UCLouvain

lbrpp2101

2019

Biology of phytopathogenic bacteria, fungi, nematodes and viruses

In view of the health context linked to the spread of the coronavirus, the methods of organisation and evaluation of the learning units could be adapted in different situations; these possible new methods have been - or will be - communicated by the teachers to the students.

5 credits	37.5 h + 15.0 h	Q2

Teacher(s)	Bragard Claude ;Declerck Stephan ;Hellin Pierre (compensates Legrève Anne) ;Legrève Anne (coordinator) ;
Language :	French
Place of the course	Louvain-la-Neuve
Main themes	This course is composed of four parts corresponding to the main biotic plant pathogenic agents: bacteria, fungi, nematodes and viruses. The main topics are as follows: - a) Bacteria: structure and composition of plant pathogenic bacteria, genetic determinants, toxins and physiological effects, bacteriocins and phages, control strategies including bactericides, antibiosis, biotechnological strategies. - b) Fungi: structural and biochemical characteristics of pathogenic fungi, vegetative growth, typical life cycle, diversity and evolution, plant-pathogenic fungi interaction (infection strategies, gene for gene interaction, pathogenesis, plant defense mechanisms. -c) Nematodes: anatomic and morphological characteristics, typical examples and their control strategies. -d) Viruses: typical life cycle, viral genome, classification, movement within the plant, virus vector interaction, transmission, interference with host plant, pathogenesis.
Aims	a. Contribution of the activity to the LO (LO from the program) 1.1 to 1.5 ; 2.1 to 2.4 ; 3.1 to 3.9 ; 4.1 to 4.7 ; 6.1 to 6.9 ; 7.1 ; 8.1, 8.5 and 8.6 b. LO from the program specific to this activity 1 By the end of the course, each student knows in detail plant pathogens responsible for plant diseases and should be able : - to define a given pathogenic agents, - to explain the pathogenesis steps of a given plant pathogen, and - to understand plant-pathogen interactions, - to develop appropriate control strategies. - - - - *The contribution of this Teaching Unit to the development and command of the skills and learning outcomes of the programme(s) can be accessed at the end of this sheet, in the section entitled "Programmes/courses offering this Teaching Unit".*
Evaluation methods	**Due to the COVID-19 crisis, the information in this section is particularly likely to change.** Written exam during the examination period and report on the pratical works
Teaching methods	**Due to the COVID-19 crisis, the information in this section is particularly likely to change.** Lectures and practical works
Inline resources	Moodle
Bibliography	Syllabus et/ou support diapos fournis via Moodle Site web dédié, thesaurus d'images, échantillons. Ouvrages de référence : Matthew's Plant Virology, '
Other infos	This course can be given in English.
Faculty or entity in charge	AGRO

Programmes containing this learning unit (UE)

Program title	Acronym	Credits	Prerequisite	Aims
Master [120] in Agricultural Bioengineering	BIRA2M	5		