



# National Institute of Training for Standardization (NITS) Bureau of Indian Standards

## 2-DAY TRAINING ON “MEASUREMENT UNCERTAINTY” at National Institute of Training for Standardization (NITS), A-20 &21, Institutional Area, Sector-62, Noida, U.P. -201309 29-30 AUGUST 2022



### LEARNING OBJECTIVES

- Clear understanding of Basic Statistical Concepts.
- Know the factors responsible for measurement uncertainties (MU)
- Identify these factors for your testing/ calibration.
- Carry out the statistical calculations for evaluation of the MU
- Formulate effectively Quality Control Plan for the laboratory utilizing the uncertainty of measurements.
- Understanding a testing activity in terms of mathematical model, to be able to identify the significant control factors for accuracy or validity of results.

### COURSE OUTLINE



- Overview and introduction of measurement uncertainty.
- Basics of statistical calculations and components of uncertainty.
- Step by step approach to uncertainty estimation.
- Estimating different types of uncertainties.
- Measurement uncertainty in calibration
- Concepts of combined and expanded uncertainty

### PRE-REQUISITES



Availability of a Computer/laptop with a stable internet connection with speakers, camera and mike.

### TRAINING METHODOLOGY

- Interactive Online Sessions.
- Workshops, case studies, and auditing exercises.
- Soft copy of all training material.



### WHO SHOULD ATTEND

- Technical Heads of testing and calibration laboratory, including microbiological testing.
- Young engineers / scientists working in testing field and wants to enhance their career, with a formal added professional qualification and skill up-gradation.
- An individual working as consultant in ISO/IEC 17025 field.



### FEE AND DISCOUNTS



- Rs. 7000/- + 18 % GST = Rs. 8260/- per participant.
- Discount of 10% for 2-5 persons and 15 % for more than 5 persons from same organization.



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## PROCEDURE

The Application has to be made through BIS "Training Portal "as explained below

**VISIT** the **E-BIS Website:** [www.manakonline.in](http://www.manakonline.in)

**CLICK** on the "Training" Head

**LOGIN** by clicking on the blue "LOGIN" button on the top right corner

**SIGNUP** by clicking on "SIGNUP" on the Member Login Page if you are not a member otherwise "SIGN IN" using your credentials

**FILL OUT** all the fields and click on "REGISTER" and complete the registration process.

**CHOOSE** the course you want to apply for, fill in the required information and "PAY" the requisite fee.

### WHY CHOOSE NITS AS YOUR TRAINING PARTNER

- Advantage of being the National Standards Body of India.
- Rich pool of Trainers with decades of auditing experience across disciplines.
- Course contents developed by subject matter experts.
- Proven track record of delivering public, in-house, e-Learning for leading companies and recognized Government and private organizations.
- Focus on the provision of practical training using real life scenarios.
- Availability of customized training solutions.



**For any further queries, you may contact:**

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