UNIVERSITY OF SKÖVDE

TRANSLATION FROM SWEDISH

COURSE SYLLABUS

Introduction to Data Science A1N

15 credits

Course code: IT803A
Version number: 3.1
Valid from: 1 July 2026
Ratified by: Curriculum Committee for Informatics
Date of ratification: 5 February 2026

1. General information about the course

The course is provided by the University of Skövde and is named Introduction to Data Science A1N (Introduktion till Data Science A1N). It comprises 15 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 Informatics. The disciplinary domain of the course is Technology.

2. Entry requirements

A Bachelor's degree equivalent to a Swedish kandidatexamen of 180 credits (or the equivalent).

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

3. Course content

The course aims to provide the student with an introduction to Data Science, both in terms of research and application. Initially, the course introduces a holistic view of the area, its interdisciplinary nature and application areas. Further, the course introduces and deepens the student's knowledge of programming for Data Science. The course also focuses on the scope and characteristics of the current research within Data Science and the challenges associated with the field, together with the ethical and societal issues within research and development within the area.

4. Objectives

After completed course the student should be able to:

- extensively describe and problematize the state of the art of the field of Data Science;
- extensively describe, contrast and discuss fundamental application areas for Data Science;
- extensively exemplify and contrast different perspectives on central foundations, principles, methods and theories within the field;
- present and discuss ethical and societal issues in connection to Data Science and its applications;
- account for syntax and semantics for programming languages that are particularly suited for Data Science;
- critically reflect on and describe requirements and issues for programming within the area; and
- independently develop computer programs within the area.

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:

- **Mini Project**
  4.5 credits, grades: G/U
- **Written assignment**
  3 credits, grades: G/U
- **Supervised written examination**
  7.5 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 modes of assessment.

6. Types of instruction and language of instruction

The teaching is comprised of presentations, supervision and lectures.

The teaching is conducted in English.

7. Course literature and other educational materials

Course literature according to teachers' instructions on the learning platform.

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.