

Faculty of Medicine



MD1005

Biologie générale

[65h+25h exercises] 9 credits

Teacher(s): Jean Baptiste Demoulin, Marie-Christine Many, Philippe van den Bosch Sanchez de Aguilar
Language: French
Level: First cycle

Aims

After this course, students should understand the basis of life on Earth and be able to answer the following key questions : what are living organisms, what do they have in common, and what differentiates them. These lectures constitute a framework that will be developed in more detailed courses in the following years, with a special focus on cellular and molecular biology, Mendelian genetics and evolution from bacteria to modern Man. Those aims try to develop qualities of intellectual curiosity, observation, reasoning, synthesis, scientific rigour, oral, written and iconographic expression, and finally of self-learning, stimulating the consultation of books, scientific reviewz, and informatics materials (CD-Rom, websites)

Main themes

In a first of the course, the cell is studied by closely associating morphology and function. The diversity and evolution of the living is first tackled by the study of meiosis, fertilization and Mendelian genetics. The study of animal evolution from the first animals to modern Man is based on arguments of anatomy and compared embryology illustrating the principle "ontogeny recapitulates phylogeny".

Content and teaching methods

Contents :

Introduction : principles of organization of the biosphere

Chapter 1 : The chemistry of life

Chapter 2 : The cell

Chapter 3 : Reproduction and genetics

Chapter 4 : Evolution

Chapter 5 : Biological diversity through evolution

Chapter 6 : Scientific ecology

Methods :

The course includes lectures during which the diagrams will be drawn together with the students. During practical works, the students will see on screen everything they were taught in theoretical courses : slides and films' showings and examination of histological cuts. Additional support (slideshows, exercices, forum) is available on a iCampus website.

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

Prerequisite : French language knowledge, qualities of observation, of intellectual curiosity, of reasoning, of synthesis.

Assesment : Writtent exam.

Materials : The course materials consist in written notes with which the students will have to add the diagrams drawn during the class. Slideshows are available online. Different references are recommended to the students for further information.

Supervision : The supervision of practical courses is organized by work managers and assistants. Tests are carried out and corrected each week.

Other credits in programs

DENT11BA	Première année de bachelier en sciences dentaires	(9 credits)	Mandatory
MED11BA	Première année de bachelier en médecine	(9 credits)	Mandatory
MED12BA	Deuxième année de bachelier en médecine	(9 credits)	Mandatory