



BIOL2211 Microbial genetics

[30h+15h exercises] 3.5 credits

This course is taught in the 2nd semester

Teacher(s): Anne-Marie Corbisier, Bernard Hallet
Language: English
Level: Second cycle

Aims

The objective of this course is to introduce the students to the diversity and mostly the flexibility of genetic systems encountered in microorganisms, whether bacteria or eucaryotes (filamentous fungus or yeast). We go into detail on the different types of organization of genetic information, the modes of genetic regulation (replication and expression), the variations (mutations and rearrangements), reparations and transfers, mostly detailed on bacteria. The genetic systems of inferior eucaryotes presented in depth are nuclear or Mendel heredity and cytoplasmic or non-Mendel heredity.

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

Prerequisites: biochemistry, genetics.

Evaluation: JM- Oral examination preceded by written preparation. Choice between 2 questions. The aim is to illustrate the diversity of systems encountered. AMC- Article preparation by using genetic tools presented during the course, in the frame of fundamental and applied research. Students may, nevertheless, be questioned on theoretical subjects.

Support: reference book: Prokaryotic genetic, Joset & Guespin Michel 1994 (JM) and Génétique microbienne, Giraud 1993 (AMC). This last book will probably change since it does not present genetic concepts from experimental examples.

Programmes in which this activity is taught

BRAS3DS	Diplôme d'études spécialisées en brasserie
SBIM3DS/TA	Diplôme d'études spécialisées en sciences biomédicales (Toxicologie analytique)
SBIM3DS/TC	Diplôme d'études spécialisées en sciences biomédicales (Toxicologie clinique)
SBIM3DS/TE	Diplôme d'études spécialisées en sciences biomédicales (toxicologie expérimentale)

Other credits in programs

BIOL22/A	Deuxième licence en sciences biologiques (Biologie moléculaire, cellulaire et humaine)
CHIM22	Deuxième licence en sciences chimiques