UCLouvain

lbio1251

2018

Ecology

5 credits	60.0 h + 15.0 h	Q2

Teacher(s)	Van Dyck Hans ;Wesselingh Renate ;
Language :	English
Place of the course	Louvain-la-Neuve
Prerequisites	*The prerequisite(s) for this Teaching Unit (Unité d'enseignement – UE) for the programmes/courses that offer this Teaching Unit are specified at the end of this sheet.*
Main themes	All elements of ecology, from the individual to the ecosystem via populations and population interactions, will be dealt with in this course, to give the student basic knowledge that will be built upon in other, advanced courses later in the curriculum. The theoretical course is entirely given in English, but questions can be asked (and will be answered) in French.
Aims	1 To understand how ecological systems are structured in space and time, from the basic level, the individual, up to the most complex levels, communities and ecosystems. To analyse the dynamics of these systems (adaptation, evolution, speciation) under the influence of natural environmental changes and those caused by human activities. To master research methods in ecologie (observation, experiments, modelling). To familiarize students with listening to and understanding scientific English. - - - - *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".*
Content	1-Introduction. The order of the natural world; discovering the order of nature. 2-Organisms in physical environments. Life and the physical environment; water and solute balance; energy and heat; response to variation in the environment; biological factors in the environment; climate, topography, and the diversity of the natural world. 3-Energy and materials in the ecosystem. The ecosystem concept; energy flow in ecosystems; pathways of elements in ecosystems; nutrient regeneration in terrestrial and aquatic ecosystems; regulation of ecosystem function. 4-Population ecology. Population structure; population growth; population regulation; metapopulations; population fluctuation and cycles; extinction, conservation, and restoration. 5-Population interactions. Resources and consumers; competition theory; competition in nature; predation; herbivory and parasitism; coevolution and mutualism. Practical work for biology students : observations and experiments on three trophic levels (plant, herbivore, carnivore) in the Bois de Lauzelle. Other students : individual observations during spring and development of scientific hypotheses based on these observations.
Other infos	Evaluation : Written exam (in French) on the theoretical part (80%) and written report on practical work (20%) Support : Syllabus, PowerPoint presentations. The book on which this course is based is Ecology (4th edition, 1999) by R.E. Ricklefs & G.L. Miller (Freeman & Co.). To follow this course, it is not necessary to buy the book, which also exists in a French translation (De Boeck), but it is available in the Sciences Library.
Faculty or entity in charge	BIOL

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Aims
Bachelor in Biology	BIOL1BA	5	LANG1861	
Minor in Scientific Culture	LCUSC100I	5		
Minor in Development and Environment	LDENV100I	5		
Minor in Population and Development Studies	LSPED100I	5		