



**JSPMs  
BHIVARABAI SAWANT INSTITUTE OF TECHNOLOGY AND  
RESEARCH,  
WAGHOLI, PUNE**

(APPROVED BY AICTE , NEW DELHI, GOVT.OF MAHA & AFFILIATED TO PUNE UNIVERSITY)  
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**PROF. T.J.SAWANT**  
**FOUNDER SECRETARY**

**DR. T.K.Nagaraj**  
**PRINCIPAL**

**Report on  
Faculty Development Programme  
On**

**“Geometric dimensioning and Tolerances” Organized by Department  
of Mechanical Engineering”**

at

Department of Mechanical Engineering Bhivarabai Sawant Institute  
of Technology & Research Wagholi, Pune

<b>Name of The Programme</b>	<b>Faculty Development Programme “Geometric dimensioning and Tolerances”</b>
<b>Date</b>	17 <sup>th</sup> April 2023 to 22 <sup>nd</sup> April 2023
<b>Mode</b>	Online
<b>Organizer</b>	Department of Mechanical Engineering Bhivarabai Sawant Institute of Technology & Research Wagholi, Pune
<b>Programme Convenor</b>	Dr. Arun Patil, Dean Acad (BSIOTR)
<b>Programme Co-Convenor</b>	Dr.P.S.Kachare,HOD Mech(BSIOTR)
<b>Programme Co-Ordinator</b>	Asst. Prof. A.M.Salve (MECH) Asst. Prof.A.V.Talape (MECH))
<b>Participants</b>	50 Participants

The FDP aimed to enhance the professional and personal skills of faculty members to facilitate their overall personal and institutional development. The program was attended by than 50 faculty members from various institutes. The Programme also intendsto develop the knowledge of participants in the relevant field for inculcating learning values in students and guiding and monitoring their progress.

**FDP Objective:**

<b>Sr. No.</b>	<b>FDP Objective</b>
<b>1</b>	This FDP provides a platform to learn basics of Geometric dimensioning and Tolerances.
<b>2</b>	An ability to study the basics of Datum features, profile control, tolerance a analysis, runout control, composite control and inspection and measurement. Along with practice exercises.
<b>3</b>	An ability to understand techniques and tools for measuring and verifying GD&T tolerances.

## FDP Brochure:

### INSTITUTE

**VISION:** Satisfy the aspirations of youth force, who want to lead nation towards prosperity through techno-economic development

**MISSION:** To provide, nurture and maintain an environment of high academic excellence, research and entrepreneurship for all aspiring students, which will prepare them to face global challenges maintaining high ethical and moral standards.

### CHIEF PATRON

**Hon. Dr. T.J.Sawant**

Founder Secretary, JSPM & TSSM Group of Institutes, Pune  
Cabinet Minister (Health & Family Welfare)  
Govt. of Maharashtra

**Hon. Mr. Rushiraj Sawant,**

Director, JSPM and TSSM, Pune

**Hon. Mr. Giriraj Sawant,**

Director, JSPM and TSSM, Pune

### PATRONS

- Dr. S.V.Admane, Director, Wagholi Campus
- Dr. T.K.Nagaraj, Principal, BSIOTR, Pune

### Advisory Committee

- Dr. R. Rudrapati, Bule Hora University, Ethiopia
- Dr. Pramodkumar, Jiangxi University, China
- Dr. P.Vasu, Federal Institute, Ethiopia
- Dr. S. Takale, Scientist, BAARC

### Convener

- Dr. Arun Patil, Dean Acad, BSIOTR

### Co-Convener

- Dr. P.S.Kachare, HOD Mech, BSIOTR

### Coordinators

- Prof. A.M.Salve, 98817 61366
- Prof. A.V.Talape, 90288 79278

### Organizing Committee

- Prof. P.V.Jatti
- Prof. V.R.Mohite
- Prof. P.G.Patil, 98607 31617
- Prof. V.A.Patil, 82375 67041
- Prof. M.S.Devadhe, 88302 37729
- Dr. A.D.Pingale

### ABOUT US

The Institute was established in 2009 under the banner of Jayawant Shiksha Prasark Mandal. It is approved by AICTE, New Delhi, DTE, and Government of Maharashtra and is affiliated to Savitribai Phule Pune University. The Institute is one of the progressive and developing Engineering College of JSPM Group of Institutes in Pune. The Institute has modern, state-of-the-art infrastructure appropriate to conduct engineering education and runs 05 under graduate (UG) programs and 02 post-graduate (PG) programs in Engineering. It has well qualified, experienced and doctorate faculties in all disciplines, engaged in teaching and research. College laboratories have modern equipment and experimental setups. Besides conventional teaching, college puts special emphasis on e-based learning and subject-oriented advanced inputs.

### About the Department:

The Department of Mechanical Engineering was established in 2009 with an intake of 60 students. Present intake capacity of Mechanical Engineering for UG courses is 120. The goal of the Department is to train the students to face the challenges of ever changing technology and maintaining high ethical and moral standards. The Department organizes the workshops and seminars on advance technology for the students & Faculty. In addition to this the expert lectures from senior academicians and industrialists are organized for our students. The Departmental advisory committees consisting of well-known academicians and experts from industry, guides the departments in their academic activities.

### Registration Fee

For JSPM & TSSM Faculty :- Free  
Faculty & Research Scholars :- Rs. 200/  
Industry Participants :- Rs. 250/

### Payment details:

The registration fee is to be paid in the form of DD/online transfer/QR using the following details:

- Demand Draft:** In favor of "JSPM Bhivarabai Sawant Institute of Technology & Research" payable at any bank in Pune.
- Online Transfer Details:**

Account Name: JSPM Bhivarabai Sawant Institute of Technology & Research  
Account No: 36000201021063  
IFSC: UBIN0536008

- QR Code:



### Important dates:

Last date for Registration: 15th April, 2023.  
Course dates: 17-21, April 2023.

### For Online Registration:

<https://forms.gle/9NrcWYNfaueX6hAdA>

### Whatsapp group link:

<https://chat.whatsapp.com/llwjnOm6zl7CKr2cY9EADH>

### RESOURCE PERSON

**ASHFAQE ALAM SIDDIQUI**  
Technical Director  
Silhouettes

### ABOUT FDP

In this world of emerging technology, the product should be very precise and of high quality. To manufacture a quality product, engineering drawings should be accurate and communicate precisely. GD & T, is a symbolic language used in engineering drawings to define the allowable deviation of feature geometry. GD & T consists of dimensions, tolerances, symbols, rules and conventions that are used to communicate precisely the functional requirement of design model. GD & T elicits functionality, cost effectiveness, producibility, ease of inspection and many other factors of manufacturing and inspection. GD & T standards are ASME Y14.5-2009 and ISO 1101:2012. GD & T is inbuilt in present Computer Aided Drafting software that requires the subject matter expert to design the drawings. It is to be noted that, GD & T is helpful to excel in an industry. The inclusion of this topic in the curriculum would benefit the students a lot. In this context, a faculty development program on "GD & T" is designed to fill the gaps and strengthen the participants with required skills. The participants/learners will be provided with exercises and case studies to improve their understanding. It allows the learners to develop accurate drawings that would result in better product design and manufacturing.

### Contents of the course:

1. Introduction to GD&T, Terminology, drafting Symbols, Dimensioning Styles, Rules and Concepts of GD&T
2. MMC, LMC, RFS and FCF
3. Datums (Planar, Axis and Centre Plane)
4. Bonus Tolerance
5. Virtual Condition
6. Resultant Condition Boundaries
7. Form Control, Orientation Control & Location control
8. Tolerance of Position
9. Runout and Profile Controls
10. Fixed and Floating Fastener
11. Projected Tolerance Zones & Part Tolerancing
12. Tolerance Analysis and Stack-up analysis
13. FAI, Paper Gauging and Functional Gauging

**JSPM's**  
**Bhivarabai Sawant Institute of**  
**Technology & Research**  
NAAC Accredited & NBA Accredited - IT, E&TC & Electrical Departments  
Gat No: 720/2, Nagar Road, Wagholi, Pune,  
Maharashtra 412207  
020 - 67335100, Fax: 020 - 67335108  
Portal: <https://jspmbiotr.edu.in>



**NATIONAL LEVEL**  
**6 DAYS FDP ON**  
**GD & T**  
(GEOMETRIC DIMENSIONING & TOLERANCES)  
**SLOF: SIZE, LOCATION,**  
**ORIENTATION, AND FORM.**



**DURATION 17-22 APRIL 2023**  
IN ASSOCIATION WITH



**ORGANIZED BY**  
**DEPARTMENT OF MECHANICAL**  
**ENGINEERING**

### Registration Form

1. Name :
2. Designation :
3. Institution/Industry :
4. Email:
5. Mobile No:
6. DD/Ref No:
- Bank: Date:
- Amount:
7. Address for Correspondence:
8. Educational Qualification:
9. Experience (in years):
- Place: Date:

Signature of the Applicant

Declaration The information provided is true to the best of my knowledge. If selected, I agree to abide by the rules and regulations of the FDP and shall attend the course for the entire duration. I also undertake the responsibility to inform the Coordinator in case, I am unable to attend the course.

**JSPM's**  
**Bhivarabai Sawant Institute**  
**of Technology & Research**

## Inaugural Session:

Inaugural Session	
Date	17 <sup>th</sup> April 2023
Time	2:00 PM to 2.30 PM

The esteemed personalities present on the inauguration of the Programme:

Mr.Ashfaqe Siddique	Technical Director.Silhouettes	Resource Person
Dr. Arun Patil	Dean Acad (BSIOTR)	Host
Dr. T.K. Nagaraj	Principal, BSIOTR	Host
Dr.P.S.Kachare	HOD,Mechanical	Host

In welcome speech, The FDP started with the inauguration ceremony. The program was started by Prof.Salwe A.M. with introduction to FDP .The H.O.D. of Mechanical engineering dept.Dr.P.S.Kacahre gave the welcome address and inaugurated the program.Prof.Salwe A.M.introduced a Key note speaker Mr.Ashfaque Siddique. The keynote speaker gave an insightful talk on the importance of this faculty development and how it could benefit the participants. He has conducted session on form controls.The day was closed by Prof.Salwe A.M.

**Geometric Dimensioning and Tolerancing (GD&T)**

**Course content**

- Section 1: Introduction and Basics of Engineering drawing
- Section 2: Need for GD&T.
- Section 3: Introductory Concepts of GD&T
- Section 4: Datums
- Section 5: Bonus tolerance and Virtual condition
- Section 6: Form Control
- Section 7: Orientation control
- Section 8: Location control
- Section 9: Runout
- Section 10: Profile
- Section 11: Datum feature modifier- Datum Shift

**Participants (20)**

- Dr. Salwe A.M. (Co-host)
- Dr. P.S. Kachare (Co-host)
- Annappurna Koli
- chagam chandra sekhar reddy
- Dr. Ajay Chavan
- dranurpatil
- Mayuri Mhaske
- NAGARAJ TIMALAPUR
- Prof. Ashok Mache
- Prof. Atul Talape
- Sachin Malave
- Sheshkar Waghmode
- Sudish Ray
- Vaibhav Jape
- Varsha Patil C201
- Shashikant Mane
- Swapnil Gosavi

**Geometric Dimensioning and Tolerancing (GD&T)**

**What should a design engineer know ?**

- How to read a drawing with GD&T and make sense of the annotations ?
- How to visualize tolerance zones for each geometrical control?
- How to calculate tolerances for each geometrical control as opposed to actual parts ? Verify as per drawing?
- How to convert a co ordinate tolerance drawing to GD&T drawing?
- How to setup GD&T scheme for a part or assembly from CAD based on its functional requirements ?

We will learn these concepts and more with examples

<b>Date</b>	<b>17th April 2023</b>
<b>Session</b>	<b>One</b>
<b>Topic</b>	<b>Introduction to GD&amp;T, Terminology, Dimensioning styles ,Drafting symbols</b>
<b>Resource Person</b>	<b>Mr.Ashfaque Siddique, Technical Director.Silhouettez</b>
<b>Time</b>	<b>2:00 PM To 3:15 PM</b>

**Geometric Dimensioning and Tolerancing (GD&T)**

**Course content**

- Section 1: Introduction and Basics of Engineering drawing
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- Section 8: Location control
- Section 9: Runout
- Section 10: Profile
- Section 11: Datum feature modifier- Datum Shift

**Participants (20)**

- Dr ... (Co-host) Ask to Unmute
- Kachare Pravin (Co-host)
- Annapurna Koli
- chagam chandra sekhar reddy
- Dr Ajay Chavan
- drarunpatil
- Mayuri Mhaske
- NAGARAJ TIMALAPUR
- Prof Ashok Mache
- Prof.Atul Talape
- Sachin Malave
- Shekhar Waghmode
- Sudish Ray
- Vaibhav Jape
- Varsha Patil C201
- Shashikant Mane
- Swapnil Gosavi

**Geometric Dimensioning and Tolerancing (GD&T)**

**Toleranced engineering drawing**

**Material :**  
Aluminium 6061

**Note on general tolerances**

The manufacturer can then decide how this part is to be made  
Sets up the machine tool to make the part.

The traditional way of giving specifications and tolerances to parts

**Co-ordinate tolerancing**

**Participants (29)**

- JSPM (Host, me)
- Ashfaq ... (Co-host, guest)
- Dr Ajay Pingale (Co-host, guest)
- Kachare Pravin (Co-host, guest)
- Prof. Atul Tala... (Co-host, guest)
- Amol Patil (Guest)
- ANINDITHA BISWAS (Guest)
- Arun (Guest)
- chagam chandra sekhar... (Guest)
- DR P S KACHARE (Guest)
- Dr Ranjitsinh Deshmukh (Guest)
- Jatti P (Guest)

Mr.Ashfaque Siddique has delivered an interactive lecture on “Introduction to GD&T, Terminology”. In this session participants were learned the basics of GD&T, importance and need of GD&T,



Date	17th April 2023
Session	Two
Topic	Form controls, Rules and concepts of GD&T,
Resource Person	Mr.Ashfaque Siddique, Technical Director.Silhouettez
Time	3:00 PM To 4:15 PM

**Geometric Dimensioning and Tolerancing (GD&T)**

**Process of applying GD&T on engineering drawing for a Design engineer**

Detailed 3D CAD model (after Detail design phase in product development)

↓

**Making Basic Engineering Drawing**  
How to make an engineering drawing?  
How to Convert 3D CAD model into a 2D drawing with views (1<sup>st</sup> or 3<sup>rd</sup> angle projection)  
Along with specifications and notes as per drawing standard . Using co ordinate tolerancing

↓

**Apply GD&T scheme on the 2D drawing**

1. Datum scheme
2. Tolerance values
3. Types of geometric controls
4. Feature control frames
5. Modifiers?

→ Final drawing

**Geometric Dimensioning and Tolerancing (GD&T)**

**Deciding tolerance for an application / for a dimension ?**

Deciding the tolerance for a dimension is not a one off activity

It has to be revisited during the design process especially for critical applications

1. First arrive at a tolerance range depending on the manufacturing process and known generic precision of the process.  
Machining , forging, casting or sheet metal forming
2. Apply a generic tolerance from International tolerance grade table ISO 286
3. If it's a dimension related to a mating part then deciding the fit is an important step . Tolerances would be defined based on that fit
4. If there are multiple parts in assembly . Tolerance stackup analysis would be necessary to ascertain if tolerances considered are Ok .
5. Verify decided tolerance with process capability studies during actual production.

Mr.Ashfaque Siddique has delivered an interactive lecture on “Form controls Rules and concepts of GD&T,” along with practice exercise for participants. In this session participants were learned the different Form controls like straightness, flatness, roundness, circularity, cylindricity along with practice exercise.

Date	18th April 2023
Session	One
Topic	Orientation controls
Resource Person	Mr.Ashfaque Siddique, Technical Director.Silhouettez
Time	2:00 PM To 3:10 PM

Zoom Meeting

Recording

Geometric Dimensioning and Tolerancing (GD&T)

Considering the positional deviation tolerances

12-9=3

1.5

1.5

1.5

1.5

8±1

20±x

25±y

±1.5mm is the diametrical gap between pin and Hole in x and y directions

Considering x and y as 1.5. For any condition the pin will assemble

Your network bandwidth is low

Participants (19)

Find a participant

JSPM (Host, me)

Ashfaque ... (Co-host, guest)

Dr Ajay Pingale (Co-host, guest)

Prof. Atul Talape BSIOTR (Co-host, guest)

chagam chandrasekhar ... (Guest)

D.P.Yesane, MMIT (Guest)

Dipak Patil (Guest)

Dr. Ajay Chavan (Guest)

Jatti P (Guest)

Nagargoje U S (Guest)

Prof. Pankaj Patil (Guest)

SHRIK... (Guest)

Ask to Unmute

Invite

Mute All

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ENG

14:12

18-04-2023

Zoom Meeting

Recording

Geometric Dimensioning and Tolerancing (GD&T)

Origins of GD&T

- The first realization that the traditional method of tolerancing was inefficient came during the time of World War 2
- An engineer found that parts which were actually functional were being rejected.
- He came up with the idea of True position which is the most important geometric tolerance today for mating parts

Concepts developed gradually and then they were all accumulated and made into a standard ASME Y14.5M Dimensioning and Tolerancing

The Y14.5 standard is considered the authoritative guideline for the design language of geometric dimensioning and tolerancing

Latest – 2009 revision

Participants (24)

Find a participant

Prof. Atul Talape BSIOTR (Me)

JSPM (Host)

Ashfaque Alam Siddiqui (Co-host)

Dr Ajay Pingale (Co-host)

Arun

Ashok Mach

chagam chandrasekhar reddy

D.P.Yesane, MMIT

Dattatraya Inamdar

Dipak Patil

Dr. Ajay Chavan

Jatti P

Mayur Devdhe

Nagargoje U S

sachin malave

SHRIKANT

Sudish Ray

Unmute Me

Invite

Type here to search

36°C Sunny

2:42 PM

4/18/2023

Mr.Ashfaque Siddique has delivered an interactive lecture on “Orientation controls” along with practice exercise for participants. In this session participants were learned the different Orientation controls like perpendicularity,parallelism,angularity with practice exercise.

<b>Date</b>	<b>18th April 2023</b>
<b>Session</b>	<b>Two</b>
<b>Topic</b>	<b>Datum features and Datum reference frames</b>
<b>Resource Person</b>	<b>Mr.Ashfaque Siddique, Technical Director.Silhouettez</b>
<b>Time</b>	<b>3:15 PM To 4:15 PM</b>

**Geometric Dimensioning and Tolerancing (GD&T)**

**Selection of datums**

Selection of datum should be done based on

- Functional surfaces
- Mating surfaces
- Readily accessible surfaces
- Surfaces of sufficient size for stability

Applied to:

- Features not subject to size variations – Planar surfaces
- Feature of sizes – Holes, Tabs, Pins, Shafts

**Participants (25)**

- Arun (Guest)
- Ashok Mache (Guest)
- chagam chandrasekhar ... (Guest)
- D.P.Yesane, MMIT (Guest)
- Dr. Ajay Chavan (Guest)
- Jatti P (Guest)
- Mayur Devdhe (Guest)
- Nagargoje U S (Guest)
- Nivru... (Guest)
- Prof. Pankaj Patil (Guest)
- Prof. Atul Talape BSIOTR (Guest)
- Prof. Atul Talape (Guest)

**Geometric Dimensioning and Tolerancing (GD&T)**

**Feature location control**

**Drawing of Stepped shaft**

59 129 65

1 2

**Drawing does not mention any relation between segment 1 and 2**

**Participants (22)**

- JSPM (Host, me)
- Ashfaque ... (Co-host, guest)
- Dr. Ajay Pingale (Co-host, guest)
- Arun (Guest)
- Ashok Mache (Guest)
- chagam chandrasekhar ... (Guest)
- D.P.Yesane, MMIT (Guest)
- Dattatraya Inamdar (Guest)
- Dipak... (Guest)
- Dr. Ajay Chavan (Guest)
- Jatti P (Guest)
- Nagargoje U S (Guest)

Mr.Ashfaque Siddique has delivered an interactive lecture on “Datum features and Datum reference frames” along with practice exercise for participants. In this session participants were learned how to use Datum features and Datum reference frames with practice exercise.

Date	19th April 2023
Session	One
Topic	Profile controls
Resource Person	Mr.Ashfaque Siddique, Technical Director.Silhouettez
Time	2:00 PM To 3:10 PM

Geometric Dimensioning and Tolerancing (GD&T)

**What is a feature?**

**Feature:** feature is a physical portion of a part, such as a flat surface, pin, hole, tab, or slot.

Anything which is not physical is not a feature Centre line, centre plane

Geometric Dimensioning and Tolerancing (GD&T)

**Dimensions – which locate features, which define size**

- which locate features,
- which define orientation
- which define size

**Example 1**

Mr.Ashfaque Siddique has delivered an interactive lecture on “Profile controls” along with practice exercise for participants. In this session participants were learned different Profile controls,profile of a line and profile of a surface with practice exercise.



<b>Date</b>	<b>19th April 2023</b>
<b>Session</b>	<b>Two</b>
<b>Topic</b>	<b>Tolerance Analysis</b>
<b>Resource Person</b>	<b>Mr.Ashfaque Siddique, Technical Director.Silhouettez</b>
<b>Time</b>	<b>3:10 PM To 4:10 PM</b>

Geometric Dimensioning and Tolerancing (GD&T)

**Concept of tolerance**

- The manufacturer cannot make the part with perfect dimensions mentioned in drawing,
- There have to be limits within which the specification varies .
- Those degrees of variations from the design value is called tolerance .
- The variation will be for all characteristics related to the design – size ,shape, orientation, location
- Variations in manufacturing process with respect to Machine, Method ,Material and Operators can cause variations in the output of the part during manufacturing

**The Tolerance is generally decided by keeping in mind**

- Functional requirements
- Manufacturing constraints

Tolerance

20±1

Geometric Dimensioning and Tolerancing (GD&T)

**Example of Fit Transition fit**

Assembly

60 ± 0.5

60 ± 0.5

Two cases :

Max size of shaft	60.5	1) Largest shaft with smallest hole will cause interference
Min size of shaft	59.5	60.5                      59.5
Max size of hole	60.5	2) Smallest shaft with Largest hole will cause Clearance gap
Min size of hole	59.5	59.5                      60.5

Can be a clearance or an interference hence its transition fit

Mr.Ashfaque Siddique has delivered an interactive lecture on “Tolerance Analysis” along with practice exercise for participants. In this session participants were learned how and why tolerance analysis is done with practice exercise.

<b>Date</b>	<b>20th April 2023</b>
<b>Session</b>	<b>One</b>
<b>Topic</b>	<b>Runout controls</b>
<b>Resource Person</b>	<b>Mr.Ashfaque Siddique, Technical Director.Silhouettez</b>
<b>Time</b>	<b>2:00 PM To 3:10 PM</b>

**Zoom Meeting** You are viewing Ashfaque Alam Siddiqui (SILHO...)'s screen View Options

**Participants (14)**

Find a participant

**Waiting Room (1)** Message

RD Ranjitsinh Deshmukh (Guest) Joining...

**Joined (14)**

J JSPM (Host, me) Unmute

AA Ashfaque ... (Co-host, guest)

MD Mayur Devdhe (Co-host, guest)

AK Annapurna Koli (Guest)

A Anushri (Guest)

AM Ashok Mache (Guest)

CC chagam chandrasekhar ... (Guest)

DI Dattatraya Inamdar (Guest)

M Mayur (Guest)

Invite Mute All

**Geometric Dimensioning and Tolerancing (GD&T)**

**Inspecting straightness**

0.02

Dial indicator

- Part is oriented parallel to the running axis of the Dial indicator.
- Dial indicator is run along the line element in the direction required for straightness control
- If the Full Dial indicator moment – The maximum movement of the dial exceeds the straightness control tolerance
- The surface does not meet specifications

Unmute Start Video Security Participants 15 Share Screen Apps Whiteboards More End

Type here to search 36°C 14:07 20-04-2023

**Zoom Meeting** You are viewing Ashfaque Alam Siddiqui (SILHO...)'s screen View Options

**Participants (27)**

Find a participant

**Deciding tolerance for an application / for a dimension ?**

Deciding the tolerance for a dimension is not a one off activity

It has to be revisited during the design process especially for critical applications

1. First arrive at a tolerance range depending on the manufacturing process and known generic precision of the process.
  - Machining , forging, casting or sheet metal forming
2. Apply a generic tolerance from International tolerance grade table ISO 286
3. If it's a dimension related to a mating part then deciding the fit is an important step . Tolerances would be defined based on that fit
4. If there are multiple parts in assembly . Tolerance stackup analysis would be necessary to ascertain if tolerances considered are Ok .
5. Verify decided tolerance with process capability studies during actual production.

Audio Start Video Security Participants 27 Chat Share Screen Pause/Stop Recording Breakout Rooms Raise Hand Apps More Leave

DP DR P S KACHARE

DR Dr Ranjitsinh Deshmukh

JP Jatti P

MD Mayur Devdhe

MM Mayuri Mhaske

P Prof . Pankaj Patil

PA Prof. Ashok Mache

PS Prof. Satish Gadhave

PT Prof.Atul Talape

SM sachin malave

SW Shekhar Waghmode

SR Sudish Ray

VJ Vaibhav Jape

VP Varsha Patil C201

AP Ajay Pingale

AB ANINDITHA BISWAS

AK Annapurna Koli

SG Swapnil Gosavi

Invite Mute All

Mr.Ashfaque Siddique has delivered an interactive lecture on “runout controls” along with practice exercise for participants. In this session participants were learned about different runout controls like Total runout and circular runout, concentricity and symmetry with practice exercise.

Date	20th April 2023
Session	Two
Topic	Composite controls
Resource Person	Mr.Ashfaq Siddique, Technical Director.Silhouettez
Time	3:10 PM To 4:10 PM

The screenshot shows a Zoom meeting interface. The main window displays a presentation slide titled "Geometric Dimensioning and Tolerancing (GD&T)" with the sub-heading "Cylindrical Surface straightness Inspection". The slide contains two bullet points: "The part is constrained and a gauge is moved along a straight line on the surface" and "When the plunger moves up and down the pointer moves and the full movement of pointer gives the deviation of the surface". A diagram shows a green cylindrical part with a red gauge and a pointer. A tolerance of 0.5 is indicated. A small video window shows the presenter, Ashfaq Siddique. The right sidebar lists 14 participants, including JSPM (Host), Ashfaq Siddique (Co-host), and several guests. The bottom status bar shows the temperature as 36°C and the date as 20-04-2023.

The slide is titled "Geometric Dimensioning and Tolerancing (GD&T)" and "Rectangular Tolerance zone". It shows a diagram of a rectangular tolerance zone in a 2D coordinate system (X and Y axes). The zone is defined by a red square. The vertices of the square are labeled with coordinates: (23.5, 21.5), (25, 21.5), (26.5, 21.5), (26.5, 20), (26.5, 18.5), (25, 18.5), (23.5, 18.5), and (23.5, 20). A diagonal line is drawn from the bottom-left vertex (23.5, 18.5) to the top-right vertex (26.5, 21.5). A vertical line is drawn from the top-left vertex (23.5, 21.5) to the bottom-left vertex (23.5, 18.5). The diagonal line is longer than the vertical line. The text below the diagram states: "The diagonal line is longer than the vertical line. Hence the max variation from nominal varies – causing the issue observed. Tolerance is Not uniform throughout".

Mr.Ashfaq Siddique has delivered an interactive lecture on “composite controls” along with practice exercise for participants. In this session participants were learned about composite controls with practice exercise.

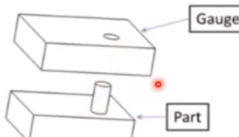
<b>Date</b>	<b>21th April 2023</b>
<b>Session</b>	<b>One</b>
<b>Topic</b>	<b>Inspection and Measuremnets</b>
<b>Resource Person</b>	<b>Mr.Ashfaque Siddique, Technical Director.Silhouettez</b>
<b>Time</b>	<b>2:00 PM To 3:10 PM</b>

Geometric Dimensioning and Tolerancing (GD&T)

**Inspection** Major activity in product quality verification

**Attribute gauges (Functional gauging)**

A gauge which is assembled with part  
Verifies the Dimension of a part is within limits.  
No-assembly state means part is not within specifications

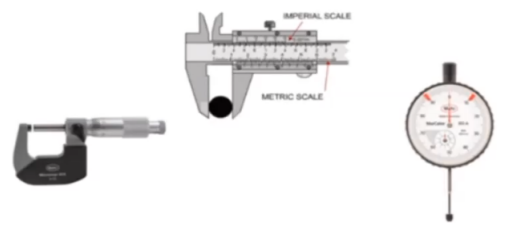


- Within a specific tolerance range
- Fast and simple
- No moving parts
- Low error

Generally used for position , orientation

**Variable gauges**


A gauge which gives the output as a measured value  
That measured value is checked whether it lies within specifications or not




- Large range of measurement
- Precise measurements
- Flexible
- Prone to error

Generally used for size and form.

Zoom Meeting You are viewing Mayur Devdhe's screen View Options





**Participants (10)**

Q Find a participant

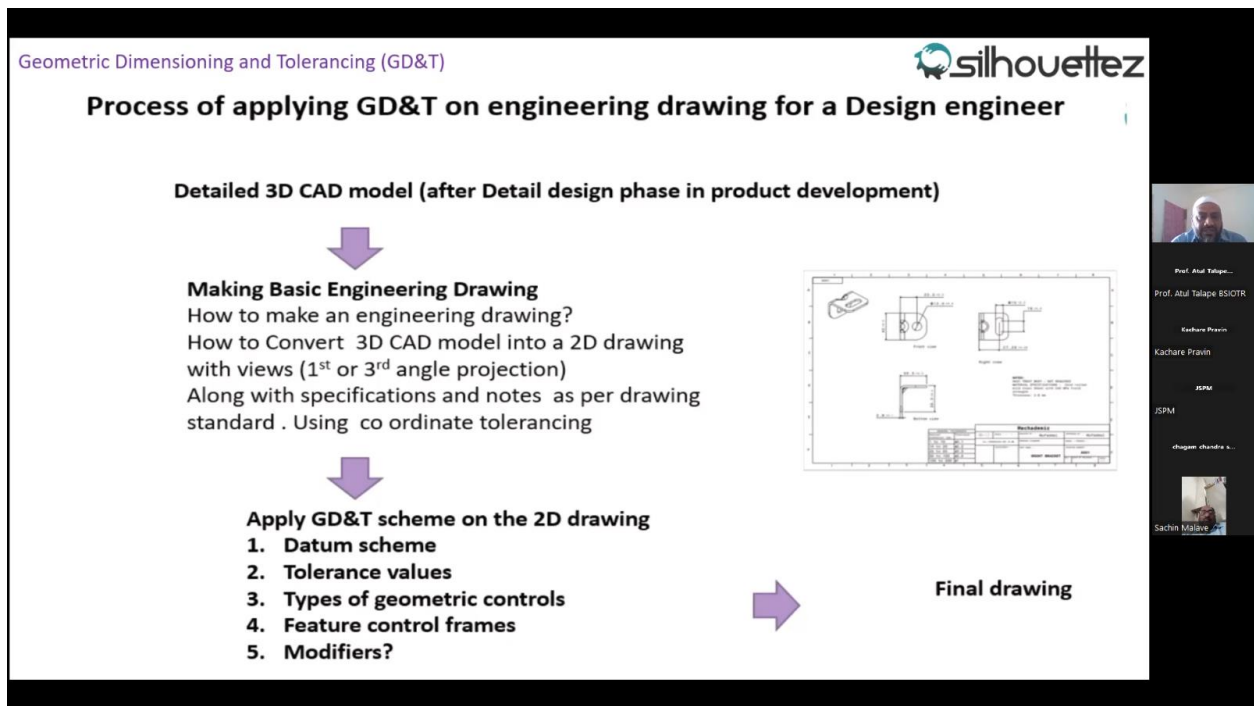
- J JSPM (Host, me)
- MD Mayur Devdhe (Co-host, guest)
- AA Ashfaque Alam Siddiqui ... (Guest)
- P Prof. Pankaj Patil (Guest)
- A Anushri (Guest)
- CC CHAGAM CHANDRASEK... (Guest)
- GS Gururaja Sharma (Guest)
- SR Sudish Ray (Guest)
- SG Swapnil Gosavi (Guest)
- JP Jatti P (Guest)

Unmute Start Video Security Participants 10 Share Screen Apps Whiteboards More End Invite Mute All

Windows taskbar: Type here to search, 39°C, 14:03 21-04-2023

Mr.Ashfaque Siddique has delivered an interactive lecture on “Inspection and measurements and its techniques and tools for measuring and verifying GD&T tools” along with practice exercise for participants. In this session participants were learned about different inspection and measurement techniques and tools used for inspection and measuring and how to verify with practice exercise

<b>Date</b>	<b>21th April 2023</b>
<b>Session</b>	<b>Two</b>
<b>Topic</b>	<b>Review of all GD&amp;T concepts and principles</b>
<b>Resource Person</b>	<b>Mr.Ashfaque Siddique, Technical Director.Silhouettez</b>
<b>Time</b>	<b>3:15 PM To 4:30 PM</b>



Zoom Meeting

You are viewing Ashfaque Alam Siddiqui (SILHO...) screen

View Options

Geometric Dimensioning and Tolerancing (GD&T)

**Runout**

Runout is applied on surfaces of rotating parts generally controlling them with respect to a rotational datum axis. Surface can be around the axis or perpendicular to axis.

**Circular Runout**

Runout controls circular elements on the surface with respect to the datum axis.

Participants (9)

Find a participant

- J JSPM (Host, me)
- AA Ashfaque Al... (Co-host, guest)
- MD Mayur Devdhe (Co-host, guest)
- A Anushri (Guest)
- CC CHAGAM CHANDRASEK... (Guest)
- P Prof. Pankaj Patil (Guest)
- SR Sudish Ray (Guest)
- SG Swapnil Gosavi (Guest)
- JP Jatti P (Guest)

Unmute Start Video Security Participants Share Screen Apps Whiteboards More

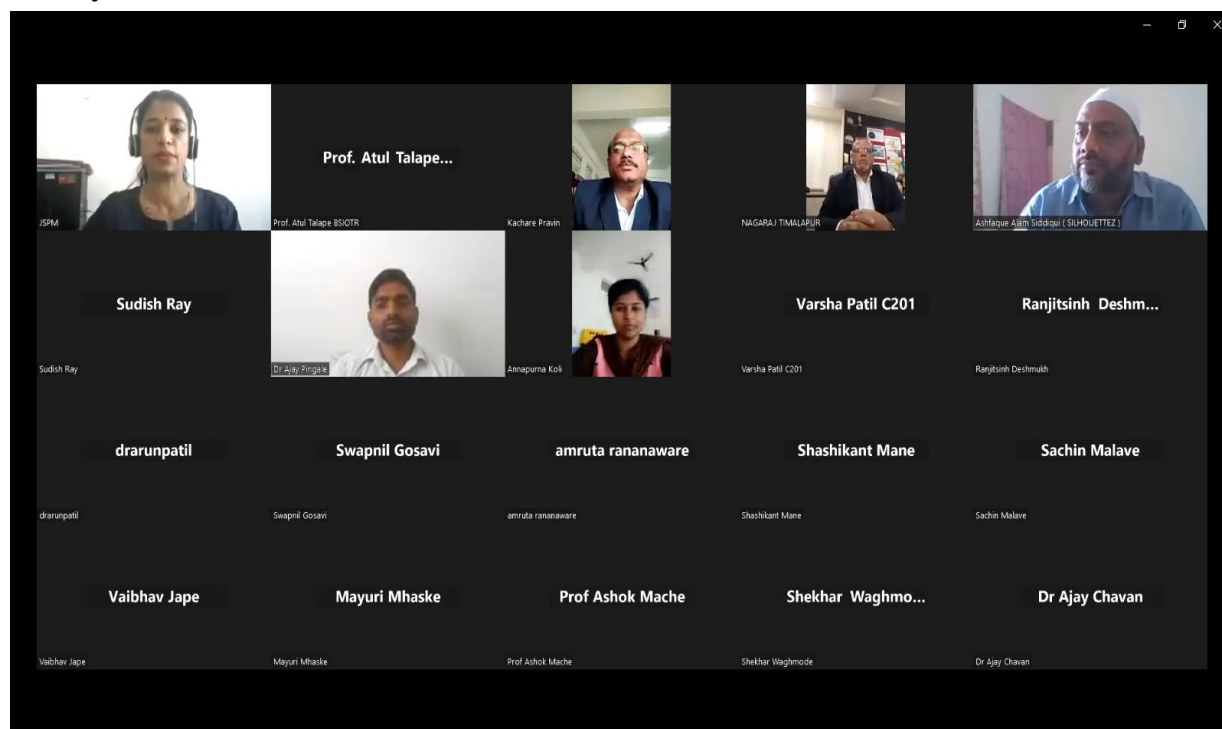
End Invite Mute All

39°C 14:05 21-04-2023

Mr.Ashfaque Siddique has reviewed all GD&T concepts and principles and discuss with participants regarding questions, doubts and clarify concepts in GD&T.



## Valedictory Session:



Valedictory Session	
<b>Date</b>	<b>22 April 2023</b>
<b>Time</b>	<b>2:00 PM</b>

The esteemed personalities present on the Valedictory of the Programme:

Dr. P.S.Kachare	HOD,Mechanical Department,BSIOTR	HOD
Dr.A.G.Patil	Dean,BSIOTR	Host
Mr.Ashfaq Siddique	Technical Director.Silhouettez	Resource Person

All the personalities appreciated the department for organizing the FDP. The program evaluation and feedback session was done by Prof.P.V.Jatti . The FDP ended with a valedictory session done by Prof.Dr.Arun Patil. The program was ended with vote of thanks by Prof.V.A.Patil., Asst. Prof., Mechanical Dept., JSPM'SBSIOTR & Coordinator of the FDP. The FDP received a lot of positive feedback from faculty members, from many universities of India. There were 50 enthusiastic participants in total, who took part in the 6-day online FDP. Each session was of Minimum 60 minutes & Maximum 90 minutes and included open questions, answer session. Join Zoom Meeting <https://us02web.zoom.us/j/88513120108?pwd=aXNleHR1RFBLeM1SME9JVDN2RFIsZz09>; feedback links were shared, MCQ Test was conducted at the end of FDP. The registered participants were engaged in a special WhatsApp group. The recordings are being uploaded on the Google Drive. 50 E-certificates were awarded to all registered participants.

### Sample FDP Certificate:



### FDP Outcome:

All the sessions were very much informative. The discussed areas are of great benefit for the participants as the topics match with the current working domain. Participants were enlightened with the most widely used advance technologies in this domain. This in turn will help in industrial activity.

Sr. No.	FDP Outcome
1	Understand basic concepts of GD&T and principles.
3	Understand Orientation controls and Datum Feature and Datum reference frame.
2	Analyze tolerance and different profile controls.
4	Understand runout controls and composite controls.
5	Study of different techniques and tools for measuring and verifying GD&T tools

<b>Sr. No.</b>	<b>FDP Outcome</b>	<b>PO</b>	<b>PSO</b>
<b>1</b>	Understand basic concepts of GD&T and principles.	PO1	PSO1
<b>2</b>	Understand Orientation controls and Datum Feature and Datum reference frame.	PO1	PSO1
<b>3</b>	Analyze tolerance and different profile controls.	PO2	PSO2
<b>4</b>	Understand runout controls and composite controls.	PO1	PSO1
<b>5</b>	Study of different techniques and tools for measuring and verifying GD&T tools	PO2, PO3, PO4, PO5	POS3

Programme Co-Ordinator	Asst. Prof. A.M.Salve (MECH)	
	Asst. Prof.A.V.Talape (MECH))	
Programme Convenor	Dr. Arun Patil, Dean Acad (BSIOTR)	
Programme Co-Convenor	Dr.P.S.Kachare,HOD Mech(BSIOTR)	
Principal	Dr. T. K. Nagaraj, Principal, (BSIOTR)	