UNIVERSITY OF SKÖVDE

TRANSLATION FROM SWEDISH

COURSE SYLLABUS

Introduction to Computational Tools for Bioinformatics G1N

6.5 credits

Course code: BI122G
Version number: 7
Valid from: 1 July 2026
Ratified by: Curriculum Committee for Bioscience
Date of ratification: 25 September 2025

1. General information about the course

The course is provided by the University of Skövde and is named Introduction to Computational Tools for Bioinformatics G1N (Introduktion till datorverktyg för bioinformatik G1N). It comprises 6.5 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: Science studies 2, Mathematics 3b or Mathematics 3c or Mathematics C, English 6
Or:
Science studies level 2, Mathematics Further level 1b or level 1c, English level 2 (or the equivalent).

The level of English proficiency is normally shown by an internationally recognized test, e.g. IELTS or TOEFL.

3. Course content

The course gives an overview of the basic properties of computer systems, with a focus on UNIX/Linux, an introduction to the usage of the Excel and Word software and introduction to the University's library resources. The teaching includes practical exercises in using command shells and text editors in UNIX/Linux, analyzing and reporting data in Excel, using Word for report writing, using the library resources to find relevant literature references, and using citation tools.

4. Objectives

After completed course the student should be able to:

- describe and use basic computer tools, such as operating systems, command shells, file types and text editors,
- explain general propertis of UNIX/Linux, including the file system and which commands can be used in a command shell,
- use a UNIX/Linux command shell to manipulate files and create scripts that combine commands,
- use spreadsheet software to report data in tables and charts, perform calculations, and use the software's built-in functions to perform statistical tests,
- use word processing software for report writing, including how to effectively use formating, spelling- and grammar check, commenting and change tracking, and
- use software to prepare presentations, including how to manage formats, insert figures and tables, as well as design layout.

5. Examination

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

A final grade of the course is only issued when all the examination parts have been passed and is determined by a weighted average of the grades for the three written assignments. The average value is rounded to the nearest integer (half rounded up) and translated into a final grade of the course.

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

- **Written assignment 1**
  1 credit, grades: A/B/C/D/E/F
- **Written assignment 2**
  1.5 credits, grades: A/B/C/D/E/F
- **Written assignment 3**
  3 credits, grades: A/B/C/D/E/F
- **Oral presentation**
  1 credit, grades: G/U

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

6. Types of instruction and language of instruction

The teaching is comprised of laboratory sessions, supervision, lectures and presentations.

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

The content of the course corresponds completely or partially with the following course(s) and cannot be included in the required credits of a degree qualification:

- BI120G - Introduction to Computational Tools for Bioinformatics G1N 7.5 credits

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.