Crop Pests and Diseases (I000760)

Course Specifications
Valid as from the academic year 2018-2019

Course offerings and teaching methods in academic year 2019-2020

<table>
<thead>
<tr>
<th>A (semester 1)</th>
<th>Dutch</th>
<th>lecture</th>
<th>7.5 h</th>
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<tr>
<td></td>
<td></td>
<td>practicum</td>
<td>40.0 h</td>
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<td>self-reliant study</td>
<td>5.0 h</td>
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<td></td>
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<td>activities</td>
<td>7.5 h</td>
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<td>guided self-study</td>
<td>7.5 h</td>
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Lecturers in academic year 2019-2020

Hôfte, Monica
LA21 lecturer-in-charge

Tirry, Luc
LA21 co-lecturer

Offered in the following programmes in 2019-2020

Master of Science in Bioscience Engineering: Agricultural Sciences

Teaching languages

Dutch

Keywords

Crop protection, nematology, entomology, phytopathology, plant diseases, crop pests

Position of the course

This course provides information on the taxonomy, biology and control of a selection of economically important diseases (microbial pathogens) en pests (nematodes, mites and insects). It aims at making the student familiar with the vast amount of organisms, which can cause damage to crops, and to offer the knowledge which can be used to mange or control these pests and diseases.

Contents

Theory

1. Crop pests (nematology, entomology)
   General characteristics, biology, ecology and control of the different crop pest groups within the Nematoda, Gastropoda, Acari, Myriapoda and Insecta
2. Plant diseases
   2.1. Plant-pathogen interactions
   2.2. General characteristics of the most important microbial pathogens (Plasmodiophorales, Oomycetes, Fungi, Prokaryota, viruses and viroids)

Practical classes

1. Selected examples of crop pests from the different groups: emphasis is on the identification, the analysis of the life cycle and physiology, in order to use these aspects as targets for management strategies
2. Selected examples of the most important plant pathogenic micro-organisms, with the emphasis on identification and life cycle

Initial competences

Basic knowledge on crop protection (animal pests, plant pathogens, weeds, control, pesticides)

Final competences

1. Recognizing the most important pests and diseases in agricultural and horticultural crops

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

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<tr>
<th>Credits</th>
<th>Study time</th>
<th>Contact hrs</th>
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<tr>
<td>4.0</td>
<td>120 h</td>
<td>60.0 h</td>
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Contact hrs 120 h
Study time 60.0 h

(Approved)
2 Knowing the biology and ecology of the most important pests and diseases
3 Knowing and implementing the current strategies for control or prevention of these pests and diseases
4 Knowing, evaluating and exploiting the plant – animal interactions in control or prevention strategies
5 Knowing, evaluating and exploiting the plant-pathogen interactions in control and prevention strategies
6 Using the microscope for the identification of pests and diseases

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
Guided self-study, lecture, practicum, self-reliant study activities

Extra information on the teaching methods
Theory: lectures; Minerva; coached self study. Part of the lectures can be replaced by flipped classroom.
Exercises: practical classes, under supervision

Learning materials and price
Course material is available. Price is about 15 Euro

References
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Course content-related study coaching
The teaching staff is available for solving questions and problems.

Evaluation methods
end-of-term evaluation

Examination methods in case of periodic evaluation during the first examination period
Written examination with open questions

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

Examination methods in case of permanent evaluation

Possibilities of retake in case of permanent evaluation
examination during the second examination period is possible

Extra information on the examination methods
Theory: period aligned evaluation
Exercises: period aligned evaluation

Students who eschew period aligned and/or non-period aligned evaluations for this course unit may be failed by the examiner.
Theory: written (closed book) examination
Exercises: written (closed and open book) examination

Calculation of the examination mark
The parts given by the two professors have an equal share in the final score (50%).
The student has to pass (10/20) for both parts in order to pass for the course. If in this case the final score would be 10 or more on 20, the score will be reduced.

(Approved)