

Course Report WASP Graduate School

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Graphical Models and Bayesian Learning, 6hp

Semester: Fall 2025

Number of registered students: 43

Answering frequency (course evaluation): 19%

Examination results

Number of students examined: 43

Fail: 0%

Pass: 100%

Brief summary of student viewpoints and suggestions

Results of WASP base-line quantitative questions

- What is your overall rating of the course (1-5) **average response = 4.25**
- Did you enjoy the course? (1-5) **average response = 4.38**
- Was it time well spent? (1-5) **average response = 4.38**

Answers to free text-questions to be (shortly) summarized under “Strengths” and “Weaknesses”

- What was the best aspect of the course?
 - From course survey:
 - Students enjoyed the lectures, in combination with the exercise sessions.
 - They appreciated that the course taught them the basic theory but also included relevant recent applications, as well as hands-on implementation.
 - From debriefing:
 - The students felt this was perhaps the ‘best WASP course they have taken’.
 - They felt it was well-structured.
 - The group work opportunities were helpful in both modules
 - Module 1 introductory lectures were also helpful
 - The hands-on implementing from scratch in Module 2 (as opposed to downloading and using a package) was appreciated.

¹ The report should be written by the examiner together with the teachers and possibly others, such as teaching assistants

- Module 1 assignment was a reasonable level of difficulty.
- What would you suggest improving?
 - From the course survey:
 - Some felt the assignments were on the hard side.
 - Modules 1 and 2 could work to improve their connection, including synchronizing on notation.
 - Some more coding examples would be appreciated (in both modules).
 - From debriefing:
 - the 10 days for doing Module 1 assignment is good, unless you have a conflicting deadline.
 - Module 2 could have more time for group work at the in-person meeting.
 - Perhaps there is still too much material in Module 2, or some steps should be taken to shrink the distance between lectures and exercises (more practical examples in lectures and/or some introductory material to basic Bayesian statistical theory?).
 - Module 2 assignment was perhaps slightly too much work for students with no background knowledge on Bayesian statistics.
- What advice would you like to give to future participants?
 - Read the lecture materials beforehand,
 - takes notes and actively do the exercises.
 - Exercise sessions are very helpful to understanding what is going on.
- Other comments. Is there anything else you would like to add?
 - Lectures were very nice even if sometimes hard to follow.
 - When using slides try to decrease words on each
 - A lot was learned and many found the course to be very nice

"Strengths" according to students²

- The course is very well-structured in the sense that the lectures are interesting and helpful, the group work exercise sessions are valuable to learning and the introductory lectures were helpful (good constructive alignment)
- The course properly teaches the basic theory (module 1) but also takes them through hands-on application and implementation (module 2)
- The pace and expectations of the course seem (generally) well-balanced.

"Weaknesses" according to students¹

- Module 1 assignment is do-able in 10 days, but the tight window can make it hard if the student has other deadlines
- There is a gap between lectures and exercises in module 2, perhaps due to students lacking fundamental knowledge about Bayesian statistics

² Based on both quantitative results and key viewpoints from students' free-text answers

- Some minor additional steps such as synchronizing notation between modules could help with connecting the two more harmoniously

Comments from teachers on the implementation and outcome of the course³

- We are generally happy with how the course went this time. Based on student feedback and our own experiences we seemed to have achieved a good level of constructive alignment, the intended learning outcomes are being fulfilled and the workload appears to be at an appropriate level for the students.
- Our impression is that the quality of the course has increased thanks to the changes implemented this year relative to previous years. This includes the reduction to two modules, each with a little more time and a more clear connection for the students. This also helped balanced the workload for a 6hp course.
- One administrative note: teachers of both module 1 and 2 felt that it was difficult to find basic administrative information that is useful when smoothly executing the course offering. For instance, it was unclear how to best contact the students, which students were registered for the course, and who to expect at the in-person course activities. Perhaps a simple spreadsheet with the names of registered students and their contact information could be made available to the teachers in good time before the start of the course?
- The course is in good shape, but there are some minor changes that could result in further improvements. These changes are related to the 'weaknesses' summarized above. We have some concrete strategies for addressing these that we plan to implement for the next course offering (see below).

Proposed changes/comments/measures

- We plan to synchronize our notation between modules to help avoid unnecessary confusion for the students, as well as to further confirm the connection between the two modules.
- We plan to have an in-person meeting in Fall 2026 to workshop the course with the goal of further improving alignment between the modules.
- Both modules will work more 'practical/coding' examples into the lectures at key places to help smooth the transition between theory (discussed in lectures) and implementation (done in the practice sessions).
- To help the subset of students struggling with the distance between theory and implementation in module 2, we plan to have introductory lectures for module 2 on zoom (as already done for module 1). One lecture to give a high-level picture of the module goals (as in module 1 intro lecture 1) and the other to give a crash course in Bayesian statistics (like is done for graph theory in Module 1 intro lecture 2).
- We will add a bit more time for the assignment for module 1 to accommodate the possibility of students having other deadlines during this time window.

³ Including changes effected during the course