

## Introduction to Bioinformatics (C001479)

**Course size** *(nominal values; actual values may depend on programme)*

**Credits 6.0**

**Study time 165 h**

**Course offerings and teaching methods in academic year 2024-2025**

A (semester 2)

Dutch

Gent

lecture

**Lecturers in academic year 2024-2025**

Marchal, Kathleen

WE09

lecturer-in-charge

Miclotte, Giles

WE09

co-lecturer

**Offered in the following programmes in 2024-2025**

[Bachelor of Science in Mathematics](#)

**crdts**

6

**offering**

A

**Teaching languages**

Dutch

**Keywords**

Biological databases, sequence alignment, homology, motif detection.

**Position of the course**

"Introduction to bioinformatics" aims to teach students the basic computational methodologies for processing molecular biological data, in particular nucleic acid and protein sequences.

Students learn the importance of bioinformatics in biological sciences.

**Contents**

see C003713

**Initial competences**

Basic knowledge of mathematics.

**Final competences**

- 1 Value bioinformatics in molecular biology.
- 2 Gain insight in the complexity of biological data in online biological databases.
- 3 See through computational methods for biological sequence data.
- 4 Independently apply computational methods for biological analysis of sequence data.
- 5 Critically assess computational results.
- 6 Put computational results in their biological context.

**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**

Seminar, Lecture, Independent work

**Extra information on the teaching methods**

Guided exercise sessions

Participation to discussion forum

Self study

## **Study material**

Type: Slides

Name: NA

Indicative price: Free or paid by faculty

Optional: no

Number of Slides : 100

Available on Ufora : Yes

Online Available : Yes

Available in the Library : No

Available through Student Association : No

## **References**

### **Course content-related study coaching**

#### **Assessment moments**

end-of-term and continuous assessment

#### **Examination methods in case of periodic assessment during the first examination period**

Written assessment with open-ended questions

#### **Examination methods in case of periodic assessment during the second examination period**

Written assessment with open-ended questions

#### **Examination methods in case of permanent assessment**

Participation

#### **Possibilities of retake in case of permanent assessment**

examination during the second examination period is not possible

#### **Extra information on the examination methods**

Written examination with open questions: theory and exercises.

Closed book unless the exam takes place online

#### **Calculation of the examination mark**

The written closed book examination for 17/20; participation to the discussion forum/quizzes 3/20

In principle the use of generative AI during the exam is forbidden. However because it is impossible to check this, answers that are correct but do not use any concepts or terminology of the course will be judged anyhow incorrect. This will be told in advance to the students. The link in the answer to the lecture should be clear. If the students wishes to add more information than was told in the course, the source of the information should be mentioned.

see C004092

#### **Facilities for Working Students**

see C004092