Report - MH2029 - 2021-11-15

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 have given comments on the lectures by the 3 teachers Jesse White, Andrey Karasev and Pär Jönsson as well as by the assistant Josefin Mvele Svensson during the course. After the exam, a LEQ was started where 9 out of 13 students answered the LEQ.

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.)

No specific meetings have been organized during the course, but students have given comments on the lectures by the 3 teachers Jesse White, Andrey Karasev and Pär Jönsson as well as by the assistant Josefin Mvele Svensson during the course.

COURSE DESIGN

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

• To develop students' knowledge of current methods to produce base metals from natural ores and recycled materials with focus on steel, which are most relevant for the Swedish steel industry. However, the production of aluminum and silicon is also discussed to exemplify the production other metal as well as other production concepts.
• To develop students' individual skills at performing relevant thermodynamic calculations for the extraction of base metals with focus on steel.
• To develop students' individual skills at interpreting the significance of the results of these calculations.
Course requirements:
Exam (TEN1), 4 p.
Home assignment (ÖVN1: 2p)thermodynamic calculations.
Since 2019 we have added some extra lectures where basics of thermodynamics is explained, since in the past many students have said that they did not have enough knowledge in this area. This year the students abilities to meet the goals of thermodynamics was examined using a home assginment for OVN 1.

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?

Most students spent between 6-11 hours per week, which corresponds to the expected levels.

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 results from the exam TEN1 were the following:
A. 1
B: 4
C: 5
D: 2
E: 1

We consider this to be a good result and it is as good as last year when we got higher grades. We believe that this is due to that we have adopted the lectures to better focus on the goals of the coarse. It should also be noted that all students passed the exam at the first time it was given.
The student has also done well in the assignment OVN1, where they have performed calculations. The assistant played an important role in teaching them the calculation methods as well as answering their questions. Most of these students have not studied thermodynamics of high temperature processes in the BSc education .This is an essential knowledge for them in order to perform well in the obligatory courses that are given after this course in the MSc program.

STUDENTS´ANSWERS TO OPEN QUESTIONS

What does students say in response to the open questions?

What was the best aspect of the course?
Exercise section
It was interesting.
Printed slides, complete course material
The teachers
Get to know more about different materials processing.
Lessons and Teachers

What would you suggest to improve?
nothing
To change the order of the exercise sessions : the ones with Josefin first.
Plan a group visit, in order to directly apply course knowledge and to make the course a little bit less theoretical.
Maybe a trip to steel industry to have a look at physical blast furnace
If it is possible to give any additional references, which have bit more detailed celebrations about the processes. I think it's better.
Courses on Si and Al is not very impressive

What advice would you like to give to future participants?
Do work on the exercises by yourself as well
None
Follow exercises with attention

Name the two best things with the course
Very interesting overall
Lessons were explained very clearly, easy to understand the main concepts, since they were presented in basic and clear terms
Overall introduction to steelmaking process in Sweden
The teachers and course material
The structure of course.
The teachers.

Name the two worst things with the course that you recommend should be improved to next year
nil

SUMMARY OF STUDENTS' OPINIONS

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

It is clear that the students were satisfied with the teachers in the course. Moreover, that they are satisfied with the assistant that was responsible for teaching them the basics of performing thermodynamic calculations for high-temperature processes.
Some wish to add a visit to an industrial plant.

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 have performed well on both the written exam and the assignment. It is clear that the changes we implemented the last years based on the previous students suggestions, have highly contributed to the the good result. There is no funding for a visit to a plant in this course, but the students will get this opportunity in MH2049.

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 have to few students in this class to judge this on a statistical base. This course is mainly seen as an adaptation course for students that has not taken thermodynamics before. So far only international students attend.

PRIORITIZED COURSE DEVELOPMENT

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

We should continue to strengthen the part that involves thermodynamic calculations, where the students under a good guidance learn the basic theories of thermodynamics and how this knowledge is applied on realistic but well defined industrial problems.

OTHER INFORMATION

Is there anything else you would like to add?

It would be of interest to follow up how the students in MH2029 perform in the following courses focusing on thermodynamics, in order to confirm that they have received a sound initial knowledge in the MH2029 course.