



Report - EL2820 - 2020-11-20

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 course evaluation is mainly based on a LEQ course survey sent to the students at the end of the course, right after the exams have been graded. The LEQ questionnaire allows to investigate aspects of gender and disabilities by segmenting the answers of the students according to these aspects.

Additional feedback from the students was obtained during the lectures, and as part of the EL2220 course, where mentors of the course directly ask the students of the TSCRM program about the course they were taking during HT20.

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.)

We did not have meetings with the students during this course round, as unfortunately the teaching assistants and myself were extremely busy working on turning the course into a semi-online disposition (as explained in the next point).

COURSE DESIGN

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

Due to the COVID situation, the course had to be massively modified on a short notice, in order to turn into a semi-online course (that is, ensuring the KTH requirement that at least 50% of teaching time should be on campus, while maintaining social distancing regulations. To this end, the course disposition, traditionally consisting of lectures, exercise sessions, 3 labs and 1 exam, had to be modified as follows:

- All material from lectures and exercise sessions was turned into pre-recorded videos.
 - The 12 lectures were divided into 4 groups of 3 repeated lectures, which the students could attend on campus by pre-registering into groups of at most 25 people each.
 - Similarly, the 18 exercise sessions (which were originally 9 different sessions, repeated twice) were divided into 3 groups.
 - The first lab was transformed into 2 homework assignments.
 - The second and third labs were done online.
 - The final exam was divided into 2 quizzes and 1 take-home exam, all done online through Canvas.
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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 student workload was heavier than in previous years, due to the replacement of the first lab by two assignments, and of the final exam by 2 quizzes and a take-home exam. There were 2 reasons for increasing the workload:

- By dividing the final exam into smaller assessments, the goal was to reduce the pressure on the final exam, since this time it had to be done as an unsupervised online evaluation, thus hopefully reducing the cheating during this assessment.
- In concurrence with this course, most students take another course, Introduction to Robotics, which is very time consuming (due to its number of assignments). This has created problems over the last three years, as students study much less for EL2820. Increasing the number of assessments for this course, while far from ideal, encourages students to spend more time studying for the 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?

The pass rate this year was 87%, which is higher than on average. This might be due to two reasons:

- Since the course had more assessments than in previous years, the students spent more time studying for the course, thus achieving a higher level of understanding of its topics.
- By changing the final exam, the pass threshold was reduced: the students had to pass two quizzes (for which they had two opportunities to take them), and the threshold for passing the take-home exam was much lower than previous exams.

STUDENTS' ANSWERS TO OPEN QUESTIONS

What does students say in response to the open questions?

See next box.

SUMMARY OF STUDENTS' OPINIONS

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

According to the course survey, the students had an overall positive impression of the course. However, the students made the following comments:

- The course includes a large number of concepts, which makes it difficult to study in a short (2-month) period.
- The course was also time-consuming, especially when taken at the same time as Introduction to Robotics.
- The videos of the lectures were in general fairly long: this was due to lack of time needed for proper scripting and editing. Nevertheless, the students in general appreciated having pre-recorded videos, since they could rewind and revisit difficult topics several times.

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.

Teaching the course during this COVID period was fairly challenging and very time consuming. The overall result was good, but due to the need for social distancing, there was less direct connection to the students. Modifying the assessments made the students study for the course from the beginning, unlike previous course rounds. However, the division of the final exam could be improved, as the quizzes became a bit difficult, while the pass threshold was too low.

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?

The labs and assignments have provided good learning activities, even in an online manner. Having videos of the lectures and exercises was also a good idea, even though they need more editing. As mentioned above, the idea of having quizzes and a take-home exam should be re-evaluated.

Unfortunately the course survey was answered by few students (18 out of 84), and no student identified herself as female nor with disabilities. However, regarding national students seem to have had more difficulties due to collaborate with others or to receive feedback; this was indeed difficult during this period due to the COVID situation, which forces us to make most of the assessments online.



PRIORITIZED COURSE DEVELOPMENT

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

- Several of the videos of the lectures should be re-done, by properly scripting and editing them.
 - Due to COVID, the original plan of investing time on writing lecture notes had to be postponed. With more time, it would be good to continue developing them.
 - The introduction of the quizzes should be revisited: should we reduce their level of difficulty, and increase the grading scale of the final exam? Should the quizzes contribute with bonus points to the exam, instead of being a requirement to pass the course?
 - An unsupervised take-home exam is very prone to cheating, so from a pedagogical point of view an in-class written exam should be preferred for the next course rounds.
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