

# UCAT-I ISO Category I

ULTRASOUND ANALYSIS TRAINING  
& CERTIFICATION



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# LEARN THE MOBIUS WAY

## WHY LEARN WITH MOBIUS INSTITUTE™?

There are three major reasons why over 5,000 students choose Mobius Institute every year, and why you should, therefore, choose Mobius Institute for your ultrasound training and certification.

- We make complex topics simple with amazing 3D animations and simulations that make you say, *"Ah, now I get it!"*
- We give you access to the entire course before the class begins so you are better prepared, and for six months after the course, just in case you still have questions.
- We use anonymous, stress-free polling throughout the course, so you know if you truly understand each topic, and the instructor knows not to move on to the next topic - *no student is left behind.*



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## WITH MOBIUS INSTITUTE™, YOU CAN *LEARN YOUR WAY.*

We offer the ultimate flexibility. See the course details for more information.



### PUBLIC INSTRUCTOR-LED COURSES

We have training partners in 60 countries, offering 23 languages.



### VIRTUAL INSTRUCTOR-LED COURSES

Attend a virtual course - just like a live course, but you learn via GoToMeeting.



### PRIVATE ON-SITE INSTRUCTOR-LED COURSES

Have the instructor come to your site to save your precious time and money (and health).



### ONLINE VIDEO COURSES

Traditional eLearning courses and iLearnReliability Learning Management System (LMS) courses

## WHY BECOME CERTIFIED BY THE MOBIUS INSTITUTE BOARD OF CERTIFICATION™?

### There are so many benefits to becoming certified:

- You should be recognized for your achievements; not everyone is up to the challenge of understanding ultrasound analysis, let alone successfully collecting data and utilizing it
- Being certified by an accredited certification organization is a major step up from simply passing a test. Yes, the process is a little more complicated and stricter, but that is for very good reasons
- The educational process is extremely valuable, but being certified tells an employer (or a consulting client) that you are capable of doing an important job

Almost 40,000 students around the world, just like you, chose Mobius Institute for a good reason.

You will receive a digitally encrypted certificate, an ID card, and a personalized logo that you should use in email signatures and elsewhere that you want people to know about your achievements.



# UCAT-I Ultrasound Analysis

## ISO 18436-8 Category I

Learn to be a confident and effective ultrasound technician - capable of diagnosing faults, detecting costly steam and air leaks, and precision lubricating bearings - with advanced 3D animations and interactive simulations that make everything easy to understand.

Congratulations on the decision to become an ultrasound specialist. Ultrasound is incredibly powerful and versatile, so there is a lot to learn. The good news is you are in the right place. Our UCAT-I ISO Category I course will set you up for success.

We will help you understand why ultrasound analysis is important. You will gain a solid understanding of the fundamentals of ultrasound, lubrication, and leak detection. You will learn how to take quality, dependable measurements, and you will begin the process of understanding how to diagnose common faults.

Once you complete the training, you can take the exam with confidence, and become certified to ISO 18436-8 Category I via the internationally respected Mobius Institute Board of Certification [MIBoC]. The MIBoC certification is accredited to ISO/IEC 17024.

### UCAT-I CANDIDATE PROFILE

**This course is intended for the ultrasound analyst and technician analyst who will:**

- Collect ultrasound data to detect fault conditions in rotating machinery, electrical equipment, and a host of other equipment including valves, hydraulics, steam traps, and more
- Detect leaks in compressed air and steam systems
- Grease lubricate bearings with precision
- Use the training and certification as the start of a new and rewarding career as an ultrasound technician



## WHAT WILL YOU GAIN FROM TAKING THIS COURSE?

There are so many benefits to taking this course. You will learn...

- About condition monitoring, including a summary of the most common technologies
- About reliability improvement
- How ultrasound testing and ultrasound-assisted lubrication plays a key role in reliability improvement
- About the fundamentals of sound: frequency, amplitude, wavelength, pitch, and period
- How it is measured and quantified: dB, RMS, peak, kurtosis, and crest factor
- How sound behaves: speed of sound, reflection, refraction, and transmission
- How ultrasound is detected in industrial settings
- How to take dependable, repeatable, high-quality readings
- About listening to ultrasound, and capturing and interpreting waveforms and spectra
- About how to set up software systems, including the naming of assets
- About impacts, friction, turbulence, cavitation, arcing, tracking, corona, and partial discharge
- How it can be used to detect faults in bearings, electrical systems, steam traps, valves, hydraulic equipment, pumps, compressors, and other equipment
- About how hydraulics, electrical systems, steam systems, compressors, bearings, pumps, valves, steam traps, and other components work – all with vivid, realistic 3D animations
- How to correctly lubricate bearings: not too much, not too little
- How to collect data and perform tests safely
- How to generate reports that will provide people with the information they really need

## UCAT I FAST FACTS

### Duration:

32 hours, typically over four days

### Format:

- Live public course
- On-site course
- Virtual online course
- Video distance learning online course

### Compliance:

- Training and certification: ISO 18436-8
- Certification: ISO 18436-1, ISO/IEC 17024
- Training: ISO 18436-3

### Exam:

- Two hours
- 60 multiple-choice questions
- 70% passing grade
- Can be taken online or in-person at the course

### Certification requirements:

- Training course completed
- 6-months of work experience, verified by an independent person
- Pass a hearing test
- Valid for 5 years

### Pre-study:

- Access to the “Learning Zone” upon registration and payment
- Complete set of videos covering every topic
- An excellent way to be prepared and get the most from the course

### Post-study:

- Continue to access the Learning Zone for 6-months after the course
- Continue learning, without charge, on MOBIUS CONNECT™ via [mobiussconnect.com](http://mobiussconnect.com)





Mobius Institute Board of Certification is an accredited certification body per ISO/IEC 17024 and ISO 18436-1 authorized to provide certification in accordance with ISO 18436-1 and 18436-2.

Mobius Institute Board of Certification (MIBoC) is an impartial and independent entity that is directed by scheme and technical committees to ensure that its certification meets or exceeds the requirements defined by the applicable International Organization for Standardization, ISO 18436 standards.



MOBIUS INSTITUTE is a worldwide provider of Reliability Improvement, Condition Monitoring and Precision Maintenance education to industrial plant managers, reliability engineers, and condition monitoring technicians, allowing plants to be successful in implementing Reliability Improvement programs through delivery of more easily understandable and comprehensive training of Reliability and Vibration Analysis via public, in-plant and online education programs.

For more information about additional training courses, software tools, industry terminology and definitions, accredited certification, and specific course details, visit the Mobius Institute website.

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