

# Vibration Analysis: ISO Category 1

## ISO Vibration Analysis Category 1

The 'Entry', or 'Junior Level' Category 1 course is intended for personnel who are new or have 6 months vibration monitoring and analysis experience.

It is ideal for **reliability engineers, asset managers, maintenance planners, fitters plant operators, electricians, mechanics, mechanical engineers, condition monitoring and lubrication practitioners.** Anyone who is interested in the reliability of their machinery and want to know more about vibration analysis.

The course focusses on periodic, single channel data collection and analysis for condition-based maintenance programmes. A foundation is established for in-depth understanding of spectrum and waveform relationships.

### Course Materials

- Pre and post online course study
- Interactive assessments during the course
- 300-page course notes
- Short-form booklet
- Diagnostic mousepad
- VIA Certificate of Attendance
- Mobius Certificate
- Mobius membership

### Course Description

**Duration:** 3 .5 days training plus optional 2-hour exam

**Hours:** Training Days 1-3: 8.00am to 5.00pm  
Training Day 4: 8.00am to 11.00am  
Exam Day 4: 11.00am to 1.00pm

**Format:** Classroom learning

**Optional:** Certification examination, 2 hours, 70% passing grade

**Compliance:** ISO 18436 Category I – Vibration Analyst

**Pre-Study:** Registered students are given access to the online version of the course via the Mobius Institute Learning Zone™ before the class and for six months after course completion to assist them with converting the course information into practice.

**Certification Prerequisite:** Prior experience is not required for attending the training course, but 6 months of experience is required for certification.

**Outcome:** You will come away from this course with a very good understanding of vibration analysis fundamentals, you will understand how to take good measurements, and you will be ready to begin analyzing vibration spectra.



### Vibration Analysis Category 1 – Certification

All VIA trained, Mobius certified analysts receive personalized logos with their certification number and name for their own professional use. Mobius Institute also maintains a listing of all certified analysts on our website and provides each analyst with a certification confirmation webpage.

For more information about Mobius Institute's accreditation, and the recognition of your certification by the ISO 18436 standard, please visit [www.mobiusinstitute.com/certification](http://www.mobiusinstitute.com/certification).



**Vibration Institute of Australia**

<https://viaustralia.com.au>

Phone: (61) 03 9587 1177

[jennie@viaustralia.com.au](mailto:jennie@viaustralia.com.au)

[clyde@viaustralia.com.au](mailto:clyde@viaustralia.com.au)

# Vibration Analysis: ISO Category 1

## Course Summary

### Maintenance practices

- Breakdown, preventive, predictive and RCM

### Condition monitoring

- Review of condition monitoring technologies: Vibration, oil, wear debris analysis, infrared thermography, ultrasonic acoustic emission, electric motor testing

### Principles of vibration

- Motion, r.m.s./peak/peak-peak, frequency/period
- Displacement, velocity and acceleration
- Units and unit conversion
- Waveform and spectrum (FFT)
- Natural frequencies
- Basic forcing frequency calculations

### Data acquisition

- Instrumentation
- Transducers and transducer mounting
- Measurement point naming conventions
- Routes/surveys: Loading and unloading the route
- Data collection
- Following a route
- Repeatable data collection
- Test procedures
- Observations: utilising your time effectively in the field
- Recognizing bad data

### Equipment knowledge

- Rotating equipment types and applications
- Rolling element bearings and journal bearings
- Review of failure modes and appropriate use of condition monitoring technologies

### Basic vibration analysis

- Overall level measurements
- Spectrum analysis:
- Harmonics, sidebands and the analysis process
- Alarm limits, trending and exception reports
- Fault diagnosis:
  - Imbalance, misalignment, looseness, eccentricity, resonance
  - Defects associated with bearings, gears, belts, electric motors

## Course Dates

25 - 28 May 2021

12 - 15 April 2021

18 - 21 May 2021

15 - 18 June 2021

5 - 8 October 2021

30 Nov - 3 December 2021

**SYDNEY**

**AUCKLAND**

**MELBOURNE**

**PERTH**

**DARWIN**

**PERTH**

## Course Includes

### Course (& Materials)

3.5 day training

AUD\$2970 (\$3267 inc GST)

Pre and post course online study resources

Diagnostic Reference Guide

Course Notes

Lunches and refreshments

**Optional Exam** - 2 hours exam AUD\$510 (\$ 561 inc GST)

**TOTAL (Course & Exam)** AUD\$3480 (\$3828 inc GST)

Parking and transport at own cost

## Registration

Visit <https://viaustralia.com.au/registration> to download a form to complete and return or register online.

For further information, including quotes and registration forms, contact Jennie at [jennie@viaustralia.com.au](mailto:jennie@viaustralia.com.au)

## About VIA

Clyde Volpe is the founder of VIA - the Vibration Institute of Australia, and is a Mobius Training Partner for Category 1, 2, and 3 Vibration Analysis.

Mobius Institute awarded Clyde 'Instructor of the Century'. Clyde has trained in over 30 countries, spanning 30 years to over 10,000 students. Clyde has a reputation for his energy, and his motivating and entertaining courses. With his hands-on experience, with the Mobius simulators, he has the ability of making the very complex easy to understand. His courses are designed to use vibration analysis to drive capability.



**Vibration Institute of Australia**

<https://viaustralia.com.au>

Phone: (61) 03 9587 1177

[jennie@viaustralia.com.au](mailto:jennie@viaustralia.com.au)