

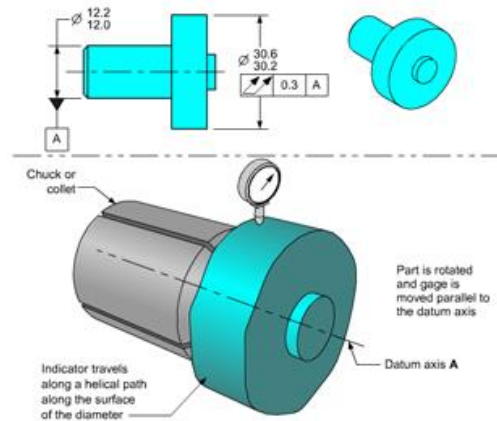


# Gyanmanjari Institute of Technology (GMIT)

## Mechanical Engineering Department

### SDP Course Content

**Name of Course :** Geometric Dimensioning and Tolerances



#### Course Objective:

- To learn the basic principles and building blocks of GD&T.
- To appreciate the merits of GD&T and how it complements conventional Tolerancing methods.
- To be able to read, specify and interpret GD&T language.
- To apply GD&T for technical and economic competitive advantages.

#### Syllabus

Sr.No.	Contents	Hrs.
1.	Dimensioning and tolerancing	2
2.	Introduction to symbols and terms	2
3.	Introduction to datum	2
4.	Material condition and material boundary	2
5.	Form tolerances	2
6.	Orientation	2
7.	Location tolerances (Part I)	2
8.	Location tolerances (Part II) and virtual condition	2
9.	Profile tolerances	2
10.	Run out	2
<b>Total Hrs.</b>		<b>20</b>

#### Coordinator details and timing:

<b>Course Duration</b>	20 Hrs.
<b>Course Coordinator</b>	Prof. Niraj Patel
<b>Batch Size</b>	20
<b>Course Fee</b>	NIL
<b>Targeted Audience</b>	Third sem mechanical students from Design and Manufacturing Domain

**Resource requirement:**

<b>Infrastructure requirement</b>	Class room with projector, workshop
<b>Hardware / Software</b>	Various machine tools and measuring instrument
<b>Consumable</b>	M.S. Plate, M.S. round bar, wooden blocks
<b>Special Equipment</b>	NIL

**Assessment criteria**

<b>Sr. No.</b>	<b>Criteria</b>	<b>Marks</b>
1	Test (MCQ + Numerical)	50
2	Practical Exam	50
<b>Passing criteria: More than 50% marks in all component</b>		

**Course Outcome:**

- Geometric dimensioning and Tolerancing (GD&T) is a system for defining and communicating engineering tolerances. It uses a symbolic language on engineering drawings and computer-generated three-dimensional solid models that explicitly describes nominal geometry and its allowable variation.
- GD&T tells the manufacturing staff and machines what degree of accuracy and precision is needed on each controlled feature of the part.
- Modern CAD skills will place you ahead of the competition in this fast-growing industry.
- Certificate at the successful completion of the course.