

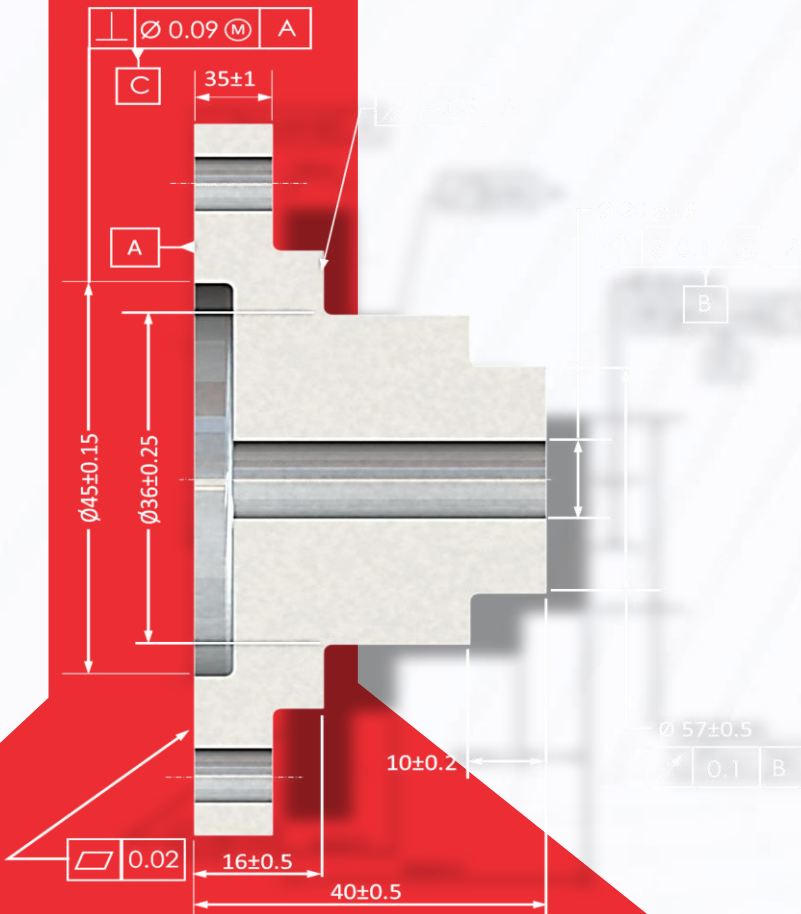


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# GD&T

## Introduction

### COURSE



**Contact us:**

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**COURSE DESCRIPTION** : GD&T Introduction

**COURSE DURATION** : 8 hrs.

## SYLLABUS

### Module 1: Introduction to Geometric Dimensioning and Tolerancing

- Definition of Tolerance
- Accuracy vs Precision
- Types of Dimensioning
- Types of Tolerances
- Types of Tolerancing
- Tolerancing Rules (Millimeter units)
- Introduction to ASME Y 14.5 (2009) tolerancing standard
- What is GD&T and What is Not GD&T?
- GD&T Standards
- Why use GD&T?
- Comparison of conventional and GD&T approach to tolerancing

### Module 2: Introduction to GD&T Concepts

- Feature of Size
- Non-Feature of size
- Bounded features
- General Tolerancing rules
- Feature Control Frame Representation
- Material Modifiers
- Regardless Feature of Size (RFS)
- Maximum Material Condition (MMC)
- Least Material Condition (LMC)
- RFS, MMC, LMC for Internal Feature of Size (IFOS) & External Feature of Size (EFOS)

### Module 3: Datum Reference Frames

- Datum Definition
- Datum, Datum Features and Simulators
- Datum Feature Representation
- Methods for applying Datum Feature Symbols
- Multiple datum features
- Datum Targets Representation and interpretation

**Module 4: Tolerance of Form**

- Straightness: Description, GD&T Tolerance Zone
- Straightness: Usage & Examples
- Flatness: Description, GD&T Tolerance Zone
- Flatness: Usage & Examples
- Circularity: Description, GD&T Tolerance Zone
- Circularity: Usage & Examples
- Cylindricity: Description, GD&T Tolerance Zone
- Cylindricity: Usage & Examples

**Module 5: Tolerance of Orientation**

- Parallelism: Description, GD&T Tolerance Zone
- Parallelism: Usage & Examples
- Angularity: Description, GD&T Tolerance Zone
- Angularity: Usage & Examples
- Perpendicularity (Surface): Description, GD&T Tolerance Zone
- Perpendicularity (Axis): Description, GD&T Tolerance Zone
- Perpendicularity: Usage & Examples

**Module 6: Tolerance of Location**

- Position: Description, GD&T Tolerance Zone
- Position at MMC: Description, GD&T Tolerance Zone
- Position: Usage & Examples
- Concentricity: Description, GD&T Tolerance Zone
- Concentricity: Usage & Examples
- Symmetry: Description, GD&T Tolerance Zone
- Symmetry: Usage & Examples

**Module 7: Tolerance of Profile**

- Profile of a Line: Description, GD&T Tolerance Zone
- Profile of a Line: Usage & Examples
- Profile of a Surface: Description, GD&T Tolerance Zone
- Profile of a Surface: Usage & Examples

**Module 8: Tolerances of Runout**

- Runout: Description, GD&T Tolerance Zone
- Runout: Usage & Examples

- Total Runout: Description, GD&T Tolerance Zone
- Total Runout: Usage & Examples

### Module 9: Symbology

- Translation
- Projected Tolerance Zone
- Free State
- Tangent Plane
- Unequally Disposed Profile
- Independency
- Statistical Tolerance
- Continuous Feature
- Diameter, Spherical Diameter
- Radius, Spherical radius, Controlled Radius
- Square
- Reference
- Arc Length
- Dimension Origin
- Between
- All Around
- All Over



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#### **Certificate:**

On successful completion of the course and evaluation, the Certificate will be issued by aCADemix.

## OTHER COURSES

### **SolidWorks 3D CAD**

- SolidWorks-Basics
- SolidWorks-Advanced
- SolidWorks- Mold Design
- SolidWorks- Routing
- SolidWorks-Composer
- SolidWorks-MBD

### **SolidWorks Simulation**

- SW Simulation Advanced
- SW Simulation-Fatigue FEA
- SW Simulation-Drop Test FEA
- SW Simulation-Dynamic FEA
- SolidWorks Motion
- SolidWorks Plastics

### **Design For Quality (DFQ)**

- GD&T-Advanced
- Tolerance Stack-Up Analysis
- DFMEA

### **SolidWorks Automation**

- SolidWorks API - Basics
- SolidWorks API - Advanced

### **SolidWorks PDM**

- SolidWorks PDM- User
- SolidWorks PDM - Admin

### **SolidWorks PDM Automation**

- SolidWorks PDM- Automation

### **Abaqus CAE**

- Abaqus CAE - Linear Static Analysis