

This two day course provides an understanding of calibration standards, principles along with an overview of the essential elements and operation of a modern Gage Calibration System.

Day 1

- Calibration theory and techniques, Traceability is explained via presentations, videos, practical demonstrations and interactive discussions with the faculty.

Day 2

- Review; Gauge blocks, Calibration procedures for various handheld tools explained via presentations, videos, practical demonstrations and interactive discussions.

Contents

Day 1	<ol style="list-style-type: none"> 1. Introduction to calibration <ol style="list-style-type: none"> a. What is calibration? b. Levels in calibration hierarchy c. NABL/NPL role d. Basis of calibration – basic concepts, 4:1 Rule e. Calibration reference standards 2. Traceability <ol style="list-style-type: none"> a. Essential elements of traceability b. Relevant SI units c. Pyramid of accuracy 3. Laboratory condition for calibration <ol style="list-style-type: none"> a. Temperature issues and control for calibration b. Standard temperature c. Temperature error sources 4. Calibration procedures & techniques <ol style="list-style-type: none"> a. Micrometers b. Calipers c. Dial Indicators d. Dial Test Indicators 5. Q & A Session
Day 2	<ol style="list-style-type: none"> 1. Gauge Blocks <ol style="list-style-type: none"> a. History of Gauge Blocks b. What Are Gauge Blocks c. Types of Gauge Blocks d. Properties of Gauge Blocks e. Technical information: <ol style="list-style-type: none"> i. Grades and applications ii. Selection of Gauge Blocks iii. Construction of Gauge Blocks iv. Wringing techniques v. What is “Coefficient of thermal expansion?” 2. Calibration procedures & techniques <ol style="list-style-type: none"> a. Bore Gages b. Height Gages c. Gauge Blocks 3. Q & A Session