



# Report - ML2301 - 2022-01-27

Respondents: 1  
Answer Count: 1  
Answer Frequency: 100,00 %

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Please note that there is only one respondent to this form: the person that performs the course analysis.

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**Course analysis carried out by (name, e-mail):**

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**DESCRIPTION OF THE COURSE EVALUATION PROCESS**

**Describe the course evaluation process. Describe how all students have been given the possibility to give their opinions on the course. Describe how aspects regarding gender, and disabled students are investigated.**

The students had three opportunities to share their opinions during the course, the first one was concerning the lab session, at the end of the session day, they got the chance to reflect on the practical activities, and how they connect to the course, and what could have been improved to enhance the learning experience of future students. The second opportunity was during the course conclusion session. The students were asked openly to share their suggestions about the course. They openly shared reflections and gave suggestions to the course responsible and examiner. The third opportunity was anonymous through the course evaluation utilizing an LEQ survey with general and specific questions about the course. The LEQ was sent out after the students had their written exam.

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**DESCRIPTION OF MEETINGS WITH STUDENTS**

**Describe which meetings that has been arranged with students during the course and after its completion. (The outcomes of these meetings should be reported under 7, below.)**

- Meeting organized by the Master program responsible with student representatives during the first half of the course. Same as the previous year, the whole staff also involved had the opportunity to reflect on areas of improvement for the program and courses; for this particular course, the teachers incorporated what was possible for the upcoming sessions in the running course.
  - Course conclusion meeting, with open discussion, sharing reflections.
  - Continuous improvement was possible through open communication in CANVAS- course discussion section, email, and allocated tutoring meetings, the students could share their concerns opinions (about the course and project) directly to the course responsible.
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**COURSE DESIGN**

**Briefly describe the course design (learning activities, examinations) and any changes that have been implemented since the last course offering.**

The course was delivered in diverse formats including lectures, group discussions, seminars, workshops, and lab activity. It is evaluated with a written exam (individual) and project work (team). Guest lectures were held on selected topics, following KTH guidelines for the fall period regarding COVID-19. The lectures, seminars, and lab sessions were planned to be conducted in a physical and digital mix via zoom. If students notified the teacher on time they could not attend on-site due to being sick, the opportunity to join digitally was offered. The final presentation was adjusted to be digital given the rising spread of COVID during the beginning of Dec 2021.

Changes in connection to previous evaluation:

- The complete project assignment was integrated in CANVAS – project PM and all relevant material. The student groups were open to four to five members, given the total number of students in this round.
  - Lab session was reduced to only one day, given the smaller number of students in the course this year. The length of the session was extended from 8-12 to 8-14, giving additional time to work on the practical tasks driven by the students.
  - Reading material was set with priorities, and all material was provided at least one week before the corresponding session (still the students perceive the load high).
  - The session practical examples in connection to project work were given earlier in the course for the students to have a clear idea of the expectations in the project work.
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**THE STUDENTS' WORKLOAD**

**Does the students' workload correspond to the expected level (40 hours/1.5 credits)? If there is a significant deviation from the expected, what can be the reason?**

The responses in the LEQ indicated highly varied effort from students ranging from 6-8 hrs on the low side to 24-26 hours on the high side (only 1 student). For this 9hp course, the students are expected to prepare the assigned reading material before class. The assumption on the difference between students connects to their background. Some of them seemed familiar with the content. Other students could find it necessary to allocate time to understand basic concepts, coming from a different background. There is still the comment from students to reduce mandatory preparations/reading material even though the invested hours do not seem to exceed the expectation in all cases.

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**THE STUDENTS' RESULTS**

**How well have the students succeeded on the course? If there are significant differences compared to previous course offerings, what can be the reason?**

This year the grades have increased, all students taking the exam passed the course. At the moment of this analysis, two students are missing to take their final exam. The lowest grade in TENTA 1 is C, and the lowest grade in INL1 is B.

Final grades in the course range from A to B. Such a positive chance is attributed to the quality of students in this year and the improvements in the course over the past two years.

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## STUDENTS' ANSWERS TO OPEN QUESTIONS

### What does students say in response to the open questions?

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Their overall opinions seem positive, still offering suggestions. And well aligned with the feedback we received during our meetings. The following are the key aspects expressed by the students:

- They highlighted the industry examples and guest lectures to better understand the topics in the course and think outside the box.
  - The students enjoyed the discussions in the course to elaborate on their own arguments.
  - The students appreciated the pedal car lab to connect the theory to practical work.
  - They see overlaps in the concepts; some found it not necessary to elaborate on basic concepts and go more in-depth.
  - They suggest reviewing the reading material; some were found interesting and some were not.
  - There was a concern that digital exams can facilitate cheating.
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## SUMMARY OF STUDENTS' OPINIONS

### Summarize the outcome of the questionnaire, as well as opinions emerging at meetings with students.

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The LEQ questionnaire received a response rate of 46, 15% (6 out of 13). A higher rate would be expected to better triangulate the responses with the meeting's feedback. Overall, the opinions match the reflections provided on the course conclusion and other meetings. The students highly rated working on their own to test their ideas is challenging in its way, the course is open and inclusive, organized to support their learning. They all agreed they understood what the teacher was talking about. A couple of students marked they did not receive as much feedback to see their progress, which was not mentioned in any of the meetings with the students. One student noted the project not being equally divided. The reason for that could be one group could have five members instead of four, which was purely given the total class number of participants. Another student suggested having smaller students groups for the project task.

The opinion received at the meetings with students in supervision sessions was positive in general. Some students sent out their concerns often via email regarding on-site sessions and requested alternatively attending online. Even though the communication was open both ways, new suggestions emerged in the LEQ survey, highlighting the importance of getting a higher response rate in upcoming years.

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## OVERALL IMPRESSION

### Summarize the teachers' overall impressions of the course offering in relation to students' results and their evaluation of the course, as well as in relation to the changes implemented since last course offering.

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It seems the students appreciate the course structure, the adjustment to the pedal car lab, and connection to the more lectures and seminars was recognized, still, new improvements can be implemented. This generation brought new perspectives to the course; they challenged the teachers and the design of the course given their more aligned background and preliminary experience with the topics.

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## ANALYSIS

### Is it possible to identify stronger and weaker areas in the learning environment based on the information you have gathered during the evaluation and analysis process? What can the reason for these be? Are there significant difference in experience between:

- students identifying as female and male?
  - international and national students?
  - students with or without disabilities?
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The students highly value the practical examples and guest lectures; the weakest point can be the overlaps in course topics. In previous years, a mix of students with different backgrounds takes part, which makes it relevant to review and emphasize basic concepts. The main differences between international and national students can be the concern to getting a higher grading in the course. The international students highlighted the concern on project grading and its weight with the final grade. If they wish to improve their individual mark they see themselves hindered by their teammate's performance in the group work.

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## PRIORITIZED COURSE DEVELOPMENT

### What aspects of the course should be developed primarily? How can these aspects be developed in short and long term?

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Aspects to develop short and long term.

Short term

- Seminars with hands-on student's tasks, e.g., conducting the mapping seminar in the pedal car lab and building a red thread with the long lab session.
- Assess the project assignment (INL1) evaluation criteria, such as avoiding limiting high-performance students' final grades and what opportunities could be offered if students ask to improve their final grade.
- Revise with all teachers the overlap of concepts. This connects to the students' background we receive each round of the course, how to customize, and how detail or how deep the topics should be explained.
- Reading assignments to be more dispersed throughout the course. If possible, check with ML2305 for tasks clashing.

Long term

- Develop alternatives for digital examination.
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## OTHER INFORMATION

### Is there anything else you would like to add?

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N/A

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