

## MITUTOYO ASIA PACIFIC **TRAINING INSTITUTE**

To Train and Educate Today for the Needs of Tomorrow



# Metrology Training Course

Course Type	Duration
<b>Calibration of Small Tools</b> <ul style="list-style-type: none"> <li>Teaches the correct method to calibrate caliper, micrometer, dial test indicators, dial gauge and height gauge</li> </ul>	2 Days
<b>Fundamentals of Precision Measurement</b> <ul style="list-style-type: none"> <li>Introduction, SI system, measurement errors, the importance of calibration</li> </ul>	1 Day
<b>Dimensional Measurement Metrology</b> <ul style="list-style-type: none"> <li>The underlying working principles of basic hand tools</li> <li>Proper usage and handling of basic hand tools</li> </ul>	2 Days
<b>Basic Geometric Dimensioning &amp; Tolerancing</b> <ul style="list-style-type: none"> <li>Introduction</li> <li>What are datum, features, tolerance, and modifiers</li> </ul>	1 Day

# Vision Product Software Training Course

Course Type	Duration
QSPAK	2 Days
QVPAK	3 Days

## QSPAK Course Content

### Day 1

- Machine Control, light and stage motion
- Focusing
- Co-ordinate system alignment
- Edge detection tools
- Feature measurement I

### Day 2

- Measurement with co-ordinate input
- Create tolerance
- Creating and executing a part program
- Feature measurement II

## QVPAK Course Content

### Day 1

- Setting up for measurement
- Moving control system
- Setting stage option
- Focusing, edge detection, drawing tools
- Type of co-ordinate system, alignment and measurement

### Day 2

- Part program editor and file management
- Measurements between features
- Compute of distance and angle
- Using nominal, tolerance and datum fit

### Day 3

- Align a PCS with rotation values, point offset
- QVNavigator window construction and operation page
- QVGraphics window configuration and view window
- Working with point buffers
- Step and repeat loop in part program



# CMM Product Software Training Course

Course Type	Duration
MCOSMOS GEOPAK-WIN Manual	3 Days
MCOSMOS GEOPAK-WIN CNC	4 Days



## MCOSMOS GEOPAK-WIN Course Content

### Day 1

- Basic Maintenance of CMM
- Introduction to GEOPAK-WIN
- Layout of Main Windows
- Program directory

### Day 2

- Introduction to Learn Mode
- Probe Data Management
- Pattern for Alignment
- Element Commands
- Types of Calculation

### Day 3

- Define Coordinate System by steps
- Types of Construction
- Compute of Distance and Angle
- Types of Coordinate System
- Element Commands and Tolerance
- Output of Data

### Day 4 (Only applicable to MCOSMOS GEOPAK-WIN CNC)

- CNC Parameter
- Automatic Element Commands
- Manual/ CNC Part Program

# Form Product Software Training Course

Course Type	Duration
ROUNDPAK	2 Days
FORMTRACEPAK	
• SURFTEST	1 Day
• CONTRACER	2 Days
• CONTRACER CNC	3 Days

## FORMTRACEPAK Course Content

### Day 1 & 2

- Introduction to machine
- Operating the measuring instrument
- Calibration of styli
- Customizing the FORMTRACEPAK operating conditions
- Establishing the co-ordinate system  
(Only applicable to CONTRACER)
- Executing calculation
- Part program creation
- Creating and saving measured data
- Printing the measurement result
- Printing and editing the page layout

### Day 3

- Performing step and repeat part program
- Performing step and repeat with Y-axis (optional)



## ROUNDPAK Course Content

### Day 1

- Introduction to machine
- Calibration of styli
- Performing centering and levelling on workpiece
- Simple measurement
- Understanding of screen and printer outputs

### Day 2

- Part programming
- Deleting data
- Partial rotations measurement
- Layout results screen



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We offer various metrology training courses, ranging from the Fundamentals of Precision Measurement to Co-ordinate Measuring Machine software. The courses are led by our industrial experienced, highly skilled trainers. Course contents are based on years of experience in offering solutions, advice and educational support to the industries in Dimensional Metrology Field.

Each training course is designed to equip trainees with theoretical knowledge, as well as extensive practical 'hands on' experience gained from our latest and comprehensive range of Mitutoyo equipment.

If you have any special requirements, just let us know, and we will customize a course to suit your needs. Special arrangements can be made for the training to be held in your own premises.

All trainees who successfully complete the course, will each receive a certificate that reflects the high standard of achievement obtained.

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