DM2731 AI for Learning 7.5 credits

AI för lärande

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

Establishment

Grading scale

P, F

Education cycle

Second cycle

Main field of study

Computer Science and Engineering

Specific prerequisites

Knowledge and skills in programming, 6 credits, equivalent to completed course DD1310-D1319/DD1321/DD1331/DD1337/DD100N/ID1018.

At least one of the following:
Knowledge in algorithms and data structures, at least
6hp higher education credits, equivalent to completed course
DD1338/DD1320/DD1325/DD1328/DD1338/DD2325/ID1020/ID1021

or

Knowledge in Human-Computer Interaction, 6 higher education credits, equivalent to completed course DH1620/DH1622/DH1624/DH2624.

Language of instruction

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

Intended learning outcomes

After passing the course, the student should be able to:

• account for historical and current perspectives on AI (artificial intelligence) for learning

• explain the theoretical foundations underlying applications of AI and Learning Analytics (LA) in educational and professional learning environments

• plan, design and evaluate AI and LA tools to improve learning experiences

• discuss how AI and LA can contribute to personal and professional development of learning, including strategies for further education and retraining

• critically evaluate the implications of AI and LA developments in educational and professional learning environments

• reason about ethical issues in the application and evaluation of AI systems for learning, with a focus on ensuring responsible and fair outcomes

in order to

• provide students with a broad competence in AI for learning that encompasses theoretical knowledge, practical application, critical thinking and ethical considerations

• prepare for further studies and the labour market.

Course contents

• The historical development of AI-based applications for learning

• The theoretical foundations of AI-based applications for learning

• The practical application of AI-based applications for learning

• Planning, design and evaluation of AI-based applications for learning

• Ethics and privacy related to AI-based applications for learning

Examination

• SEM1 - Seminars, 3.0 credits, grading scale: P, F

• PRO1 - Project Work, 4.5 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.

Other requirements for final grade

At least 75% attendance at seminars is required to pass the final grade of the course.

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.