




3.00 credits

12.0 h + 24.0 h

Q2

Teacher(s)	Bragard Claude ;Hance Thierry ;
Language :	French
Place of the course	Louvain-la-Neuve
Main themes	<p>After a brief history of biological pest historic illustrated by the most striking examples, the analysis of mechanisms of population growth and its fluctuations will be undertaken.</p> <p>The plant-insect, prey-predator and host-parasite systems will be studied and their modelisation explained for use in biological pest control.</p> <p>This course will be accompanied by article discussions and excursions.</p>
Learning outcomes	<p>At the end of this learning unit, the student is able to :</p> <p>Biological pest control is becoming very popular to protect cultures. However, its installation is quite complicated and requires a profound knowledge of phytosanitary problems (insects and diseases) and the possibility to use natural agents in pest control (predators, parasites, competitors, entomopathogens, etc.). Additionally, industrial applications like auxiliary production, their diffusion and the quality control correspond to new potential uses.</p> <p>1 The objectives of the course are to explain the basic techniques necessary to use the methods of biological pest control and to present the actual possibilities and the corresponding products. Also, an analysis of ins and outs of this type of intervention will be practised.</p> <p>The problems and limitations will be discussed and the future perspectives described.</p>
Evaluation methods	Written examination and individual paper presentation
Teaching methods	<p>Face-to-face classes and practical work.</p> <p>Two excursions are also organized.</p>
Content	<p>Biological control will be studied as an applied field of biology aimed at controlling pest populations without the use of pesticides.</p> <p>After an introduction on the history of the discipline, the three major control methods will be analyzed in depth, namely biological control by introduction, by augmentation and by conservation. Examples will be taken from different types of crops.</p> <p>In a second step, the biological control of diseases due to viruses, bacteria or phytopathogenic fungi and the analysis of the possibilities and constraints related to the limitation of the development by the introduction and/or the stimulation of competitive or parasitic organisms will be analyzed as well as by the induction of a resistance in the plant, and technical and regulatory parameters to be taken into consideration.</p>
Inline resources	Moodle
Other infos	<p>Precursorycourses : basics in ecology</p> <p>Support : syllabus, law texts, articles, web.</p>
Faculty or entity in charge	BIOL

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Master [120] in Biology of Organisms and Ecology	BOE2M	3		
Master [120] in Environmental Science and Management	ENVI2M	3		
Master [60] in Biology	BIOL2M1	3		
Interdisciplinary Advanced Master in Science and Management of the Environment and Sustainable Development	ENVI2MC	3		