



# ME2046 Managing Risks in Complex Technical Systems 6.0 credits

Riskhantering i komplexa tekniska system

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

## Establishment

Course syllabus for ME2046 valid from Autumn 2007

## Grading scale

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

## Education cycle

Second cycle

## Main field of study

## Specific prerequisites

ME2041 Psychology for engineers, or ME2040 human factors engineering or equal courses.

## Language of instruction

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

## Intended learning outcomes

After completing the course the student will be able to:

- Discuss risks, for example: how do we perceive risks, how do we communicate risks, how does society estimate and value risks, what are common risks?
- Give relevant information of risks.
- Describe the relationship between work organization, management and safety cultures.
- Use theories and models to describe how organizations can help prevent accidents in complex technical systems.
- Identify risks within an organization using methods of risk analyses.
- Argue for various definitions of risks.

## Course contents

The course gives 5 seminars with assigned literature and guest speakers. After the seminars an individual project is conducted. The project could for example be an accident analysis or analysis of risk management within an organization in your field.

## Course literature

Grimvall, G., Jacobsson, P. och Thedéen, T. Risker i tekniska system. Studentlitteratur, Lund (2003).

Reason, J. Managing the Risks of Organizational Accidents. Ashgate, England (1997).

Harms-Ringdahl L. Riskanalys I MTO perspektiv. Kompendie.

## Examination

- SEM1 - Seminars, 3.0 credits, grading scale: A, B, C, D, E, FX, F
- PRO1 - Project, 3.0 credits, grading scale: A, B, C, D, E, FX, 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.

## Other requirements for final grade

Participation in seminars (SEM1; 3hp) and project (PRO1; 3hp).

## **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.