



DD2438 Artificial Intelligence and Multi Agent Systems 15.0 credits

Artificiell intelligens och multiagentsystem

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, Information Technology, Information and Communication Technology

Specific prerequisites

Knowledge in introduction to robotics, 7.5 credits, equivalent to completed course DD2410 or knowledge in artificial intelligence, 1.5 credits, equivalent to completed course or completed exam in DD2380/ID1214.

Intended learning outcomes

After passing the course, the student should be able to

- use a number of important tools and technologies used in artificial intelligence and multi-agent systems
- develop multi-agent systems
- assess the value of, and to a suitable extent utilize, existing solutions as a part of a programming project
- plan and lead the work in a larger project
- present their work and results, both orally and in writing
- write a basic scientific paper in English.

Course contents

The students will in project form design and implement a multi-agent team performing a task. The actual course content can vary based on which solutions the students choose to use.

The following areas will to a smaller or greater extent, dependent on the students' choices, be treated in the course:

- Cooperative path planning
- Cooperative task assignment
- Formation keeping
- Motion coordination

The course will also train the ability to manage, plan and participate in larger projects, assess existing solutions and their possible use, and work with existing code.

Examination

- PRO2 - Software Engineering Project, 4.0 credits, grading scale: P, F
- INL1 - Hand-in Assignment, 3.0 credits, grading scale: P, F
- PRO1 - Software Engineering Project, 4.0 credits, grading scale: P, F
- PRO3 - Software Engineering Project, 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.