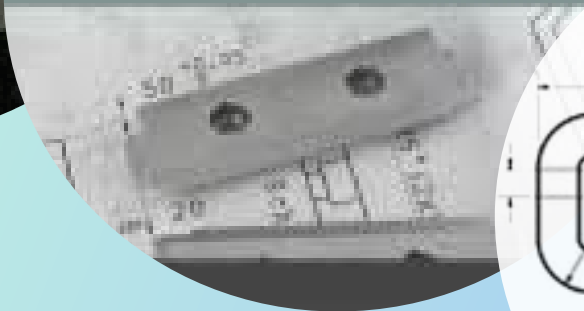


# GEOMETRIC DIMENSIONING & TOLERANCING

From 03rd -07th March  
2025



SYSTEM SELECTION AND  
INTERPRETATION



GD&T

## Highlights of the Programme

Need for higher accuracy of components used in vast category of products is increasing day by day due to various reasons like greater operational precision, automatic assembly, general interchangeability, reliable operation, miniaturization, etc. The basic definition of a part starts with its drawing and unambiguous representation in drawing is very important to avoid disastrous effects during production and assembly stages. Geometric Dimensioning & Tolerancing is a new tool that eliminates such ambiguities and enhances precision. GD&T, though being an effective tool, was not so popular among industries till recently. But, today's precision engineering industries have started using it more and more exhaustively to bring out the designer's intent very clearly in the engineering drawings. The basic aim of this training course is to help new users of GD&T in clearly understanding the various aspects of GD&T and the various representations used in the engineering drawings. Fundamental dimensioning rules, basic tolerancing concepts, geometric tolerancing symbols, definitions and representations, positional tolerancing, reference datum, definition and usage of material condition modifiers etc., would be dealt in detail

CMTI adheres to the ASME Y14.5 GD&T standard, ensuring that participants are taught in alignment with all relevant engineering principles.

# Target Participants:

**Design, Manufacturing and Quality Control Engineers**

## Programme Schedule :

It is 05 day Non Residential Training Programme scheduled during **03rd –07th March 2025**. The Programme will be held at Central Manufacturing Technology Institute, Bangalore

## Participation Fees

Rs. 19,500/- plus GST @ 18%\*\*\*, per participant. This includes Course Kit, working veg lunch, midsession tea.

Course Fee can be paid through NEFT / RTGS / Demand Draft. Demand Draft to be drawn in favor of "Central Manufacturing Technology Institute", payable at Bangalore and should reach CMTI one week before the actual date of commencement of the course.

### Beneficiary for RTGS/NEFT

- a) Name : **Central Manufacturing Technology Institute**
- b) GST No: **29AAATC2085K1ZJ**
- c) Account No :**10521862015**
- d) Bank Name & Branch: **State Bank of India, Yeshwanthpur Branch**
- e) IFSC Code :**SBIN0003297**
- f) MICR Code : **560002055**

## Additional Information:

1. A 10% rebate on course fee will be given to organizations nominating 3 or more participants for each programme, only if payment is made in advance, ten days before the commencement of the course.
2. Individuals/ Companies interested in participation are requested to fill in the enclosed Enrollment Form and submit at the earliest.
3. Participants are advised to proceed for the programme only after the nominations / Programme confirmed by us (by Fax / Letter / Phone / E-Mail).
4. Participants should report at CMTI on the day of commencement of the course. Participants are advised to reach Bangalore the previous day evening/ night.
5. Course will be conducted from 09:00 to 17:00 hrs. Participants may plan their return journey accordingly.
6. Participants will be given Certificate after the completion of the Training Programme
7. Enclosed are the tentative programme contents for ready reference
8. GST No. to be shared while sending your nomination / Registration (if a company is exempted from GST they have to provide GST Exemption certificate).
9. Please note that Course fee once paid will not be refunded. However, change in nomination will be permitted.

**Note: \*\*\* Taxes and other levies will be charged as per the prevailing rates at the time of Billing**

**For further enquiries / registration / nominations, please contact:**

**Mr. Arun Kumar J G, Joint Director & Centre Head – AEAMT,**

**09449842686 / 78 Fax: (080) 2337 0428**

**E-mail– training@cmti.res.in**

# Training Programme

## On

### ‘Geometric Dimensioning & Tolerancing’

### Tentative Programme Schedule

<b>Day &amp; date</b>	<b>Topic</b>
<b>Day 1</b>	Introduction to GD & T Definitions, basic terms, Tolerances, limits, fits,
	Tolerance Frames- Features- Zones, Virtual Condition, Bonus Tolerance, Functional gauge
	Introduction to Precision Measurements & Metrology
	Visit to Labs
<b>Day 2</b>	Dimensioning
	Tolerancing & Datums Referencing
	Form Measurements
	Demo : Dimensional Metrology Shaft, Bore size with Various accuracies, angle measurement with different instruments
<b>Day 3</b>	Surface Roughness
	Tolerance of Form, Orientation, Location & Runout
	Demo : Straightness & Parallelism – V Block / Jack / Surface plate methods · Flatness Measurement – 3 jack method

	<ul style="list-style-type: none"> <li>· Parallelism – Surface Plate Method</li> <li>· Squareness using Gr square / Height gauge</li> <li>· Angularity - Sine table/ Sine Centre Flatness of Surface Plate using Electronic / Spirit Level</li> </ul>
<b>Day 04</b>	<b>Positional Tolerancing</b>
	<b>Demo</b> <ul style="list-style-type: none"> <li>• Circularity– Diametrical Methods</li> <li>• Cylindricity – Diametrical Methods</li> <li>• Runout- V Block, Bench Centres</li> <li>• Coaxiality - V Block Method</li> <li>• Symmetry – Surface Plate Method</li> </ul>
	<b>Thread measurement</b>
	<b>CMM – Position &amp; Straightness, Flatness, Angularity, Squareness, Etc.,</b>
<b>Day 05</b>	<b>Tolerance Stack up</b>
	<b>Roundness Tester</b>
	<b>FTS - Roughness</b>
	<b><i>Concluding Session</i></b>

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