Introduction to Life Sciences (C003390)

Valid as from the academic year 2020-2021

Course Specifications

Due to Covid 19, the education and evaluation methods may vary from the information displayed in the schedules and course details. Any changes will be communicated on Ufora.

Course offerings and teaching methods in academic year 2020-2021

A (semester 2) Dutch Gent online lecture 0.0 h
lecture 40.0 h

Lecturers in academic year 2020-2021

Vandenabeele, Peter WE14 lecturer-in-charge
Declercq, Wim WE14 co-lecturer

Offered in the following programmes in 2020-2021 crdts offering
Bachelor of Science in Biochemistry and Biotechnology 5 A
Bachelor of Science in Mathematics 6 A

Teaching languages

Dutch

Keywords

Life, origin, evolution, cell biology, molecular biology, biochemistry, biotechnology, introduction to

Position of the course

The course aims at introducing crucial concepts and insights in the origin and evolution of life on earth, the organisation of life, the building blocks of life, the energy conversions in life, inheritance and expression of genes. The course is situated at the interface between molecular biology, genetics, biochemistry, microbiology and cell biology. At the start of studies in Biochemistry and Biotechnology a number of crucial topics are raised that form a guideline and permanent background for the further bachelor educational program. What is life? (reproduction, metabolism, evolution) How have molecules of life evolved and became organised in higher and more complex molecular structures? How have cells originated and how did they evolve to pluricellular forms of life. How did insights in the fundamental molecular processes of life give rise to techniques and approaches in biotechnology? The unifying, evolutionary, biochemical, genetic, cell biological concepts of life should trigger the student to acquire an overview and insights in the basics of a complex phenomenon such as “life”.

Contents


Initial competences

Secondary education.

Final competences

Insights and knowledge of concepts of the evolution of life, insights and knowledge of concepts in the coherence between biochemistry, molecular biology, genetics and cell biology; insight how this knowledge gave rise to biotechnology applications.
Conditions for credit contract
  Access to this course unit via a credit contract is determined after successful competences assessment

Conditions for exam contract
  This course unit cannot be taken via an exam contract

Teaching methods
  Guided self-study, lecture, online lecture

Learning materials and price
  Syllabus; PowerPoint schemes; texts are available that try to put the learning subjects of the studies in Biochemistry and Biotechnology in a broader context (research, ethical and society issues, biomedical applications, genomic and postgenomic framework). These texts are not learning materials but aims at reflection about the study subjects in the further education program. 20 EUR

References

Course content-related study coaching
  Powerpoint presentations are available; questioning and discussion are encouraged; the studying of the course is guided by means of a list of actual questions on the syllabus; multiple choice questions are available to evaluate the processing of the course content.

Evaluation methods
  end-of-term evaluation and continuous assessment

Examination methods in case of periodic evaluation during the first examination period
  Written examination with open questions

Examination methods in case of periodic evaluation during the second examination period
  Written examination with open questions

Examination methods in case of permanent evaluation
  Participation
  Possibilities of retake in case of permanent evaluation
    examination during the second examination period is not possible

Extra information on the examination methods
  Written exam (general questions, multiple choice).

Calculation of the examination mark