UNIVERSITY OF SKÖVDE

TRANSLATION FROM SWEDISH

COURSE SYLLABUS

Molecular Biotechnology A1N

7.5 credits

Course code: BV703A
Version number: 8
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 Molecular Biotechnology A1N (Molekylär bioteknik A1N). It comprises 7.5 credits and is a second-cycle course. The level of progression is A1N.

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

2. Entry requirements

The prerequisites for this course are 150 higher education credits passed, of which at least 90 higher education credits must be courses within biology or medicine. Among these higher education credits, at least 15 must be on G2E-level or higher (or the equivalent).

An additional requirement is is proof of skills in English equivalent of studies at upper secondary level in Sweden, known as the Swedish course English 6 or English level 2. This is normally demonstrated by means of an internationally recognized test, e.g. IELTS or TOEFL or the equivalent.

3. Course content

The course consists of the theory behind modern molecular biotechnology. The course also contains an individual project where the student will solve a biotechnological problem in an independent and scientific way and present this orally and in writing.

4. Objectives

After completed course the student should be able to:

- in detail describe the fundamentals and applications of modern molecular biotechnological techniques,
- in an individual project use bioinformatic tools and databases to design an engineered protein as well as plan for its mutagenesis, cloning and overexpression,
- in a scientific way present the project orally and in writing,
- critically review scientific texts, and
- be able to discuss the use of gene technology and biotechnology from a scientific and ethical perspective and their impact on our 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 Supervised written examination and Written assignment. 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:

- **Supervised written examination**
  4 credits, grades: A/B/C/D/E/F
- **Written assignment**
  2 credits, grades: A/B/C/D/E/F
- **Oral presentation and opposition**
  0.5 credit, grades: G/U
- **Seminar assignment**
  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 project work, seminars/group discussions and lectures.

The teaching is conducted in English.

7. Course literature and other educational materials

Wink, M. (2011). *An Introduction to Molecular Biotechnology: Fundamentals, Methods and Applications* (2nd edition). Wiley-Blackwell. ISBN 9783527326372.

or Wink, M. *Introduction to Molecular Biotechnology: Fundamentals, Methods and Applications* ISBN 9783527672035 (E-book)

Scientific articles.

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:

- MB721A - Genetic Engineering and Biotechnology A1N 15 credits
- MB711A - Genetic Engeering A1N 7.5 credits
- MB712A - Applied Biotechnology A1N 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.