UCLouvain

lbio1213

2020

Morphology and physiology of fungi

Due to the COVID-19 crisis, the information below is subject to change, in particular that concerning the teaching mode (presential, distance or in a comodal or hybrid format).

2 credits	15.0 h + 10.0 h	Q1

Teacher(s)	Declerck Stephan ;
Language :	French
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	-Taxonomy : nomenclature and terminology ; main taxons (ascomycetes, zygomycetes, basidiomycetes and deuteromycetes) - Life cycles of some selected species representative of main taxons - Main groups of fungi - In vitro culture - Activity of decolouration by White Rot Fungi - Introduction to identification of fungal species - Physiology and secondary metabolites (emphasis put on mycotoxines) - Bases of fungi sexuality
Aims	1 Competences Use of fungal terminology Allocation of a fungal species to a main taxon Ability to use identification procedures to the fungal species (including yeasts, molds and filamentous fungi) Mastering the different forms of fungal sexuality and of principal asexual developments Knowledge Introduction to fungal terminology and associated references allowing autonomy to the student. The main taxons and life cycles of some representative species. The double nomenclature of sexual and asexual cycles (anamorphic and teleomorphic names). The fungal sexuality (bipolar and tetra polar, tetrad analysis, homothallic, heterothallism, parasexuality). Symbioses : lichens and mycorrhizes (ecto- and endomycorrhizes). In vitro culture of endomycorrhizes. Main groups of fungi and their applications in biotechnology and environmental bioremediation. - - - - *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 integrating the concepts taught in the practicalcourses and the excursion.
Teaching methods	**Due to the COVID-19 crisis, the information in this section is particularly likely to change.** The teaching method consists of three components: (1) theoretical teaching through which the seven chapters are addressed, (2) practical work during which students make culture preparations between slides and observations under microscope. An identification key allows them to classify the studied fungi. (3) an excursion to the 'bois de Lauzelle' allowing them to discuss fungal diversity and the role of fungi in an ecological context (carbon cycle ...).
Content	The course is divided into seven main chapters. Chapter 1 introduces some notions of mycology and fungi. It recalls the main beneficial or harmful activities and the general characteristics of the world of fungi. Chapter 2 briefly traces the history of mycology through its main actors. Chapters 3 and 4 focus on the notions of taxonomy and systematics as well as on the positioning of fungi in the living kingdom. Chapter 5 discusses the fungal cell (composition, structure and ultrastructure, growth, anastomoses and healing mechanisms). Chapter 6 deals with sexuality (life cycles, sexual and asexual reproduction, conidiogenesis, homotalism, heterothalism, dikaryotism) of the major taxa (Ascomycetes, Zygomycetes, Basidiomycetes, Glomeromycetes and Deuteromycetes). Finally, Chapter 6 reviews the major fungal groups in the major taxa.
Inline resources	Moodle
Faculty or entity in charge	BIOL

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Aims
Bachelor in Biology	BIOL1BA	2	LBIO1111 AND LBIO1117	
Minor in Biology	MINBIOL	2		
Minor in Scientific Culture	MINCULTS	2		