#### Lecturer

Bruno ANDRE (Coordinator)

Course mnemonic BIOL-F302

**ECTS credits** 5 credits

Language(s) of instruction French

**Course period** First term

### Course content

Structure of nucleic acids - Organisation and evolution of genes and genomes - Mobile genetic elements (plasmids, viruses, transposons) - The question of the origins of life - Mutations, DNA repair and DNA recombination - Principles of meiotic gene transmission - Principles of genetic mapping and their applications in association studies - Principles of genetic dissection applied to model organisms (yeast, nematod, fish) and gene cloning techniques

# Objectives (and/or specific learning outcomes)

To transmit the main concepts of modern genetics and to allow the student to understand the current goals, progress, and applications of this main disciplione of biology

## Pre-requisits and co-requisits

#### Pre-requisites courses

BIOL-F204 | Microbiologie moléculaire et cellulaire | 5 crédits

### Co-requisites courses

BIOL-F208 | Biochimie et physiologie de la cellule | 5 crédits

## Teaching method and learning activities

3 ECTS (lectures : 2, exercices: 1, practical work: 0, personnal work: 0)

## References, bibliography and recommended reading

Slides presented during lectures are provided by the teacher via internet - Key references of articles in journals like "Trends in...", " Nature Reviews in...", " Annual Reviews in ...", .. also transmitted by the teacher - Books: "Molecular Biology of the Gene" - J. Watson, T. Baker, S. Bell., A. Gann, M. Levine, R. Losick (Pearson Benjamin Cummings, CSHL, 5th edition, 2004); "iGenetics, a molecular approach" - P.J. Russel (Pearson Benjamin Cummings, 2006).

## Other information

### Contact(s)

Email: bran@ulb.ac.be Office: AE4.110 (Campus of Gosselies). Postal address: 300

## Evaluation method(s)

Other

### Programmes

## Programmes proposing this course at the faculty of Sciences

BA-BIOL | Bachelor in Biology | option Bruxelles/unit 3