



CH2012 Evaluation and Measures of the Acoustic Work Environment and Vibrations 7.5 credits

Bedömningar och åtgärder av vibrationer och den akustiska arbetsmiljön

This is a translation of the Swedish, legally binding, course syllabus.

If the course is discontinued, students may request to be examined during the following two academic years

Establishment

Course syllabus for CH2012 valid from Autumn 2024

Grading scale

A, B, C, D, E, FX, F

Education cycle

Second cycle

Main field of study

Technology and Health

Specific prerequisites

180 ECTS credits in technical, natural or medical sciences or in human resource studies.
English B/English 6.

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

The overall aim is to provide knowledge about the impact on health and performance from the acoustic work environment and from vibrations, and how to improve these factors. By the end of the course, the students should be able to:

1. Describe, exemplify and explain how work related factors within the field of noise and vibrations affect safety, health, wellbeing, and performance.
2. Describe and reflect on theories about mechanisms linked to noise and vibrations in causing work-related symptoms, disorders and performance effects.
3. Plan and perform exposure measurements and risk assessments of noise and vibration exposures, then communicate results
4. Propose work environment improvements concerning noise and vibrations, based on sociotechnical (human, technology and organisation) perspectives.

Interpret measurements and critically evaluate risk relative to relevant work environment regulations.

Course contents

1. Theories on acute and long term health effects for noise and vibration
2. Work environment regulations for noise and vibrations
3. Methods for exposure measurement and risk assessment for noise and vibration, including sampling strategies
4. Interpreting risk assessments for noise and vibration, and identifying priority areas
5. Proposing and evaluating intervention strategies for noise and vibration

Examination

- LAB1 - Laboratory work, 1.5 credits, grading scale: P, F
- PRO1 - Project work, 1.5 credits, grading scale: A, B, C, D, E, FX, F
- TEN1 - Written exam, 3.0 credits, grading scale: A, B, C, D, E, FX, F
- ÖVN1 - Exercises, 1.5 credits, grading scale: P, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

- Learning goal 1 is examined in TEN1 and ÖVN1.
- Learning goal 2 is examined in TEN1 and ÖVN1.
- Learning goal 3 is examined in LAB1, ÖVN1 and PRJ1.
- Learning goal 4 is examined in TEN1 and PRJ1.
- Learning goal 5 is examined in ÖVN1 and PRJ1.

Other requirements for final grade

Requirements for final grade: Passed written and oral presentation of project and assignments, and active participation in exercises and laboratory work. The final grade (A-F) is decided from the results of the final examination.

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.