DD2380 Artificial Intelligence 6.0 credits

Artificiell intelligens

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

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

Establishment

On 04/21/2020, the head of the EECS School has decided to establish this official course syllabus to apply from spring term 2020 (registration number: J-2020-0581.

Grading scale

A, B, C, D, E, FX, F

Education cycle

Second cycle

Main field of study

Computer Science and Engineering

Specific prerequisites

Completed courses in all of the following fields:

- mathematics equivalent SF1546 Numerical methods course and SF1901 Mathematical Statistics
- Programming equivalent DD1337 programming

• algorithms and data structures equivalent DD1338 Algorithms and Data Structures.

Active participation in a course offering where the final examination is not yet reported in LADOK is considered equivalent to completion of the course. This applies only to students who are first-time registered for the prerequisite course offering or have both that and the applied-for course offering in their individual study plan.

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

1. apply different principles of Artificial Intelligence (AI)
2. choose appropriate tools and implement efficient solutions to problems in AI
3. integrate tools to design computer programs that show different properties that are expected by an intelligent system
4. present, analyse, and entitle an own solution to an AI problem
5. reflect on and discuss current social and ethical aspects of AI

in order to be able to

- draw use of methods of artificial intelligence in analysis, design and implementation of computer programs
- contribute to design of an intelligent system in both academic and industrial applications.

Course contents

The following fields are treated within the scope of the course: problem-solving with search algorithms, heuristics, knowledge representations (logic), planning,representation of uncertainty and inference (Bayesian networks, HMM), decision theory and utility theory, diction (NLP).

Examination

- LAB1 - Labs, 4.0 credits, grading scale: P, F
- RAP1 - Report, 0.5 credits, grading scale: P, F
- TEN2 - Written exam, 1.5 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.

Transitional regulations

The earlier course moment TEN1 is replaced by TEN2 and RAP1.

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.