



THE BEST QUALITY TRAINING BY THE BEST QUALITY PEOPLE

TUM. Ver 6: Oct 09

Traceability and Uncertainty in Measurement for Testing Laboratories

ISO/IEC 17025 requires that all laboratories must make a reasonable estimate of their uncertainties of measurement. Join this course to find out how to do it.

Testing laboratories are required to be in full compliance with ISO/IEC 17025. Laboratories need to have and apply procedures for making reasonable estimates of their uncertainties of measurement.

The first day of the course will cover:

- International agreements on how to approach uncertainty estimates for the various disciplines
- IANZ policy for the various disciplines on how to approach uncertainty estimates
- Meaning of uncertainty and overview of uncertainty requirements in ISO/IEC 17025
- Other key elements of the standard related to uncertainty such as method validation and traceability
- Description of various approaches such as using published data, using precision data and full ISO - GUM estimations
- A simple illustration of how to apply GUM

On the second day, the class will divide up into two discipline groups – chemical/biological and physical testing - where each will cover:

- Possible alternative approaches for your discipline
- Deciding when to use which approach
- Examples and practical exercises on estimating uncertainty using the various identified approaches.

Suitability

This course is designed for the analysts who will be required to estimate the uncertainties of their test results and for those responsible for technical management of testing laboratories.

Participants will be guided through the decisions on which approach is best for their applications.

Instructions and practical exercises will be given on how to prepare the models and do the calculations necessary to arrive at reasonable estimates of uncertainty.

Presenter

The lead presenter is Dr. Max Robertson, retired General Manager, International Accreditation New Zealand. Max was a leader in recent APLAC workshops on uncertainty in testing. Other experts may also be used to present this course.

Please Note

The number of participants for each course is restricted to ensure a trainer / student ratio that will facilitate effective training outcomes.

Participating in a course

It's very easy to take part. You can make a provisional booking by phoning 0800 9000 99 or emailing us at info@nzqc.co.nz.

To confirm your place, just send us a completed registration form either with full payment or a purchase order. As soon as we receive your registration form (preferably no later than four weeks before the course), we'll send you a confirmation letter with full details.

Course fees include

- Tuition
- Morning tea, lunch and afternoon tea (depending on course times)
- All course notes and take-home reference materials

Duration & Prices

Two day course \$1095 +gst

Book one month in advance to receive the early bird price of \$995 +gst

Dates & Locations

Auckland 27-28 July 2010

NZQC COURSE REGISTRATION FORM



Name of Course Traceability and Uncertainty in Measurement for Testing Laboratories

Date _____ Location _____

REGISTRANT INFORMATION

First Name _____ Last Name _____

Position/Title _____

Email _____

Company Name _____

Postal Address _____ Postcode _____

Telephone _____ Fax _____

APPROVING MANAGER

First Name _____ Last Name _____

Position/Title _____

Email _____

Telephone _____ Fax _____

BOOKING

Purchase Order _____

Booking Contact Name _____

Invoice Address (if different to above) _____

Please read the terms and conditions below before posting your registration for this course.

METHOD OF PAYMENT

Payment for the course must be received by NZQC prior to course commencement date unless another arrangement has been agreed with NZQC.

Pay By Cheque

Please make cheque payable to:
New Zealand Quality College
Private Bag 28908, Remuera
Auckland 1541

Pay by Credit Card

Currently we accept VISA and MASTERCARD

VISA MASTERCARD

Card Number _____

Expiry Date _____

Cardholder's Name _____

Signature _____

Payment Amount: \$ _____ (+ GST)

TERMS AND CONDITIONS

Amendment, Alteration and Cancellation

We reserve the right to amend, alter or withdraw any of the information in this brochure or on any course being offered should circumstances dictate. If we cancel, we will notify registrants as early as possible to minimise any inconvenience. Please check with us before booking any travel or accommodation connected with your course registration.

Unable to attend

We understand that priorities change and you may not be able to attend the course you have registered for. When this arises, the following terms may apply:

- If you advise us of the registrant's non-attendance 14 days or more before the course starts, you will be issued with a full refund.
- Should we receive cancellation less than 14 days before the course starts, we will refund 50% of the course fee.
- If we receive cancellation on the day of the course or the registrant does not attend, no refund will be made.

Transfers

You may transfer to another date and/or location for the course you have registered for up to 14 days prior to the course commencing at no additional cost. If we receive a transfer request within 14 days of the course, a 10% transfer fee will apply. Transfers on the day of the course will be treated as cancellation.