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

Course syllabus for DD2438 valid from Spring 2014

Grading scale

P, F

Education cycle

Second cycle

Main field of study

Computer Science and Engineering, Information and Communication Technology, Information Technology

Specific prerequisites

KTH-students:
2D1345/DD1345, Introduction to Computer Science and 2D1240/DN1240, Numerical Methods, Basic Course II or 2D1241/DN1241 Numerical Methods, Basic Course III or equivalent.
2D1363/DD1363, Software Engineering or equivalent is recommended.

Single course students:
90 university credits including 45 university credits in Mathematics or Information Technology. English B, or equivalent.

Language of instruction

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

Intended learning outcomes

After completing the course the students should:

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

Course literature

To be announced at least 4 weeks before course start at course web page.

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.

In this course all the regulations of the code of honor at the School of Computer science and Communication apply, see: http://www.kth.se/csc/student/hederskodex/1.17237?l=en_UK.

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.