



Report - IS1200 - 2020-07-14

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):

David Broman, dbro@kth.se

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.

I have used the following method:

1. Course committee meetings. Students volunteered to be part of the committee in the beginning of the course. Several students volunteered. We had one meeting planned at the end of the course, but unfortunately, no student showed up. However, I received written feedback from some of the students after the planned meeting.
2. In the middle of the course, I performed a battery evaluation (a special form of mid-term evaluation). All students are asked to give feedback (pros and cons) on small papers that are handed out in the break in one of the lectures. The course responsible then summarizes all answers and presents it at the next lecture. The summary is also published on Canvas.
3. At the end of the course, the LEQ form is sent out to all students. Unfortunately, there were some problem with the LEQ system this time, so I could not get a good summary from the system this year.
4. The students are encouraged to send emails directly to the examiner with feedback.

I try to encourage students from different programs with different background to take part in the course committee. This year, there were both male and female students from different programs in the committee.

To enable support for disabled students, I always inform (in the Canvas page) about where they can find more information about their rights (FUNKA). I am also always using microphones at the lectures (important for student with hearing impairment).

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.)

Usually, we have two meetings with the course committee (kursnämnd), one meeting in the middle of the course, and one meeting at the end of the course. This year, because of a somewhat different spring, we planned for only one meeting after the course. Besides that, we had a Battery evaluation (mid-term evaluation, previously called Muddy cards evaluation) with the whole course during one of the lectures.



COURSE DESIGN

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

The course teaches the fundamentals of computer organization, including both software and hardware. The course is divided into 6 modules:

1. C and Assembly Programming
2. I/O Systems
3. Logic Design (only for IS1500 students, not for IS1200)
4. Processor Design
5. Memory Hierarchy
6. Parallel Processors and Programs

The course is divided into 2 LADOK parts: (i) Labs and home labs (4.5 hp) (ii) Written Exam (3hp)

There are in total 12 lectures, 5 exercise sessions, 4 seminars, 4 laboratory exercises, and one mini project. The course ends with a 5 hour written exam.

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?

Quit a lot of the students find the course quite challenging. However, when I look at the LEQ diagrams, the students answer that they spend between 6 and 40 hours per week. That is, it varies a lot. From the student comments we can see that they think that the workload is very high, which probably depends on two factors: (i) this is their second semester at KTH, (ii) the course is given during just one period. Compared to IS1500 students, this year's IS1200 students believe that the workload was much higher.

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 pass rate on the first exam was 62% for IS1200 students. It is a bit lower than last year, but better than the years before (68% 2019, 60% 2018, and 50% 2017).

STUDENTS' ANSWERS TO OPEN QUESTIONS

What does students say in response to the open questions?

From the Battery evaluation (mid-term evaluation) it was clear that the students were very happy with the lectures, and the lecture material (including slides). They also thought that the course information and the canvas pages were very good. The main issue during the mid-term evaluation was that a significant amount of the students thought that the pace of the course was very high. Some students also thought that the course was hard in general. At that point in time, many students also answered that they thought that the seminars and exercises were good. There were very few comments about the labs and the project (the project had not started at that point in time).

From the LEQ answers, some of the main points were:

- + The lectures are very appreciated.
- + We get positive feedback about the teachers and the teaching assistants.
- Some students thought that the amount of material in the course was too high and that it was hard to find time to do all the required work.
- + Some students said that this was the best course that they have ever taken.
- Some students were not satisfied with the amount of work in the course, and the answer they got after the battery evaluation. Some students thought that the course should be given the second year instead.
- + Several students found the course really fun. Some students thought especially that the project was fun.



SUMMARY OF STUDENTS' OPINIONS

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

In general, it is very clear that the students seem very happy with the course. But, in contrast to previous years, many students seem to find the course hard and time consuming this year. Some of the main findings are (including feedback from the course committee):

Strengths:

- + Course structure, many students think that it is well organized.
- + Students are in general very positive about the lectures. Especially the slides, the overall structures, and the interactive exercises.
- + The students found the exam hard, but fair.
- + The seminars, exercise, and lunch office hours were appreciated.
- + The labs were for the most part very clear.

Weaknesses:

- We received some feedback that the lecture slides should be uploaded earlier (typically they were uploaded the day after because the English course round should be given before the slides are handed out). Another comment was to use the whiteboard a bit more, if possible.
 - Sometime the size of the classroom was not enough for the exercises and seminars.
 - The instructions on how to install the software (C compilers and MIPS toolkit) can be improved.
 - Some students thought that the labs were not synchronized with the lectures. The labs are synchronized, but because the course is given during just one period, the lectures are always ahead of the labs.
 - The requirements for the advanced project can be improved.
 - Some students thought that the teaching assistants did not give as much help, as they should.
-

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.

The course works overall very well, and it is mature. Some student says that this is the best course they have taken at KTH. However, this year a lot of students thought that the course was hard and too time consuming.

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?
-

This year's course round stands out compared to previous years. The students this year seems to be much more stressed, and the results on the exam were a bit lower this year. Also, many more students were delayed, and not handing in the labs on time. There is also a clear difference between the student performance in Kista and the students in downtown, which can be because the students in Kista take this during only one period in their first year, whereas the students on the main campus takes the course the second year, during two periods. Nevertheless, the results on the exam differ quite a lot. Also, the results this year (especially finishing labs on time) differ quite a lot from previous years in Kista. It is unclear why this is the case.

From the LEQ numerical scores, it is still clear that most students find the subject very interesting, but compared to previous years, many more students answer that they do not find their background knowledge to be enough. For future course rounds and for the PA of the programs, it is important to investigate why this is the case and why it has changed this year. Most students seem to find that the course was stimulating in a positive way (only positive answers with a few exceptions). Compared to previous years, fewer student thought that they could get enough feedback, even if most students agrees that they get enough feedback. On the question if you could learn in a collaborative way, we got very high scores. The assessment was also generally positive (mean value 5.6).



PRIORITIZED COURSE DEVELOPMENT

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

This course has improved every year, and it is rather mature. The main critical comments that we get concern the workload and the pace of the course. It is hard to say how we should handle this, since we do not get the same feedback when the course is given on Campus. Without changing the learning objectives, it is hard to see how the course can be changed to a larger extent. Alternatively, the course should perhaps be moved to the second year in the programs.

Next year will probably look quite differently, because of the Covid-19 situation that affects all teaching right now. Some things that we should try to improve are:

- To hand out the slides as soon as possible after the lecture. However, it is a bit problematic since both the English and the Swedish versions of the lectures must have been given. Sometimes these lectures are not scheduled the same day.
 - We need to check the schedule carefully so that there is enough room for all students. It is a good idea to book the lecture rooms even for some of the seminars. But, maybe both seminars and lectures will be given online next year because of Covid-19.
 - We should try to make the requirements for the projects clearer, especially the requirements for advanced projects.
 - We should have a clear discussion with all TAs (which we have every year before the course starts) where we emphasize the need to be helpful and to come back with good answers even if they do not know the answer directly.
-

OTHER INFORMATION

Is there anything else you would like to add?

To all students who might read this course analysis: Thanks for great feedback. Please do not hesitate to send me an email (dbro@kth.se) if you have some more feedback, comments, or questions.
