Report - SI1410 - 2019-01-10

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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COURSE DESIGN

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

The course aims at giving an introduction to modeling dynamical systems. The course consists of 6 modules (1 per week). Each module is centered around a topic and consists of four activities, a lecture, a workshop (in groups of 4-5, in the absence of a teacher), an exercise session (where the students present the outcome of the workshop in groups and where the problems are solved with help from the rest of the class and the teacher) and a computer lab (done in pairs). The activities are designed to complement each other. Two individual computer lab reports are graded (1.5 credits each) and the final written exam accounts for 3 credits. The exam has 4 problems and each of them should be passed to pass the exam, the final grade is a result of the individual grades. We have a midterm in an empty week in the middle of the period so the students can practice. This is graded for reference but the grades no not count towards the final grade. However, one grade from one exercise that was successful can be transferred from the midterm to the final exam, in case one exercise in failed on the exam.
Following the 2016 course evaluation, the structure of the course was modified. The total material was reduced, the modules were introduced as well as the workshops and the corresponding exercise sessions. The grading system was modified to ensure all the intended learning outcomes are fulfilled upon passing the course. This course offering led to a global increase in the student's satisfaction in the 2017 course offering.
Following the 2017 course evaluation, which showed a lower level of satisfaction than the 2016 one, I have decided to add a few lectures. Instead of one single lecture, we will have two lectures for modules 1, 2, 3 and 5. These are the modules where the mathematical tools are introduced, and it seems like increasing the number of hours will reduce the pace of the lectures which is evaluated as too fast by students who think their background knowledge is insufficient.

THE STUDENT'S 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 average reported time spent in 2017 was around 12-14 hours per week, the average reported time spent in 2018 is around 18-20 hours. The difference remains unexplained since the course material is the same.

18-20 hours is however what should be expected from the students.

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 are stable in 2017 and 2018. The grade distribution during the first session of the 2018 exam is as follows (16F, 7E, 6D, 15C, 10B, 4A), the success rate being 72%. At the reexam, 4/12 passed, bringing the overall success rate over the course period to 80%. The grade distribution shows that the upper grades are achievable and that many students obtain a C, which shows a quite good achievement of the class ILOs.

OVERALL IMPRESSION OF THE LEARNING ENVIRONMENT

What is your overall impression of the learning environment in the polar diagrams, for example in terms of the students' experience of meaningfulness, comprehensibility and manageability? If there are significant differences between different groups of students, what can be the reason?

Interestingly, despite no changes in the course, the students' overall satisfaction went down in 2017 compared to 2018. That can be in part attributed to a lower response rate to the class evaluation survey (which is known to lead to proportionally more dissatisfied students expressing their concerns).

The students still think they work on interesting issues, and that they have an open atmosphere and can work by talking to others. They would like more material, which was not expressed in the previous class edition.

This year, the gender difference was larger with males showing more satisfaction. It is difficult to ascribe these disturbing differences, here again, due to the small number of respondents. Effort should be made to level out these differences.

ANALYSIS OF THE LEARNING ENVIRONMENT

Can you identify some stronger or weaker areas of the learning environment in the polar diagram - or in the response to each statement - respectively? Do they have an explanation?

The area to improve the most is the assessment and improving the lab report guidelines.

ANSWERS TO OPEN QUESTIONS

What emerges in the students' answers to the open questions? Is there any good advice to future course participants that you want to pass on?

The students seem to appreciate the course structure and the lectures, although some think the pace is too high and the quantity of information is too high. This is despite them doing well on the exam while spending an appropriate time on the course. This probably reflects anxiety associated with learning and can maybe be improved with more teacher support.
As before, opinions are polarized with some students saying they find the class very interesting and challenging in a good way.

PRIORITY COURSE DEVELOPMENT

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

We will add 4 lectures, for the more intense modules, to have more time to spend on difficult concepts.
Increasing the number of hours will also allow to introduce the grading system more efficiently. Some students complain about not understanding the too complicated and arbitrary grading system (which was designed while taking KTH's learning using the grading criteria class and is even used by the teacher of this class as an example of a well thought-out grading system), even though they are available in writing. Spending time explaining it will hopefully increase the sense of fairness. As more teachers adopt a similar grading system (mandated by KTH), hopefully students will not feel as much as a lack of points is equivalent to arbitrariness.
We will also make a teacher or TA available during the workshops, through an online work environment where the students will be able to ask questions and get feedback to avoid getting stuck for too long, a common complaint throughout the class.

Course data 2019-01-15

SI1410 - Basic Modeling in Biotechnology, HT 2018

Course facts

Course start:	2018 w.35
Course end:	2018 w.43
Credits:	6,0
Examination:	LAB1 - Laboration 1, 1.5, Grading scale: P, F LAB2 - Laboration 2, 1.5, Grading scale: P, F TEN1 - Exam, 3.0, Grading scale: A, B, C, D, E, FX, F
Grading scale:	A, B, C, D, E, FX, F

Staff

Examiner:	Lucie Delemotte <lucied@kth.se>
Course responsible teacher:	Lucie Delemotte <lucied@kth.se>
Teachers:	Lucie Delemotte <lucied@kth.se> Annie Westerlund <anniewe@kth.se>
Assistants:	

Number of students on the course offering

First-time registered:	0
Total number of registered:	66

Achievements (only first-time registered students)

Pass rate[1] [%]	*There are no course results reported*
Performance rate[2] [%]	*There are no course results reported*
Grade distribution[3] [%, number]	*There are no course results reported*

1 Percentage approved students
2 Percentage achieved credits
3 Distribution of grades among the approved students