 10-11

Visit www.etinews.com for more details, pricing, and registration information.



Call 1-800-886-0909 or visit our website to enroll today.