UNIVERSITY OF SKÖVDE

TRANSLATION FROM SWEDISH

COURSE SYLLABUS

Applied Molecular Ecology A1F

7.5 credits

Course code: BV716A
Version number: 3
Valid from: 1 July 2026
Ratified by: Curriculum Committee for Bioscience
Date of ratification: 23 October 2025

1. General information about the course

The course is provided by the University of Skövde and is named Applied Molecular Ecology A1F (Tillämpad molekylär ekologi A1F). It comprises 7.5 credits and is a second-cycle course. The level of progression is A1F.

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 Systems Biology. The disciplinary domain of the course is Natural Sciences.

2. Entry requirements

The course has the following entry requirements: at least 12.5 passed credits in BV717A Experimental Methods and Design in Bioscience A1N and at least 4.5 passed credits in BV715A Molecular Ecology in Conservation Biology A1N (or the equivalent).

An additional requirement 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 language test, e.g. IELTS or TOEFL or the equivalent.

3. Course content

The course covers advanced ecological, population genetic, evolutionary, and conservation biology issues where molecular methods are particularly appropriate. Through a DNA barcoding laboratory exercise, the student will practice the practical application of one of these methods. The course covers applications within conservation biology, environmental monitoring, evolutionary biology, and ecological risk assessment.

4. Objectives

After completion of the course, the student shall be able to:

- provide an in-depth explanation of theories, applications, and scientific methods in the field of molecular ecology,
- formulate ecological, evolutionary, population genetic, and other biological questions where molecular analyses are particularly suitable,
- independently plan and conduct a project in DNA barcoding, and
- evaluate the results of a barcode analysis, assess the relevance of the results, and present the findings both orally and in writing in a scientific manner.

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.

The laboratory assignment involves a dugga. The purpose of the dugga is to ensure that the student has the required knowledge of the safety procedures surrounding the laboratory work and sufficient theoretical knowledge to perform the laboratory tasks professionally.

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

- **Supervised written examination**
  3.5 credits, grades: A/B/C/D/E/F (determines the final grade)
- **Written assignment**
  1.5 credits, grades: G/U
- **Laboratory assignment**
  1.5 credits, 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 laboratory sessions, lectures, seminars and presentations.

The teaching is conducted in English.

7. Course literature and other educational materials

Rowe, G., Sweet, M. & Beebee, T. (2017). *An Introduction to Molecular Ecology* (Third edition). Oxford University Press. ISBN 9780198716990.

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

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.