UNIVERSITY OF SKÖVDE

TRANSLATION FROM SWEDISH

COURSE SYLLABUS

Microbial Bioinformatics G1N

7.5 credits

Course code: BV124G
Version number: 1
Valid from: 1 January 2027
Ratified by: Curriculum Committee for Bioscience
Date of ratification: 11 June 2026

1. General information about the course

The course is provided by the University of Skövde and is named Microbial Bioinformatics G1N (Mikrobiologisk bioinformatik 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 Bioscience. It can also be 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 reviews the structure, metabolism, evolution and systematics of different microorganisms, as well as microbial growth and growth control. Bioinformatical and experimental methods of basic microbial genomics, species identification and to determine relationships of different microorganisms are also part of the course.

4. Objectives

After completed the course the student should be able to:

- describe different microorganisms, their structure and function as well as metabolism,
- describe microbial growth, microbial applications and growth-control,
- describe microbial evolution, -systematics, -genomics as well as methods for microbial analyses,
- describe, carry out and interpret results from experimental and bioinformatical analyses to determine microbial species and study relationships between such, and
- discuss and argue on how experimental- and bioinformatical data can be used in an ethical- and unethical way in the society.

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 examination parts On-campus supervised written examination and Individual assignments. The average value is rounded to the nearest integer (half rounded up) and translated into a final grade of the course.

The examination Laboratory assignments involves a dugga. The purpose of the dugga is to ensure that the student has the required knowledge regarding safety surrounding the laboratory work. The dugga also secures that the student can perform the laboration in a professional manner.

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

- **On-campus supervised written examination**
  4 credits, grades: A/B/C/D/E/F
- **Laboratory assignments**[1]
  1.5 credits, grades: G/U
- **Individual assignments**
  1.5 credits, grades: A/B/C/D/E/F
- **Seminar assignments**
  0.5 credit, grades: G/U

[1] The laboration is mandatory.

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, laboratory sessions and seminars.

Depending on the study period, the language of instruction may be Swedish or English. Even if the teaching is conducted in Swedish, some English may still occur.

7. Course literature and other educational materials

Madigan, M. et al. (2018). *Brock biology of microorganisms* (15th ed.). Pearson Education. ISBN 9781292235103. The latest edition of the course literature should be used.

Scientific articles and protocols.

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:

- BV115G - Microbial 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.