Sveriges lantbruksuniversitet
Swedish University of Agricultural Sciences

SLUkurs

Syllabus

PNS0159 Risk assessment of chemicals, 7.5 credits

Syllabus approved

2017-12-12

Subjects

Environmental Assesment/Chemistry

Education cycle

Third cycle

Grading scale

Pass / Failed
The requirements for attaining different grades are described in the course assessment criteria which are contained in a supplement to the course syllabus. Current information on assessment criteria shall be made available at the start of the course.

Language

English

Prior knowledge

Students must be enrolled as PhD students in a subject that is related to the course themes (environmental sciences or equivalent) or being a researcher within environmental sciences or equivalent.

Objective, including learning outcomes

The aim of this course is to introduce the students to the principles of risk assessment of chemicals. The course will provide basic background information on

possible sources, emissions, distribution and fate of potential hazardous chemicals for the estimation of health risks posed for organisms including human beings. Possible exposure pathways include indoor and outdoor exposure, direct and indirect exposure, as well as occupational exposure. The course covers aspects of environmental chemistry, toxicology, ecotoxicology as well as the legislative framework focusing on chemicals in Europe.
Individual learning outcomes (ILO) are listed below. The student will be able to:
- Explain the basic structures and principles of risk assessments of chemicals (ILO 1)
- Discuss and communicate with experts at all stages along the risk assessment procedure (ILO 2)
- Assess and value the quality of the input data to a performed risk assessment of chemicals (ILO 3)
- Review of a real-life risk assessment and to present the outcome to the other students and teachers in a critical manner, highlighting the limitations and possible sources of errors (ILO 4)

Content

The course design follows the structure of the book "Risk Assessment of chemicals: An introduction" (van Leeuwen and Vermiere, 2007), which is the main course book. The students will be assigned to present selected chapters of the book to their fellow students at seminars at joint events for all participants. Each seminar will be followed by a discussion organized by the responsible student. The course organizers and other teachers will be present at the seminars for answering questions and guiding, but the learning process primarily builds on the student's own capacity to acquire knowledge and to find answers. The students will be encouraged to go beyond the course book to find illustrative examples to present to fellow students. The final individual task will be to review and present a scientific paper that highlights aspects relevant to an up-to-date chemical risk assessment. The student is by then expected to have reached a stage where he/she is able to discuss and evaluate the different aspects associated to e.g., hazard identification, exposure assessment, health effects, and risk management.
At least three external researchers from a relevant field of research will be invited to give lectures, to provide input, to illustrate how a risk assessment is applied, and to show how new data can facilitate better understanding and handling of chemicals.
Students from different departments at SLU, and other universities (e.g. Stockholm, Örebro and Umeå University) will be invited to attend the course. Depending on the number of students from each university, the seminars could alternate between

the participating students' departments. This will enhance the students' network building and facilitate collaboration between departments.

Requirements for examination

To pass the course, the student must have attended the compulsory lectures and the final workshop, where the individual tasks will be presented. The student must have been active in giving a lecture, contributed to the scientific discussions and must have performed and passed the literature review presentation at the final workshop.

Additional information

Register for the course by email to Jana Weiss: jana.weiss@slu.se
Department of Aquatic Sciences and Assessment, SLU, Uppsala
Please provide your name, social security number (Swedish personnummer), telephone number, and information about your home department and the PhD program/post-doc project to which you are enrolled at.

Responsible department

Department of Aquatic Sciences and Assessment