

## **Aditi Consultancy Services**

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## **Calibration & Uncertainty of Measurements**

(2 days)

|         | Topics  |
|---------|---|
| Day - 1 | Introduction to Calibration   |
|         | Measurement Traceability to International Standards   |
|         | Environmental requirements for Dimensional Calibration  |
|         | <ul> <li>IS/ISO/IEC 17025:2005 Standard</li> <li>Quality System Requirements</li> <li>Technical Requirements</li> </ul> |
|         | Inter Laboratory Comparison and Proficiency Testing   |
|         | Case Studies of Calibration of  • Measuring Devices  • Gauges and Masters  • Measuring Machines                         |
| Day - 2 | Introduction to Uncertainty of Measurements   |
|         | Definitions, Terminology and Basic Concepts   |
|         | Probability Distribution Functions  |
|         | Statement of Uncertainty of Measurements in a calibration certificate   |
|         | Meaning of 95% confidence level and K factor  |
|         | Components of Uncertainty in measurements   |
|         | <ul> <li>Random and Systematic</li> </ul>   |
|         | Step by step Procedure for Evaluation of Uncertainty of Measurements  |
|         | Evaluation of UOM – Case studies  |
|         | Evaluation and meanings of Z and En factors.  |
|         | Questions & Answers   |