



UNIVERSITY  
OF SKÖVDE

## COURSE SYLLABUS

# Bioinformatic Analysis with Python 1 G1N

7.5 credits

**Course code:** BI121G

**Version number:** 7

**Valid from:** 1 July 2023

**Ratified by:** Curriculum Committee for Bioscience

**Date of ratification:** 30 March 2023

## 1. General information about the course

The course is provided by the University of Skövde and is named Bioinformatic Analysis with Python 1 G1N (Bioinformatisk analys med Python 1 G1N). It comprises 7.5 credits and is a first-cycle course. The level of progression is G1N.

The course is a part of the main field of study in Bioinformatics. The disciplinary domain of the course is Natural Sciences.

## 2. Entry requirements

General entry requirements.

Additional requirements: Mathematics 2a or 2b or 2c and Biology 1 (or the equivalent).

## 3. Course content

The course provides knowledge about procedural programming in the programming language Python, with the aim of solving simpler bioinformatic problems. The course contains both theoretical and practical background knowledge for procedural programming in the language Python. Covered theory and practice is concretized with a number of exercises and assignments.

## 4. Objectives

After completed course the student should be able to:

- describe the basic principles of procedural programming,
- describe and use basic syntax for the programming language Python,
- in a structured way analyze and break down simpler problems into smaller sub-problems, as a basis for implementing functions in Python,
- based on a general description of a bioinformatic problem, create a program in Python that solves the problem,
- give examples of bioinformatic analyzes that can be performed with programs developed in Python.

## 5. Examination

The course is graded A (Excellent), B (Very good), C (Good), D (Satisfactory), E (Sufficient) or F (Fail).

The final grade of the course is determined by the weighted average from the grades for the three

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written assignments; A=5, B=, C=3, D=2 and E=1. The average value is rounded to the nearest integer (half rounded up) and translated into a final grade according to 5=A, 4=B, 3=C, 2=D and 1=E.

The examinations of the course consist of the following modes of assessment:

- **Written assignment 1**  
1.5 credits, grades: A/B/C/D/E/F
- **Written assignment 2**  
3 credits, grades: A/B/C/D/E/F
- **Written assignment 3**  
3 credits, grades: A/B/C/D/E/F

Students with a permanent disability who have been approved for directed educational support may be offered adapted or alternative modes of assessment.

## **6. Types of instruction and language of instruction**

The teaching is comprised of lectures, supervision, exercises, supervision, exercises and lectures.

The teaching is conducted in English.

## **7. Course literature and other educational materials**

Articles and compendium material will be provided by the course coordinator.

## **8. Student influence**

Student influence in the course is ensured by means of course evaluation. The students are informed about the results of the evaluation and potential measures that have been taken or are planned, based on the course evaluation.

## **9. Additional information**

Further information about the course, as well as national and local governing documents for higher education, is available on the website of the University of Skövde.