GHENT UNIVERSITY

Course Specifications

Valid in the academic year 2022-2023

Risk Assesment of Chemicals (I630060)

Course size *(nominal values; actual values may depend on programme)*

Credits 4.0 **Study time 120 h** **Contact hrs** 48.0h

Course offerings and teaching methods in academic year 2022-2023

A (semester 2)	Dutch	Kortrijk	lecture	27.0h
			practicum	3.0h
			seminar: practical PC room classes	18.0h

Lecturers in academic year 2022-2023

De Schamphelaere, Karel	LA22	lecturer-in-charge
Rousseau, Diederik	LA24	co-lecturer
Verougstraete, Violaine	LA22	co-lecturer

Offered in the following programmes in 2022-2023	**crdts**	**offering**
Bachelor of Science in Bioindustrial Sciences	4	A
Preparatory Course Master of Science in Bioindustrial Sciences: Circular Bioprocesstechnology	4	A

Teaching languages

Dutch

Keywords

Human toxicology; Epidemiology; Ecotoxicology; Ecological Risk Assessment; radioactivity; explosion safety; chemical substances.

Position of the course

This course focuses on the potential dangers and risks of the production and use of chemicals on human beings and the environment. Students will learn to assess environmental and health risks as well as physical risks (e.g. explosion hazard) and translate this into appropriate measures based on current legislation and standards.

Contents

THEORY:
1 introduction (eco)toxicology and risk assessment
2 basic principles of exposure assessment
3 basic principles of ecotoxicology and ecological risk assessment
4 basic principles of human toxicology, epidemiology and risk assessment
5 applying basic principles of risk assessment in legislation (e.g. REACH & CLP)
6 Physical hazards and risks (e.g. explosion safety & radioactivity)
7 applying basic principles of risk management in legislation (e.g. Codex Well-Being of Workers)

PRACTICE:
1 computer exercises on exposure, dose-response relations and risk analysis;
2 executing an ecotox test and converting results into relevant toxicity data;
3 drafting an explosion safety document.

Initial competences

Basic knowledge biology, physics and chemistry

Final competences

1 Master the basic principles of human and ecotoxicology, risk assessment and physical hazards of chemical substances

2 Carry out simple ecotoxicological tests and analyze, interpret and use the collected data for ecological risk assessment
3 Assess human exposure to chemical substances and consequent effects and risks
4 Elaborate an explosion safety document for simple situations.

Conditions for credit contract

Access to this course unit via a credit contract is determined after successful competences assessment

Conditions for exam contract

This course unit cannot be taken via an exam contract

Teaching methods

Practicum, Lecture, Seminar: practical pc room classes

Learning materials and price

All necessary information and supporting learning material are distributed via UFORA.

References

Course content-related study coaching

Individual coaching is possible on appointment.

Assessment moments

end-of-term assessment

Examination methods in case of periodic assessment during the first examination period

Written examination with open questions

Examination methods in case of periodic assessment during the second examination period

Written examination with open questions

Examination methods in case of permanent assessment

Report

Possibilities of retake in case of permanent assessment

examination during the second examination period is possible in modified form

Extra information on the examination methods

PE: closed book exam with open questions and multiple choice questions about both theory and practice.
NPE: reports on the lab and computer exercises

Calculation of the examination mark

Final score = 75% Periodic Evaluation + 25% Permanent Evaluation.
To succeed for this course a minimum score of 8/20 must be achieved for both PE and NPE. If this condition is not met and only in case the calculated final score equals 10 or more, the final score will be adjusted to a 9
NPE second term: revised reports.
Students who eschew period aligned and/or non-period aligned evaluations for this course unit may be failed by the examiner. The maximum global examination mark is in that case 6/20.