UNIVERSITY OF SKÖVDE

TRANSLATION FROM SWEDISH

COURSE SYLLABUS

Biomedical and Digital Tools A1F

15 credits

Course code: BM709A
Version number: 2
Valid from: 1 January 2026
Ratified by: Curriculum Committee for Health Sciences
Date of ratification: 28 May 2025

1. General information about the course

The course is provided by the University of Skövde and is named Biomedical and Digital Tools A1F (Biomedicinska och digitala verktyg A1F). It comprises 15 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 Biomedicine. The disciplinary domain of the course is Natural Sciences.

2. Entry requirements

The course has the following entry requirements: passed BM706A Laboratory Skills 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.

3. Course content

The course covers digital and biomedical tools and methods for analyzing biomedical research questions and data management. During the course students are trained to independently plan and conduct a biomedical experiment and to analyze and present results from the experiment.

4. Objectives

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

- explain digital tools for handling, analyzing, and visualizing of biomedical data
- apply the use of digital tools for the analysis and visualization of biomedical data
- apply methods and tools for the analysis and management of large-scale biomedical data
- independently plan an experiment and identify relevant biomedical and digital tools to analyze a biomedical research question
- independently conduct an experiment with relevant digital and/or biomedical tools and make a critical and accurate analysis of the obtained results
- present obtained results orally and in writing and summarize current knowledge about a biomedical research question based on guidelines for academic writing

5. Examination

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

The final grade is issued when all course units reach at least grade E/are passed (G).

The grades from the the supervised written examination and the written report are combined equally in the final grade (A=5, ..., E=1), resulting in the following final grade: A 5-4,5; B 4,4-3,5; C 3,4-2,5; D 2,4-1,5 och E 1,4-1.

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

- **Supervised written examination**
  3 credits, grades: A/B/C/D/E/F
- **Seminar assignment 1**
  2 credits, grades: G/U
- **Seminar assignment 2**
  2 credits, grades: G/U
- **Seminar assignment 3**
  2 credits, grades: G/U
- **Laboratory assignments**[1]
  3 credits, grades: G/U
- **Written report**
  3 credits, grades: A/B/C/D/E/F

[1] Examination of the laboratory assignments includes a dugga. The dugga aims to ensure that the student has the necessary knowledge of the safety routines for the laboratory work as well as has sufficient theoretical knowledge to be able to perform laboratory in a professional manner. To be allowed to participate in the laboratory work the student must first pass the dugga.

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, seminars/group discussions and exercises.

The teaching is conducted in English.

7. Course literature and other educational materials

Strachan, T. & Read, A. P. (2018). *Human molecular genetics* (5th ed.). London: Garland Science. ISBN 9780815345893.

Scientific articles and web material will be added.

The latest edition of the course literature shall be used.

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.