UNIVERSITY OF SKÖVDE

TRANSLATION FROM SWEDISH

COURSE SYLLABUS

Programming Project in Bioinformatics G2F

7.5 credits

Course code: BI507G
Version number: 1
Valid from: 1 July 2026
Ratified by: Curriculum Committee for Bioscience
Date of ratification: 14 August 2025

1. General information about the course

The course is provided by the University of Skövde and is named Programming Project in Bioinformatics G2F (Programmeringsprojekt i bioinformatik G2F). It comprises 7.5 credits and is a first-cycle course. The level of progression is G2F.

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

The course has the following prerequisites: passed course BI119G Introduction to Bioinformatics G1N, passed course BI121G Bioinformatics Analysis with Python 1 G1N.

Additional requirements: attended BI319G Expression analysis with R G1F with passed grade on Written assignment 1 and passed grade on Seminar or passed grade on Written assignment 2 (or the equivalent).

Since the level of progression of the course is G2F the prerequisites are at least 60 credits in one or both of the subjects bioinformatics and bioscience, where the courses above are included.

3. Course content

The course aims to provide students with practical experience in working on a bioinformatics analysis problem in the form of a project. Students independently plan, execute, and evaluate a project where they apply their knowledge in programming and bioinformatics. The work is carried out in a structured manner, focusing on developing and implementing a solution based on a given problem description. Throughout the process, good programming practices and clear documentation are emphasized. Students practice both oral and written communication by presenting and discussing their work. The course concludes with a final presentation in which the solution is summarized and explained in detail.

4. Objectives

After completed course the student should be able to:

- independently plan, implement, evaluate and present a programming project,
- based on the description of a bioinformatic analysis problem, in a structured way develop an algorithmic solution,
- apply programming skills to implement a solution to a relevant bioinformatics analysis problem,
- apply principles of good programming practice when developing software,
- describe, summarize and explain the solution to an implementation problem orally and in written form.

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 the grade for Programming assignment.

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

- **Programming assignment**
  6.5 credits, grades: A/B/C/D/E/F (determines the final grade)
- **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 lectures, seminars and supervision.

The teaching is conducted in English.

7. Course literature and other educational materials

Scientific papers and web materials. Specific list of literature provided by the teacher.

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.