



LL141U Teaching artificial intelligence in upper secondary school: Technical perspectives

7.5 credits

Att undervisa artificiell intelligens på gymnasial nivå – tekniska perspektiv

This is a translation of the Swedish, legally binding, course syllabus.

Establishment

The official course syllabus is valid from the spring semester 2024 in accordance with the decision by the Faculty Board: M-2024-0018. Date of decision: 2024-06-13.

Grading scale

P, F

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

On completion of the course, the student should be able to

1. Describe principles for the development of AI systems
2. Discuss risks and safety aspects of various types of AI systems
3. Use AI tools to design simple models
4. Test AI models and discuss their usability and possibilities
5. On a general level, follow the development within AI
6. Plan and evaluate teaching about the above technical aspects of AI for pupils in the upper secondary school

Course contents

The course is intended to suit teachers who are going to teach artificial intelligence in the upper secondary school. It has therefore both technical and didactic contents. The course brings up, on a general level, central technical principles that form the basis of today's AI systems, for example neural networks, knowledge representations and statistical methods. Furthermore, current AI applications, their possibilities and limitations, are dealt with. A didactic view permeates the course. At the same time as the students learn about AI technology, they work on transforming their newly acquired knowledge to contents suited for the upper secondary school.

Examination

- SEM1 - Seminars and exercises, 3.5 credits, grading scale: P, F
- INL1 - Written assignments, 4.0 credits, grading scale: P, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

If the course is discontinued, students may request to be examined during the following two academic years.

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.