UCLouvain

lbio1311

2026

Microbiology and virology

4.00 credits	40.0 h + 15.0 h	Q1

Teacher(s)	Desguin Benoît ;Michiels Thomas ;
Language :	French
Place of the course	Louvain-la-Neuve
Prerequisites	Chemistry, Biochemistry (metabolic pathways, acid-base reactions, oxidation-reduction reactions) Biology (constituents of living matter, mechanisms of replication, transcription and translation of DNA, synthesis and addressing of proteins) Notions of immunology (elementary mechanisms of the immune reaction, nature and production of antibodies) Knowledge and skills developed in the courses LCHM1271A (Elements of biochemistry) and LBIO1223 (Molecular biology)
Main themes	The course is divided into two main sections corresponding to the type of microorganism studied. The Bacteriology part includes: the historical accounts of microbiology, the bacterial structure, physiology and metabolism, the diversity and classification of bacteria, the various ways to control microorganisms, microbial ecology, food and industrial microbiology and finally an introduction to descriptive epidemiology. In the Virology part, the following notions are explained and illustrated: structure of viruses and viral cycles, classification, interaction between host and virus (cellular transformation, latency, antigenic variation, cancer, oncogenes, HIV), use and manipulation of viruses, antiviral vaccination and antiviral agents, virus of plants, prions and non conventional viruses.
Learning outcomes	**At the end of this learning unit, the student is able to :** 1 The main objectives of the Microbiology course is to establish the basic knowledge on microbes, mostly bacteria and viruses, and their relationships with other organisms, mainly plants and animals. Also included are the biochemical and molecular techniques and strategies used to study, but also to control, these microorganisms.
Faculty or entity in charge	BIOL

Programmes containing this learning unit (UE)

Program title	Acronym	Credits	Prerequisite	Learning outcomes
Bachelor in Veterinary Medicine	VETE1BA	5		🔍
Bachelor in Biology	BIOL1BA	4		🔍
Minor in Biology	MINBIOL	4		🔍
Bachelor in Biology, Anthropology and Archaeology	BABA1BA	4		🔍