	K.S. RANGASAMY COLLEGE OF TECHNOLOGY, TIRUCHENGODE - 637 215 (An Autonomous Institution, Affiliated to Anna University, Chennai)	MECH

Flipped Class			
Programme & Branch	**B.E - MECHANICAL ENGINEERING**	**Year/Sec/Sem**	**V**
Course Code & Name	50 ME E14 – PRODUCT DESIGN FOR MANUFACTURING	**Date**	**17.08.2022**

The video link for the topic GEOMENTRIC DIMENSIONING AND TOLERANCING is **https://www.youtube.com/watch?v=-3tN7KvDUjQ.** All the students are requested to listen the video and come prepared for the discussion to be held on 20.08.2022 (Third Hour) in our classroom Hall Number 201 in Nano Block.

Course Instructor
Prasath. M

	K.S. RANGASAMY COLLEGE OF TECHNOLOGY, TIRUCHENGODE - 637 215 (An Autonomous Institution, Affiliated to Anna University, Chennai)	MECH

Flipped Class Activity Report			
Programme & Branch	**B.E - MECHANICAL ENGINEERING**	**Year/Sec/Sem**	**V**
Course Code & Name	50 ME E14 – PRODUCT DESIGN FOR MANUFACTURING	**Date** **Hour**	**20.08.2022** **3rd Hour**

Questions:

1) What is the difference between General Dimensioning and Geometric Dimensioning & Tolerance?
2) What is the need of GD & T?
3) Write down the step by step approach in GD&T.
4) What is position tolerance in GD&T?
5) Define Datum.
6) Define Feature Control frame.

The above questions have been asked to the students and they shared their answers. All the students answered questions no. 1, no.2 and no.3 correctly. But few students answered questions No. 4 and 5 correctly. So, I discussed the non-answered topic in the classroom.

Course Instructor

	K.S. RANGASAMY COLLEGE OF TECHNOLOGY, TIRUCHENGODE - 637 215 (An Autonomous Institution, Affiliated to Anna University, Chennai)	MECH

Flipped Class – Questions and Answers			
Programme & Branch	**B.E - MECHANICAL ENGINEERING**	**Year/Sec/Sem**	**V**
Course Code & Name	50 ME E14 – PRODUCT DESIGN FOR MANUFACTURING	**Date** **Hour**	**20.08.2022** **3rd Hour**

Answers:

1) General Dimensioning control size of the part and Geometric Dimensioning controls the shape of the part.

2) With functional assemblies, multi-part products, or parts with complex functionality, it is crucial that all components work well together. All relevant fits and features need to be specified in a way that impacts the manufacturing process and its related investments the least, while still guaranteeing functionality. Tightening tolerances by a factor two can raise the costs twofold or even more, due to higher reject rates and tooling changes. GD&T is the system that allows developers and inspectors to optimize functionality without increasing cost.

3) Identify Your Functional Features, Choose Your Controls, Define Your Tolerances, Define Your Datum References, Designate Your Datum Alignments

4) Position Tolerance (symbol: ⌖) is a geometric dimensioning and tolerancing (GD&T) location control used on engineering drawings to specify desired location, as well as allowed deviation to the position of a feature on a part.

5) A datum is a plane, a straight line, or a point that is used as a reference when processing a material or measuring the dimensions of a target.

6) A feature control frame is used in GD&T to describe the conditions and tolerances of a geometric control on a part's feature. The feature control frame consists of four main pieces of information: GD&T symbol or control symbol. Tolerance zone shape and dimensions.

Mr. [illegible]

Course Instructor

Abithas . R
73772011401
III / A sec.
50 MEE14 - Product Design for Manufacturing.

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M. [illegible]

1. General dimensioning control zi size of the part and Geometric dimensioning control the shape of the part.

2. With functional assemblies, multi part products or part with complex shapes or functionality, it is crucial that all component work well together.

3. Identify your functional features, choose your controls, define your tolerance, Define your datum reference and at last designate your datum alignment.

4. A datum plane is a straight line, or a point that is used as a reference with processing a material or measuring the dimension of a target.

5. A feature control frame is used to in GD&T to describe the coordinates & the conditions and tolerances of a geometric control on a part features. A feature control frame consist of four main pieces of information. That is GD&T symbol or control symbol, tolerance zone shape and dimension value.

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50ME614 - PRODUCT DESIGN FOR MANUFACTURING.

1. General dimensioning Control size of the part and Geometric Dimensioning control the size of the part.

2. In multipart products or part with complex shapes or functionallity it is critical that all component work well together.

3. The steps involved are i) Identify your functional features.
ii) Choose your controls.
iii) Define your tolerance.
iv) Define your datum reference.
v). Designate your datum alignment.

4. A datum plane is a straight line, or a point that is used as a reference with processing a material or measuring the dimension of a target.

5. A feature control frame is used in GD&T to describe the coordinates of the condition and tolerance of a Geometric control on a part feature. A feature control frame consist of four main pieces of information ie.

i) GD&T symbol or control symbol.

ii) Zone shape.

iii) Tolerance

iv) Dimension value.

K S RANGASAMY COLLEGE OF TECHNOLOGY

DEPARTMENT OF MECHANICAL ENGINEERING

Evaluation Form

50 ME E14 – Product Design for Manufacturing

Roll No	Register No	Student Name	Marks (10)
1.	73772011117	MEIYAPPA S	8
2.	73772011401	ABITHAS R	9
3.	73772011402	ABISHEK G	8
4.	73772011403	ABISHEK R	7
5.	73772011409	CHOKKALINGAM C	10
6.	73772011419	HARIHARAN E	7
7.	73772011422	JAI SURYA S	8
8.	73772011423	JEEVANANDAM P	9
9.	73772011424	KRISHNAMOORTHY K	9
10.	73772011426	KARTHIK M	10
11.	73772011433	KRISHNA KUMAR M	8
12.	73772011445	MOULIKANTH M	6
13.	73772011446	NAVEENKUMAR A	6
14.	73772011448	NITHISHKUMAR M	9
15.	73772011449	NITHISH M	9
16.	73772011450	PRABHAKARAN R	8
17.	73772011471	SRITHAR G	6
18.	73772011476	VEERAMANI K	8
19.	73772011480	VISHNUPRAVIN R P	9
20.	73772011481	YASHWANTH S	7
21.	73772011132	SRIDHAR S	8
22.	73772011411	DHARANISH M K	9
23.	73772011435	LOGUPATHI T	7
24.	73772011443	MOHAMED ZAID Y	7
25.	73772011452	PRASANTH M	6
26.	73772011453	PRIYAN K S	8
27.	73772011464	SARANRAJ N	9
28.	73772011466	SATHEESHWARAN P	6
29.	73772011467	SIBIRAJ R	6
30.	73772011473	SURESH G	5
31.	73772011483	VARADHARAJ S	7

Subject Handler