



# MEASUREMENT UNCERTAINTY MADE SIMPLE



**MAS MANAGEMENT SYSTEMS PTY LTD**



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## COURSE OUTLINE

In this course, participants will use their knowledge of measurement uncertainty principles to determine the appropriate calibration requirements for equipment used in their laboratory.

We'll show you how to intelligently evaluate the effects of various sources of measurement uncertainty so that an appropriate calibration strategy can be determined.

This can be submitted as part of the NATA assessment process in order to meet NATA's requirements on Metrological Traceability and Equipment assurance, in-house calibration and equipment verification.

The principles covered in this course can be extended to cover other sources of uncertainty and different analytical techniques.

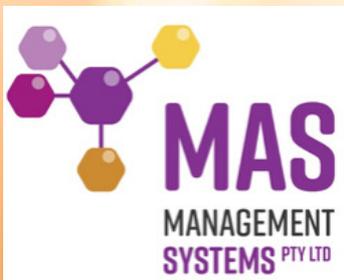
## COURSE REQUIREMENTS

Participants will need to bring:

- A laptop/ calculator
- A copy of one method used in their laboratory
- Any method validation data for that method - at least precision/ accuracy/ robustness study data (if done)
- QC data for the method, showing at least 10 data points
- Calibration results and most recent calibration certificates for any equipment used in the method
- Any manufacturer's specs for equipment that they don't have a calibration certificate for
- EQA/ PT results and full reports if available
- A open mind and readiness to learn!

Visit our website at [www.masmanagementsystems.com.au](http://www.masmanagementsystems.com.au) for more information about our company's services.

Email [info@masmanagementsystems.com.au](mailto:info@masmanagementsystems.com.au) for any enquiries.



## COURSE STRUCTURE

**9.00 - 10.00**

We'll begin with refresher training on principles in the estimation of measurement uncertainty (MU)

- definitions
- basic statistics
- the process of estimation of MU

**10.00 - 10.20**

**Morning tea and stretch**

**10.20 - 12.00**

We'll delve into the detail of an example MU estimation and what it can tell you about your testing and calibration needs.

**12.00 - 1.00**

**Lunch and stretch**

**1.00 - 3.00**

You'll work through an example from your lab in a workshop format. The presenter will assist by answering questions and facilitating the workshop.

**3.00 - 3.20**

**Afternoon tea and stretch**

**3.20 - 4.30**

The workshop will continue, concluding with attendees sharing what they have learned from the exercise.

**4.30 - 5.00**

We'll end the day by learning how to package up your work for a NATA assessment and any final questions.

Visit our website at [www.masmanagementsystems.com.au](http://www.masmanagementsystems.com.au) for more information about our company's services.

Email [info@masmanagementsystems.com.au](mailto:info@masmanagementsystems.com.au) for any enquiries.