



Report - AK2036 - 2019-05-22

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) 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 main change from previous periods is that the course events have been more evenly distributed over the period, going from three lectures each week, with seminars starting the second week, to two lectures each week, seminars starting the third week and including a one week break between seminar two and three. The intention with this was to ameliorate stress - students reported working unreasonably hard in the beginning, and not at all towards the end. By distributing the course events, we hoped to change this.

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 expected workload for the AK2030 is 12 hours per week. 27% of the respondents (3/11) reported working this much, 36 % (4/11) more, and 36 % reported working less than this (4/11). The expected workload for AK2036 is 20 hours per week. 8 % (5/60) reported working this much, 15 % reported working more (9/60) and 77 % reported working less (46/60). None of the text comments give any hints on why the amount of time differed from what was to be expected. Several text comments report the workload being "fair", "not very heavy" and "reasonable". However, some students who worked 12-17 hours instead of 20 reported that the workload was "heavy", "too high" and "hectic". One student said that the workload did not correspond to the amount of credits, while at the same time self-reporting working the recommended number of hours. Only one text comment from a student who actually worked more than the expected level claimed clearly that the workload was too heavy, and two more can perhaps be interpreted similarly. Many of the other comments were not related to the workload in particular (34 respondents gave text comments in this field).

Disregarding the possibility of errors in the self-assessment, students thus, on average, work less than what is expected but feel that the workload is higher than expected. While it is not necessarily a problem that students do not work the expected hours - level of ambition, or time required to learn, might vary among students - it might be a problem if students still feel that this is more than what is reasonable, since this might have a negative effect on their perception of the course and perhaps also negatively influence their performance in the course. One reason for this result could be that they are not properly informed about the expected workload of the course.



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?

P3 2017-2018 - P2 2018-2019 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 3 grades in percent, rounded to nearest full percentage point (n=192)

A: 19
B: 19
C: 18
D: 12
E: 6
Fx: 11
F: 15

73 % of students received a passing grade, which is higher than the year average for these courses of 61 %. Slightly more students received the highest grades, A and B, than the year average. No clear conclusions can be drawn from this.

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 on average. The overall impression is that students' experience the learning environment as conducive to learning. Swedish students of AK2036 report slightly lower satisfaction with 8/12 aspects of the learning environment, and for 10/12 of the aspects for AK2030. No comments provided by the students could provide a definitive answer to why this was. A possible reason is that these courses are different in terms of structure and/or subject matter from the courses given to bachelor students at KTH (this course is perhaps relatively more lecture and text-centred) in a way that is perceived negatively, and that this is not the case for bachelor level courses at international universities or that the difference is not perceived negatively. Three comments from international students support the latter interpretation, stating that the course provided a different way of learning compared to at their home universities.

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?

No aspect stood out as significantly more positive or negative than other. For AK2036 results varying from 5,0-5,8 on a scale from 1-7, with "The course was challenging in a stimulating way" being the lowest, followed by "I worked with interesting issues" and "The intended learning outcomes helped me to understand what I was expected to achieve". AK2030 reported the least satisfaction with "I worked with interesting issues", "The intended learning outcomes helped me to understand what I was expected to achieve", "I could practice and receive feedback without feeling graded" and "I was able to learn by collaborating with others" (results varying from 4,8-4,9 for these questions). One aspect to mention might be to what extent students perceive the ILO's as helpful. The evaluation does not ask to what extent students are aware of what the ILOs are, and a possible explanation as to why they did not perceive them as helpful is that they are not aware of what they are. We could thus work more on informing students what the ILOs are and how they can be helpful for learning. This will presumably be helped by the introduction of grading criteria from period 1 2019-20.



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. The quizzes and feedback is also mentioned as positive aspects. Regarding some issues answers expressed opposite opinions: some perceived the repeated deadlines for optional bonus points quizzes as stressful while others reported this as helpful for staying on track. Several text answers stated that there were too many different tasks to do, and some stated the preparatory reading for optional bonus points before campus lectures were either hard or that the associated quiz was hard to do. AK2036: (1) Some negative feedback was brought up regarding the flipped classrooms - stating that it is not a viable learning format for large lecture classes. (2) Some reported that they felt that the course structure was scattered, with many deadlines for instance and that it was difficult to get a grasp of the course structure. Others, said that the course was well-structured. Some felt that there was a strong focus on learning definitions of course concepts and that this was negative.

PRIORITY COURSE DEVELOPMENT

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

From period 4, two new video lectures will be introduced, with associated quizzes. A practice-quiz will also be completed, in which we help students distinguish between important ILO connected terms, such as the difference between explaining what a concept means versus just stating a definition. This quiz will also serve to highlight important common mistakes made by students. 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 of reading) and improving the information regarding the ILOs, and the different skills that they represent and how these are evaluated. We will continue to work on ways to show the usefulness of knowing the different concepts in actual scientific research, for instance by continuing the work with collecting cases from real research where the course terminology and concepts can be applied.

Course data 2019-05-22

AK2036 - Theory and Methodology of Science with Applications (Natural and Technological Science), VT 2019 Period 3

Course facts

Course start:	2019 w.3
Course end:	2019 w.11
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:

Assistants:

Number of students on the course offering

Registered	0
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Achievements (only registered students)

Pass rate ¹ [%]	<i>There are no course results reported</i>
Performance rate ² [%]	<i>There are no course results reported</i>
Grade distribution ³ [%, number]	<i>There are no course results reported</i>

1 Percentage approved students

2 Percentage achieved credits

3 Distribution of grades among the approved students