Course report

This course report is based on student feedback and submitted course evaluations, exam results and the teacher's idea for further development. The course report is published on the course website and Canvas-site.

Course name	Prototyping Technologies
Course code	DA623E
Semester	VT26
Number of registered students	17
Course coordinator	Benjamin Maus

	Course report is published on Canvas-site
x	Course report is published on course webpage

Compulsory course evaluation

Number of responses to the compulsory course evaluation:	15 on Google Forms, 5 on Sunet

The compulsory course evaluation has been conducted through:

X	Standard template via SSR (Sunet Survey and Report)
	Extended standard template with *own questions* via SSR
	Own evaluation method by the course coordinator

Additional evaluations that were conducted during the course

X	Separate survey
	Oral evaluation in class
	Oral evaluation in smaller groups
	Other evaluation method
Additional evaluation questions were collected through a customized survey conducted via Google Forms. This survey primarily focused on the course content.	

Comments on the course evaluations

According to the Google Forms survey (n = 15), the average score for the question "How would you rate the course overall?" was 8.2 out of 10, with ratings ranging from 5 to 10. Most students rated the course between 8 and 9, indicating a generally high level of satisfaction. The relatively low variation in responses (SD = 1.47) suggests that students were fairly consistent in their evaluations. This is further supported by the Sunet survey (n = 5), where overall expectations were rated 8.8/10, and support from learning activities was also rated 8.8/10.

Support for including the course in the master's programme was also strong. In

the Google Forms survey, for the statement "This course should be part of our master's program", 87% of students (13 out of 15) agreed or strongly agreed. The median and most common response was 5 (strongly agree), indicating that most students felt the course adds value to the programme. While there was one strongly negative response and one neutral response, the overall pattern suggests broad support for the course.

The qualitative feedback from the Google Forms survey was largely positive and focused on three main areas: the course structure, the teaching approach, and the project work. The most frequently mentioned theme was the balance between autonomy and support (n = 9). Students described the course as well structured, appreciated the balance between lectures and independent work, and valued having enough time to explore ideas and iterate on their projects. This sense of autonomy was strongly reflected in the Sunet survey as well, where the question about opportunity to take responsibility for one's own learning received the highest score of any item at 9.4/10 (SD = 0.9), and one respondent explicitly noted that the absence of mandatory personal reflections - common in other courses - made the course feel more relevant. The teaching and facilitation were also highlighted by several students in the Google Forms survey (n = 6), who described the lectures as clear and engaging and appreciated the supportive learning environment. Another recurring theme was the opportunity to work on a project over an extended period of time (n = 6), which allowed students to develop, test, and refine their ideas through multiple iterations. The practical integration of AI tools was also viewed positively (n = 4), with students appreciating the realistic and transparent way AI was incorporated into the course.

Regarding learning outcomes specifically, the Sunet survey suggests students felt confident across all areas, with mean scores ranging from 4.2 to 4.6 out of 5. The highest-rated outcome was the ability to identify, construct, present, and evaluate prototypes based on a given problem (mean 4.6, SD 0.5), pointing to particular confidence in hands-on, applied work. The outcome rated lowest - though still positively - was evaluating prototype methods through an ethical, sustainability, and security lens (mean 4.2, SD 0.8), which may be worth monitoring in future iterations of the course. It is worth noting that these results are based on only 5 respondents and should therefore be interpreted with caution.

The most common suggestion for improvement in the Google Forms survey concerned the physical prototyping activities, particularly the laser-cutting and workshop sessions (n = 6). Some students felt that these activities overlapped with content from previous courses, were too lecture-oriented, or were not directly relevant to their projects. More generally, several students noted some overlap with previous courses in terms of tools, assignments, and workflows (n = 5). A number of students expressed interest in more advanced content related to AI-supported prototyping, software MVP development, and "vibe coding" (n = 4). A smaller group suggested providing stronger synthesis of methods and key lessons throughout the course (n = 2), while others would have liked additional time for project development and iteration (n = 2).

One positive structural note from the Sunet survey: a respondent highlighted the alignment between the group work and the pictorial paper as a particular strength, noting that assignments in this course were better integrated than in other courses they had taken.

Examination results

X	Examination results are as expected
	Examination results are not as expected

The overall level of the project work was particularly high this year.

Recommendations and priorities for the course development

Overall, the course demonstrates a mature structure, and students generally feel that they achieve the intended learning outcomes. However, there are areas where adjustments could improve the overall experience. Based on the identified opportunities and additional student suggestions, the following recommendations are proposed:

- Review the role and timing of physical prototyping across the programme to avoid repetition (e.g. repeated K3 workshop tours).
- Reconsider the inclusion of laser cutting, or redesign it to be more hands-on and clearly connected to student projects and learning goals.
- Differentiate the course more clearly from earlier courses by building on existing student skills and focusing on more advanced prototyping work.
- Strengthen the focus on AI-supported prototyping as a core part of the course, with emphasis on practical application.
- Make the role of the course as the final course of the first year more explicit by connecting learning across courses and highlighting synthesis of complexity, assumptions, ethics, and sustainability in prototyping work.
- Improve clarity of the user research and prototype evaluation methods assignment/seminar by providing short summaries of key concepts, and how they can be applied in practice.
- Maintain a strong balance between structure and autonomy, which was consistently valued by students.