AK2023 Risk- and Safety Analysis in Building 7.5 credits

Risk- och säkerhetsanalys i byggandet

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 AK2023 valid from Autumn 2007

Grading scale

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

Education cycle

Second cycle

Main field of study

Built Environment

Language of instruction

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

Intended learning outcomes

The course provides basic knowledge about risk and safety in building and in construction work. After completing the course, students should have acquired good knowledge about the most important risk and safety issues in this field of technology. Students should also have acquired understanding of basic concepts in the analysis of societal risks and of basic principles for technical safety management. Students should also be able to apply these concepts and principles in analysis of actual buildings and other structures.

Course contents

The course consists of lectures and exercises. The lectures cover:

- Introduction. The development of
- Decision-theoretic aspects on risk
- Risk and uncertainty, different definitions
- Facts and values in technical risk assessment
- Risk and ethics. Risk communication
- The conditions, possibilities and limitations of risk analysis
- Technical risk analysis
- Building regulations
- Methods for safety analysis of buildings 1-3
- Environmental and health risk of building materials
- Work environment risks in building and construction work
- Fire in buildings
- Maintenance from a safety perspective
- Safety in bridges and steel constructions
- Geotechnical risks – above and below ground
- Tools for analysing geotechnical risks

Specific prerequisites

Course literature

TBA

Examination

- PRO1 - Project, 3.0 credits, grading scale: P, F
- TEN1 - Examination, 4.5 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.

Other requirements for final grade

Written exam, 4,5 hp, Exercises, 3,0 hp.

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.