Course syllabus for

Target organ toxicology, 15 credits
System och vävnadstoxikologi, 15 hp

This course syllabus is valid from autumn 2012.
Please note that the course syllabus is available in the following versions:

Course code 4TX000
Course name Target organ toxicology
Credits 15 credits
Form of Education Higher Education, study regulation 2007
Main field of study Toxicology
Level AV - Second cycle
Grading scale Fail (U), pass (G) or pass with distinction (VG)
Department Institute of Environmental Medicine
Decided by Programnämnden för biomedicinprogrammen
Decision date 2008-05-14
Revised by Programnämnd 7
Last revision 2012-03-30
Course syllabus valid from Autumn 2012

Specific entry requirements

Bachelor of science or professional qualification of at least 180 credits in biomedicine, biology, cell and molecular biology, pharmacy, chemistry, medicine or biotechnology. Furthermore, knowledge in English equivalent to English B (with at least the Pass grade) is required.

Objectives

After the course, the student should:
* be able to interpret, analyse and describe the signs of toxicity that toxic compounds cause and relate this to the structure and function of the tissues and organs
* be able to explain central concepts and underlying mechanisms of toxicity or be able to explain hypotheses about underlying mechanisms

Content

Toxic effects and their underlying mechanisms in different organ systems (e.g., liver, kidney, lung,
nervous and reproductive system), including genetic toxicity and chemical carcinogenesis. Clinical toxicology, and the toxicology of metals and persistent organic pollutants. The course includes mechanisms and toxicity of chemical substances that can pose a threat to human health and sustainable development.

Part 1. Genotoxicity and chemical carcinogenicity, 1 credit
Part 2. Mechanisms and target organ toxicity, 6 credits
Part 3. Integration of target organ toxicity, 8 credits

**Genotoxicity and chemical carcinogenicity, 1.0 hp**
Grading scale : GU
Mechanisms and principles for genotoxicity and chemical carcinogenesis.

**Mechanisms and target organ toxicity, 6.0 hp**
Grading scale : GU
Toxic effects and their underlying mechanisms in different organ systems (e.g. liver, kidney, lung, nervous and reproductive system). Clinical toxicology and the toxicology of environmental pollutants. The part includes mechanisms and toxicity of chemical substances that can pose a threat to human health and sustainable development in an individual, population and global perspective.

**Integration of target organ toxicity, 8.0 hp**
Grading scale : VU
Integration of mechanisms and effects of toxic compounds, including genotoxic and carcinogenic compounds.

**Teaching methods**

The course builds largely on problem-based learning in the form of different case studies with oral and written presentation. Furthermore, lectures, seminars, group discussions, practical demonstrations and study visits are included.

**Examination**

Part 1 is graded Pass/Fail and is examined through a written test. Part 2 is graded Pass/Fail and is examined through written and oral presentations. Part 3 is graded Pass with credit/Pass/Fail and is examined through a written final examination.

The course grade is based on the grade of part 3.

During the current semester, a regular examination and an occasion for re-examination are given.

Compulsory participation
All practical demonstrations, study visits and group exercises including presentations are compulsory. The course director assess about and if so, 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 results for respective part will not be registered in LADOK.

Limited number of examinations or practical training sessions
Students who have not passed the regular examination are entitled to participate in five more examinations. If the student is not approved after four examinations, he/she is recommend to retake the course at the next regular course date, and may, after that, participate in two more examinations. If the student has failed six examinations/tests, no additional examination or new admission is provided.
The number of times that the student has participated in one and the same examination is regarded as an examination session. Submission of a blank examination is regarded as an examination. An examination for which the student registered but not participated in, will not be counted as an examination.

**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**

Course evaluation will be carried out in accordance with the guidelines established by the Board of Education. Course council meeting is held with the course coordinator and student representatives.

The course syllabus substitutes part of QTOA04.

The course is given in English.

**Literature and other teaching aids**

**Principles and methods of toxicology**
*Hayes, A. Wallace*


[Library search](http://www.loc.gov/catdir/toc/ecip0715/2007015656.html)

**Casarett, Louis J.; Klaassen, Curtis D.4 edt; Doull, John**

**Casarett and Doull's toxicology: the basic science of poisons**


[URL](http://www.loc.gov/catdir/toc/ecip0715/2007015656.html)

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