AK202X Degree Project in Risk and Safety, Second Cycle 30.0 credits

Examensarbete inom risk och säkerhet, avancerad nivå

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 AK202X valid from Autumn 2019

Grading scale

P, F

Education cycle

Second cycle

Main field of study

Built Environment

Specific prerequisites

Engineering degree 300 credits:

All courses from years 1-3, or courses required for Bachelor degree; and at least 60 credits in second cycle courses, including a course in the philosophy of science and research methodology.

Master's degree 120 credits:

A main part of the studies, at least 60 credits, of which 30 credits with specialisation, should be completed before the degree project may be started for second-cycle studies within the main field of study.

Language of instruction

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

Intended learning outcomes

After passing the course examination work, the student should be able to

1. show knowledge of the disciplinary foundation of the chosen subject area and best practice, advanced understanding in current research and development and advanced method knowledge

2. Demonstrate ability to holistically, critically and systematically search, collect and integrate knowledge, and identify oneÂ´s need for further knowledge.

3. Demonstrate ability to identify, analyse, assess, and handle complex phenomena, issues and situations, even with limited information.

4. Demonstrate ability to plan and with adequate methods carry out advanced tasks within given time frames, and evaluate this work.

5. Demonstrate ability to clearly present and discuss conclusions and the underlying arguments with other groups both orally and in writing.

6. show the ability to make judgements considering relevant scientific, social, and ethical aspects

7. show such skills that are required to participate in research and development or to work independently in other qualified activities.

Course contents

The knowledge field risk and safety includes analyses of environment and health risks, reliability, vulnerability and safety in technical and social systems. Such analyses are intended to provide a foundation for decisions about risk preventive and security-promoting measures. The research within this field draws on use of knowledge from the different technology- and scientific, medical, social- and behavioural science fields that can contribute to assess risk and safety. The choice of method is strongly depending on the type of risk and safety issues that are treated. Statistical methods have a central role in many cases but in other cases, other methods can be the more suitable. The subject-specific skills consist of assessing such

a basis in a collected way that gives a justified and true image for the decision. Within the subject area, studies of risk perception and risk communication and of the social processes where risk and safety issues have been treated are also included.

The degree project is carried out individually or jointly by two students. In the latter case the individual contributions shall be clearly separable.

The subject of the degree project can be suggested by the student, teachers or some outside client. The student designs a work plan. When the work plan is approved, at the latest, a supervisor is appointed whom the student should be able to continuously consult during the work.

Disposition

Individual studies and supervised essay writing.

Course literature

Väljs individuellt.

Equipment

None.

Examination

- XUPP - Examination, 30.0 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.

Other requirements for final grade

Presented and defended essay.

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.