



Report - EL2820 - 2019-11-06

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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COURSE DESIGN

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

The course is based on 12 standard lectures based on slides and blackboards, 11 exercise sessions and 3 computer exercises. The assessments are based on 3 laboratory exercises (two of them are computer-based, and the third one involves experimenting with a real physical process), and a final exam.

Since the last course round (from 2018), the main change has been the development of a few lecture notes, meant to replace the previously used textbook; this is an ongoing process, so only a few chapters (3 plus an appendix on prerequisite material) were ready this time, but the plan is to continue developing them.

Also, a Q&A session was given, where the students could ask questions in preparation for the final exam.

THE STUDENT'S 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?

It is hard to measure the exact workload that the students spent on the course. However, based on the students' comments in the course evaluation (and feedback given during the EL2220 "The sustainable control engineer" course), as well as on the teacher (myself) and the assistants, most students did not spend much time on the course during the first month, and spent mostly the last two weeks or so preparing for the final exam.

I think one of the main reasons for this behaviour is that most students are taking at the same time another course, "Introduction to Robotics", which is very time demanding (as mentioned by the students in the course evaluation and at EL2220) due to weekly assessments in addition to quizzes before every lecture; thus, most of them had to sacrifice studying for EL2820 in order to perform well at the other course.

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 time the pass rate for the exam was 72% overall, which is a positive result, within the usual variability over the last years. Last year the pass rate was the lowest so far, 55%, due to the newly created "Introduction to Robotics" course, which took students' time away from EL2820, and the fact that KTH/EE students were lacking prerequisites on physics (due to recent changes in the CELTE programme). This year the exam was a bit easier than in 2018, and, being aware of these two difficulties, we introduced a Q&A session to provide extra support for the students.



OVERALL IMPRESSION OF THE LEARNING ENVIRONMENT

What is your overall impression of the learning environment in the polar diagrams, for example in terms of the students' experience of meaningfulness, comprehensibility and manageability? If there are significant differences between different groups of students, what can be the reason?

From the course evaluation, it seems that the students are in general positive about the learning environment, and there seem to be no major differences between groups of students, even though female students tend to be slightly more positive about the environment than men. The main complaint is about the difficulty of the exam; however, since the course evaluation started before the final exam, and was closed a week after it, it is difficult to know if the students are referring to old exams or to the latest (2019) exam.

ANALYSIS OF THE LEARNING ENVIRONMENT

Can you identify some stronger or weaker areas of the learning environment in the polar diagram - or in the response to each statement - respectively? Do they have an explanation?

In general the comments of the students about the learning environment are positive, except, as mentioned in the previous point, regarding the difficulty of the course, and in particular of the exam. However, as mentioned by them, many could not spend much time initially on the course due to other courses taken simultaneously.

ANSWERS TO OPEN QUESTIONS

What emerges in the students' answers to the open questions? Is there any good advice to future course participants that you want to pass on?

Besides the comments stated in the previous points, the main advice that the students given to future course participants is to start studying earlier for the course, instead of preparing for the final exam on the last two weeks.

PRIORITY COURSE DEVELOPMENT

What aspects of the course should primarily be developed? How could these aspects be developed in the short or long term?

The main priority for myself is to continue developing lecture notes for the course; this is a time consuming and slow process, but I think it is very important to have good base material that the students can go to in order to complement the lectures.

Another important priority is to repair or replace the physical process (magnetic levitator) used for the third lab, which unfortunately broke during this lab exercise.

Finally, in order to encourage the student to spend time on the course since it starts, the plan is to replace one of the laboratory exercises by homework assignments.

OTHER INFORMATION

Is there anything else you would like to add?

Nope.