



ENGINEERING STAFF COLLEGE OF INDIA

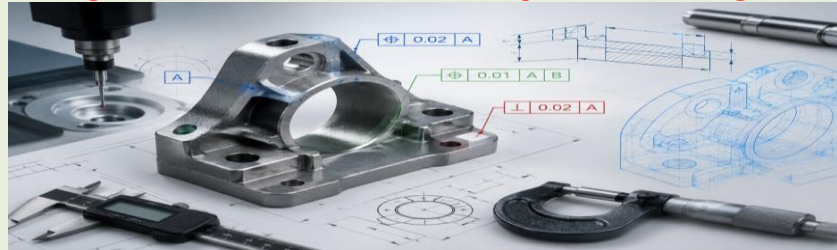
(An ISO 9001:2015 Certified, AICTE & CEA Recognized Institution)

Autonomous Organ of the Institution of Engineers (India)

Old Bombay Road, Gachibowli, Hyderabad – 500 032. Telangana, India



Design Prototyping Centre & Mechanical Division Continuing Professional Development Programme on



Geometric Dimensioning and Tolerancing (GD&T)

17 – 20 November 2026

INTRODUCTION

Cost to fix an error during product development cycle increases exponentially WRT time! It is minimum at Idea stage and maximum at manufacturing stage! To reduce the errors, it is necessary that the drawings should contain precise and correct information. The communication through the drawing should be correctly understood all across the organization. Hence a common method to convey the design intent is needed. Geometric Dimensioning and Tolerancing known as “GD & T” is a compilation of symbols and rules that efficiently describe & control dimensioning. It also helps in tolerancing of all drawings (castings, machined components, etc.). The concept of “GD&T” was introduced by Stanley Parker from Scotland in the late 1930's. However, it was not used to any degree until World War II (WW II) because until then the vast majority of products were made in-house. The designer could discuss with the manufacturing personnel (die designer, foundry, foreman, machinist & inspectors) what features were to be controlled. Also when two or more features were shown coaxial or symmetrical around these “center lines”, the questions that needed to be answered by the designer was, “how concentric or symmetrical do these features have to be to each other”? GD & T principles answer these questions. GD&T gives a uniform meaning to the drawing across the organization that conveys the correct design intent.

OBJECTIVES

The objectives of the programme are:

- To impart knowledge on concepts and process of “Geometric Dimensioning and Tolerancing”
- To provide awareness on standard practices used to convey the design through the drawings
- To make clear and error free drawings that convey the design intention across the organization
- To make cable for ensuring that drawings issued convey the desired functional information

COURSE CONTENT

The following topics will be covered during the training programme:

- Introduction to GD & T
- History of GD & T
- Advantages of GD & T over coordinate
- Dimensioning & Tolerancing
- General Dimensioning
- Direct Tolerancing Methods
- Symbols and Terms
- Datum Reference Frames
- Form Tolerances
- Orientation Tolerances
- Profile Tolerancing
- Runout
- Features
- Fixed fasteners & Floating fasteners
- Graphical symbols for the indication of surface texture
- Welding, brazed and soldered joints –
- Symbolic representation
- Metric screw threads
- Case studies

Centre for Promotion of Professional Excellence

METHODOLOGY

Methodology of the programme includes Chalk & Talk sessions /lectures/group discussions/case studies/debates with audio-visual aid,benched marked video shows etc. All the sessions will be interactive demanding active participation from all the member participants.

TARGET PARTICIPANTS

Professionals from Governments, Private and Public Sector Undertakings (from Design, Prototyping, Development, Service & Maintenance Divisions), Scientists working in Research Laboratories& Faculties of various Colleges & Universities, Startups into New product development, Dockyard personnel and repair shop personnel will find the programme useful.

CERTIFICATION

A Certificate of participation will be awarded to all the participants after the successful completion of the training programme.

COURSE DIRECTOR

Dr. N V S S Sagar

Faculty & Head i/c,
Design Prototyping Center and Mechanical Division
Engineering Staff College of India,
Gachibowli, Hyderabad.

Email: dpc@escihyd.org

Contact No.: 9052291738 or 040 – 66304186

COURSE CO-ORDINATOR

Mr. Aliga Raju

Faculty
Design Prototyping Center and Mechanical Division
Engineering Staff College of India,
Gachibowli, Hyderabad.

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Contact No.: 9908689758 or 040 – 66304184

PROGRAMME DATES: 17 – 20 November 2026

COURSE FEE: Rs. 24,000/- (Rupees Twenty Four Thousands Only) per Participant + GST@18% Extra. Fee includes, course material, course kit, twin-sharing/single AC accommodation as per availability, breakfast, lunch, dinner, tea / coffee and snacks during the actual days of training programme.

DISCOUNT:

Additional 10% discount for three or more participants, if sponsored by the same organization. PAN Card No AAATT3439Q; GST No. 36AAATT3439Q1ZV. H.S. No. 999293 (Under commercial training or coaching services – clause 65(105) (ZZC) of Finance act – 1994).

Programme fee is to be paid in in favor of “THE INSTITUTION OF ENGINEERS (INDIA) – ENGINEERING STAFF COLLEGE OF INDIA” in the form of Demand Draft (DD) payable at Hyderabad. Alternatively, the payment may be made by Electronic Fund Transfer (EFT) to ESCI - SB A/c No. 10007111201 with State Bank of India, P.B.B / Khairatabad, Rajbhavan Road, Hyderabad-500004 by RTG's/ NIFT / IFSC Code No: SBIN0004159. While using EFT method of payment, please ensure to communicate us your company name, our Invoice reference and programme title.

REGISTRATION:

To register, please send your nominations by providing name, designation, contact address, email address, mobile no, telephone and fax number of the participant along with the details of mode of payment of fee, addressed to: dpc@escihyd.org/mechanical-dpc@escihyd.org. For more details please contact our program officer, **Mr. K. Raghuveera Reddy, Mobile No: 9849988930.**

GENERAL INSTRUCTIONS:

- ESCI encourages participants to present case studies from their respective organizations.
- ESCI provides complimentary accommodation and boarding to the participants one day before commencement (Check-in 12:00 h) and one day after conclusion (Check-out 12:00 h) of the programme duration. Overstay charges will be applicable as per ESCI rules (subject to availability of accommodation).
- Well-developed Information Centre and Internet facilities are available to the participants free of cost.