UCL Faculté d'ingénierie biologique, agronomique et environnementale

AGRO

BIR1323 Microbiologie

[30h+15h exercises] 3.5 credits

This course is taught in the 2nd semester

Teacher(s): Jacques Mahillon
Language: french
Level: 1st cycle course

Aims

1. Acquisition of basic knowledge and main concepts in General Microbiology.
2. Practical exercices of the main techniques related to the study and control of microoganisms.

Main themes

The main themes of this course are:
Part 1: Structure/activity relationships of prokaryotic microorganisms, growth and control of microbial populations, metabolic specificity of microbes in relation to ATP production.
Part 2: Microbial genetics, horizontal DNA transfer and genetic recombination processes, plasmids, viruses and bacteriophages, recombinant DNA technology and microbial taxonomy.
Part 3: Eukaryotic microorganisms (fungi), commensal and symbiotic relationships, pathogenicity, control and prevention (vaccines) of microbial diseases.
Part 4: Use of microorganisms in the agro-food/feed and industrial sectors.

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

Precursory courses : Biologie générale, Eléments de Biochimie, Introduction à la Génétique.
Evaluation : Besides the periodic evaluations mentioned earlier, there is a written or oral examination with 3 to 5 questions which combine knowledge of, integration of and reflection on the different parts of the course.

Other credits in programs

BIR21/A	Première année du programme conduisant au grade de bio-ingénieur (Agronomie)	(3.5 credits)	Mandatory
BIR21/C	Première année du programme conduisant au grade de bio-ingénieur (Chimie)	(3.5 credits)	Mandatory
BIR21/E	Première année du programme conduisant au grade de bio-ingénieur (Environnement)	(3.5 credits)	Mandatory
INCH23	Troisième année du programme conduisant au grade d'ingénieur civil chimiste	(3.5 credits)	