



Report - IK2217 - 2020-05-11

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 had three main ways to provide feedback about the course.:

1. The course had two students' representative who collected feedback from all the students. The students met with the teacher at half of the course and after the notification of the course results. Limited feedback has been collected during the intermediate meeting with the students' representatives. Extensive feedback has been provided by the students during at the end of the course. Notes from the meetings have been made available to all the students in Canvas.
2. The LEQ course evaluation that has been circulate right after the results of the course have been notified to the students. 50% of the students replied to the course evaluation.
3. Directly to the teacher via email or in class. The teacher has given the students some flexibility on how to organize the new material introduced this year into the course, i.e., the group project. The students have provided extensive feedback on how they preferred to organize some parts of the work and evaluation.

As for gender balance, the students were 10% female and 90% male. No specific requirements for disabled needs applied to this edition of the course.



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.)

During the intermediate meeting, the feedback was limited: adding slide numbers on the slides.

During the last meeting after the notification of the results (on the 26th of March), the feedback was more extensive. It follows a description of the meeting after the exam with the students' representatives.

The general feedback received from the students could be organized as follows:•

Written exam

Problem: the students felt the exam was too long.

Actions: some questions that were redundant could be removed, e.g., recomputing the spanning tree after a failure. For each module, one could let the students decide which questions to answer. This would allow the students to both avoid risks of failing a learning outcome because of some unlucky questions and to reduce the number of questions to answer.

Project

- Problem: several bugs to be addressed in the provided code

Actions: bugs have now been fixed for the next year.

- Problem: grading should be based on individual contributions

Actions: we will explore ways to grade students individually. Letting the students split pool of points have been suggested but some concerns exist regarding possible conflicts within a group (e.g., what happens if the students do not agree on how to split the points?). Other solutions based on GitHub commits also have some limitations, e.g., more commits does not mean more work, checking the code in each commit does not scale on the examiner's side, some students are slower yet capable at coding.

- Observations: Video sessions were enough, no real need for in-person sessions

Paper summaries:

- Problem: limited feedback. Actions: discuss more in class

- Problem: hard to write the limitations. Actions: providing some examples of limitations for the first papers

Lab:

- Problem: very similar to IK2215. Actions: thinking whether to differentiate it more from IK2215

Lecture schedule:

- Problem: the project could start before. Actions: the project will start after the VPLS lecture

Ways of learning:

- Problem: not much collaboration or way of discuss with each other. Actions: try to incorporate peer reviews

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 divided into several types of teaching activities aimed at fulfilling the ILOs of the course.

The course contains 8 frontal lectures of 1h30' each, 3h of laboratory work, 6h of programming lectures, and 2h of a guest lecture from Saab. The course is fully accessible online and contains extra video lectures for the programming parts.

The examination consists of the following parts:

LABA - Laboratory work, 1.0 credits, Grading scale: P, F

PROA - Project, 2.5 credits, Grading scale: A, B, C, D, E, FX, F

SEMA - Summary of scientific papers, 1.0 credits, Grading scale: P, F

TENA - Written exam, 3.0 credits, Grading scale: A, B, C, D, E, FX, F

From the last course edition, the main modification has been the introduction of a group project as discussed in the last-year course analysis. The aim of the group project was to make the course more practical and to help the students relating the teaching material with real-world implementations.



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?

From the course evaluation, we observe an increase in hours per week dedicated to the project. 60% of the respondents reported between 15-17 hours/week devoted to the course and 40% between 6-8 hours. It is clear that the group project has increased the numbers of hours dedicated to the course but not for all the students. Some feedback has been received about a non-uniform workload among students in the same group, possibly explaining these differences in the number of hours per week per student.

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 number of failed students has been 10% in contrast from the 30% of one year ago. Some possible motivations are: i) the improved teaching material and explanations given in the lectures and ii) the possibility for the students to look up at the exam from last year and prepare for the exercises in a better way.

STUDENTS' ANSWERS TO OPEN QUESTIONS

What does students say in response to the open questions?

The best aspects of the course were the project, the paper summaries, the lectures and interaction with the teacher, and the video recordings.

There were no suggestions on what to improve.

The students suggest to future students to focus on the concepts.

Some ad-hoc questions have been added to get feedback about the newly introduced group project. The students liked the project and found it useful to relate with real-world technologies and applications. The students would have appreciated some more guidance on the part of the project for the highest grade, fewer bugs, and more time for the project, for instance by starting it before. Some students would prefer an individual grade for the group project and to divide the project in more phases.

SUMMARY OF STUDENTS' OPINIONS

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

The course evaluation has an average score of roughly 6.0. The strongest aspects are the "support from the teachers", "having worked with interesting issues", "the course was challenging in a stimulating way", and "the ILOs helped to understand what the students were expected to achieve". The lowest scores are for "I could practice and receive feedback without being graded" and "I was able to learn by collaborating and discussing with others".

It is clear that the group project had made the course more interesting to the students. One of the goal of the group project was to make the students collaborating and discussing with each other more than one year ago. The score has however remained unchanged from last year.

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 has received a generally positive evaluation, especially for the newly introduced group project. We also hosted a guest lecture from Saab, which helped the students relating the teaching material with real-world industrial use cases.



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 teachers are satisfied with the changes applied to this year edition of the course. Preparing the group project has helped the students to gain some hands-on experience with real networking programmable devices. The massive work on preparing the group project seem to have been worth the effort and will be repeated (and improved) for the next edition. The other parts of the course seem to also function well.

Several parts of the course could still be improved: providing more feedback to the students without grading them is a key aspect that we expect to improve for the next year.

Grading the group projects with per student grades is a complex problem. This year the group project grade was composed of a base grade equal for all the students in the same group plus an individual grade at the per-student level. We will analyze whether a better solution to grade the students exists.

While we were expecting to spur collaboration among students with the new group project assignment, something did not work so smoothly. We will investigate this issue and look at alternatives to enhance social engagement in the course.

The number of responses to the evaluation was too small to gain any insight about differences in different categories of students.

PRIORITIZED COURSE DEVELOPMENT

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

In the short-term, the course should consolidate the group project assignment, possibly incorporating the feedback from the students. The course should also reduce some parts related to older yet conceptually interesting technologies and enlarge parts related to datacenter networks.

In the long-term, the course should cover more aspects of network virtualization technologies with practical projects. Network virtualization is today pervasive in most network organizations and the students are not sufficiently exposed to this domain.
