

Report - MG2022 - 2022-05-31

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.

This year there were three elements in the course evaluation process: An LEQ questionnaire (LEQ 22) which was sent out to the 39 students who had completed the first course module. This questionnaire was open between April 1st and May 15th, but only answered by six students, so its value is limited for us. The second element was the new requirement that all students had to include a personal reflection on their overall experiences and learning during the course. The average reflection consisted of about half a page of text, and as this was a compulsory part of the final report, we have received reflections from all 36 students that until this date (May 31st, 2022) have submitted their final report. That makes the personal reflections our main source of feedback from students. The third element of the course evaluation is the discussions held with students at lab sessions, help classes and the final presentation, where students show and we discuss all their models created throughout the entire course. This element is not documented in print, but it gives us a general impression of the students' views on the course and what they have learnt.

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.)

As mentioned above, we have had regular discussions with students throughout the course, and in particular at the individual final presentation. However, outside these scheduled classes and individual final presentations, no meetings dedicated to feedback has been arranged.

COURSE DESIGN

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

During P2, exercises are distributed to the students at the start of classes (2*3h/week) in form of engineering drawings from which they shall create CAD models. Initially, students are given time during most of the class to complete the exercise, the best they can. During the last part of the class, we then present how we create that model and explain why it is done that way, trying to teach students a modelling strategy to ensure that the resulting model is of good quality. These drawings, and thereby the exercises, are gradually getting more and more complex, and require more time to complete, where students for the last drawing distributed are given up to 10 hours to complete the model, before we present our solution. Exercise drawings, video recordings of our presentations of solutions to the exercises, and the completed models, are published on Canvas, so students who can't attend at classes, can still take part of the same information, although videos and completed models are published with a delay of at least one week, to give those who are absent time to try on their own, before seeing our solution. The examination for the P2 activities is to submit a written report, which usually amounts to between 5 and 10 pages, of text and images describing the completed model and particularly interesting modelling situations and learning experiences for each of the exercises. We write feedback to these reports, and if we consider the quality to meet our expectations, students are given a Pass grade and 3 credits for this module.

During P3, students work with drawings and models of their own choice, selected from a library of digitised drawings that we provide. Typically, the complexity of these drawings are equal to or higher than that of the final exercises during P2. Classes during P3 (1*3h/week) are dedicated to individual supervision and help to solve the chosen modelling tasks. Students can choose which final grade they are aiming at by the number of drawings that they choose to create models from, and the complexity of each such model.

For the final examination each student has to write and submit a final report, including the (possibly revised) P2 report, in the same manner describing the key modelling methods used and intermediate and final model, in text and images. When this report has been submitted, the student book a time for the final presentation, and at the end of this final presentation session, the student is given the final grade. There is an additional grading criterium, which means that if the final report was submitted after April 1st, the grading scale is lowered by one step, i.e. students submitting the final report before this deadline, will get a minimum grade of D, whereas those who submit later can not get an A final grade. We also had a second deadline for submission, on May 1st. A final report submitted after this date can only get an E grade. These deadlines were set to encourage students to finish the course in due time, as they do most of their work during P3 outside scheduled classes, and it is thus a risk that other activities get a higher priority.

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?

It varies between students, depending on the grade they are aiming at, and thus the number of models they choose to create, but scheduled classes sum up to 72 hours and in addition to this, students have to do additional work between classes. The number of hours per week spent on the course among students that answered the course evaluation questionnaire vary from 3-5 hours up to 21-23 hours, but with the average and the majority spending about a total of 10 hours per week on the course. If we multiply this with the number of weeks with classes, this sums up exactly to the 160 hours corresponding to 6 credits. In the personal reflections, many of the students state that they would have liked to spend more time on the course, but due to parallel courses, some with compulsory attendance when our classes were scheduled, they were not able to put as much work as they would have liked, particularly on the P3 activities.

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?

As mentioned above, we had 39 active students in the course this year, even if 50 were initially admitted and registered. Of those, three have chosen to discontinue the course, another four have never attended any classes despite registering to the course offering, two more were reregistered but did not attend, and two have told us that they will reregister next year. Of the 39 active students, four were only active during P2, and have not submitted a final report. 33 students have received their final grade and two more have submitted the final report and booked a final presentation. Final grades for the 33 students who completed the course are distributed as 7 A, 5 B, 8 C, 12 D and 1 E. The remaining two students who have submitted the final report will also get an E grade. Overall, the examination rate is better than most previous years, but quite similar to last year's course.

STUDENTS' ANSWERS TO OPEN QUESTIONS

What does students say in response to the open questions?

What was the best aspect of the course?

- Varierande uppgifter
- Freedom to choose how high to aim for
- Bra feedback ifrån Lasse och Per. Man lärde sig oerhört mycket nya funktioner i Solid Edge under första halvan av kursen. Under den senare halvan fick man tillfälle att öva på sina nya kunskaper.
- I think that the second part with the harder drawings was very fun and challenging. Sadly I had alot of other harder classes but otherwise I would have tried a few more assignments.
- This course gave me a firm hold on the software and improved my modelling skills

What would you suggest to improve?

- Some modules were a bit unclear and finding the expected requirements for each grade may have been better as its own document/page on canvas since that was something I needed to access a lot near the end of the course.
- I don't know really, the course was well refined
- It would be a added advantage if FEM or other simulations in solid edge was taught.

What advice would you like to give to future participants?

- Delta i genomgångarna som hålls i slutet av lektionen
- Do all the assignments on a schedule, and do the yellow parts first before the red parts.
- Gå på övningarna / hjälptillfällena, där lär du dig jättemycket.
- Trust Per & Lasse. The course gets heavy during P3, don't push up the final projects.
- Per and Lasse were my mentors who helped me every time i encountered any obstacles. If u have any doubts they are always there to help you out. Try to dedicate some specific time for the assignment in P3. Based on personal experience i would strongly recommend not to start late. Though i started in time, it did take me several attempt to get the right model with the right steps. First choose the models you would like to model then try to understand the drawing properly. There is no harm in redoing the models again and again, as each time we get a new approach which is better than the previous one. The last advice which was my biggest mistakes that kept repeating was not saving it file. The software can crash anytime which would lead to you loosing your work. TRY TO KEEP SAVING FREQUENTLY.

Is there anything else you would like to add?

- Superkul kurs, Sök den!
 - It's a great course to improve you're cad understand and abilities as well as understanding drawings.
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SUMMARY OF STUDENTS' OPINIONS

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

The opinions were very similar to those last year. Once again, the students agree to a very high degree to the statements in the LEQ questionnaire.

Statement #5: "I felt togetherness with others in the course" had the lowest score (4.8), but that can be attributed to the pandemic.

Statement #20: "I had opportunities to influence the course activities" also got a 4.8 score, but that is in line with our expectations/plans

Statement #21: "I was able to learn by collaborating and discussing with others" also received a lower score (5.2), probably also due to the pandemic.

However, even these "low" scores were more in favour of than opposing the statements, and all other statements got a score well above 6.

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.

As usual, this is one of our favourite courses to teach, and the results were similar to those in previous course offerings. We had more students on the course than last year and the average final grade also improved a little from last year. The new requirement that all students should write a personal reflection on their learning during the course was good, as we received a lot of valuable feedback that way, and not the least very many encouraging and positive comments from the students. However, it is possible that the introduction of this reduced the number of answers to the LEQ questionnaire, but in total, we think that the combination of LEQ and personal reflection gave us more input than just the questionnaire has done during previous years.

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?
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No, the number of answers to the questionnaire was too low to see any such distinctions.

PRIORITIZED COURSE DEVELOPMENT

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

We are planning to replace this course with a new almost identical one, where the additive manufacturing has been removed from the course and its name. The reason for this is that we started a separate course on advanced level in additive manufacturing this year, and thus, there is no need to keep that module in the course.

OTHER INFORMATION

Is there anything else you would like to add?

The answer, as usual is: NO!
