GHENT UNIVERSITY

Course Specifications

Valid as from the academic year 2024-2025

Sustainable Agriculture: a Global Perspective (I002914)

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

Credits 5.0 **Study time 150 h**

Course offerings in academic year 2025-2026

A (semester 1) English Gent

Lecturers in academic year 2025-2026

de la Pena, Eduardo	LA21	lecturer-in-charge
De Smet, Stefaan	LA22	co-lecturer

Offered in the following programmes in 2025-2026	crdts	offering
Master of Science in Nutrition and Food Systems	5	A
Exchange Programme in Bioscience Engineering: Agricultural Sciences (master's level)	5	A
Exchange Programme in Bioscience Engineering: Food Science and Nutrition (master's level)	5	A

Teaching languages

English

Keywords

Food systems, sustainable production, primary production, crop production, types of crops, land-use, animal production, aquaculture, plant- and animal-source foods, sustainable intensification, global change (adaptation)

Position of the course

The aim of this course is to acquire general knowledge on agriculture, primary production systems and sustainable development aspects; all necessary to develop new strategies to improve food security and food systems.

Contents

1 General introduction to global food systems
2 Food production in the "Anthropocene", society, environment, global change
3 Food systems and primary production
4 Traditional, industrial, indigenous food systems
5 Farming systems, agricultural systems
6 Agrobiodiversity, agroecology
7 Major food crops: staple crops
8 Yield gap
9 Farm to fork strategy (Green deal)
10 Impact of primary production on land-use
11 Food system transformation, closing the yield gap, agricultural innovation
12 Animal production worldwide (roles and prospects, distribution of major farm animal species, classification and major characteristics of animal production systems)
13 Factors determining production of animal source foods (productivity of animals; feeds, crop residues and by-products of the agro-industry; effects of climate)
14 Sustainability issues in livestock production
15 Fish, fishery products, aquaculture
16 Food security

The course integrates classic lectures, guest lectures led by experts, and an interactive discussion session (preceded by group work in which essential documents on critical issues of sustainable primary production are analyzed).

Initial competences

No specific requirements

Final competences

1 General knowledge on primary production and agriculture, on the characteristics, opportunities and limitations of the different production systems, crops and products.
2 Have knowledge of the limiting factors and the main bottlenecks in primary production.
3 Reasons for world's food problem are known, and possible ways/strategies to tackle them are understood.

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, Independent work

Study material

Type: Slides

Name: Slides of "Sustainable agriculture: a global perspective"
Indicative price: Free or paid by faculty
Optional: no
Language : English
Number of Slides : 350
Oldest Usable Edition : 2023
Available on Ufora : Yes
Online Available : No
Additional information: Together with the slides a selection of articles, policy notes and relevan documentation is provided

References

Course content-related study coaching

Permanent through Ufora. Personal contact with lecturers and assistants.

Assessment moments

end-of-term and continuous assessment

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

Participation, Written assessment with open-ended questions

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

Written assessment

Examination methods in case of permanent assessment

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

The end-of-term assessment consists of a written assessment with open-ended questions on the different parts of the course.
The continuous assessment consists of an evaluation of the group work and participation in the discussion session.

Calculation of the examination mark

90% end-of-term assessment and 10% continuous assessment