# Risk and Accident Analysis

Risk- och olycksanalys
6 credits

Single subject and programme course

729A98

Valid from: 2010 Autumn semester

| **Determined by** | **Main field of study** | |
|---|---|---|
| The Quality Board at the Faculty of Arts and Sciences | Cognitive Science | |
| **Date determined** | **Course level** | **Progressive specialisation** |
| 2010-09-24 | Second cycle | A1X |
| **Revised by** | **Disciplinary domain** | |
| | Technology | |
| **Revision date** | **Subject group** | |
| | Technology from a Social Perspective | |
| **Offered first time** | **Offered for the last time** | |
| Spring semester 2011 | Spring semester 2022 | |
| **Department** | **Replaced by** | |
| Institutionen för datavetenskap | 769A22 | |

## Course offered for

- Master Programme in Cognitive Science

## Entry requirements

For admission to the course, the specific entry requirements that apply for the master's education in Cognitive Science, or the equivalent, must be satisfied.

## Intended learning outcomes

On completion of the course, the student should be able to
- account for theories/models and methods in the area of risk control and system security that are appropriate for describing, analysing and understanding risks and accidents in socio-technical systems
- demonstrate knowledge of common accident models, natural accident theory, high reliability organisation theory, and resilience engineering, and be able to recognise concepts from these theories in (non-) scientific accident reports
- demonstrate knowledge of common risk analysis methods, such as fault trees, event trees and functional modelling, and be able to apply selected methods on smaller systems and accident descriptions in a practical way

## Course content

The contents of the course are focused on
- models and methods for describing and analysing accidents and risks
- human-technology-organisation
- normal accident theory
- high reliability organisations
- resilience engineering
- practical application in real investigations

## Teaching and working methods

The course is built around seminars with discussions of literature, exercises, practical assignments and lectures. Some parts have compulsory attendance. The student is expected to study independently, individually or in groups.

# Examination

The course is examined through written assignments, a final report, compulsory participation in a final review, and a critical review. Detailed information can be found in the study guide.

If special circumstances prevail, and if it is possible with consideration of the nature of the compulsory component, the examiner may decide to replace the compulsory component with another equivalent component.

If the LiU coordinator for students with disabilities has granted a student the right to an adapted examination for a written examination in an examination hall, the student has the right to it.

If the coordinator has recommended for the student an adapted examination or alternative form of examination, the examiner may grant this if the examiner assesses that it is possible, based on consideration of the course objectives.

An examiner may also decide that an adapted examination or alternative form of examination if the examiner assessed that special circumstances prevail, and the examiner assesses that it is possible while maintaining the objectives of the course.

Students failing an exam covering either the entire course or part of the course twice are entitled to have a new examiner appointed for the reexamination.

Students who have passed an examination may not retake it in order to improve their grades.

# Grades

Three-grade scale, U, G, VG

# Other information

Planning and implementation of a course must take its starting point in the wording of the syllabus. The course evaluation included in each course must therefore take up the question how well the course agrees with the syllabus.

The course is carried out in such a way that both men´s and women´s experience and knowledge is made visible and developed.

If special circumstances prevail, the vice-chancellor may in a special decision specify the preconditions for temporary deviations from this course syllabus, and delegate the right to take such decisions.