



Report - SK2772 - 2018-11-11

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):

Muhammet Toprak (toprak@kth.se)

COURSE DESIGN

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

The course is designed to give a general background to the Nanotechnology master program students about chemical concepts, chemical classifications, hazards of chemical, safe chemical handling, basic thermodynamics concepts, Calculations using Enthalpy, Entropy, Gibbs Free Energy, basic chemical calculations, stoichiometry, chemical equations, acid-base equilibrium, electrochemistry, Common chemicals and wet-chemical processes for Si treatment, and Green Chemistry. An online quiz and an assignment is given after some critical learning modules are completed. Final evaluation is done as a seated 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?

Students seem to have dedicated less time than expected. This could be due to the fact that the pace of course was slow to make sure students from diverse backgrounds can follow the concepts properly to manage the course content with a good level of comprehension. Most of the material was classroom teaching followed by assignments, besides extra reference material to study deeper. The students' participation was very high in the class and they interacted actively with the teacher most of the time to discuss the unclear points in their mind. This may have also caused less time spent outside of the classroom.

According to the polar diagram 55% of the respondents feel that their background was appropriate to follow the course and they have regularly spent time to reflect what they have learnt in the class.

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 course is given the first time in the Nanomaster program. Except for 3 students 17 out of 20 passed the course. There is no prior course groups to compare.

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' response are very positive in the polar diagram. There is no significant difference between the responses of male and female students, or Swedish vs. international students.



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 time students have spent on the course should be increased. Students are content about the teaching environment based on their responses given to specific questions. (9 out of 20 have answered the questionnaire, which is less than 50%. Statistics below is based on this population and the outcome may not reflect the whole)

90% of the respondents feel that they worked with interesting issues (Q1); 67% of respondents feel that they have explored parts of the subject on their own; this is due to the style of the course, not allowing students to research and make presentation on a topic.

55% of the respondents think that the course was challenging in a stimulating way (Q4); some students with different background have studied similar topics in their former training, who may have not found the course stimulating.

All respondents find the course open and inclusive (Q6); All respondents feel the ILOs helped them to improve their learning (Q7); All respondents think that the course was designed to support their learning (Q8); All respondents understood the course content (Q9) and they (89%) were able to learn from concrete examples (Q10); All respondents feel that understanding the key concepts had higher priority (Q11); All respondents think that the course activities helped them to achieve ILOs effectively (Q12); Only 55% of the respondents feel that their background was sufficient to follow the course (Q17); and they (55%) have regularly spent time to reflect what they have learnt (Q18) (Open Answer: Often, the classroom lecture was sufficient for most concepts); they (89%) were able to learn in a way that suited them (Q19). Besides all identify that the support was available whenever they needed (Q22).

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 open questions and some of the answers are given below:

What was the best aspect of the course?

- Lectures
- Teaching

*- Very detailed support material to help understand the topics discussed in the lectures and a variety of solved examples.

*- Way of teaching and curriculum

- Key areas of chemistry was focused to provide foundation to learn more about nanotechnology in future.

*- I was able to learn from concrete examples that I could relate to.

*- The style of teaching was the best part. It started with slides but the teacher explained everything very well with examples and analogies to connect and describe everything in detail.

- The best aspect was that anyone with no background in chemistry at all could learn at least the basics and understand chemistry

What would you suggest to improve?

*- More exercises

- It's perfect course for understanding the basics.

*- More assignments to keep track of the learning and make sure the concepts have been understood.

- more examples related to real life problems

- More relevant topics can be taught that directly influences chemistry at nanoscale.

- More assignment will be better.

- There could be a few more assignment/self exploratory tasks like review of some concepts or a presentation (graded/non-graded).

- I was really satisfied about the teaching of the course and Mr.Toprak is an excellent teacher and explainer.

*- I guess a summary lecture in the last lecture will be good!

What advice would you like to give to future participants?

- Be ready to learn newer topics.

- take the course to build/ revie foundations in chemistry.

- Take time to read and understand what's going on in classes

- Please go through the articles that occur in this course as you may find your interested area.

- Attend all the classes. It is very informative and you won't have to spend too much time studying the concepts by yourself. The course content (all slides, tutorials etc.) will be available on canvas but presence in class really helps to understand the content better.

- For someone who has no prior knowledge of chemistry my advice would be to devote at least half an hour to prepare every lecture before the class attendance.

- Carefully do the practice problems.



PRIORITY COURSE DEVELOPMENT

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

The time students spent on the course can be further improved. More reading assignments will be distributed to prepare before each class. More assignments, or tasks for individual student's presentation will be included as students seem to ask more those kind of activities to engage more.

OTHER INFORMATION

Is there anything else you would like to add?

No.

Course data 2018-12-10

SK2772 - Chemistry for Nanotechnology, HT 2018

Course facts

Course start:	2018 w.35
Course end:	2018 w.43
Credits:	5,0
Examination:	INL1 - Assignment, 1.0, Grading scale: P, F TEN1 - Written examination, 4.0, Grading scale: A, B, C, D, E, FX, F
Grading scale:	A, B, C, D, E, FX, F

Staff

Examiner:	Muhammet Toprak <toprak@kth.se>
Course responsible teacher:	Muhammet Toprak <toprak@kth.se>
Teachers:	Carmen Vogt <carmenma@kth.se> Muhammet Toprak <toprak@kth.se>
Assistants:	

Number of students on the course offering

First-time registered:	0
Total number of registered:	21

Achievements (only first-time 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