Report - AK2030 - 2018-06-18

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.

Note: In this course analysis answers from all connected course rounds (AK2030, AK2036 P4, FAK3014 P4, FAK3024 P4 and F1N5113 P4) have been taken in to account due to the high similarity between the courses. The courses share the same or almost the same lectures, seminars and exam and in reviewing the answers we have found no reason to believe that the answers are not valid for the other course rounds, except when it comes to those seminars and lectures not shared.

Course consists of lectures, seminars and an exam. Since the last course round two video lectures have been introduced, along with quizzes giving bonus points. The seminar hand out for seminar 4 has been changed. Lecture preparation readings to the lectures "Observation and measurement", "Philosophy of the social sciences" and "Science at risk" have been changed, and quizzes changed. One "flipped classroom" has been added, treating submitted student questions based on the video lectures and working with an in-class assignment. Structure of the exam changed to a more explicit goal oriented grading where a certain number of points on each part was required for each grade, and the total number of points decreased to give students more time. The last two parts of the exam were restructured to better match the intended learning outcomes of the exam.

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 AK2030 course is a 4,5 credit course over eight weeks (when holidays are excluded). One respondent stated 33-35 hours, one 18-20 hours and one 6-8 hours. With only three respondents and no comments we are unable to say if this means that students on average are working more or less than the expected 15 hours per week.

Considering the 7,5 credit sister course AK2036, where the expected workload is 25 hours per week, the 33 respondents are stating, on average, 11 hours per week, including scheduled hours. Given that course weeks often have between 9-11 scheduled hours, this indicates that not a lot of individual work was done. Some commentators who according to their self-assessment work less than expected, state that they thought it was a stressful course. Some commentators also state that the workload was uneven. In comments to other sections, students indicate having a workload outside of the course, from other courses or from part time work, more than would be expected of a 7,5 credit course.

Our interpretation of this is that we need to be better in communicating the expected workload of this course, both at the beginning of and during the course, but also in material communicated to students when choosing this course. The course load is somewhat uneven, and we have plans to even this out for the spring term of 2019 for all connected courses.

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?

A	B	C	D	E	P	FX	F	
13%	14%	16%	8%	9%	5%	10%	25%	(1)
15%	12%	12%	8%	4%	4%	13%	31%	(2)

(1): 2018-05-30, 118 submissions, AK2030, AK2036, and PhD courses
(2): Mean last 12 months, 8 exams, and total 1348 submissions: AK2030, AK2032, AK2036, AK2038, AK2050, DA2205, and PhD courses.

Due to the low number of students of AK2030, the combined results of AK2030, AK2036 and PhD variants are presented here for the May exam. For the year average, all connected courses are presented.

Fewer students failed the period 4 exam than the 12 month average, and the grade distribution was similar. There is no indication that the new exam format either made it easier or harder for students to pass nor to receive a certain grade.

Almost all students have passed the other course requirement (4 seminars). This is in line with previous periods.

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?

For all but one of the 22 specific question a majority (about 60-70 %) reported positive scores. Most students seem to find many aspects of the course meaningful and challenging. There were no significant variations between student groups, except that Swedish students reported having sufficient background knowledge to a higher degree and were slightly more positive to the other aspects of the course than international students (with the exception of question 20).

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 evaluation indicate that the course is generally perceived as open and inclusive, and that the course has high comprehensibility. In particular the focus on core concepts and the discussions with peers were appreciated.

The weaker aspects of the course were the individual learning aspect – being able to choose what to do and learning in a way that suited the student. This is to some degree a representation of the actual structure of the course, were not much is left for the student to choose for instance when it comes to subject matters. A possibility for course development is to let students choose which cases to work with in the seminar, chose project articles (for AK2036).

Another interpretation is that this is a result of the many quizzes and deadlines of the course. For almost each lecture and for every seminar there is something that needs to be done beforehand and before a certain date. This forces a student to study at a certain time, and to some extent in a certain way. When it comes to the deadlines for the seminar quizzes, there is not much that can be done since attending the seminar requires a certain background knowledge.

When it comes to the lecture quizzes, a possible development is to be clearer that the pre-lecture quizzes are optional and up to each student to choose to take, as a way to increase his or her knowledge and grade. We hope that all students take these and have now structured the course to clearly lead students to take these. One possibility could be to make it more open to the student to take these or not. Increasing video lectures will also give more opportunity for students to study in their own way.

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?

Changing to video lectures and flipped classroom appears to be generally appreciated. The seminars are highly appreciated, which is the same trend as seen in previous years. Some students note that they help a lot with passing the exam, and some others note that there are a lot of other concepts that are necessary.

The reading and quizzes that can be done for bonus points before some lectures receives some criticism. One aspect is that it takes a lot of time to read them. Given that they are not mandatory and that students self-report fewer hours than intended, this is not necessarily something to take into account. However, some of the criticism is that the reading is not relevant for the lecture nor is useful for the exam. Another aspect is that the level of the texts are too high, so that they are hard to understand without having been to the lecture first. Three of the texts and questions were changed before this period with such considerations in mind, and it is unclear to what extent this applies to the new texts as well.

A commentator makes the distinction between external motivation and internal motivation. We interpret this distinction so that giving bonus points for the exam for doing quizzes and reading texts serves as external motivation, and internal motivation is about being intrigued by the course material. This is an important point, and one to consider in future course development – is this serving the purpose of making students study or making them want to study? However, we are also aware that for many students these courses are mandatory, which often implies that at least for some students, the internal motivation is low. For these, the best we might be able to do is to provide as much external motivation as possible.

Another criticism is the late change of the exam format, grading and the role of bonus points in the exam. The system as such is not the target of these comments, but that the changes were announced late during the course. We will make this more explicitly clear in the information for upcoming periods, and it fits in with making it clearer that the bonus points are optional.

A commentator pointed out that no teacher came by during the exam. This is adherence to KTH regulation, and any student who wants to ask questions should ask the invigilator to summon the teacher. While it is all students' duty to be informed about the rules for examination, we could certainly assist by providing links to them in the exam section of Canvas.

Some comments indicated that the course used words and concepts that were hard to understand, and that the course is very concept-centred and that Wikipedia was a useful tool for understanding the course.

PRIORITY COURSE DEVELOPMENT

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

Some course development is already planned: the implementation of three more video lectures, the addition of another flipped classroom (for period 1 of 2018-19) and distributing the course events more evenly during the course weeks (for period 3 of 2018-19).

Based on the feedback from the students, we should make it clearer what is mandatory and what is optional, especially with regards to the lecture quizzes, and how taking part in these can help the grade. We could also aim to show more clearly how lecture quizzes relate to the course material, to explain how they are relevant. In terms of information we should also be clearer about how much total time a student is expected to spend to pass this course, and provide links to the KTH exam regulations.

The level of the language used in the course could be discussed, and the possibility of providing a list of concepts to help students navigate the course. In addition, while Wikipedia and other internet sources can help students, some concepts are defined differently in this course than in other sources. A list of concepts could help students in this regard.

We should also consider on how to provide additional kinds and sources of motivation for students – we are currently focusing a lot on external motivation and providing incentives for studying early – which is what many students put forward as a recommendation to other students. On the other hand, we might have to consider how to increase motivation for students who are interested in the subjects discussed in the course.

Course data 2018-06-28

AK2030 - Theory and Methodology of Science (Natural and Technological Science), VT 2018 Period 4

Course facts

Course start:	2018 w.12
Course end:	2018 w.23
Credits:	4,5
Examination:	SEM1 - Seminars, 1.5, Grading scale: P, F TENA - Examination, 3.0, Grading scale: A, B, C, D, E, FX, F
Grading scale:	A, B, C, D, E, FX, F

Staff

Examiner:	Till Grüne-Yanoff <gryne@kth.se>
Course responsible teacher:	Till Grüne-Yanoff <gryne@kth.se>
Teachers:	Johan Berg <jgberg@kth.se> Sebastian Östlund <sostlun@kth.se>
Assistants:	

Number of students on the course offering

First-time registered:	9
Total number of registered:	31

Achievements (only first-time registered students)

Pass rate[1] [%]	33.30%
Performance rate[2] [%]	59.30%
Grade distribution[3] [%, number]	B 33% (1) C 33% (1) E 33% (1)

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