Report - SG2214 - 2020-11-25

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):

Anders Dahlkild, aad@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.

The course evaluation was performed electronically with 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.)

None.

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

14x2h Lectures
14x2h Recitations
3x1h Tutorials
1x3h Laboration (mandatory)
3 Homework assignments (mandatory, may give bonus points on written exam).
1 Written exam

This year we offered lectures and recitations live and via zoom in parallell. All lectures were also recorded in Zoom and made available in Canvas. The class was divided in two halves and were invited to attend every second lecture live.

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 median of the answers was about 13 hours per week, some considerably more, some considerably less.
(According to course credits 7,5 it should have been 20 hours per week. If you add 6 hours per week for teaching in class one gets 19 hours per week, which is then according to the expected value (in average).

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?

First written exam:
6A
3B
3C
5D
2E
14F
The amount of F has doubled.
Less contact with students could be one reason.
Another that the difficulty of particular exams may fluctuate.

STUDENTS´ANSWERS TO OPEN QUESTIONS

What does students say in response to the open questions?

What was the best aspect of the course?
(I worked: 3-5 timmar/vecka)
The first lectures were very interesting, I found very well explain the streamlines, the deformation part, the different solutions of the Navier Stokes equation.
(I worked: 9-11 timmar/vecka)
The lab work was Nice to understand, it would be good to have more labs to understand other parameters
Giving basic understanding of fluid phenomena
(I worked: 15-17 timmar/vecka)
The understanding of physical effect and concrete examples.
(I worked: 18-20 timmar/vecka)
Goo balance of theory and exercises
Anders is a very friendly and devoted teacher.
(I worked: 30-32 timmar/vecka)
Example of typical examination from several years ago

What would you suggest to improve?
(I worked: 3-5 timmar/vecka)
The boundary layer part was a bit more confused for me. Didn't know when we can apply the blausius ansatz.
The recitation notes are strange. You could change the structure. First explain what the problem is, then show the solution.
(I worked: 9-11 timmar/vecka)
A better revision of math principles would be great
(I worked: 15-17 timmar/vecka)
To clarify some important and hard aspect of this course.
(I worked: 18-20 timmar/vecka)
The course structure, or at least tell the students that this course is not for people who have done only one exam in fluid mechanics in their whole life. A solid basis is needed beforehand to complete This course
I think it would be helpful if the teachers provided some practice problems, maybe by providing a paper of ~5 easier problems each week with solutions that the students could work independently with. Sure, the course literature had practice problems but without solutions.
(I worked: 30-32 timmar/vecka)
If possible, material distribution can be divided in to two periods in one semester.
Rekommenderade övningsuppgifter med tillhörande lösningsförslag i varierande svårighetsgrad att kunna arbeta med.

What advice would you like to give to future participants?
(I worked: 9-11 timmar/vecka)
Learn the answers to the theory questions answer ALONG the course.
Start revising right away. Pay more attention to the HW exercises.
(I worked: 15-17 timmar/vecka)
Take time at home to understand the hard points and don't hesitate to ask questions to the teachers
(I worked: 18-20 timmar/vecka)
If you have done only one exam in fluid years ago don’t choose the subject
Attend the lectures, but effort into the homework problems.
(I worked: 30-32 timmar/vecka)
Please, train and learn hard!

SUMMARY OF STUDENTS' OPINIONS
Summarize the outcome of the questionnaire, as well as opinions emerging at meetings with students.

In general the course seems to be okay, but some students obviously find the course hard to follow.

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.

Seems as if previous knowledge differs substantially between students. This difference is probably emphasised by the lack of direct physical communication with the students. However, there was no direct comments regarding the remote teaching procedures. Lectures were sparcely attended, probably because of the available recordings. Students took few chances for questions during lectures, independent of if they were on Campus(a few) or on Zoom(most of them).

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?

Too few answers to draw any general conclusions for the different groups.
Highest score, 5.6, was given to 16. The assessment on the course was fair and honest.
Lowest score, 4.4 ,was given to 4. The course was challenging in a stimulating way.

A weak point is the lack of easier exercises with available solutions. That would be a valuable resource for students that find the homework assignments too demanding as a first exercise to try. Although there are old written exams with solutions available, maybe they are not useful as first exercise either.

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

Enable problem solving on the side on shorter basic problems.

With the lectures recorded from this year, lecture classes could possibly be focused more on interaction and questions from/to the students. Derivations of equations are easily reviewed through the recordings and we would have more time on lectures to take questions from the students.