Report - AK2036 - 2019-04-05

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, AK2050) 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.

The 4,5 credits version of the course consists of lectures, seminars (1,5 credits) and an exam (3 credits). The longer versions on a master level also complete a “Project part” assignment related to articles in their field (3 credits). The exception is the course AK2050 and students from the medical engineering master’s programme, TMLEM who as their project part take a module on the ethics of medical technology (1,5 credits / 3 credits). From previous period the content of seminar 3 has been changed, and three-self-assessment stages of the project part of AK2036 /AK2038 has been removed. This was done to increase the connection between the seminars and the exam, and to decrease the number of deadline to reduce stress, respectively.

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?

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The expected workload for the AK2030 is 12 hours per week. 26,7 % of the respondents reported working this much or more, and the rest reported working less than this, with 26,7 % reported working 9-11 hours per week and 26,7 % reported working 6-8 hours a week. The expected workload for the AK2050 version it is 16 hours per week, 75 % reported working 14 hours or less per week. The number of respondents to this survey, however, was low. The expected workload for AK2036 is 20 hours per week. All students reported working less than this, with 68,8 % reporting working between 9-14 hours a week. None of the text comments give any hints on why the amount of time differed from what was to be expected.

The course analysis meeting discussed this matter. One possibility could be that the self-assessment is not accurate, either because the respondents did not correctly assess the hours they worked, or because they interpreted the question in a different way from what was intended. For instance, it is not clear that students thought of all ten course weeks when they answered the question, since lectures and seminars feature in the first two thirds of the course weeks. Another is that the distribution of grades is reflected in these numbers – that it is possible to pass this course without spending the recommended hours studying. This is not necessarily something that should be changed. However, increasing the hours worked by the students could increase the number of students passing, and improve the distribution of grades. Providing “further reading” material and similar assignments for students could be one way, another to help students with tips on how to read and why. The meeting noted that this course is often perceived as text-heavy, and that engineering students could be believed to be less experienced in note taking, different styles of reading, and other tools for self-study of texts. Providing such tools could presumably increase time spent studying.

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?

2018 grades in percent, rounded to nearest full percentage point (n=1092)
A: 16
B: 13
C: 14
D: 12
E: 7
Fx: 15
F: 24

2018-2019 Period 2 grades in percent, rounded to nearest full percentage point (n=98)

A: 7
B: 4
C: 16
D: 19
E: 18
Fx: 17
F: 17

65 % of students received a passing grade, which is slightly higher than the year average of 61 %. However, fewer students received the highest grades, A and B, than the year average. However, no clear conclusion can be drawn from this and it is not clear that this is a significant deviation.

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?

Students' assessment of the learning environment is between neutral and +3 (maximum) for all aspects of the learning environment. The overall impression it that students' experience the learning environment as conducive to learning. The main difference between groups that held true for all course codes was that Swedish masters' students reported a lower score on the question "the assessment in the course was fair and honest" than international masters' students. The grading scheme on the exam requires certain scores on each of the three parts for each grade, and does not only consider overall score. This is one way account for the KTH decision on ILO-related grading. A possible explanation is that this way of grading is less common in Sweden compared with other countries, and thus is perceived as less fair. One way to account for this is to provide better information on the ILOs and that they test separate and to some degree incommensurable skills.

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 one aspect that seems to be an area for improvement was meaningfulness – challenge: "the course was challenging in a meaningful way". We do not currently offer further readings or sources for students who are motivated and interested – this could be added and might improve this. One other possible interpretation of this is that we could make the challenges more meaningful. One way could be to show how fulfilling the ILOs could have an impact within the students' own field of study, thus showing that what is challenging is meaningful to them. One way is collecting real examples from situations within different fields of research and use these as a part of the education.

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?

From the open questions it is clear that the seminars and the video lectures are especially well liked among students. A few commentators stated that the multiple choice part on the exam was hard or confusing. The main advice given by students to other students was to study hard throughout the course, and participate in all learning activities.

PRIORITY COURSE DEVELOPMENT

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

For period 3 and on, the course activities will be more evenly distributed throughout the course weeks to reduce stress. We will record two additional video lectures during period 3. In the long term we will create course literature related to the lectures, featuring further reading recommendations and references for interested students. Points of development, which does not yet have a clear method of implementation, are providing information to the students on self-study techniques (such as note-taking while reading and different styles or reading) and improving the information regarding the ILOs, and the different skills that they represent and how these are evaluated. We will continue the work with collecting cases from real research where the course terminology and concepts can be applied.

Course data 2019-04-23

AK2036 - Theory and Methodology of Science with Applications (Natural and Technological Science), HT 2018

Course facts

Course start:	2018 w.44
Course end:	2019 w.3
Credits:	7,5
Examination:	PRO1 - Project, 3.0, Grading scale: P, F 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:	Johan Berg <jgberg@kth.se>
Teachers:	
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Number of students on the course offering

Registered	0

Achievements (only 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

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