



Report - MH2039 - 2020-12-23

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.

Students were invited to contact me personally, if they wishes, and were asked to fill in a course evaluation. Since only four responses were received, it is not possible to investigate any overall trends in gender or disabilities.

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.)

Students were offered the chance to meet during and after the course, but decided to not do so.

COURSE DESIGN

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

The course consists of two lectures that provide an overview of metals extraction processes, followed by five sessions that cover heat and mass balance calculations, including two assessed exercises. One session on gender equality in the metals industry and one on research tools available at KTH are also given amongst the lectures on the calculations.

In parallel with these activities, students undertake a research project in groups that covers the extraction of a particular metal. All groups prepare a written report and deliver an oral presentation at a course seminar at the end of the course.

Students are examined by their project, a home exam and an individual (self-)assessment of their group work.



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 lectures and workshops cover approximately 21 hours, plus 32 hours of timetabled time for the group project. Students are expected to work more than this on their group project, whenever they are available, up to approximately an additional 24 hours. The home exam is intended to take approximately 4 hours and students are expected to perform self-study for approximately 48 hours and prepare their individual assessment of their project group (which contributes approximately 1 hour of work time). This adds up to approximately 142 hours, just below 40 hours per 1.5 credits.

In practice, the students worked much less than this, reporting an average of about 10 hours' study per week, which is identical to the previous year. This corresponds to approximately 70 hours' study in total, about half the intended amount. After the previous year, more practice questions were made available to the students, as well as recordings of the teaching material. One student commented that the workload was well-balanced.

It is unclear why the students were able to complete the course with such little study. For the next course offering, I will consider making the project more complicated, although several students gave verbal feedback that it was very inconvenient, as the deadline was close to the examination period. However, I do not consider that reasoning to be valid, as they could have chosen to do more work earlier in the semester.

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 student results have dropped slightly from the previous year. In 2019, 7 students got grade A, which fell to 5 in 2020, conversely, the number of students who were given a grade C rose from 4 in 2019 to 7 in 2020. The number of students that gained grade B and D were the same in 2019 and 2020. There was one additional student in 2020 who achieved a grade E.

This is the first year in which I have been the main teacher. In addition, the format of the course has evolved since 2019. However, the changes do not seem to have impacted on the outcomes.

STUDENTS' ANSWERS TO OPEN QUESTIONS

What does students say in response to the open questions?

Students requested more material to practice calculations, as they did in 2019.

One student also complained that too much emphasis was placed on the group work, which leaves students too exposed to the performance of others, which they believe is unfair.

All respondents advised future students to begin the project work as early as possible, as they did in 2019.

One respondent said it was forced, since gender equality is considered a mandatory consideration, and another said general issues should be explored more throughout the course, not just in one workshop.

SUMMARY OF STUDENTS' OPINIONS

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

The weakest aspects were LEQ questions 2 (I explored the subject on my own, 3.8/7) and 18 (I regularly spent time to reflect on what I learned, 3.3/7). This, combined with the low number of hours worked seems to indicate a trend that students did not need to spend time learning the material. This could mean that more content could be added, with more emphasis on self-study.

In addition, LEQ point 7 (The intended learning outcomes helped me to understand what I was expected to achieve, 4.7/7) shows that the intended learning outcomes could be improved.

The strengths of the 9 (I understand what the teachers were talking about), 16 (The assessment on the course was fair and honest), 17 (My background knowledge was sufficient to follow the course) and 22 (I was able to get support if I needed it), all of which were given a rating of 6.8/7.

The group of students who answered could not be identified, as two of them did not know what group they belonged to.



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 students seem to like the course, with all points in the LEQ except those mentioned previously scoring 5 or more. There were no major issues identified with the exception of some students who came from the KTH bachelor's programme who were frustrated with the session on research tools, as they already knew the material that was taught. The gender issues seminar was very well-received. General comments were very positive about the course, its contents and the chance for asking questions and learning more.

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?

In the future, more weight in grading could be given to the home exam and assessed exercises. For this, I think the assessed exercises should be more formal - in 2020, they were informal and not graded, simply participating was enough. Perhaps work should be submitted and graded to allow more weight to be placed on the assessed exercises. This could also require more practice material, which is being built up each year, and more will certainly be added for 2021.

The gender equality session will certainly be retained, although I will try to incorporate gender issues more widely in the course and not simply in the workshop itself, for example, as part of the home exam or group project report. The research tools session should be kept, as it is very valuable to those students who join the master's programme from other universities. For this reason, students who completed the KTH bachelor's programme could choose whether or not to participate in 2020 and I will also allow people to choose to not attend in 2021. There were suggestions to target it more at materials science and I will discuss this with the library (who taught it), but I think it needs to be basic to cover basic information for those coming to the master's programme from outside KTH.

PRIORITIZED COURSE DEVELOPMENT

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

Develop more questions for students to practice calculations.

Incorporate gender equality in more areas of the course. I have time do this, since the current workload is too low.

Consider changes to the research tools seminar to allow students who come from the KTH bachelor's programme to learn new information, while keeping it basic enough for students who have not come from the KTH bachelor's programme to get the basic knowledge they require.

OTHER INFORMATION

Is there anything else you would like to add?

This was my first year as the course organiser and main teacher. I also added a lot of new content, in response to KTH policies about sustainable development and gender equality. I hope to continue developing the course in the years ahead to address any shortcomings.