

National Institute of Technical Teachers' Training and Research, Bhopal

PROGRAMME BRIEF

- **Title of the Programme:** Non-Destructive Testing and its Engineering Application
- **Programme code:** CLB-3
- **Programme duration:** 26-30 Jun-23
- **Venue:** SVNIT, Surat

1. Rationale:

Non-Destructive Testing is widely used in engineering industries to detect defects and confirm the sound quality of components/product/equipment used in engineering applications. The spectrum of applications has a broad domain from the production of metals, manufacturing of different components, and equipment and in-service safe life of the pipelines, refineries, chemical process plants etc. Non-Destructive Testing comprises of various testing methods based on the stimuli that are used to detect the defect or area of concern. This five-day (40-hour) faculty development program is designed in accordance with the requirements given by industrial standards. The content of the training is in accordance with the need of industries and some additions are incorporated for providing insight into research opportunities using NDT as tools of investigation. A combination of theory, practical and case study discussions will help the participants to get a better understanding to guide the students to use NDT as an employable skill and use NDT as a tool for investigation.

2. Programme Outcomes:

The participants shall be able to

select an appropriate NDT technique as per requirement.

- Operate ultrasonic testing equipment in the field of non-destructive testing.
- Identify internal flaws in the material by NDT and take measures to eliminate them.
- Investigate and find solutions for complex engineering components and structures.
- Apply NDE standards and follow professional ethics to become responsible engineers for a quality and safe life.

3. Programme Content:

Magnetic Particle Testing and Applications, Industrial Radiography, Advanced NDT and applications, Research opportunities and projects, Applications of advanced UT in Composites, NDT in Heavy Fabrication Industry

4. Instructional Strategy: Lab, Tasks, Discussion, Roleplay, input interactive session.

5. Target Group: Faculty of all disciplines

6. Coordinator & Faculty details:

Coordinator

- **Name and Designation:** Prof. Nishith Dubey, Head DT&VE&R, NITTTR Bhopal

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Faculty

Sr. No.:	Details required	Detail of Faculty
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4	Name and Designation	Dr. Shailesh N. Pandya, Asst. Prof.
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5	Name and Designation	Mr. Amit Patel, MD UGES PowerMax Pvt. Ltd., Vadodara
	Mobile No	9619686916

7. Tentative Programme Schedule:

Day	Session 1	Session 2	Lunch	Session 3	Session 4
	10.00 AM- 11.30 AM	11.45 AM -13.15 PM	13.30 PM - 2.15 PM	2.15 PM - 3.45 PM	4.00 PM -5.30 PM
Day-1 Monday	Inauguration	Magnetic Particle Testing and Applications		Practical on Magnetic Particle Testing	Practical on Dye Penetrant Testing
	Dr. Nishith Dubey	Dr. Jyoti Meghani (SVNIT)		Dr. Chetan Somani (ASNT NDT Level-III)	Dr. Chetan Somani (ASNT NDT Level-III)
Day-2 Tuesday	Industrial Radiography			Radiography Film Interpretation	Radiography Film Interpretation
	Dr. Chetan Somani (ASNT NDT Level-III)	Dr. B. N Sahoo, (SVNIT)		Dr. Chetan Somani (ASNT NDT Level-III)	Mr. Alpesh Mali, Tech-Quest Engineers
Day-3 Wednesday	Ultrasonic Testing-I	Ultrasonic Testing-II		Practical on Ultrasonic Testing	Practical on Ultrasonic Testing
	Dr. Nishith Dubey	Dr. Chetan Somani (ASNT NDT Level-III)		Dr. Chetan Somani (ASNT NDT Level-III)	Mr. Alpesh Mali, Tech-Quest Engineers
Day-4 Thursday	Advanced NDT and applications	Advanced NDT Lab and equipment overview		Advance NDT Lab and equipment overview	Research opportunities and projects
	Dr. Chetan Somani (ASNT NDT Level-III)	Dr. B. N Sahoo, (SVNIT)		Dr. B. N Sahoo, (SVNIT)	Dr. Nishith Dubey
Day-5 Friday	Applications of advanced UT in Composites	NDT in Heavy Fabrication Industry		Visit to Sophisticated Instrument Laboratory	Valedictory
	Dr. Chetan Somani (ASNT NDT Level-III)	Industry Expert		Dr. Jyoti Meghani	Dr. Nishith Dubey