



UNIVERSITY
OF SKÖVDE

COURSE SYLLABUS

Bioinformatics - Research Process A1F

7.5 credits

Course code: BI730A

Version number: 9

Valid from: 1 July 2023

Ratified by: Curriculum Committee for Bioscience

Date of ratification: 30 March 2023

1. General information about the course

The course is provided by the University of Skövde and is named Bioinformatics - Research Process A1F (Bioinformatik - forskningsprocessen 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 Bioinformatics. The disciplinary domain of the course is Natural Sciences.

2. Entry requirements

Entry requirements for this course are the following attended courses: BI760A Bioinformatics Concepts and Methods A1N and BI121G Bioinformatic Analysis with Python 1 G1N (or the equivalent).

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

3. Course content

The course covers the research process from hypothesis, through the methodology and analysis to the final result and writing of scientific reports. It discusses the ethical issues and also concerns a gender perspective. The course also deals with literature search and reference management. Training in scientific writing is given. Critical thinking and critical evaluation of scientific texts practiced by article studies and seminars.

4. Objectives

After completed course the students shall be able to:

- in a scientific way present a research proposal orally and as a written report,
- in a detailed way account for what a scientific approach means,
- in a critical and insightful way discuss issues about applying scientific methods,
- in an analytical way account for both within-and extra-scientific ethical issues that arise in the context of bioinformatics research,
- describe the process of scientific publishing, especially in bioinformatics,
- critically examine the contents of bioinformatics research articles, particularly with regard to scientific method,

TRANSLATION FROM SWEDISH

- effectively search and locate scholarly articles on a given bioinformatics research problems,
- critically discuss ethical and gender aspects in bioinformatics research.

5. Examination

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

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

- **Seminars**
3 credits, grades: G/U
- **Research proposal**
4.5 credits, grades: A/B/C/D/E/F (determines the final grade)

Students with a permanent disability who have been approved for directed educational support may be offered adapted or alternative modes of assessment.

6. Types of instruction and language of instruction

The teaching comprises lectures, seminars and exercises.

The teaching is conducted in English.

7. Course literature and other educational materials

Research articles and web based materials.

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.