

# Report - MJ2386 - 2024-02-14

Respondents: 1  
Answer Count: 1  
Answer Frequency: 100.00%

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

## 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 are given the opportunity to fill in course evaluation surveys for 3 weeks time starting from before the exam until after the grades have been published. 17 of the 63 students (27%) have replied to the survey, this is inline with the average response rate over the years. The equality and fairness including gender aspect and students with disabilities are addressed in the survey questions "The assessment on the course was fair and honest", "Please comment on the course from this (gender) perspective", "Please comment on the course from this (disability) perspective" and an open ended question "Is there anything else you would like to add?" allows the students to freely express themselves.

## 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.)**

At the start of the course, a summary of the previous year course analysis was presented to the students. Feedback is encouraged throughout the semester. A midterm meeting was proposed to the student representatives and it was decided with the students to have directly a final feedback session at the end of the course upon completion of this LEQ analysis. The feedback will then feed into the following year course structure.

## COURSE DESIGN

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

The course consists of a project work, a project presentation, a lab and an exam. The lab group and project group sizes have been made into small groups so as to maximize the learning outcome where all students could be involved in the hands on activities. The exam structure has now also been presented at an earlier stage (at the introductory session of the course) to the students.

## THE STUDENTS' WORKLOAD

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

This 6 ECTS course was given over a period of two periods, the expected work level would be  $6\text{ECTS}/1.5\text{ECTS} \times 40\text{ hr} = 160\text{ hr}$ . From the students' response of average 9-11 hr work/week, a total of  $9 \times 9 = 81\text{ hr}$  to  $11 \times 9 = 99\text{ hr}$  were spent by the students. The majority of the students have thus spent a bit less time than required. The students mentioned "it was a fairly reasonable amount of time the content consumed with lectures, project and lab. Primarily because my group started with the project early and thus didn't have to stress in the end, so it was a very nice and even time consumption throughout the semester."

## 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?**

16% received A, 53% received B, 21% received C and 10% had a F. Out of the 7 Fs, 4 were dropouts while the other 3 did not take the exam and will attend the re-exam. The outcome as compared to the previous course intake indicates that A have dropped slightly while B have doubled. The number of students receiving a C and above is 90% this year as compared to  $\frac{1}{4}$  last year so overall improved outcome. The reason behind could be that exemplary lab and project reports from the previous year were made available to the current year students and they could learn from the past students.

## STUDENTS' ANSWERS TO OPEN QUESTIONS

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

The students praised the fast response time to students' questions. The examiner and course assistants were very helpful in answering emails". The exam calculation was however a bit difficult: "The written exam contained exercises that hadn't been dealt with in class". More examples could help students with the exercise practicing: "(most) teachers didn't have time left during the lectures to go through their examples".

The students taking the course have strong interest in the topic and explored the topic on their own in the project: "I'm very interested in energy storage, so it was perfect!", "Especially during the project!"

## SUMMARY OF STUDENTS' OPINIONS

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

The fact of having all activities done in hybrid mode and recordings made available to students afterwards gave students the flexibility to follow the course at their own pace: "The best aspect of the course was its flexibility to watch it online from time to time. I had other classes sometimes with conflicting times." The lab and project provided understanding of real world applications: "The project and the lab helped a lot with understanding actual applications of what was covered in the lectures."

Some students wish to have more exercises per technology in class so as to prepare for the exam: "have more old calculation exams or calculations in class that we need to learn to pass the calculation exam". Giving examples on how to tackle the project was also proposed by a student: "how to approach peak shaving, perhaps seeing a concrete example of peak shaving in lesson would be useful."

## 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.**


Overall, the students performed well. A few students indicated that the exam was difficult but the grades showed that almost all of them have succeeded well.

## 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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Male students gave slightly higher scores than female students, the largest differences are in 9. I understood what the teachers were talking about (with 1.5 higher score) and 15. I could practice and receive feedback without being graded (with 2.2 points higher score). The reasons may be due to higher self confidence among the surveyed male students and teachers/course assistants giving more direct (and harsh) feedback to the male students. 

The international exchange students and local Swedish students gave similar high scores, the international master students gave lower scores on average with differences larger than two points in 3. I was able to learn by trying out my own ideas and 12. The course activities helped me to achieve the intended learning outcomes efficiently. The reasons may be that the local and exchange students are more used to KTH teaching structure/relaxed with the outcome while international master students are more stressed for grades and more reserved due to grades pressure for scholarships (just a hypothesis).


No students indicated any disabilities.

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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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All students will now be offered both labs so that they may get experience on both the thermal and the electrochemical aspects of energy storage. Specific tutorial sessions will be introduced so as to train the students on the exam questions 

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