

Artificial Intelligence

Single subject and programme course

6 credits

Artificiell intelligens

732A77

Valid from: 2019 Autumn semester

Determined by
Course and Programme Syllabus Board
at the Faculty of Arts and Sciences

Date determined
2019-06-13

Main field of study

Computer Science

Course level

First cycle

Advancement level

A1N

Course offered for

- Masters Programme in Statistics and Machine Learning

Entry requirements

Bachelor's degree equivalent to a Swedish Kandidatexamen within statistics, mathematics, applied mathematics, computer science, engineering or a similar degree. Courses in calculus and linear algebra, statistics and programming are also required.

English corresponding to the level of English in Swedish upper secondary education (English 6/B).

Exemption for Swedish 3

Intended learning outcomes

After completed the course the student should be able to:

- explain and discuss artificial intelligence concepts
- apply artificial intelligence techniques

Course content

The course introduces concepts and applications of artificial intelligence (AI). Focus is on developing intelligent agent systems that can decide what to do and do it. This requires techniques for problem solving, knowledge and reasoning, learning, communication, perceiving and acting. More specifically, the course contains:

- Overview of AI and its applications
- Search as a problem-solving method
- Logic as a means of representing knowledge
- Reasoning with incomplete information; nonmonotonic and probabilistic reasoning
- Structured knowledge representation
- Action planning and robotics
- Strategies for automatic learning
- Orientation in architectures for AI

Teaching and working methods

The teaching consists of lectures and laboratory sessions. In addition, the student should conduct self-study.

Examination

Written reports on the computer assignments. One final written examination. Detailed information about the examination can be found in the course's study guide.

Students failing an exam covering either the entire course or part of the course twice are entitled to have a new examiner appointed for the reexamination.

Students who have passed an examination may not retake it in order to improve their grades.

Grades

ECTS, EC

Other information

Planning and implementation of a course must take its starting point in the wording of the syllabus. The course evaluation included in each course must therefore take up the question how well the course agrees with the syllabus.

The course is carried out in such a way that both men's and women's experience and knowledge is made visible and developed.

Department

Institutionen för datavetenskap