UNIVERSITY OF SKÖVDE

TRANSLATION FROM SWEDISH

COURSE SYLLABUS

Advanced AI A1F

7.5 credits

Course code: IT826A
Version number: 1
Valid from: 1 July 2026
Ratified by: Curriculum Committee for Informatics
Date of ratification: 12 June 2025

1. General information about the course

The course is provided by the University of Skövde and is named Advanced AI A1F (Avancerad AI 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 Informatics. The disciplinary domain of the course is Technology.

2. Entry requirements

The course has the following entry requirements: passed IT776A Artificial Intelligence A1N and attended IT803A Introduction to Data Science A1N with a passed grade on the examination 1002 Mini Project, 4.5 credits and a passed grade on the examination 2002 Written assignment, 3 credits.

3. Course content

The course focuses on advanced deep learning techniques and data analysis methods commonly used in Data Science. The student learns to use modern AI tools and frameworks and gains the skills to design network models and perform efficient model training, optimisation, and machine learning for a range of different example problems. The course contains computer assignments that give concrete insights into the use of neural networks. The student executes a limited, full-cycle data analysis and modeling project to apply their knowledge.

4. Objectives

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

- critically evaluate the relevance and application of advanced AI methods,
- in an in-depth manner account for the development of advanced AI methods,
- apply and demonstrate appropriate analysis strategies using advanced AI tools and techniques,
- execute a data analysis project using advanced AI methods as part of a Data Science process, and
- in an in-depth manner account for ethical use of AI to solve complex problems.

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:

- **Individual assignment**
  2 credits, grades: G/U
- **Supervised written examination**
  5.5 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 lectures.

The teaching is conducted in English.

7. Course literature and other educational materials

Course literature according to instructions on the course page 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.