



Measurement Systems Analysis (MSA) Training

Achieve a basic knowledge of the principles of measurement systems analysis (MSA) and an understanding of the importance of MSA techniques on the Measurement Systems Analysis training course.

This 1-day practical course includes modules and interactive workshops encouraging team discussions on topics such as data location and spread, R&R range method, and GRR data Interpretation, without the need for detailed discussion of statistics.

Delegates will complete the course with a knowledge of the methodologies for performance of measurement systems studies with respect to bias, linearity and stability.

COURSE DURATION

1 day

CPD

Equivalent to 7 hours

COURSE PRICE

From £625 + VAT

DATES & VENUES

[View dates & venues](#)

CERTIFICATES

All delegates will receive a certificate on completion.

Who should attend?

MSA is a core component of the Six Sigma approach and IATF 16949, making this course valuable for a range of individuals, including:

- quality professionals, Six Sigma change agents, Lean practitioners and support staff who require a basic understanding of measurement system evaluation techniques and the potential benefits of understanding measurement system limitations
- personnel with responsibility for design/ process engineering who require MSA studies to help them specify tolerances, production processes and acceptance criteria, and need to understand the information when it is presented
- those who are required to support MSA studies, but are not directly responsible for the analysis
- in-house experts who need to plan and execute MSA studies and will become the champions for the appropriate use of MSA to drive continuous improvement and influence senior management

Additional Core Tools courses include [Introduction to APQP and PPAP](#), [Failure Mode and Effects Analysis \(FMEA\)](#), and [Statistical Process Control \(SPC\)](#).

Claim a discount of £100 if you book any 2 of our Core Tools courses together.

If you would like to receive training in all 5 Core Tools – APQP & PPAP, FMEA, SPC and MSA – take a look at our [Core Tools Package](#), offering significant savings over booking the 4 courses separately.

Key topics

Topics covered on the course include:

- concepts of MSA
- measurement system elements and their contribution to measurement variation
- terminology and concepts (bias, linearity, stability, repeatability and reproducibility)
- the existence and measurement of variation
- variation
- normal distribution
- accuracy and precision
- measures of variation (mean, standard deviation and variance)
- MSA studies
- bias (overview and methodology)
- linearity (overview and methodology)
- stability studies (overview and methodology)
- measurement uncertainty (overview)
- measurement system analysis and studies (variable and attribute)
- repeatability and reproducibility
- performance of a gauge R&R study
- interpretation and use of study data (from example data provided)
- use of data for cost saving (calibration intervals, number of measurements taken etc.)

Course agenda

Our training courses are designed to optimise the learning experience for delegates both in face-to-face settings and in our Virtual Classroom.

Under the guidance of our expert tutors, attendees will follow an agenda which is briefly outlined below:

- Welcome and introductions
- Module 1 The Need for Measurement Systems Analysis
- Module 2 Measurement Concepts
- Module 3 Variation in the Measurement Process
- Workshop 1 Variation
- Workshop 2 Data Location and Spread
- Module 4 Histograms, Run and Control Charts
- Module 5 The Phases of Measurement Systems Analysis and IATF 16949/APQP
- Module 6 MSA Studies
- Module 7 R&R Studies
- Module 8 Other Gauge Studies
- Module 9 Improving Measurement Systems
- Review & Close

In-company training

Ideal for groups, you can receive this course exclusively for your organisation at your premises or online in our user-friendly Virtual Classroom.

Enjoy cost-effective flexibility and personalised learning with tailored messaging designed to address your unique business challenges.

[Contact us for a quote.](#)

Skills gained

By the end of this Measurement Systems Analysis – MSA training course, delegates will be able to:

- use MSA to determine the suitability of measurement systems
- perform a repeatability and reproducibility (R&R) study
- interpret the results in the context of the process variation and product acceptance criteria
- use the data to improve the effectiveness of the measurement system



Delegates who attend and fully participate in the course will receive a certificate of completion, evidencing their new understanding of measurement systems analysis.

Excellent tutoring. Managed to convey all content succinctly and maintain interest.

Technipfmc Umbilicals Ltd

The course was a really good overview of the subject and its application full of good examples drawing from the obvious depth of experience of the trainer. It was clear that he has helped develop the materials and that they were the result of his experience, expertise and clear communication.

UK Battery Industrialisation Centre

Tutor explained the theory in great detail and provided exercises to practice and understand the application of the theory.

Macdermid Alpha Electronics Solutions

[Read our Core Tools course reviews](#)

Why train with Bywater?

Bywater is the leading independent provider of professional management systems training in the UK.

Our expert training offers practical understanding of how to realise the benefits and assess the success of implementing and operating successful management systems.

Bywater delegates know they can rely on proven training delivered by experts at times and locations to suit their needs.

40 years established

100+ course titles

15 UK locations

1000+ courses annually

 Global Virtual Classroom

CQI & IRCA, ISEP, RSS and IOSH approved training provider.



VIEW DATES & VENUES

Booking is easy

Simply select a course date and venue and fill in the online form. View our full range of courses at www.bywater.co.uk

If you have any questions please call us on 0333 123 9001, use our online chat or email contact@bywater.co.uk

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