



## BIOL2131 Microbiology

[50h+15h exercises] 8.5 credits

This course is taught in the 1st semester

**Teacher(s):** Claude Bragard, Jacques Mahillon  
**Language:** French  
**Level:** Second cycle

### Aims

Establish the basis of our knowledge on viruses and bacterias and their relations with other organisms, in particular with animals and plants. Grasp the useful techniques to study these micro-organisms and the fight against their negative effects.

### Main themes

Bacteriology I: historical, bacteria structure, physiology and metabolism, diversity and classification of bacterias, microbial genetics, genetic engineering and biotechnology, animal-bacteria relations, microorganism control, microbial ecology, food and industrial microbiology.

Bacteriology II: Epidemiology (descriptive and analytical)

Bacteriology III: general characteristics of viruses, virus-plant and bacteria-plant relations, vaccination.

Virology : virus structure and viral cycle, classification, virus-host interactions (cellular transformation, latency, antigenic variation, cancer, oncogenes, HIV), manipulation and use of viruses, antiviral vaccination and antiviral agents, virus of Pray plants and non-conventional viruses.

### Other information (prerequisite, evaluation (assessment methods), course materials recommended readings, ...)

Prerequisites: general biology, biochemistry, introduction to molecular genetics.

Evaluation: oral examination preceded by written preparation containing three questions: one on a specific theoretical point, one reflection question aiming to integrate the different parts of the matter and, one question to summarize different theoretical subjects. Students choose between written or oral examination. The main question (reflection question) concerns usually a virus, which was not studied during the course.

Support: "Microbiology" by Prescott L.M. et al. 1999; "Brock biology of microorganisms" by Madigan et al. 2000;

"Introduction to microbiology" by Ingraham J.L. and Ingraham C.A. 1995. Overall information (course plan, reference books, practical works organization, interesting web sites, student works...) are available on-line

(<http://www.biol.ucl.ac.be/VeteUCL/BIOL2131/BIOL2131.html> and <http://didactique.sc.ucl.ac.be/ABCV>). Syllabus and overhead transparencies.

### Programmes in which this activity is taught

**VETE1** Candidature en médecine vétérinaire