ISO 18436 Category III

Advanced Vibration Analyst Training & Certification

Public Courses and Online Training

Learn vibration analysis from the world's leading provider of training & certification. At Mobius Institute, we offer the most understandable and interesting training available. Our Crystal Clear™ training methodology is unique, using hundreds of 3D animations and software simulations that make complex concepts easier to understand. We offer ISO 18436 Category I to IV training via public venue courses as well as online through the Mobius Institute website.

Mobius Institute is ISO/IEC 17024 and ISO 18436-1 accredited, meaning that you are assured that your certification meets the highest global standards, and our training teaches you everything you need to know according to the ISO 18436 standard for vibration analyst training. There is no more highly regarded training & certification available.

MOBIUS INSTITUTE

CAT-III Course **Overview**

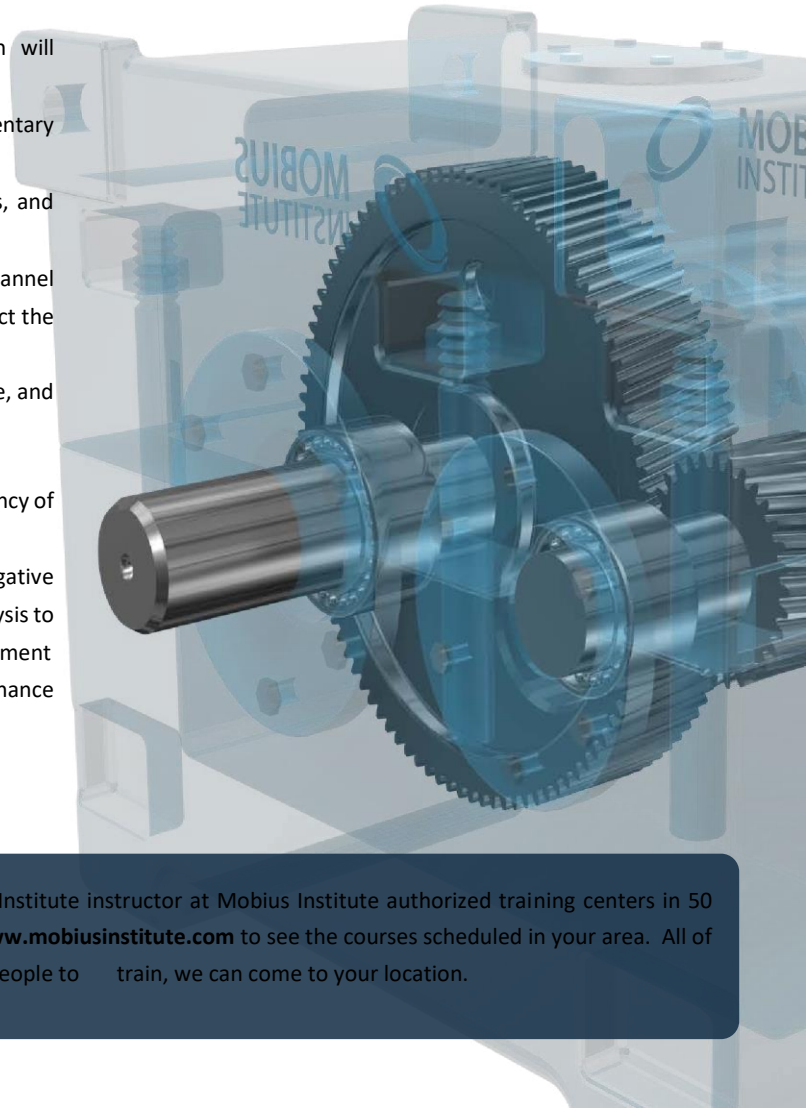
The Category-III course covers four days, with an additional day for review and the exam, is intended for people who are confident with spectrum analysis but who wish to push on and learn more about signal processing, time waveform and phase analysis, cross-channel testing, machine dynamics, and fault correction. If you wish to truly advance in vibration analysis and be able to run a successful condition monitoring team, then you are ready for this course. The course exceeds the ISO 18436-2 Category III standard and meets the ASNT Level III Recommended Practice.

You will learn to diagnose all of the common faults conditions with rolling element and sleeve bearing machines, by utilizing time waveforms, phase readings and other techniques to diagnose faults. You will also learn machine dynamics (natural frequencies, resonance, etc.) and how to perform resonance testing and correct resonance problems. The course also covers single and cross-channel measurement capabilities of your analyzer. And after completing the CAT-III course, you will be able to set and run a successful vibration program, and mentor the junior analysts.

Mobius vibration analysis training is unique. We use 3D animations, Flash simulations, and numerous software simulators that completely demystify vibration analysis. While vibration training courses have traditionally been very theoretical, difficult to understand, (and boring), you will be captivated by the Mobius training methods, and you will enjoy our practical approach. You will take away skills that you can immediately apply to your job, and you will truly understand what you are doing.

You will leave the course with a solid understanding of:

- How a well-designed program and the RCM approach will improve the OEE and the bottom line
- The condition monitoring technologies – via supplementary training
- How to select the correct measurement location and axis, and collect good, repeatable measurements
- What the Fmax, resolution, averaging and other single- channel and cross-channel analyzer settings mean, and how to select the optimum settings
- How to analyze vibration spectra, time waveform, envelope, and phase measurements
- How to diagnose a wide range of fault conditions
- How mass, stiffness and damping affects the natural frequency of a structure
- How to use phase readings, bump tests, impact tests, negative averaging, peak-hold averaging, transient, ODS, modal analysis to determine natural frequencies and visualize machine movement
- How to balance and align a machine, correct a resonance conditions, and employ isolation.



Our public courses are conducted by an experienced, certified Mobius Institute instructor at Mobius Institute authorized training centers in 50 countries throughout the world. See the Mobius institute website at **www.mobiusinstitute.com** to see the courses scheduled in your area. All of our training courses are also offered at your site, so if you have several people to train, we can come to your location.

CAT-III Course **Description**

Duration: 4 days Cat III / Level III

Format: Live public course or online learning via the web

Category III - Candidate Profile:

Optional: 1 day review & 4-hour certification examination, 70% • You have at least two years of vibration passing grade analysis experience. You want to be a leader of the vibration team, or take a leading role in diagnosing faults and making repair recommendations

Public Course Pre-Study: Registered students are given access to:

• You want to understand all data collector the online version of the course via the Mobius Institute Learning options, special test capabilities, all analysis tools and understand the widest range of Zone before the class and for six months after course completion fault conditions to assist them with converting the course information into practice

• You are seeking to become certified to Online Learning: Registered students are given access to the international standards (ISO-18436) by Mobius Institute Learning Management System for a period of 6 months to provide ample time to learn the material and prepare for monitoring technologies, how and when to the optional certification examination apply them.

Certification Prerequisite:

Prior experience is not required to • You want to understand machine dynamics attend training, but certification requires 36 months experience (natural frequencies, resonance, ODS), howand ISO Category II certification, or a minimum of 60 months to perform resonance testing and how to experience in lieu of Category II certification correct resonance problems

Topics covered:

- Review of condition monitoring technologies and the ISO standards
- Signal processing and data acquisition
- Time waveform analysis
- Phase analysis
- Dynamics (natural frequencies and resonance)
- Testing for natural frequencies
- Operating Deflection Shape (ODS) analysis
- Modal analysis and intro to FEA
- Correcting resonances
- Rolling element bearing fault detection
- Journal bearing fault detection
- Electric motor testing
- Pumps, fans and compressors
- Gearbox fault detection
- Corrective action
- Running a successful condition monitoring program
- Acceptance testing
- Review of ISO standards

Outcome: **You will leave this course with a complete understanding of vibration and phase analysis, dynamic balancing and shaft alignment, and a developing knowledge of machine dynamics and all condition monitoring technologies**

The BEST Analysts are MOBIUS Trained™

The purchase of the public course includes six months of access to the Mobius Learning Zone (an excellent web resource) to prepare for the course, and to follow up after the course), a course manual, quick-reference guide, Mobius mouse pad with fault diagnostic reminders and pen. Examinations for certification are offered as an option at the end of the course.

The purchase of the online learning course includes six months access to the Mobius Learning Management System (LMS) where you are provided the complete course content, carefully explained and demonstrated on-screen. Optionally, you can order a hard copy training manual, and become certified by taking the optional certification examination through invigilation.

CAT-III Certification

All 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.

Get started today

Go to our website to learn more about our public and online learning courses, view the public course schedule for your area. Don't hesitate to mail your questions to reliability@assetmatrixenergy.com or contact an authorized training center in your region.

MOBIUS INSTITUTE
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