



TIME AND FREQUENCY MEASUREMENT

This two-day course covers the broad range of equipment and techniques used to measure time and frequency and to calibrate time and frequency instruments.

Course Objectives

The course will provide you with the knowledge and skills to:

- understand the principles of time and frequency measurement
- understand the processes involved in the use and transfer of time and frequency standards
- identify various sources of error that affect time and frequency measurements

Course Outline

The topics covered include:

- clocks, oscillators and frequency standards
- time scales and international timekeeping
- evaluating the performance of time and frequency standards
- selection of clocks and oscillators to suit applications
- primary standards and traceability
- the Global Positioning System (GPS)
- time and frequency transfer, including TV-sync, GPS and two-way satellite transfer
- computer time and Network Time Protocol
- frequency and time interval measuring instruments
- measurement and analysis techniques for time and frequency calibrations
- estimating measurement uncertainty¹



¹Participants with limited experience in estimating measurement uncertainty would benefit from first attending the one-day [Introduction to Estimating Measurement Uncertainty](#) course

Past attendees have said...

"This course has been a great benefit by providing strong foundations for further development in time & frequency measurement"

"This course reinforced that the direction our organisation is heading is correct."

Course Details

Venue

Training may be carried out online or at an NMI office.

Fee / Inclusions

Check the NMI [website](#) for the current pricing. Face-to-face courses included lunch and refreshments.

Time

Face-to-face course will start at 9 am and will finish by 5 pm.

Online course delivered over 2 days, 2 sessions / day: 9 am – 12 pm and 1 pm – 4 pm.

Related Courses

Course name	Duration	Dates
Introduction to estimating measurement uncertainty	1-day	See NMI website
Electrical measurement	2-day	See NMI website
Photometry and Radiometry	2-day	See NMI website

In-house option

Training may be carried out at your premises for groups of 6+ on a fee for service basis. Consultancies provide advice regarding specific measurement issues or training in advanced measurement techniques. More information is available on our [website](#).

Contact us

Phone (02) 8467 3796, or send an email to training@measurement.gov.au. For more information about the National Measurement Institute, visit our [website](#).

