

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

Credits 4.0 Study time 110 h Contact hrs 36.0 h

Course offerings and teaching methods in academic year 2018-2019

A (semester 1)	Dutch	microteaching	2.0 h
		group work	6.0 h
		excursion	4.0 h
		lecture	24.0 h

Lecturers in academic year 2018-2019

De Gelder, Leen LA25 lecturer-in-charge

Offered in the following programmes in 2018-2019

	crdts	offering
Bachelor of Science in Bioscience Engineering Technology	4	A
Linking Course Master of Science in Biochemical Engineering Technology	4	A
Preparatory Course Master of Science in Biochemical Engineering Technology	4	A

Teaching languages

Dutch

Keywords

environmental legislation, environmental problems and pollution, waste water treatment, air purification, waste processing, composting, manure treatment

Position of the course

Due to the necessity to safeguard the environment, also companies in the sectors of agriculture, horticulture, food processing and fermentation are required to consider techniques to minimize negative impact on the environment. Problems and solutions specific to these industries are highlighted.

Contents

Environmental policies and legislation
 Water: parameters and causes of pollution, eutrophication, physicochemical, aerobic and anaerobic biological waste water treatment, nutriënt removal, sludge treatment, small scale waste water treatment
 Air: parameters and causes of pollution, greenhouse effect, acidification, physicochemical and biological air purification
 Waste: origin and characteristics of waste streams, landfills, incineration, digestion, composting, manure treatment
 Visit of wastewater treatment plant and composting/digester/manure treatment
 Rapport of environmental problems and techniques on a production facility

Initial competences

Based on certain end competences of the course Microbiology, and General en Anorganic Chemistry I

Final competences

- 1 Having knowledge of the Flemish environmental legislation
- 2 Having knowledge and insight in the causes of environmental pollution and the contribution of different industries
- 3 Having knowledge and insight concerning the principle and application of environmental technologies for waste water, air and waste treatment
- 4 Can situate the application of environmental technologies within the context of

different production sectors.

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

Excursion, group work, lecture, microteaching

Learning materials and price

Syllabus available

References

Course content-related study coaching

By appointment

Evaluation methods

end-of-term evaluation and continuous assessment

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

Written examination

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

Written examination

Examination methods in case of permanent evaluation

Participation, assignment, peer assessment

Possibilities of retake in case of permanent evaluation

examination during the second examination period is not possible

Calculation of the examination mark

Written exam: 80%

Report and participation: 20%