UCLouvain

lbio1221

2020

Genetics

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	20.0 h + 15.0 h	Q2

Teacher(s)	Hachez Charles ;Lejeune André ;
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	The introduction of the course aims at situating genetics and its importance in the global context of science and society. It is completed, at the end of the teaching period, with a debate on a theme related to the course, chosen by the students and prepared by the constitution of a portfolio of articles. The study of genetics is considered at two levels of organization of life. At the individual level, the general laws of gene transfer, their application to particular cases and exceptions are outlined. At the population level, the study focuses on variations in genetic characteristics.
Aims	This activity aims at: - Situating genetics in the global context of science and society; 1 - Knowing and understanding the mechanisms governing the transmission of genes from one generation to the next and the genetic variations occurring in populations of individuals; - Being able to solve exercises related to the topics mentioned above. - - - - *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 examination on theory and exercises
Content	Content 1. Genetics and the organism 2. Classical genetics. 2.1 Patterns of inheritance (laws of Mendel). 2.2 Chromosomal basis of heredity. 2.3 Extensions of Mendelian heredity (incomplete dominance, codominance, lethal alleles, multiple alleles, gene interactions). 2.4 Gene linkage and genetic mapping 3. Overview of genomics 4. Population genetics. 3.1 Hardy-Weinberg equilibrium. 3.2 Variations in populations. Method Theoretical classes and exercises. Debate on a selected topic linking genetics and society.
Other infos	Pre-requisite : cell biology class. Thorough knowledge of the mother language, rigor, ability to observe, analyse, synthesise, curiosity, imagination, motivation. Written support : books, overhead transparencies, portfolio of reading material.
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 LANG1861	
Minor in Biology	MINBIOL	2		
Minor in Scientific Culture	MINCULTS	2		