*An up-to-date version of this information during the semester is found on the course home page.*

## **Course Information**

The aim of this course is to give the student the opportunity to:

* apply methods from statistics, machine learning, or data mining in a real setting,
* plan, perform and report on an individual task, and
* discuss research and development work in statistics, machine learning or a related area.

The student is supposed to join an ongoing project or research in statistics, machine learning, or data mining led by an IDA researcher, study the origin of a problem and the research related to it, and conduct an analysis using methods and tools from statistics or machine learning.

The project is supposed to be **research** related, and after the course the students are supposed to get a better understanding of what research work implies. Accordingly, the project proposals defined by students themselves will **not** be accepted by default, with rare exceptions when the project is of interest for some of the IDAs researchers and the researcher is explicitly willing to invest time in this student formulated project.

The course runs throughout the semester at a 20% rate of full-time studies and is worth 6 ECTS. The converted course workload would be approximately 8 hours per week during the entire semester. **The project is assumed to be performed with very limited help from a supervisor who only has up to 3 hours in total allocated for their involvement in a project.**

The final product is a report containing around 3-5 pages of the work and any other additional material requested in the project description. This report must be sent to the supervisor and the course examiner by January 5th, 2026, after which an oral presentation of the results must be scheduled with the supervisor by January 16th, 2026.

## **Step-by-step process**

1. Find a research project.
**The list of projects can be found in Course Documents**. If you are interested in research of a particular IDA researcher and there is no project in the list from this person, you may contact them by email and ask if they can provide you with such a project. If you find a project in this way, send the title, a short description (appr. 3 sentences) and the name of the supervisor via email to the course examiner (isak.hietala@liu.se).
2. Sign up for the project.
Sign up for your choice of project via the **Signup menu between 13-17 on Monday September 1st**. After you have signed up, contact your supervisor.
3. Do the job.
There will be no lectures or other scheduled course sessions during the semester. You are only performing the given task with very limited support from your supervisor; a short introduction to the project and some smaller e-mail conversations or very short meetings where you can ask some questions related to your project. Your work on the project will thus be almost completely independent by default.
4. Write the report.
Write a final report containing approximately 3-4 pages that describes the background, the problem and your results and send the report to the course leader and your supervisor at latest on **January 5th, 2026.**
5. Present the work.
You are also supposed to make a short presentation for your supervisor in order to report your results. Decide a date and time for this with your supervisor. The presentation should be done before **January 15th, 2026.**

If you are delayed with your report and/or your presentation, the last submission opportunity will be on **March 9th, 2026,** and the presentation should be done before **March 19th, 2026.** Your grade will be decreased due to your inability to fit the ordinary time frames. This means that the maximum grade you can obtain will be "C". If you are unable to complete the course within these two deadlines, you will be requested to start a new project when the course starts next time (August 2026).

## **Examination**

The course is worth 6 ECTS credits. The course is graded according to the ECTS grading scale A-F. The examination consists of

* written project report (3-4 pages of text)
* oral presentation for the supervisor
* other materials named as an outcome in the project description.

Students failing an examination covering either the entire course or part of the course two times are entitled to have a new examiner appointed for the reexamination. Students who have passed an examination cannot retake it in order to improve their grades.