GHENT UNIVERSITY

Course Specifications

Valid in the academic year 2023-2024

Crop Modelling for Risk Management (I002497)

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

Credits 6.0 **Study time 180 h**

Course offerings in academic year 2023-2024

A (semester 1) English Gent

Lecturers in academic year 2023-2024

Rötter, Reimund	GOTTIN01	lecturer-in-charge

Offered in the following programmes in 2023-2024	crdts	offering
International Master of Science in Soils and Global Change (main subject Soil Biogeochemistry and Global Change)	6	A

Teaching languages

English

Keywords

Position of the course

Contents

Introduction to the major concepts of statistical and process-oriented descriptions of potential, water- and nutrient limited crop growth. Increasingly complex case studies from various countries are used as practical exercises to introduce the use of the process-oriented crop models WOFOST and APSIM. For the exercises, the modelled crops and management practices can be adapted to the cultural background of the participants. The exercises enable the participants to apply the models in the context of various regional and cultural environments, including differing climatic and soil conditions.

Initial competences

Basic knowledge of soil science and physiology of crop growth. Basic knowledge of computer programming is beneficial.

Final competences

Gain knowledge of the features of different crop modelling concepts and model families and learn to use the Agricultural Production Systems Simulator (APSIM). Understand the basic principles of production ecology and agrosystems modelling also with regard to diverse region specific management practises and cultural contexts. Apply crop modelling in intercultural teams to typical agronomic questions related to risk management strategies. Consider and debate local as well as global impact of relevant risk management strategies.
Workload

Conditions for credit contract

This course unit cannot be taken via a credit contract

Conditions for exam contract

This course unit cannot be taken via an exam contract

Teaching methods

Learning materials and price

Will be given during the lecture.

References

Course content-related study coaching

Assessment moments

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

Oral assessment, Assignment

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

Oral assessment, Assignment

Examination methods in case of permanent assessment

Possibilities of retake in case of permanent assessment

examination during the second examination period is possible

Extra information on the examination methods

Presentation (ca. 20 minutes, weighting: 30%) and report (ca. 15 pages, weighting: 70%)

Calculation of the examination mark