CB205V Environmental Toxicology for Industrial Professionals 4.0 credits

Miljötoxokologi för yrkesverksamma

This is a translation of the Swedish, legally binding, course syllabus.

Establishment

Course syllabus for CB205V valid from Spring 2023

Grading scale

P, F

Education cycle

Second cycle

Main field of study

Biotechnology

Specific prerequisites

Courses in biochemistry and cell biology at the first cycle, or equivalent.

Language of instruction

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

Intended learning outcomes

After completion of the course the student shall be able to:

- demonstrate knowledge and analytical skills in the field of environmental toxicology
- demonstrate ability to explain and analyze concepts in environmental toxicology based on relevant research literature
- formulate and discuss in writing how pollution harms organisms and ecosystems, how this can be prevented or remediated, and be able to reflect on sustainable societal development

Course contents

The course is given online remotely and provides an overview of the research area environmental toxicology, with special emphasis on how foreign substances (xenobiotics) affect humans and other organisms, and how ecosystems are disturbed by chemical pollutants. The course comprises approximately 106 full-time study hours, corresponding to 4.0 ECTS credits.

The course deals with biochemical mechanisms for how organisms' physiological processes are disrupted by xenobiotics, and how these disturbances can have extensive and long-term harmful effects on gene activity, cell differentiation, reproduction, fetal development and behavior. Furthermore, the harmful effects of chemical pollutants on ecosystems are treated, with a focus on the Baltic Sea. Risk assessment and regulations are discussed in the course.

The course contains pre-recorded lectures with associated assignments that consist of written reflections and/or quizzes with multiple-choice questions. Lectures and assignments are preparatory for the course exam.

The course also provides in-depth knowledge of current environmental toxicological issues through a literature study that is compiled in a written report.

Examination

- INL1 - Hand-in assignment, 1.0 credits, grading scale: P, F
- LIT1 - Literature assignment, 1.0 credits, grading scale: P, F
- TEN1 - Written exam, 2.0 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.

If the course is discontinued, students may request to be examined during the following two academic years.

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.