

Emnerapport 2013 vår KJEM244 –Nanokjemi

Emneansvarlig: Pascal Dietzel

Faglærers vurdering av gjennomføring

Praktisk gjennomføring

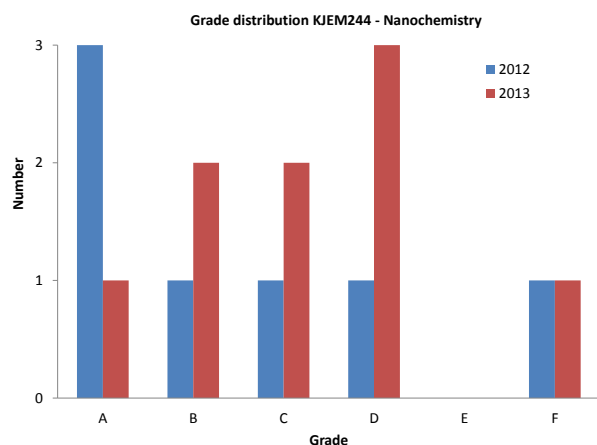
The course starts with foundations in solid state chemistry and materials science which are important background knowledge to understand the nanochemistry presented thereafter. Two textbooks specialized on each of these two focus areas were used to give a solid introduction to the subject. The accompanying lectures took 38 h. In addition to the lectures and pensum literature, the students have to select a subject (from a pre-determined list), perform literature research on it, and give a short presentation pooled into 4 h of lectures at the end of the course.

Strykprosent og frafall

There were nine students who signed up for the class and were in attention for the complete semester with varying degrees of regularity. All of these took the exam. One student didn't receive a passing grade in the final exam.

Karakterfordeling

The grade for the course is an aggregate of the final exam at the end of the semester (70%) and the seminar presentation (30%). As in the year before, the final exam was in the form of an oral examination. The same experienced and well qualified external censor was invited for the exam. Evaluation conditions therefore were very similar and comparable between years. The average grade in 2013 was C(-), slightly lower than in 2012 when it was B-C. Due to the small number of students taking the class, one has to expect large variation and significant deviation from a normal distribution.



Studieinformasjon og dokumentasjon

Mi-side was used to make slides from the lectures available to students and hold contact during the semester.

Faglærers vurdering av rammevilkårene

Lokaler og undervisningsutstyr

The screen in the auditorium on which the slides are displayed is not well positioned in respect to the computer used to control the presentation. This necessitates that the lecturer either has to stand by the side of the computer and then is in a bad position to point at specific items on screen or he has to move substantial distances back and forth to be better able to do so – which is not always easily incorporated into the flow of the presentation. It also hinders transition between content on the screen and the black board, much to the regret of this particular lecturer who enjoys drawing on the black board, which, even worse, provides all too little space for the ardent drawers and necessitates frequent interruptions erasing the board.

Andre forhold

The students taking the course are relatively evenly distributed in number between the various levels of education (bachelor, master, PhD). It proved to be less of a challenge than expected to accommodate the potentially disparate state of background knowledge.

Faglærers kommentar til student-evalueringen(e)

Metode – gjennomføring

The poll was adjusted to reflect some of the special characteristics of how the course was implemented. I was especially interested to get feedback on the use of the two textbooks written using rather different concepts and style, how the intermittent questions posed by the lecturer were received by the students, and the seminar presentations. Unfortunately, the small number of students in class and the even smaller number of participants in the evaluation impinge to a certain degree on the statistical relevance and usefulness of the results.

Oppsummering av innspill

The students who have responded to the questionnaire give unequivocal positive feedback regarding content, clarity of presentation, learning outcome of the lecture, contact with the teaching staff, and relevance of the course for their further studies.

The seminar presentations apparently did not succeed to present additional subjects to the general audience in as large degree as hoped for. However, the students do consider it a worthwhile experience for them to have given a presentation.

The work load of the course was in general considered to be in line with other classes of this caliber.

Ev. underveistiltak

Not necessary.

Faglærers samlede vurdering, inkl. forslag til forbedringstiltak

I put a strong emphasis on posing questions to the audience intermittently during the lectures with the intent of re-activating background knowledge from previous classes or to aid in the process of dissemination of the course content. On one hand, this approach keeps the audience attentive and helps in assimilation of the presented content, but it also was intended to prepare the students in a mild manner for the oral exam and the line of questioning therein. This approach did not work out quite as well as hoped for, which may have multiple causes. It might be that the participants are not used to this type of activity and that they are therefore a bit hesitant to actively engage in the exercise. A colloquium might be an alternative form to engage in a scientific discussion with the students in a setting where they are more comfortable doing so, but there are unfortunately neither enough time nor resources available to include colloquia in the course. Anyway, the student evaluation shows the approach was positively viewed by the students, and it will be used in the future again.

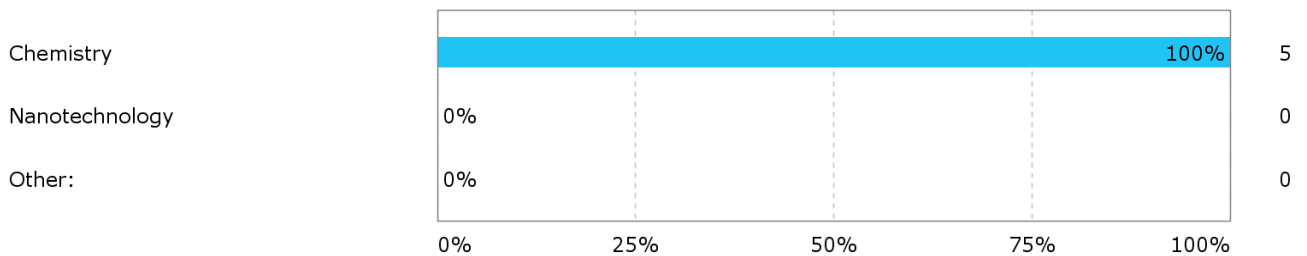
By and large, the course has worked out well in my opinion, especially considering the wide range of subjects covered. Compromises in selection of content for the lectures had to be made – one could easily set up two full (10 credit) courses, one in materials chemistry and another one on nanochemistry, covering the fields in more detail and depth, and even that would scarcely approach the importance of these fields today.

Appendix: Results of the student evaluation

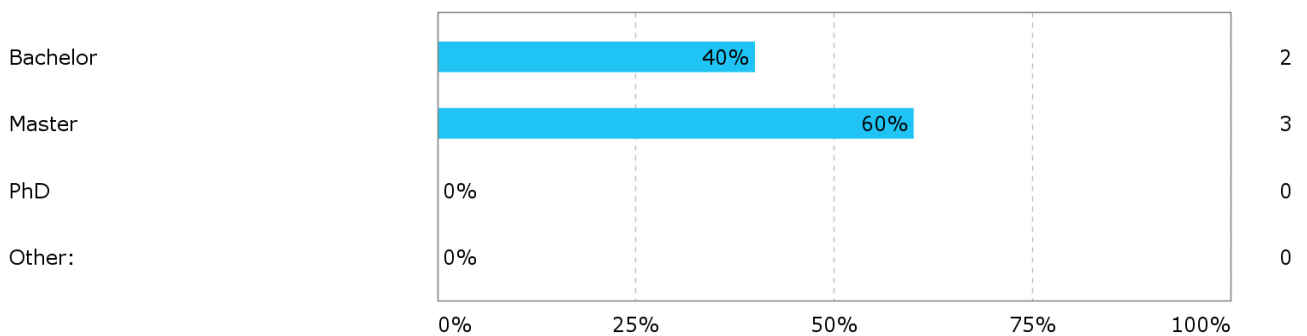
Svarprosent: 44 (4 av 9)

Kommentar: Det understrekes at det bare er de studentene som har deltatt på mer enn 25% av forelesninger og kollokvier som får oppfølgingsspørsmål om hva de synes om forelesninger/kollokvier. De som svarer at de har vært på færre enn 25% av forelesninger/kollokvier får imidlertid forklare hvorfor de ikke har deltatt på flere.

Are you studying towards a degree in:



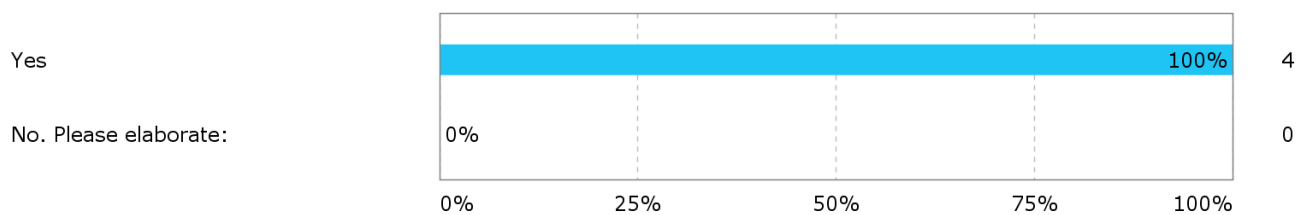
Please identify the study phase you are in:



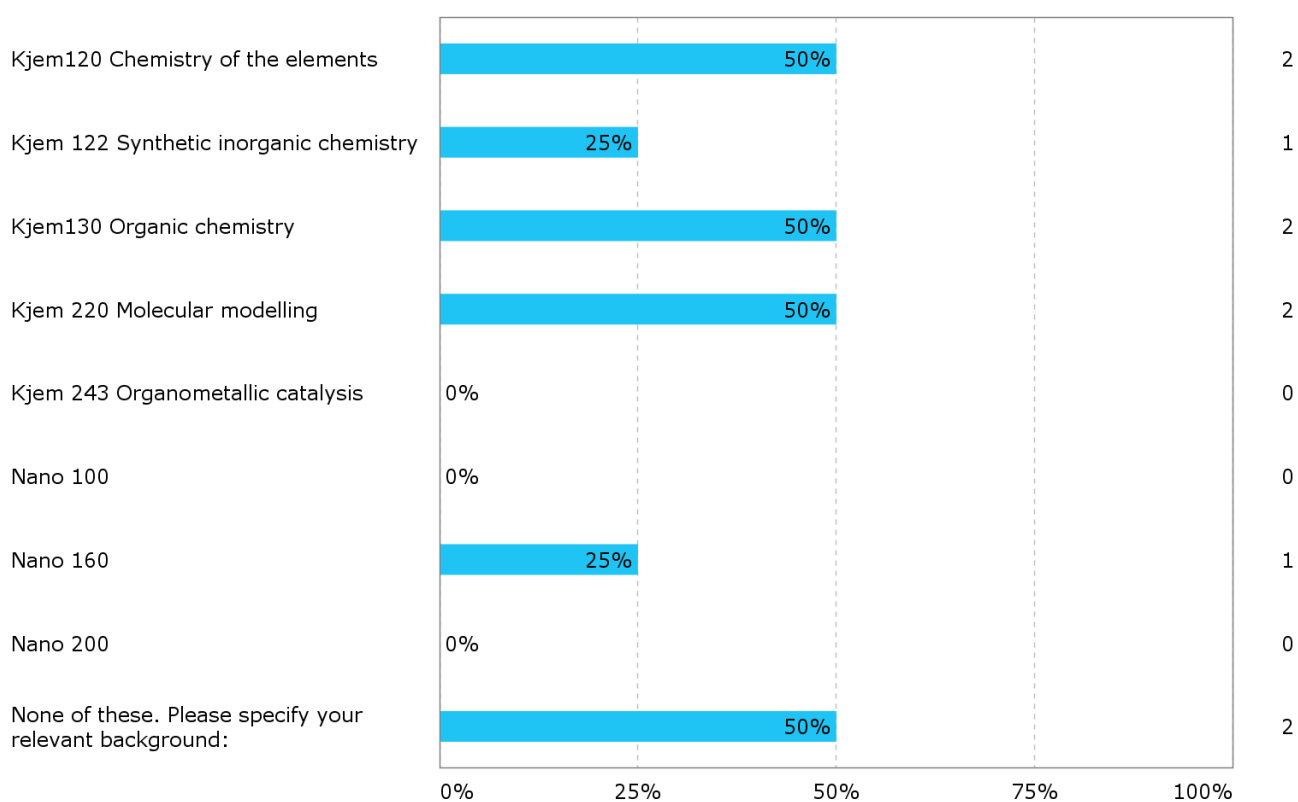
Why did you choose to attend this course?

- it seemed interesting
- sounds interesting, english language, requirements
- Important one
- Min veileder mente kurset ville være relevant i forhold til min masteroppgave.

Did the course meet your expectations?



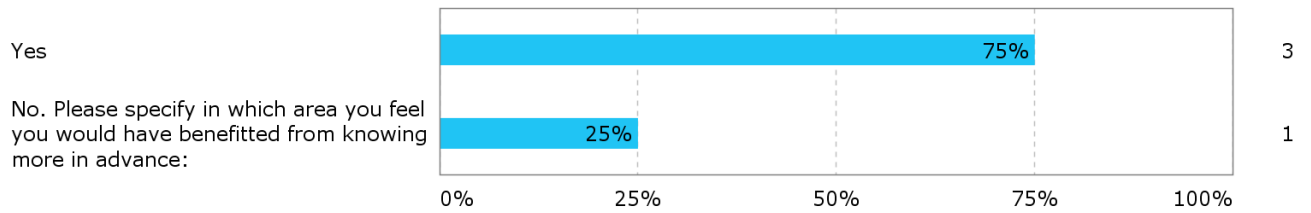
Please mark which of the following courses you have attended earlier:



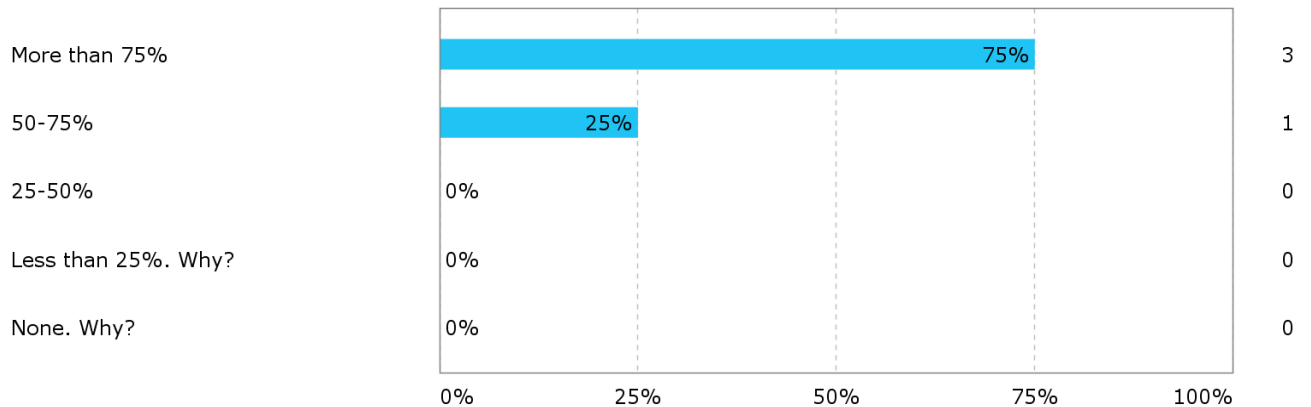
Please mark which of the following courses you have attended earlier: - None of these. Please specify your relevant background:

- exchange student

Did you feel your background knowledge was adequate to follow the content of this course?



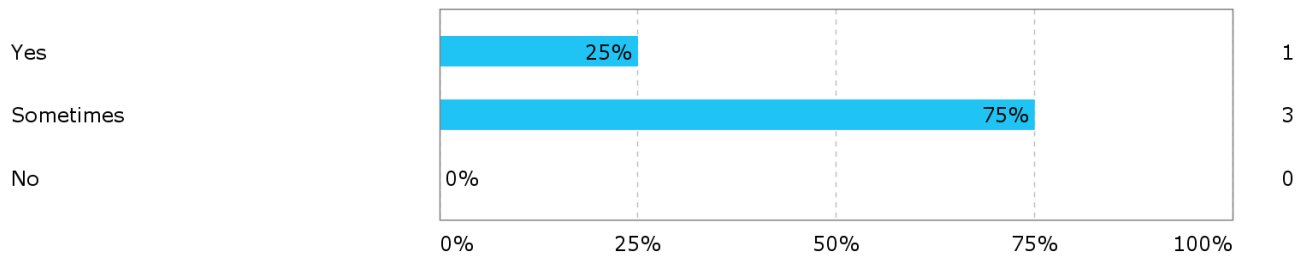
How many lectures have you attended?



What was the main reason why you did not attend the lectures you missed?

- overslept
- other appointments outside university
- Job
- Sykdom samt. overlapp med tildelt tid på instrument

Did you prepare for the lectures in advance?



The course encompasses a wide range of subjects from fundamental solid state chemistry to nanomaterials. How well do you think it managed to integrate this variety and present in a coherent manner (1 = very much failed, 6 = succeeded very much)

1. It failed to present the range of subjects to a very large deegree.

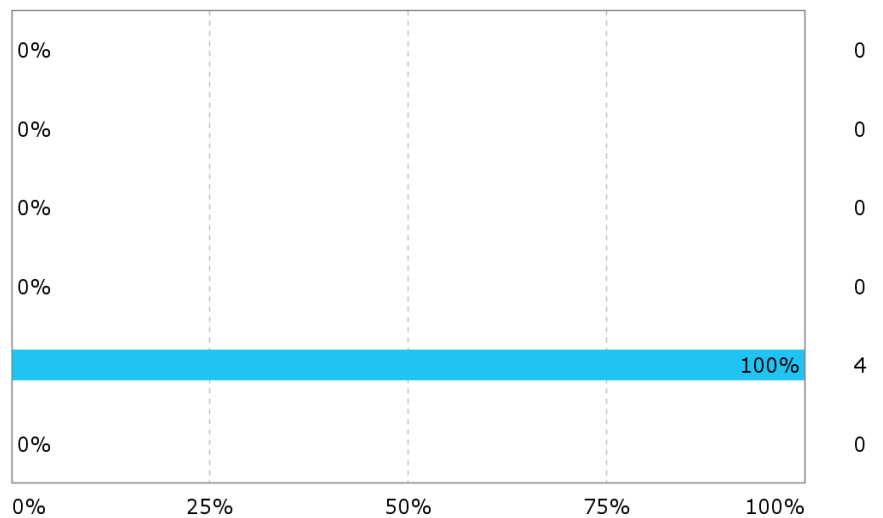
2. It failed to present the range of subjects to a large deegree.

3. It failed to present the range of subjects to a little deegree.

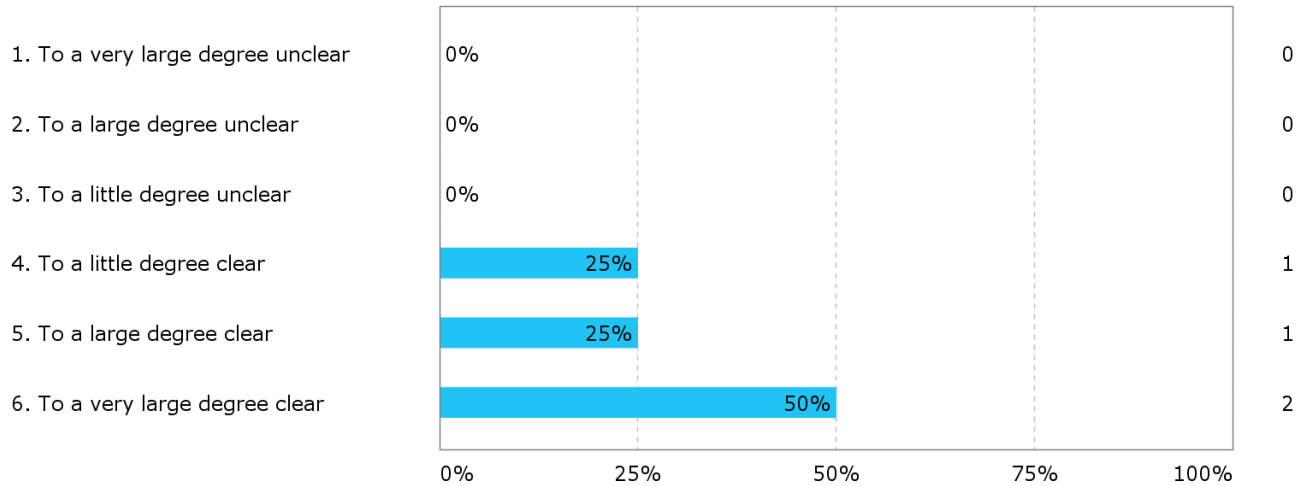
4. It succeeded to present the range of subjects to a little deegree.

5. It succeeded to present the range of subjects to a large deegree.

6. It succeeded to present the range of subjects to a very large deegree.

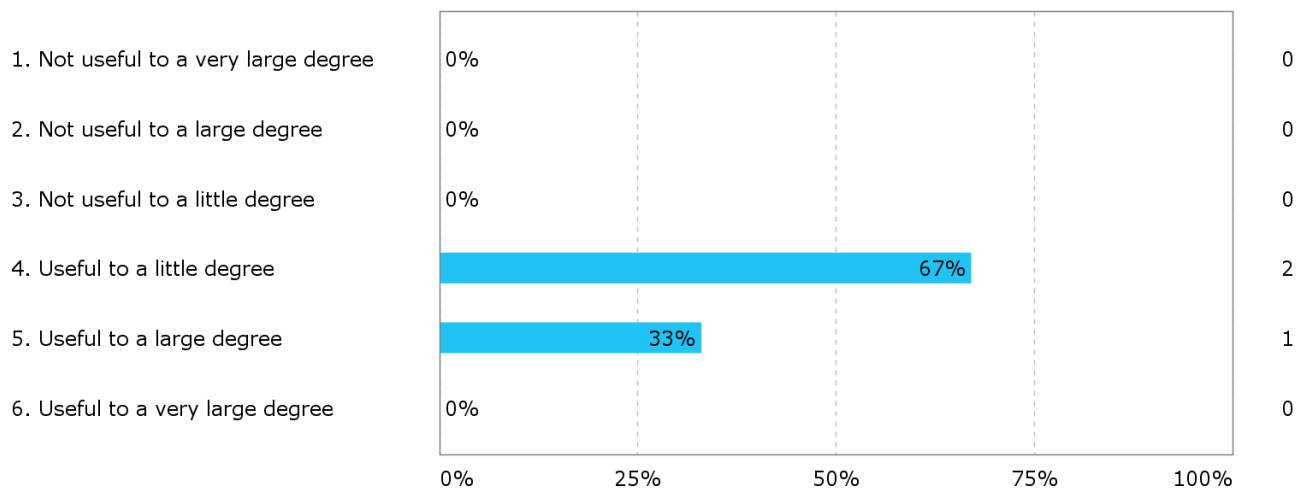


How clear was the presentation of the different topics during the lectures? Rate on a scale from 1 to 6 (1=very unclear, 6=very clear)



Comments:

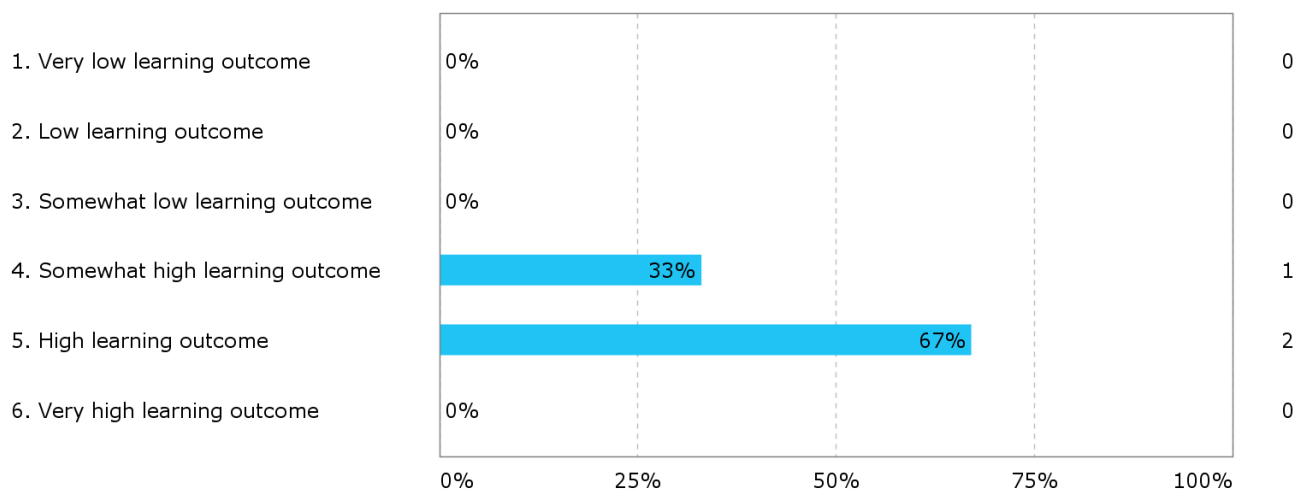
The lectures were to a certain degree meant to be interactive with intermittent questions being posed by the lecturer. Do you think this approach helped you in your learning progress? Rate on a scale from 1 to 6 (1=very little useful, 6=very useful)



If you wish you can further explain your choice and comment on this feature of the lectures:

- God tanke, viste seg vanskelig å gjennomføre.

How do you rate the learning outcome from the lectures? Rate on a scale from 1 to 6 (1=very low learning outcome, 6=very high learning outcome).



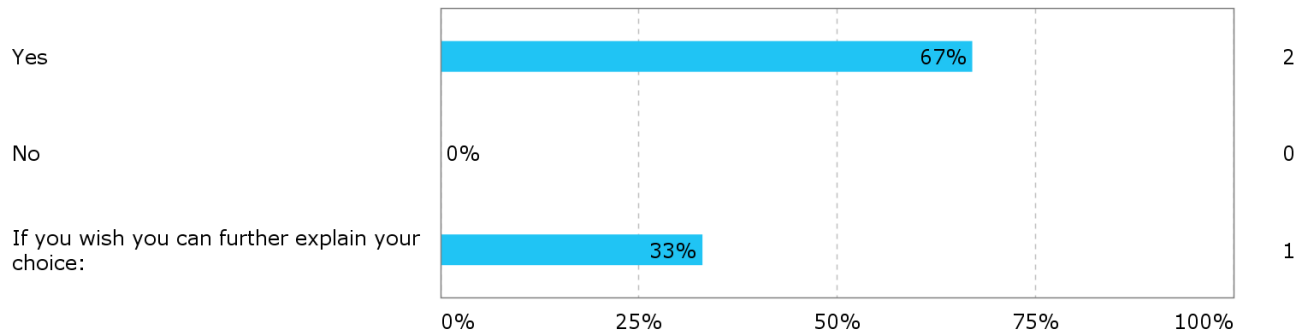
Comments:

- Vanskelig spørsmål. Føler endel av det som ble gjennomgått ikke sitter helt. Dette skyldes nok mer at jeg trenger tid på å bearbeide informasjon, og ikke mangler ved forelesningene.

Do you have other comments regarding the lectures?

- Veldig nyttig at forelesningsmaterieell blir lagt ut på MiSide i etterkant. Har stor nytte av dette ved repetisjon inn mot eksamen.

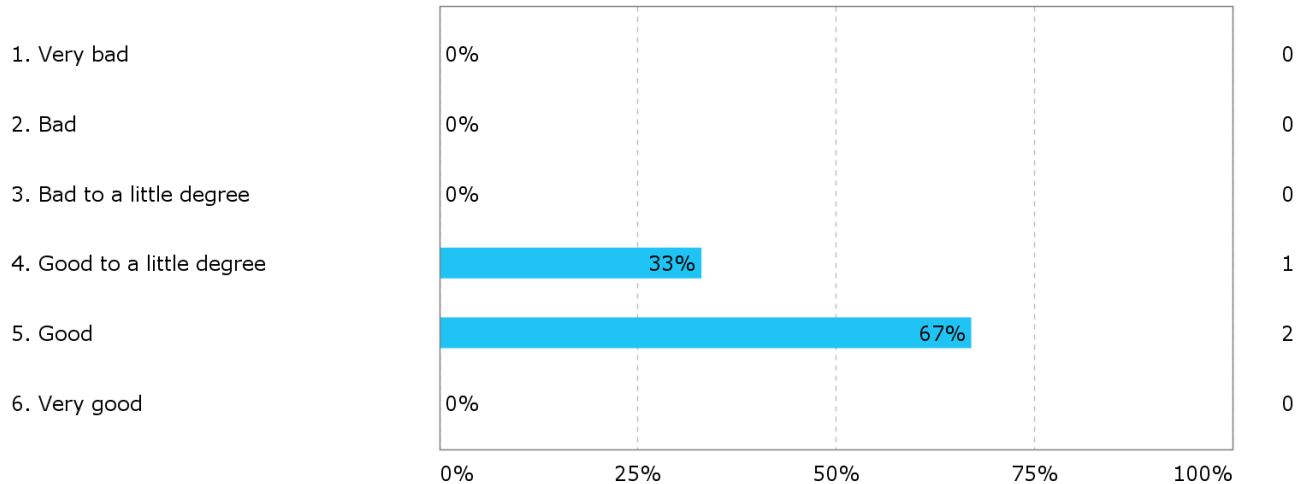
The course used two different textbooks. Do you think the combination achieved its aim of presenting the scope of the subjects treated in the course?



The course used two different textbooks. Do you think the combination achieved its aim of presenting the scope of the subjects treated in the course? - If you wish you can further explain your choice:

- Ja, men hvilke deler av boken som regnes som relevant inn mot eksamen kunne med fordel vært klargjort på forhånd.

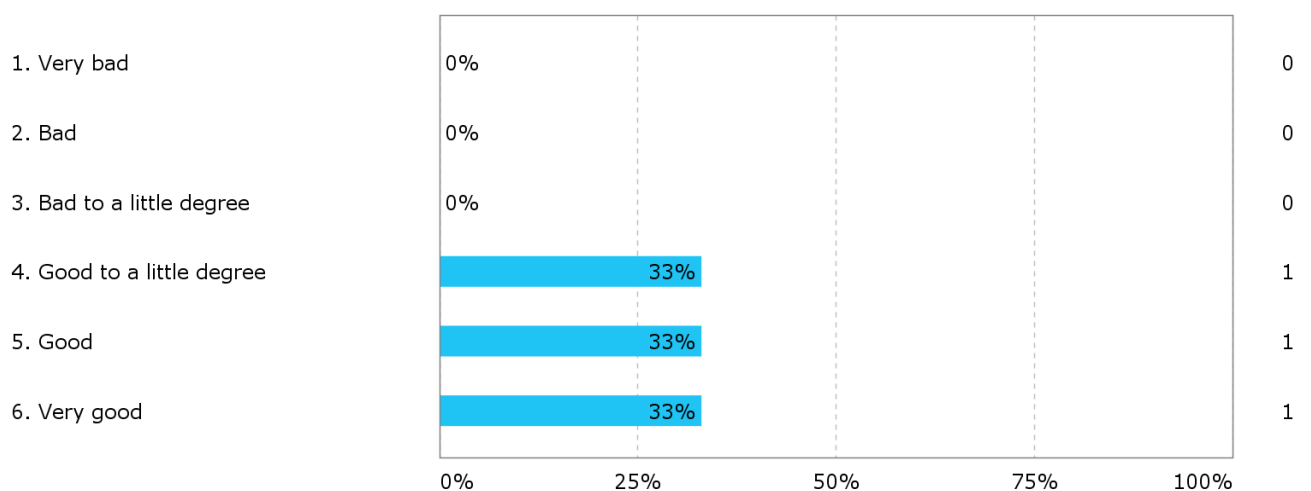
What is your opinion of the textbook "Solid State Chemistry - An Introduction"? Range on scale from 1 to 6 (1=very bad, 6=very good)



If you wish you can give reasons for your choice:

- a bit heavy to read
- Jeg hadde problemer med å forstå flere av konseptene som ble presentert. Endte ofte opp med at jeg fant alternativ litteratur for så å gå tilbake til denne boken.

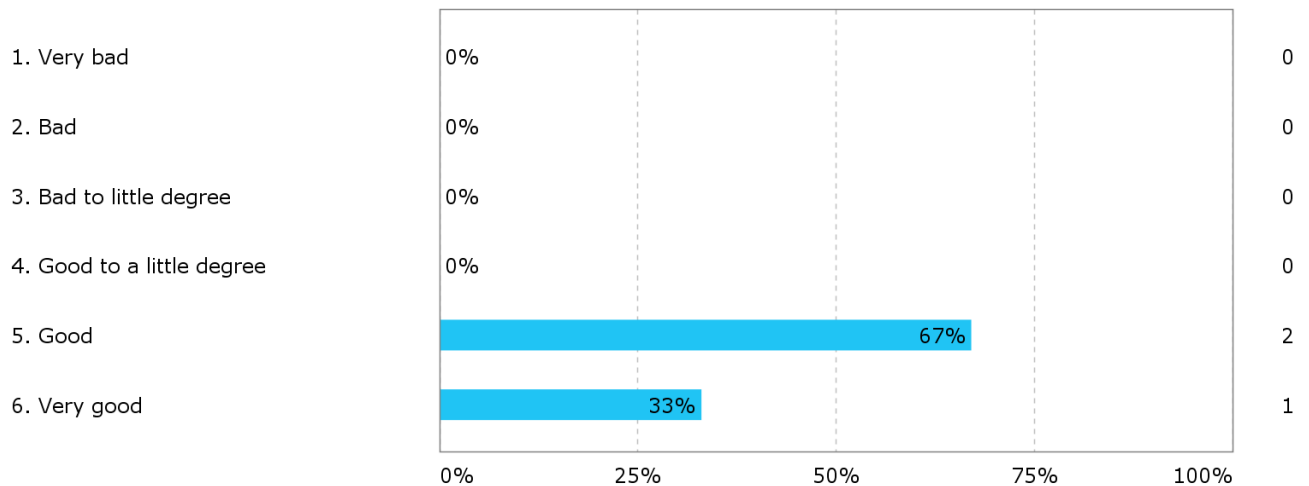
What is your opinion of the textbook "Concepts of Nanochemistry"? Range on a scale from 1 to 6 (1=very bad, 6=very good)



If you wish you can give reasons for your choice:

- Ekstremt letlest og fornuftig utformet bok. Ikke for detaljert og fungerer derfor kjempe flott som supplement til den andre boken.

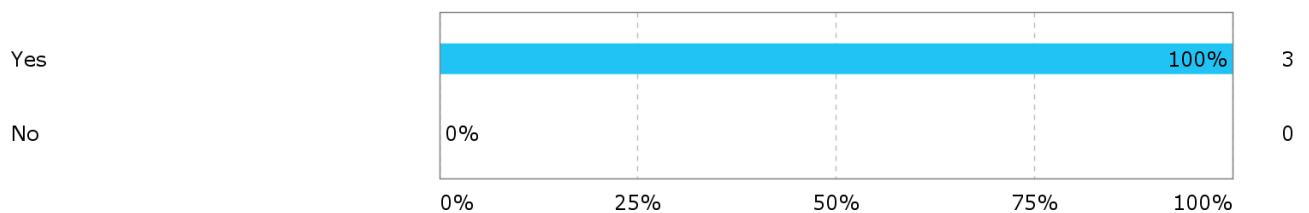
What do you think about the presentations of the lectures presented on MiSide? Range on a scale from 1 to 6 (1=very bad, 6=very good)



If you wish you can give additional comments:

- Disse fungerer ypperlig sammen med oppsatt pensumlitteratur relevant for hver forelesing. Trekker ut de viktigste temaene på en god måte. Veldig grei å se over etter å ha repetert hvert kapittel for å se at du har fått med det viktigste.

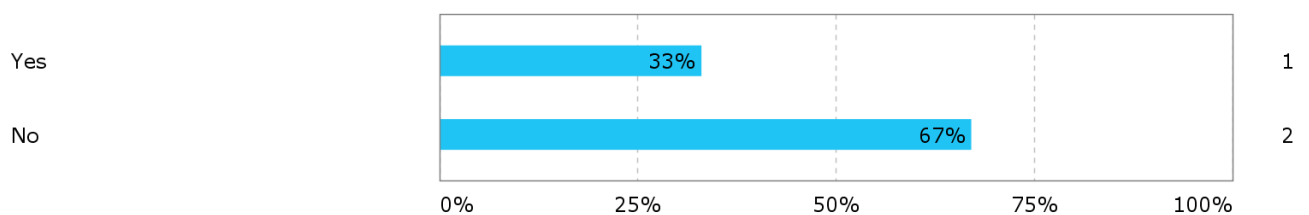
You prepared a seminar presentation as a part of the course. Do you think that was a useful exercise?



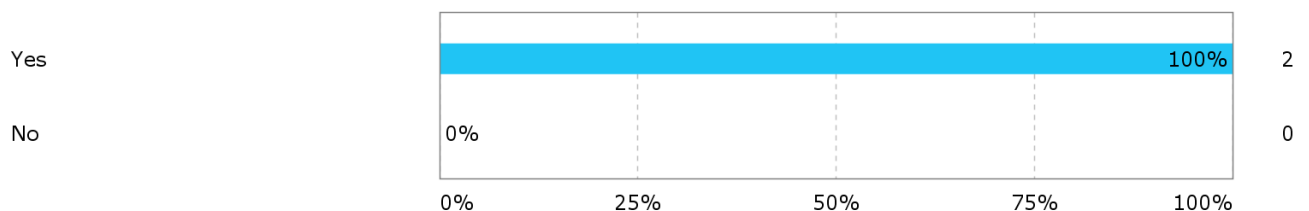
How much time did you spend preparing the seminar presentation?

- 20 hours
- 15 h
- Det gikk med omtrent 1 uke effektivt arbeid fordelt over 2 uker. Mye av tiden gikk med til å lese artikler samt lese seg opp på teori jeg ikke kjente til fra tidligere.

Do you think you learned enough from the other students' presentations to be prepared for this subject in the exam?



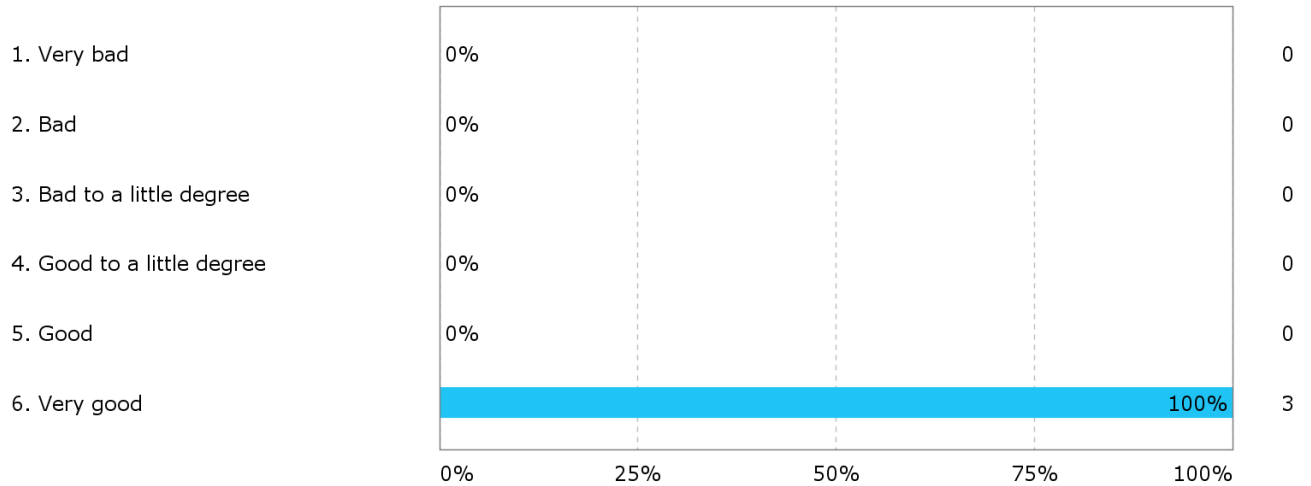
Would you have preferred it if the content of the presentations had been covered in the lectures?



Please give a brief explanation of advantages or disadvantages related to the seminar presentations:

- it is always more difficult to follow the explanations of other students compared to a professor, so more work to really get everything will be necessary
- Veldig nyttig erfaring. Det gikk med mye tid på å forsøke å forstå noen av konseptene tilknyttet mitt emne, som dessverre faller litt utenfor hva det som dekkes av kurset. Hvor mye jeg fikk ut av andres presentasjoner varierer veldig. Noen av temaene kjenner vi til i stor grad fra gjennomgått pensum, mens andre er relativt ukjente for meg. Noen av de ble heller ikke publisert før 15 mai, noe som gir veldig liten tid til å se over disse inn mot eksamen.

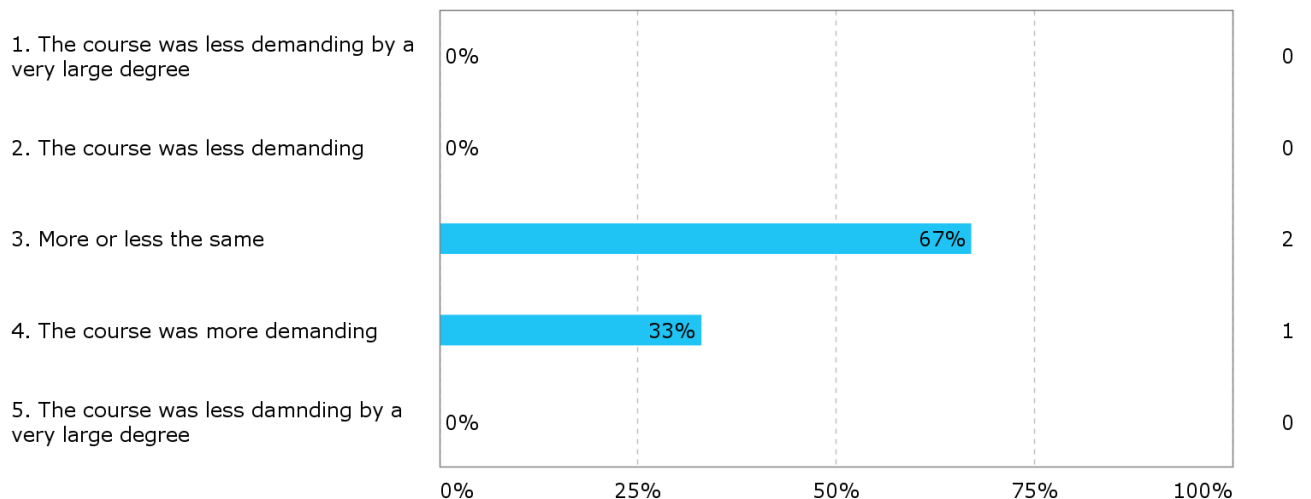
How has the contact with the teaching staff been? Range on a scale from 1 to 6 (1=very little contact/inaccessible, 6=very good contact/accessible)



If you wish you can give reasons for your choice:

- Ingenting å utsette på her.

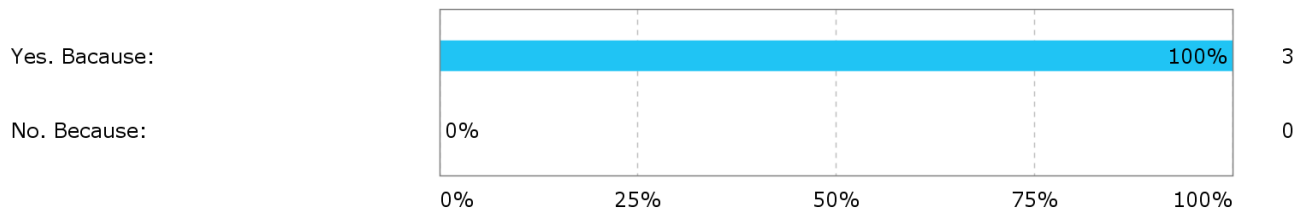
How do you rate the work load of this course compared to your other classes?



Please elaborate your selection:

- Jeg mangler kanskje kjennskap til noen av konseptene og derfor ble det tidvis litt mye å sette seg inn i før jeg kunne ta fatt på litteraturen. Arbeidsmengden her vil nok variere veldig avhengig av hvilken bakgrunn man har.

Do you think the knowledge you learned in this course will be relevant to your further studies / thesis / research activities?



Do you think the knowledge you learned in this course will be relevant to your further studies / thesis / research activities? - Yes. Because:

- general interest in solid state chemistry
- Stort sett alt med unntak av bionano-delene ser jeg for meg at vil være relevante.

If you wish to give additional feedback which is not covered by any of the questions, you can do so here:

- Vil benytte sjansen til å takke for et fint semester.