Artificial Intelligence

Single subject and programme course

9 credits

Artificiell intelligens

729G78

Valid from: 2019 Autumn semester

Determined by

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

Date determined

2019-05-07

Main field of study

Cognitive Science

Course level

First cycle

Advancement level

G1N

Course offered for

- Bachelor´s Programme in Cognitive Science

Entry requirements

General requirements for undergraduate studies.
    Mathematics 3b/3cC, Civics 1b (1a1 and 1a2)
or
Mathematics C, Civics A, English B.

Intended learning outcomes

After completing the course the student shall be able to:

- explain the key definitions of artificial intelligence (AI) and the goals associated with them
- explain different approaches and describe central theories in artificial intelligence
- implement simple AI systems such as knowledge representation systems and search systems
- explain and use concepts and models within probabilistic logic and statistically based AI
- account for and be able to use different techniques for machine learning.

Course content

The course covers the following areas:

- problem formulation and state space search
- knowledge representation, especially predicate logic
- planning of action sequences
- probabilistic logic
- bayesian networks
- artificial neural networks
- machine learning.

Teaching and working methods

The teaching consists of lectures, teaching sessions, and computer labs. The laboratory assignments are mandatory. The student is also expected to work with self-study, individually or in groups.

Examination

The course is examined through compulsory laboratory assignments and written examination. Detailed information can be found in the 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

Three-grade scale, U, G, VG

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