A Six-Day *Intensive* Faculty Development Program (FDP) on

Geometric Dimensioning and Tolerancing (GDT-2019)

20-25, May 2019

Open to all Mechanical Engineering Faculty/Industry persons

Organized by

E & ICT Academy, NIT Warangal

(Sponsored by Ministry of Electronics and Information Technology (MeitY), GOI)

Coordinators: **Dr. P. Vamsi Krishna and Prof. A. Venu Gopal**
Mechanical Engineering Department, NIT Warangal.

Highlights: Comprehensive coverage, Exercises and case studies

Preamble on E&ICT Academy:

"Electronics & ICT Academy" was set up at NIT Warangal with financial assistance from MeitY, GoI. The jurisdiction of this academy is Telangana, Andhra Pradesh, Karnataka, Goa, Puducherry and Andaman & Nicobar Islands. This academy role is to offer faculty development programs in standardized courses and emerging areas of Electronics, Information, Communication Technologies, training & consultancy services for Industry, Curriculum development for Industry, CEP for working professionals, Advice and support for technical incubation and entrepreneurial activities.

About the Course:

In this world of emerging technology, the product should be very precise and high quality. To manufacture a quality product, engineering drawings should be accurate and communicate precisely. Geometric dimensioning and tolerancing, often referred to as 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. Due to this GD & T is the heart and core of Production Drawing. For any language to be effective, it should have some standards. The present supported 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 for students 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 "Geometric Dimensioning and Tolerancing" is designed to fill the gaps and strengthen the participants with required skills. The participants/learners will be provided with exercises and case studies in the program that 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

Resource Persons

The program will be delivered by the faculty members from NIT Warangal and Experts from Industry.

Registration Fee

Faculty and Research Scholars	**Rs. 2500**
Faculty of SC/ST Category*	**Rs. 1875** (A copy of caste certificate is to be submitted along with application form)
Industry Participants	**Rs. 7500**

*Research Scholars are not eligible for SC/ST concession.

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

Demand Draft: In favor of ***"Electronics & ICT Academy* NIT W"** payable at any bank in Warangal.

Online Transfer Details: Account Name: ***Electronics & ICT Academy* NITW.**

Account No: **62423775910** IFSC: **SBIN0020149**

Eligibility:
The program is open to the teachers of all Engineering Colleges and Industry persons working in the concerned /allied discipline.

Accommodation:
All the selected participants will be provided FREE boarding & lodging in the visitor's hostel of the institute. ***No TA will be paid for the participants.***

How to apply:
A filled in form of application in the prescribed format duly signed and sponsored by appropriate authorities (along with demand draft or Proof of online payment) should reach the coordinator by Regd/speed-post. It is also mandatory to send scanned application form and Proof of payment through e-mail to vamsikrishna@nitw.ac.in as selection will be intimated only through email.

Selection Criteria:
Selection will be done based on first-come-first-serve basis to a maximum number of 50 (fifty). Additionally 10 participants from industry are allowed to participate. The list of selected participants will be intimated through e-mail. In case a candidate is not selected, the DD will be sent back. Candidates will be issued certificates on successful completion of the course. Reservations are followed for selecting candidates as per GOI norms.

Important dates:
Last date for application: **15th May, 2019.** Intimation of selection: **16th May, 2019.** Course dates: **20-25, May 2019.**

About Mechanical Engineering Department & NIT Warangal:

The department of Mechanical Engineering offers a UG program, seven PG programs and a Ph. D program. There are 40 qualified and experienced faculty in the department. The department has liaison with reputed industries and R&D organizations. Presently the department is handling several R & D projects and consultancy works. The department has also been recognized as QIP centre for M. Tech and Ph. D.

NIT Warangal, was established in1959. Over the years it has developed into a premier institute of higher learning and is ranked among the top technical education institutions in India. There are 14 Departments offering eight undergraduate and 32 post-graduate programs besides doctoral programs. About 5000 students across the country and about 500 international students study in the campus.

Coordinators:

Dr. P. Vamsi Krishna and Prof. A. Venu Gopal
Mechanical Engineering Department,
N.I.T. Warangal-506 004.Telananga. India.
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FACULTY DEVELOPMENT PROGRAMME (FDP)

on

Geometric Dimensioning and Tolerancing (GDT – 2019)

(20th May – 25th May, 2019)

Organized by

E & ICT Academy, NIT Warangal

(Sponsored by Ministry of Electronics and Information Technology (MeitY), GOI)

1. Name :
2. Designation :
3. Institution :
4. Email:
5. Mobile No:
6. DD/Ref No:

   Bank:

   Date:
   Amount:
7. Address for Correspondence:

8. Educational Qualification:
9. Subjects taught so far:

10. No. of refresher courses/workshops attended:
11. Experience (in years):

    Teaching: Research: Industry:

12. Accommodation required: YES /NO
13. Do you belong to SC/ST : YES /NO

(If yes, please specify and attach a copy of caste certificate to claim the concession)

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.

Place:
Date: Signature of the Applicant

SPONSORSHIP CERTIFICATE

Dr. /Mr. /Ms. …….. is an employee of our Institute/Organization and is hereby sponsored to participate in the FDP on **"Geometric Dimensioning and Tolerancing (GDT–2019)"**, sponsored by Electronics & ICT Academy during 20th– 25th May, 2019 at **NIT Warangal**.

Signature of Head of Institution
(with seal)

Address for correspondence

Post your application form with DD/Payment receipt to

Dr. P. Vamsi Krishna,
Associate Professor,
Dept. of Mechanical Engineering,
National Institute of Technology Warangal,
Telangana, India - 506004

E-mail the scanned copies of filled-in and duly signed application form along with DD/payment receipt to vamsikrishna@nitw.ac.in

For more details about Electronics & ICT Academy, NIT Warangal please visit: https://nitw.ac.in/eict

For more enquiries please contact:
Mobile: 8332969371

Coordinators

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