GHENT UNIVERSITY

Course Specifications

Valid as from the academic year 2024-2025

Sustainable Development in Production and Consumption Systems (I002912)

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

Credits 4.0 **Study time 120 h**

Course offerings and teaching methods in academic year 2025-2026

A (semester 2)	Dutch	Gent	group work	10.0h
			seminar	0.0h
			lecture	25.0h

Lecturers in academic year 2025-2026

Dessein, Joost	LA27	lecturer-in-charge
Dewulf, Jo	LA24	co-lecturer

Offered in the following programmes in 2025-2026	**crdts**	**offering**
Bachelor of Science in Bioscience Engineering	4	A

Teaching languages

Dutch

Keywords

Sustainable development, systems thinking, transitions, production and consumption systems, sustainability assessment

Position of the course

Considering the societal relevance, this course makes the concept of 'sustainable development' more clear and workable; with the ultimate aim of effective realizations in the specific work of bioscience engineers.

Contents

- Sustainable development in a global context
- Sustainable development in a local context
- Sustainable development and systems thinking
- Sustainable development and envisioning
- Sustainable production and consumption systems
- Governance for sustainable development
- Evaluation of sustainable development

Initial competences

No prior knowledge is required.

Final competences

1 Students deploy the concept of 'sustainable development' in a clear way, and they succeed to translate it in concrete practices of diverse stakeholders.
2 Students deal with the inherent complexity of sustainable development; they know the meaning of systems thinking and are capable to illustrate the importance of it for sustainable development with real life cases.
3 Students visualise production and consumption systems in a way that highlights diverse aspects of (un)sustainability, and their linkages.
4 Students assess in a critical way different instruments for evaluation of sustainability; they emphasize the activating potential of the tools.
5 Students can assess their own life styles related to principles of sustainable development; and they are aware of concrete practices that contribute to more sustainable life styles.
6 The students are capable to communicate on a specific topic of sustainable development, in a way that is scientifically underpinned, thoughtful, clarifying

and activating.

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

Group work, Seminar, Lecture

Extra information on the teaching methods

The course is based on lectures, and requires preparations and active contributions from the students.
Excercises complement the lectures. Students learn quantitative techniques to evaluate sustainability, and are challenged to take position in the societal debates on sustainability.

Study material

Type: Slides

Name: presentaties van de hoorcolleges
Indicative price: Free or paid by faculty
Optional: no
Language : Dutch
Available on Ufora : Yes
Online Available : No
Available in the Library : No
Available through Student Association : No

Type: Reader

Name: diverse rapporten en artikelen
Indicative price: Free or paid by faculty
Optional: no
Available on Ufora : Yes
Online Available : Yes

References

Rich scientific literature and results of own research.

Course content-related study coaching

The syllabus and the classes are complemented by online movieclips and handed out essential literature.
The group work on a sustainability issue in a strong scientific-communicative format is accompanied by experts on the matter.

Assessment moments

end-of-term and continuous assessment

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

Written assessment with open-ended questions

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

Written assessment with open-ended questions

Examination methods in case of permanent assessment

Participation, Peer and/or self assessment, Assignment

Possibilities of retake in case of permanent assessment

examination during the second examination period is possible in modified form

Calculation of the examination mark

The final score is based on a written exam (70%, PE) and the evaluation of the project (30%, NPE).
The student who did not pass the course but did pass the NPE can carry over these NPE points to the second examination period. The student who did not pass the course, and did not pass the NPE, will receive a modified NPE assignment for the second examination period.
Students who eschew period aligned and/or non-period aligned evaluations for this course unit may be failed by the examiner.