Report - IH1611 - 2021-04-06

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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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 analysis is based on the response to the LEQ6 form. This year 13 out of 23 students filled in the LEQ that was open from the exam day and two weeks forward.
The format of the exam was discussed with about five students who completed an online Fx-session in Zoom. They provided feedback on the specific tasks.
One student opted to fill out gender (female) in the LEQ6. Her responses (values) were very close to the average.

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.)

See above, the Fx-sessions were used to get feedback on the exam format. However, many students commented on the exam in the LEQ as well.
In a few instances the course (give in P3) has been discussed as a prerequisite for another course given in P4. In these cases the student have reflected on how the course prepared them for future courses in the area.

COURSE DESIGN

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

The only obvious change was the adaptation to smaller lab groups due to the covid situation:
2 students x 1h instead of 4 students x 2 h. This change is temporary.
Lectures were online in Zoom and all lectures were recorded and subtitled, some minor video edits but mostly live material. The students appreciated this format and thought the transition to online was managed in a good way and provided a good learning experience.

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?

The students report different working hours, slightly less than the nominal 20h/week.
Judging from the free text responses they seem to find that the effort is just right to meet the learning objectives and handle the volume of content.

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?

Pass rate 17/23 students after Fx-sessions.
The criteria based grading system leads to a rather high fraction of Fx-grades, six students took that opportunity with good results. The students are not completely happy with the system but in the end they judge the assessment as fair.

STUDENTS´ANSWERS TO OPEN QUESTIONS

What does students say in response to the open questions?

Some examples of positive responses:

"The adaptation to online classes was well done, the lectures were easily to follow and I really liked the format of the exercise sessions."
"It was a conceptually based course. It made us to this deep about the subject."
"The feedback process for the laboratory reports was constructive in every way."
"For example the lab peer reviewing was amazing idea."

Some examples of negative responses and criticism:

"The lab was not very interesting, although I heard it was different due to the pandemic. But it wasn't very stimulating and it treated one of the easier chapters of the course."

"Give the written solutions (made by either the TA or the teacher) to the exercises at the end of each exercise session."
"The recitations were very confusing and sometimes added more doubt rather than reassurance and practice. Different than I would have expected from an exercise session."
"I don't like the system of the exam where if you fail one question, you fail the exam. This means that the TA and professor need to be perfect which is impossible. A mean system would be better in my opinion..."

General reflections:

"The lab work should not be only pass or fail but individually graded and also the recitations. The final exam is always interesting to be under open-source and open-book philosophy, as the point of the engineer is not to learn things by heart, but learn how to use the knowledge. They should keep it like this even after the online exam situation. This allows the professors to put more challenging topics and more combinatory, as long as they are still inside the course material."

SUMMARY OF STUDENTS' OPINIONS

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

There are two important messages from the students:
1) The student recitations feel confusing since clear answers to the exercises are not always provided. This is partly due to the performance of the teaching assistant (TA). The issue has been discussed also for other TA:s previous years. Most likely a senior teacher (professor) should handle these sessions and written solutions should be provided. It is very hard to train a TA to be able to moderate open discussions around topics that are new to the students.

2) The criteria based grading systems makes it harder to pass. In a sense it really works since students must demonstrate acceptable levels for all intended learning outcomes.

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.

This course would benefit from more laboratory experience. That would complement the theory heavy parts in an efficient way and make the course even more interesting.
The course has been gradually shifted toward more conceptual understanding on away from numerical calculations. This seems to be appreciated by the students. It also provides an opportunity to stay relevant. As semiconductor technology evolves interesting material around new devices can be fitted into the course.

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?

We already know that students from the nano technology materials track could be slightly less prepared to take an electronics course. On the other hand the course is elective so the most important thing is to provide a correct description of the prerequisites and content beforehand. These comments addressed the international vs. national student perspective.
National students take the course as undergraduate Y3 and that seems to work very well.

Nano technology has a good gender balance and there is no indication that the gender should be an issue in the learning environment. The course encourages collaborative studies around the weekly assignments and the laboratory work. From my point of the view, several years of observations, this creates an inclusive working atmosphere.
A relatively high fraction of female students continue to follow up courses and thesis project in the subject. I see no "drop off" in any gender group.
It should still be noted that there are no female professors in this or any related course, and no female thesis advisors and only occasionally, basically never the last 10 years, a female TA.

PRIORITIZED COURSE DEVELOPMENT

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

More laboratory work to support the theoretical learning!
A review of the live-recorded video material. These can be used as scripts to produce more professional video content for relevant key topics in the course. I have gained a lot of experience in planning of video recording during this year.

OTHER INFORMATION

Is there anything else you would like to add?

No