

**SYLLABUS**

# **Master thesis in Artificial Intelligence 30 credits X7013E**

**Examensarbete i artificiell intelligens**

**Course syllabus admitted: Spring 2024 Sp 3 - Present**

**DECISION DATE  
2023-02-15**

# Master thesis in Artificial Intelligence 30 credits X7013E

## Examensarbete i artificiell intelligens

### Second cycle, X7013E

Education level	Grade scale	Subject	Subject group (SCB)
Second cycle	U G#	Datateknik	Computer Technology

## Entry requirements

At least 60 credits completed courses as required for the degree in master's program in Applied AI, TMDIA, at LTU. In addition to the above, the examiner decides whether the proposed degree project is within the subject area and student has the depth of knowledge required.

Good knowledge in English, equivalent to English 6.

## Selection

The selection is based on 30-285 credits

## Course Aim

The overall goal of the course is that the student practices, develops, and is able to apply theory and methods to solve unstructured problems relevant to Applied Artificial Intelligence. This means that on completion of the course the student is able to:

- Formulate a relevant problem for investigation from a chosen subject within the subject area Applied Artificial Intelligence.
- Apply knowledge and proficiency that has been acquired during the period of study to a complex development project or a smaller research project in an independent and systematic manner in the area of Applied Artificial Intelligence.
- Choose and justify the study method for an investigation.
- Analyse and defend the problem formulated in a correct manner with respect to science and engineering, without complete information.
- Locate and critically review information and summarise this in a scientific manner.
- Plan, structure and execute a project within research, development or investigation.
- Judge the scientific and practical relevance of the results obtained.
- Work according to a timetable.
- Express oneself well in writing in a verbally and scientifically correct manner.
- Create and execute a presentation of the results of the project, defending the conclusions.
- Critically review the work of others in a constructive and scientific manner.

## Contents

The content of the degree project is designed in collaboration with the examiner. The degree project always contains a theoretical foundation in the form of a literature survey that highlights the area of technology and the methodology, summarised in a scientific manner.

## Realization

Each course occasion's language and form is stated and appear on the course page on Luleå University of Technology's website.

The work should be carried out independently, but with support from tutoring and seminars. The work should be presented in writing and defended orally at a seminar. Opposition includes presentation of the work being opposed. The thesis is presented and discussed at project seminars.

## Examination

If there is a decision on special educational support, in accordance with the Guideline Student's rights and obligations at Luleå University of Technology, an adapted or alternative form of examination can be provided. The examination includes the following:

- Written report of own work. In the report, the student must demonstrate the ability to:
  - Justify the chosen problem statement.
  - Choose and justify the method for the study.
  - With a clear connection to the chosen theory/method, collect information relevant to the formulation of the problem.
  - Present the collected information in a relevant way in writing.
  - Based on the chosen theory/method correctly analyze and answer the formulated problem.
  - With a critical approach, assess the engineering and scientific relevance of obtained results.
  - Express yourself well in writing in a linguistically and scientifically correct manner.
- Oral presentation and defence of own work.
- Opposition to the work of others.
- Attend presentations of other degree project.

## Unauthorized aids during exams and assessments

If a student, by using unauthorized aids, tries to mislead during an exam or when a study performance is to be assessed, disciplinary measures may be taken. The term "unauthorized aids" refers to aids that the teacher has not previously specified as permissible aids and that may assist in solving the examination task. This means that all aids not specified as permissible are prohibited. The Swedish version has interpretative precedence in the event of a conflict.

## Remarks

The department provides active supervision for two semesters from the start of the course. The degree project is preferably carried out individually and only in exceptional cases with a maximum of two participating students. In cases where the degree project is carried out by two students, this must be reflected in the scope and depth of the report.

## Course offered by

Department of Computer Science, Electrical and Space Engineering

## Modules

Code	Description	Grade scale	Cr	Status	From period	Title
0001	Start of degree project	U G#		Mandatory	S24	
0002	Oral presentation	U G#		Mandatory	S24	
0003	Opposition to other degree work	U G#		Mandatory	S24	
0004	Approved report	U G#	30	Mandatory	S24	Yes

## Study guidance

Study guidance for the course is to be found in our learning platform Canvas before the course starts. Students applying for single subject courses get more information in the Welcome letter. You will find the learning platform via My LTU.

## Syllabus established

by Robert Brännström 2023-02-15