

MONDAY 09.00 – 16.00

**Maintenance practices**

- Breakdown maintenance
- Preventive maintenance
- Predictive maintenance
- Proactive maintenance

**Condition monitoring**

- Determine machine condition
- Convey the conditions to the organization for actions
- Vibration analysis
- Acoustic emission
- Infrared Thermography
- Electric motor testing
- Oil analysis
- Wear particle analysis

**Vibration fundamentals**

- Introduction
- Harmonic motion
- Amplitude
- Period and frequency

TUESDAY 09.00 – 16.00

**Vibration fundamentals [cont.]**

- Acc, Vel. and Disp.
- Crest factor
- Orders

**Data acquisition**

- Transducers
- Measurement points
- Routes
- Recognize bad data

**Signal processing**

- Filters
- Averaging
- Settings

WEDNESDAY 09.00 – 16.00

**Vibration analysis**

- Sine wave
- Harmonics
- Floor
- Sidebands
- Plots

**Fault diagnosis and correction**

- Unbalance
- Misalignment
- Looseness
- Bearings
- Induction motors

**Setting alarms**

- ISO 10816
- Calculated alarms
- Band alarms
- Envelope alarm

THURSDAY 09.00 – 13.00

- Self studies
- Exam [2 hours]

The course and study material are in English.

**Course code:** CATI4140

**Location:** SPM Academy, Finningevägen 71, Strängnäs

**Course fee:** 12.000 SEK,- per participant.  
Includes literature, coffee, five lunches and one dinner.

**Optional:** 1.700 SEK per participant.  
Exam for certification [optional].

**Course leader:**  
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.