



**Karolinska  
Institutet**

Course syllabus for

## **Health Risk Assessment, 9 credits**

Hälsoriskbedömning, 9 hp

This course syllabus is valid from spring 2019.

Please note that the course syllabus is available in the following versions:

Spring2019 , Spring2020 , Spring2022 , Spring2024 , Spring2025

Course code	4TX031
Course name	Health Risk Assessment
Credits	9 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Toxicology
Level	AV - Second cycle
Grading scale	Pass with distinction, Pass, Fail
Department	Institute of Environmental Medicine
Decided by	Education committee IMM
Decision date	2018-10-22
Course syllabus valid from	Spring 2019

### **Specific entry requirements**

At least the grade Pass for all courses on semester 1 and for the course Laboratory animal sciences in theory and practice, within the Master

### **Objectives**

Upon completion of the course, the student shall be able to:

Regarding knowledge and understanding

- describe and explain the basic concepts and principles within health risk assessment of chemical substances,
- explain the value and the usefulness of different methods (in silico, in vitro, in vivo, epidemiological) for evaluating toxicity and health risks, the limitations as well as the development needs of these methods, and how lack of data as well as uncertainties are handled in risk assessment,
- describe and explain how risk assessments are carried out within different regulatory areas, in a national, European and global perspective.

Regarding competence and skills

- in groups make a complete risk assessment, and present and discuss this assessment, both orally and in written format,
- discuss the scientific, societal and ethical prerequisites and limitations that are associated with a risk assessment, as well as which factors that influence a risk assessment,
- describe the most important information sources in toxicology and health risk assessment, and be able to critically review both risk assessments and individual studies,
- understand the role of risk communication in risk analysis, and be able to present and discuss issues related to health risk assessment in a dialogue with different groups.

## Content

The course comprises fundamental concepts, principles and methods, and conditions for risk assessment, regulatory applications, examples of complex risk assessments, training in practical risk assessment and in risk communication. The role of the risk assessment to promote sustainable development in a global perspective in which communication to the public and public authorities plays an important part.

## Teaching methods

The course contains lectures, practical exercises, group assignments, discussions and study visit .

## Examination

The examination consists of a written report and oral presentation (Fail/Pass), giving oral feedback on a group assignment (Fail/Pass), and a written examination (Fail/Pass/Pass with distinction).

The course grade is based on the results of the written examination.

### Compulsory participation

All group exercises, study visits, oral and written presentation and critical oral review are compulsory. The course director assesses if and how absence may be compensated. Before the student has participated in compulsory parts, or compensated absence in accordance with the course director's instructions, the student's course result will not be registered in LADOK.

## Transitional provisions

After each course, there will be at least 6 occasions for examination within a 2-year period after the end of the course.

## Other directives

The course language is English.

Course evaluation will be carried out in accordance with the guidelines established by the Board of Higher Education.

Oral evaluation in the form of course council meetings will be carried out during the course.

## Literature and other teaching aids

### Mandatory literature

*Hayes, A. Wallace; Kruger, Claire L.*

**Hayes' principles and methods of toxicology**

6. ed. : - xxvi, 2157 p.

ISBN:9781842145364 (hardcover : alk. paper) LIBRIS-ID:16954170

[Library search](#)

Handouts and other assigned literature