



COURSE SYLLABUS

State-of-the-Art in AI Research, 7.5 credits

State-of-the-Art in AI Research, 7,5 högskolepoäng

Course Code: TSAS20	Education Cycle: Second-cycle level
Confirmed by: Dean Mar 1, 2020	Disciplinary domain: Technology
Valid From: Aug 1, 2020	Subject group: DT1
Version: 1	Specialised in: A1F
	Main field of study: Informatics

Intended Learning Outcomes (ILO)

After a successful course, the student shall

Knowledge and understanding

- Display knowledge of novel methods, trends and challenges related to AI and machine learning that are of interest to the research community,
- Demonstrate comprehension of how to apply recent AI and machine learning methods to different kinds of problems and applications

Skills and abilities

- Demonstrate the ability to search for literature outlining the state-of-the-art within AI and machine learning,
- Demonstrate the ability to analyse, present and critically review recent AI scientific work,
- Demonstrate the ability to produce a draft version of a scientific publication,

Judgement and approach

- Demonstrate the ability to critically assess scientific papers in relevant areas of AI.

Contents

The course goes into depth in terms of selected topics and methods within AI, machine learning and their applications. Examples may include areas, such as computational intelligence algorithms in search, optimization and classification, natural language processing and FAT (fairness, accountability, transparency) aspects. Examples of relevant applications could include robotics, music, health and medicine.

Type of instruction

The teaching in the course consists mainly of lectures and discussion seminars. The course content is based on contemporary developments in the AI field and presented by the course manager, members of the Jönköping AI Laboratory research group, invited guest speakers or the participants.

The teaching is conducted in English.

Prerequisites

Passed courses at least 90 credits within the major subject Informatics, and completed course Embedded and Distributed AI, 7,5 credits or equivalent. Proof of English proficiency is required.

Examination and grades

The course is graded 5,4,3 or Fail.

The final grade for the course is based on a balanced set of assessments. The final grade will only be issued after satisfactory completion of all assessments.

Registration of examination:

Name of the Test	Value	Grading
Presentations	2.5 credits	5/4/3/U
Seminars	2.5 credits	5/4/3/U
Draft paper	2.5 credits	5/4/3/U

Other information

The examination consists of one or several presentations by the participants on a relevant state-of-the-art topic within the AI and machine learning domain, active participation in the discussion seminars and the preparation of a draft paper.

Course literature

Literature

The literature list for the course will be provided one month before the course starts.

Compulsory readings may include books, book chapters or journal/magazine/conference articles.