

MONDAY 09.00 – 16.00

Vibration principles

- Amplitude, frequency
- Vibration devices

Understanding signals

- Modulation
- Noise

Understanding spectrum

- Harmonics, sidebands
- Spectrum regions

Signal processing

- Filter
- Window

TUESDAY 09.00 – 16.00

Analysis of the time signal

- Pattern
- Analysis of gearboxes

Data collection

- Accelerometers
- Identify bad data

Trending

Basic frequencies and resonances

- Natural resonances
- Critical speed

WEDNESDAY 09.00 – 16.00

Evaluate unbalance

- Static and dynamic unbalance

Balancing of rotating equipment

- Single plane balancing
- Two plane balancing

Evaluate misalignment

- Misalignment or imbalance

Shaft alignment

- Evaluate the misalignment
- Parallel and angular misalignment

Evaluate looseness

- Mechanically and structurally looseness
- Flexibel foundation

Analysis of rolling bearings

- Bearing and lubrication
- Demodulation/enveloping

Analysis of electric motors

- Induction motors
- Errors related to stator and rotor

Gearbox analysis

- Waveforms
- Gear analysis

THURSDAY 09.00 – 16.00

Pumps, fans and compressors

- Cavitation

Vibration analysis process

- Data presentation

Alarm levels

- ISO 10816
- Calculated alarm limits

Acceptance test

- Standard for new machines

ISO standards

- ISO standards and condition monitoring

Maintenance practices

- Why we perform maintenance

Technologies for condition monitoring

- Vibration analysis
- Acoustic emission
- Oil analysis

FRIDAY 09.00 – 13.00

- Repetition

- Work book

- Exam [3 hours]

The course and study material are in English.

Course code: CATII413

Location: SPM Academy, Finningevägen 71, Strängnäs

Course fee: 14.000 SEK per participant.

Includes literature, coffee, five lunches and one dinner.

Optional: 2.500 SEK per participant.

Exam for certification [optional].

Course leaders:

Anders Sundberg [anders.sundberg@spminstrument.se]

Jan Hoflin [jan.hoflin@spminstrument.se]

Course registration: Please contact us by phone

0152-22500 or by email info@spminstrument.se

Registration deadline is two weeks before course start.

Reservation: If the number of registered participants is less than six, the course may be moved or canceled.