

## Biologie des organismes et du développement (Module II)

### Lecturer

Laurence LADRIERE (Coordinator)

### Course mnemonic

BIOL-G1103

### ECTS credits

10 credits

### Language(s) of instruction

French

### Course period

First and second terms

## Course content

### Theory Part

- > Part I : Unicity of alive world, basic macromolecules, life origin, cells discovery
- > Part II : Cellular biology :
  - A. Prokaryotes study (classification, structure, proteins synthesis, genetic of Prokaryotes)
  - B. Viruses study (classification, structure, infection cycle)
  - C. Eucaryotes study (classification, structure and cell function, structure and organelles function)
- > Part III : Genetics of Mendel and biotechnology
- > Part IV : Evolution (Genetics of populations, Evolution proofs)
- > Part V : Diversity of alive world
  - A. Vegetal biology
  - B. Fungus
  - C. Protists
  - D. Invertebrates
  - E. Chordates (classification, embryology, compared anatomophysiology)
- > Part VI - Compared anatomo-physio-Part VII - Embryology

## Objectives (and/or specific learning outcomes)

- > To sensibilize to fundamental unicity of living organisms and commune characteristics of human beings
- > To sensibilize to diversity of living organisms
- > To use basic notions about cellular structure and functions to understand the organisation of more complex organisms

## Pre-requisites and co-requisites

### Courses having this one as pre-requisit

BIOL-G2203 | Biologie moléculaire de la cellule, Biologie cellulaire 1 | 5 crédits and MEDI-G2211 | Physiologie générale | 10 crédits

### Courses having this one as co-requisit

BIOL-G2202 | Biologie moléculaire de la cellule | 5 crédits, BMOL-G2205 | Immunologie et microbiologie 1 | 5 crédits and VETE-G2208 | Histo-physiologie générale | 5 crédits

## Teaching method and learning activities

### -Academic Courses :

×Oral taught (illustrated with Power Point slides, vidéo)

Slides accessible with password online on Web CT [www.uv.ulb.ac.be](http://www.uv.ulb.ac.be) [<http://www.uv.ulb.ac.be/>] (Web CT) and in syllabus

×Genetics exercises : implementation of basic concepts of Prokaryotes, Mendel and populations Genetics

×Seminars/conferences : taught by scientific and medical personalities, to implement theory concepts to concrete professional situations

### -Guidance :

Framed hotlines by an biology assistant (twice per week) to ask questions about the course, to summarize and to prepare the final evaluation. Hotlines on Web CT (askings, forum, exercises, evaluations) – New interactif internet site for Multiple choice.

### -Tutoring :

Framed hotlines by a senior student (once per week) : summarize, revision, askings

### -Practical courses :

Initiation to the practice (dissections, microscope/ stéréomicroscope).

Course taught in french.

## Contribution to the teaching profile

- > To initiate of life sciences
- > To introduce fundamental biological concepts
- > To develop skills, observation, critical mind and scientific rigor.

## References, bibliography and recommended reading

### - Biologie

*Raven*, Editions De Boeck Université ; 7<sup>ème</sup> édition

### - Biologie

*Campbell*, Pearson Education ; 9<sup>ème</sup> édition

- Biologie animale. Invertébrés

*J. Maissiat et al*; Editions Dunod  
 - Biologie animale. Vertébrés  
*J-L. Picaud et al*; Editions Dunod  
 - Biologie générale  
*Van Gansen P, Alexandra P* – 4<sup>e</sup> édition Dunod  
 - Dico de Bio  
*Romarc Foret*, Editions De Boeck Université  
 -Mini manuel de Biologie animale.  
*A-M. Bautz et al*; Editions Dunod  
 - Dictionnaire de Biologie  
*J. Berthet*; Editions De Boeck Université  
 - Biologie moléculaire de la cellule  
*Alberts et al*, 4<sup>ème</sup> édition, Médecine-Sciences Flammarion  
 - Biologie et Physiologie animales  
*A Beaumont, P Cassier, JP Truchot*, Ed Dunod  
 - Evolution biologique  
*M Ridley*, Ed De Boeck  
 - Physiologie humaine.  
*L. Sherwood* - Editions De Boeck Université

## Other information

### Contact(s)

Laurence Ladrière – Faculté de Médecine – Campus Erasme  
 – Laboratoire d’Enseignement de la Biologie – CP 609/01 –  
 Bâtiment GE – Niv 3 – Local G2.3.208 – Tél. +32-2-5556787 –  
 laurence.ladriere@ulb.ac.be

## Evaluation method(s)

Other

### Evaluation method(s) (additional information)

- Theory: written assessment by multiple choice questionnaires (50%) and open questions (50%), organized in the month

of January (matter Q1) and June (remedial matter Q1, and matter Q2). *Possibly, oral examinations in the first and second examination sessions are organized according to the regulation under (see rules Jury BA1).*

- Practical course: continuous assessment throughout the year (50% points), oral assessment (dissection, report, observations, oral questions) in Mai-June covering all of the matter (50% points).

An evaluation of second session (remedial Aug.-Sept) will be held for students with a final grade of TP 10.

## Determination of the mark (including the weighting of partial marks)

Detailed Assessment : Q1=BIOLG1102 (Matter Part) et Q2=BIOLG1103 (Matter and Practical Part)

- <sup>1</sup> *Academic Course* : written exam (50% multiple choice questions and 50% open questions) in January (Matter Q1) and in June ( remedial matter Q1, and matter Q2); 1 written exam in August (Q1, Q2).
- <sup>1</sup> *Practical course* : annual evaluation (50% points) and final oral evaluation (dissection, report, observations, oral questions) in Mai-June (50% points). If the final grade of Practical Part 10.

### <sup>1</sup> Final grade of Teaching Unity 'Biology' :

- Grade BIOLG1102 = Grade Q1 (Matter Part)
- Grade BIOLG1103 = If one note is

## Main language(s) of evaluation

French

## Programmes

### Programmes proposing this course at the faculty of Medicine

BA-BIME | Bachelor in Biomedical sciences | unit 1 and BA-VETE | Bachelor in Veterinary Medicine | unit 1