



Course Catalog Number: Tdm-2  
Course Track: Dimensional Measurements  
Course Topic: Calibration  
Course Career Level: Beginner

**Monday, August 26 | 8:00 AM - 5:00 PM | 1-Day (8 Hours)**

**Course Title: Introduction to Dimensional Calibration**

**Instructors:** Jim Salisbury PhD and Amosh Kumar, Mitutoyo America Corporation

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**Abstract:** This tutorial introduces common dimensional calibrations and will include a variety of hands-on exercises. Towards the end of the tutorial, attendees will have an opportunity to participate in proficiency testing to demonstrate their skills and to potentially earn certified credentials in calibration. The focus of the tutorial will be on the calibration of small dimensional measuring instruments, such as micrometers, calipers, and indicators, and will include procedures, worksheets, and example certificates. The hands-on use of important measurement standards, such as gage blocks, ring gages, and optical flats will also be covered, as well as what to look for in the calibration of reference standards. This tutorial will also briefly discuss the field calibration of major instruments such as optical comparators and coordinate measuring machines.

**Learning Objectives:**

1. Develop practical skills in the calibration of common dimensional measuring instruments.
2. Understanding of best calibration practices, application of American metrology standards, and the extension of the basic principles to the calibration of other items.
3. Selection of the proper measurement standards and calibration providers based on an understanding of accuracy and uncertainty.

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**Instructors Curriculum Vitae (CV):**

Dr. Jim Salisbury is the General Manager of Corporate Metrology at Mitutoyo America Corporation. He is involved with new technology, advanced applications, calibration, quality, and education. Dr. Salisbury is an active participant in national and international standards efforts in dimensional metrology and tolerancing, including being a member of the ASME B89 Main Committee and a U.S. appointed subject matter expert to ISO/TC 213. Dr. Salisbury also serves NCSL International as the chair of the Dimensional Metrology Committee, a past board member, and past coordinator of the Chicago section. Dr. Salisbury has been working in the measurement field for over 25 years and has been with Mitutoyo since 2000. He received his doctoral degree from the Center for Precision Metrology at the University of North Carolina at Charlotte.

For the past 22 years, Amosh Kumar has worked for Mitutoyo America Corporation as Quality and Laboratory Manager and currently as the Corporate Quality Manager responsible for maintaining ISO/IEC 17025 accreditation for the primary standards laboratory, which includes field service calibration departments with 85+ employees under the quality management system umbrella. Amosh Kumar is well versed in the development and implementation of calibration methods, quality and technical procedures, quality system documents, uncertainty analysis and staff training for the calibration operations. Amosh Kumar is an instructor for Mitutoyo Institute of Metrology teaching Hands-On Calibration Classes in the area of dimensional metrology. Amosh Kumar is also active in NCSLI and a committee member of ASME B89 Division 1 – Length and has served on the Project team for B89.1.13-2013 (Micrometers) and B89.1.14 (Calipers) standards. Amosh Kumar also the current chair for B89.1.9 (Gage Blocks) standard.