CH105V Ergonomics - risk assessment and development 3.0 credits

Belastningsergonomi - riskbedömning och utveckling

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

Establishment

Course syllabus for CH105V valid from Autumn 2024

Grading scale

P, F

Education cycle

First cycle

Main field of study

Technology and Health

Specific prerequisites

120 credits in technical science, natural science or medical science. Alternatively, at least 2 years of professional experience in work environment development. English B/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 of the course is to provide the student with a general knowledge about biomechanical load and which physical factors increase the risk of problems in the locomotor organs. The student will also learn to use ergonomic risk assessment methods and to assess possibilities to reduce risks.

After completing the course, the student must be able to:

1. Explain different risk factors for work-related problems in the musculoskeletal system and identify stress-related risk factors in different occupational groups.
2. Use observational methods for risk assessment for the occurrence of problems in the musculoskeletal system in hand-intensive work and in work with heavy manual handling, and give examples of how risks can be reduced and workplaces can be developed.
3. Reflect on the principles on which risk assessment methods are based.
4. Discuss the strengths and weaknesses of risk assessment methods for the occurrence of problems in the locomotor organs and how the methods could be developed further.

Course contents

- Why do work-related problems occur in the musculoskeletal system?
- What is usually included in observation methods for risk assessment?
- How do you practically use different observation methods when assessing the risk of problems in the locomotor organs? Especially in repetitive hand-intensive work and in work with heavy manual handling.
- How do you apply a holistic perspective to risk reduction, including the concept of people-technology-organization?

Examination

- SEM1 - Seminars, 1.0 credits, grading scale: P, F
- INL2 - Assignments, 1.0 credits, grading scale: P, F
- TEN2 - Written exam, 1.0 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.

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

Seminars (SEM1, 1.0 credits) with compulsory attendance, grading scale P/F, examines course objectives 1, 3 and 4.

The assignments (INL1, 1.0 credits), two hand-ins, grading scale: P, F, examines course objective 2.

Exam (TEN1, 1.0 credits) grading scale: P, F, examines course objectives 2 and 3.

The final grade is based on all modules based on the P/F grading scale.

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.