

# Evaluation report 2021 spring term

Course code: KJEM220

## Faglærers vurdering av gjennomføring/*lecturers assessment of implementation:*

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### Praktisk gjennomføring/*practical implementation*

Linux computer

### Strykprosent og frafall/*failure rate and apostasy*

One student got F and he is planning to retake the exam. Two student didn't attend the exam.

### Karakterfordeling/*grade distribution*

2A, 1B, 1C, 1E

### Studieinformasjon og dokumentasjon/*information of studies and documentation*

All the content of the course are available on mittuib

### Tilgang til relevant litteratur/*access to relevant literature*

Students had access to the relevant literature (textbooks, papers, softwares documentation, and quiz) online or in the library.

## Faglærers vurdering av rammeverkstyrrene/*lecturers assessment of frame terms*

### Lokaler og undervisningsutstyr/*locals and teaching equipment*

We used the Linux computer room at Realfabbyget (Datalab 1002) as well as online access to linux machine through UiB noMachine.

## **Andre forhold/other conditions**

No

## **Faglærers kommentar til student-evalueringen(e)/lecturers comments to student evaluation**

### **Metode – gjennomføring/method – implementation**

Due to the Korona situation, we had physical and online teaching, online lectures were also recorded and available online on mittuib.

### **Oppsummering av innspill/summary of input**

Students were pleased with the practical approach in the course where the focus lies on application instead of more "heavy" maths. One student would like to see a greater emphasis on quantum mechanical methods. That's why we believe KJEM220 needs another QM course as its prerequisite (for example KJEM221). One student liked the practically oriented approach in this course, and he/she believed this should be highlighted in the course description on UiB website. We had a comment that believed the course didn't fulfill his/her expectation. Some of our students dislike digital teachings in general, but they understand that it was necessary due to korona situation, and they believed both teachers did a good job considering the circumstances. In general, the students were fine with the practical. They liked to involve more in the details of the simulation, but because of Korona and course organization they didn't have access to the datalab all the time, this forced the teacher to prepare much simpler test cases that can be run on personal computers.

### **Ev. underveisstiltak/eventual underway measures**

- Better description for the course on UiB.no website, so students can take the course wisely.
- Having access to PC lab can help the teachers to prepare more complex and applicable test case, especially for computationally expensive QM calculation.

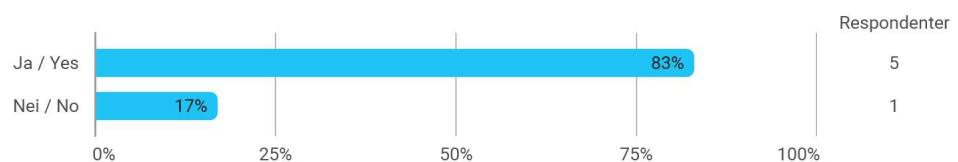
## **Faglærers samlede vurdering, inkl. forslag til forbedringstiltak/lecturers overall assessment, including suggestions for improvement measures**

We got a good lecture overall assessment by the students but for next semester / teacher we advise to have a good solution for digital practicals (in case of possible pandemic lockdown) for all students that include:

- Remote access to a linux computer with installed softwares for all students
- All students need to have basic knowledge on UNIX OS or computer science.
- This course should be for Master and PhD Students only.
- They need to be informed that the course follows mostly a practical approach and less theoretical and mathematical approach.

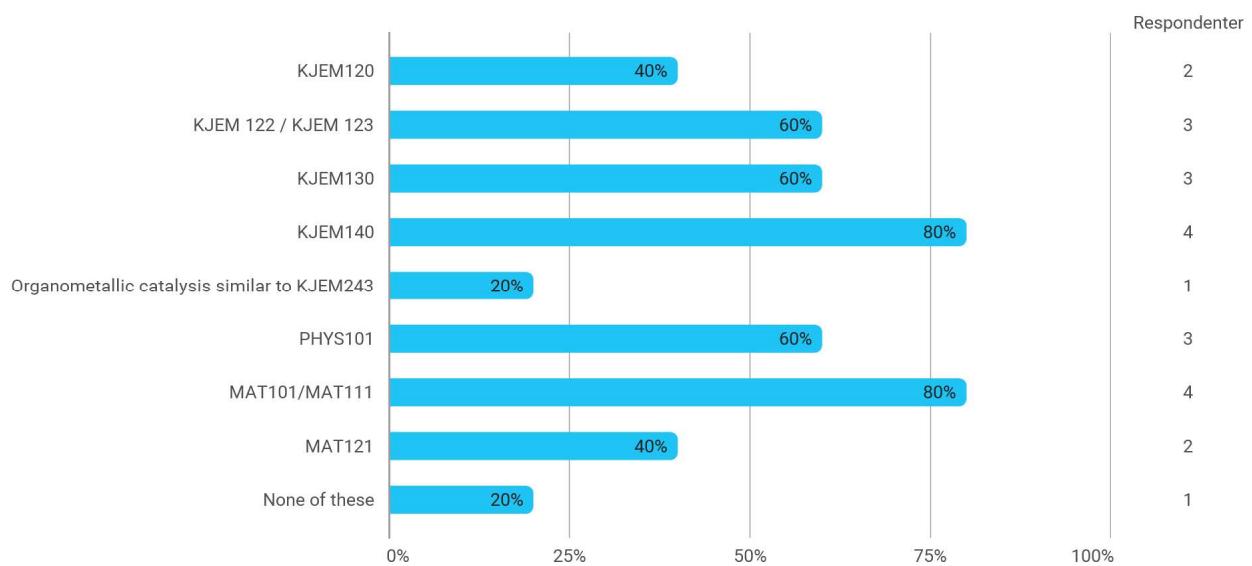
## Oppfylte KJEM220 forventningene du hadde til kurset?

*Did this course meet your expectations?*



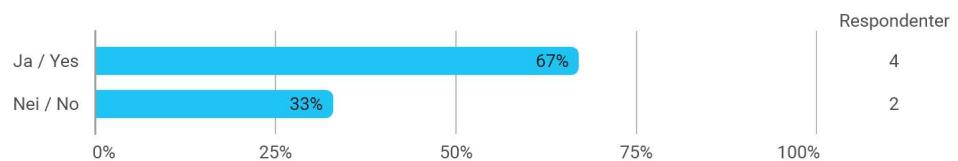
## Hvilke av de følgende kursene fra UiB har du fulgt tidligere?

*Please mark which of the following courses you have attended earlier?*



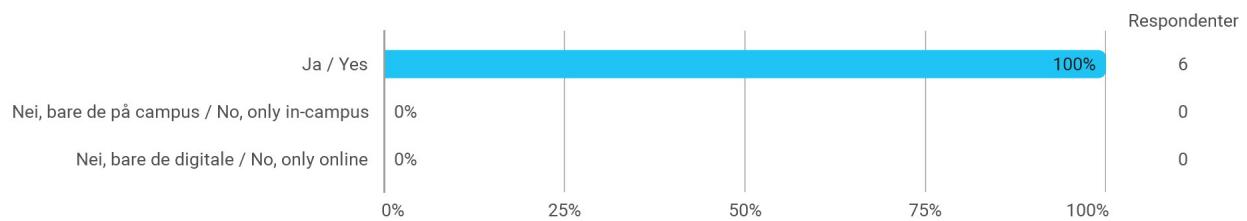
## Har du god nok bakgrunn til å ha fullt utbytte av undervisingen i KJEM220?

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



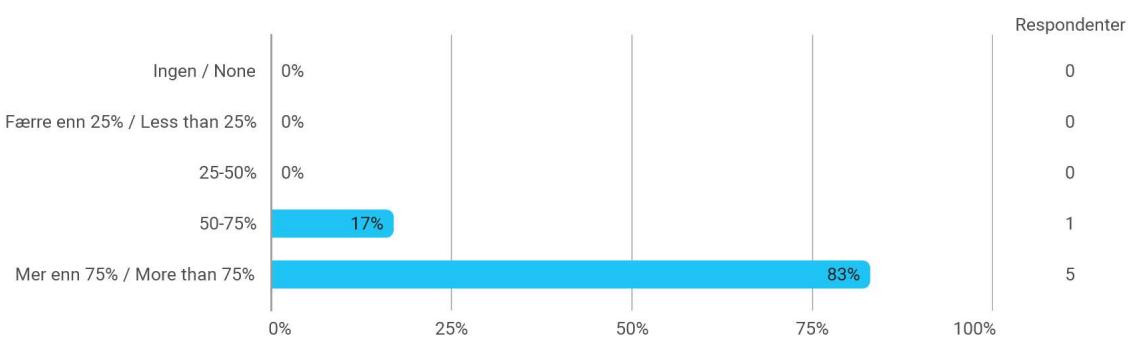
## Har du deltatt både på de tradisjonelle forelesningene på campus og på de digitale forelesningene?

*Have you attended both the in-campus and the online lectures?*



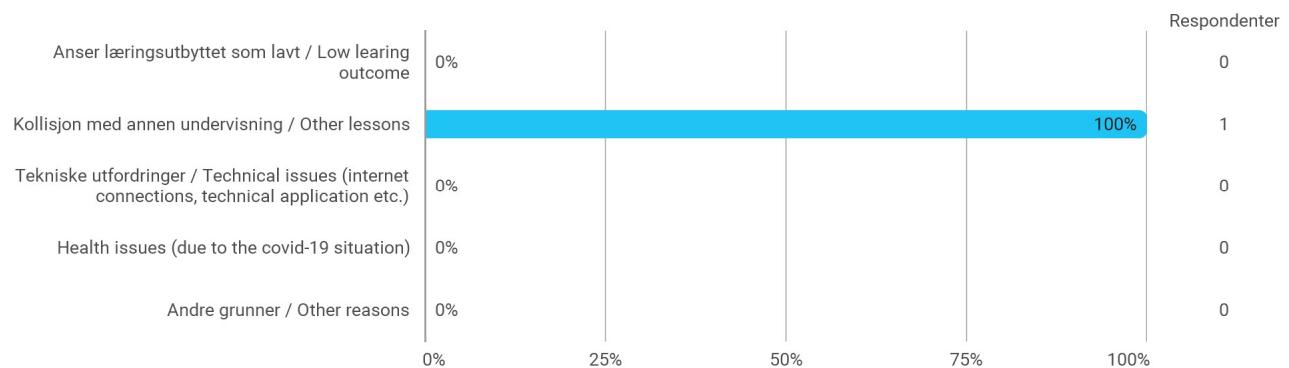
## Hvor stor andel av forelesningene har du fulgt?

*How regularly have you attended the lectures?*



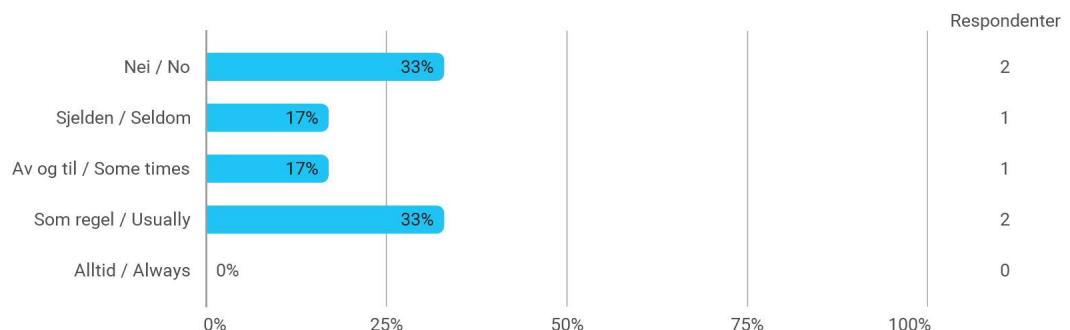
## Hva var hovedårsaken til at du ikke deltok på (flere) forelesninger?

*What was the main reason for not attending the lectures?*



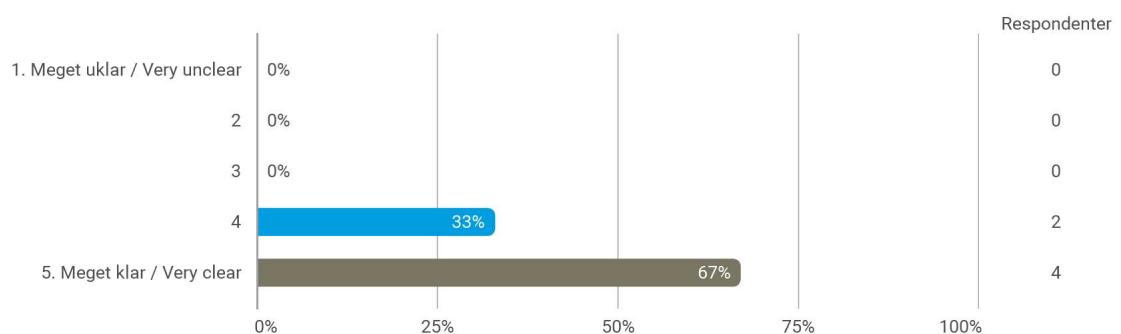
## Har du forberedt deg til forelesningene?

*Did you prepare yourself for the lectures by reading the curriculum?*



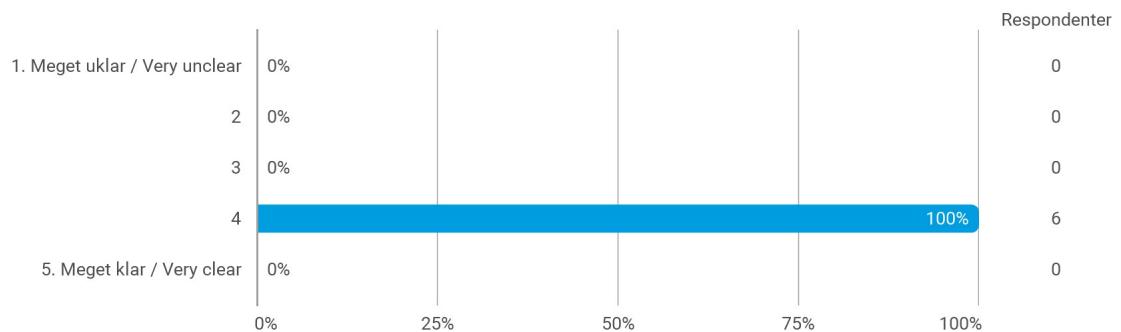
## Klarhet i fremstillingen på de tradisjonelle forelesningene på campus. 1 til 5, der 1 er meget uklar og 5 er meget klar.

*How clear was the presentation of the different topics during the in-campus lectures? Rate on a scale from 1 to 5 (1=very unclear, 5=very clear)*



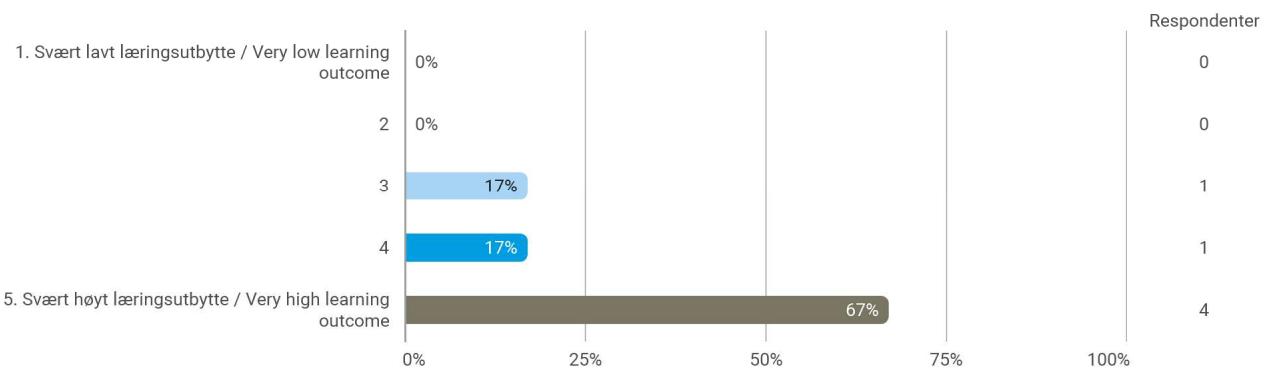
## Klarhet i fremstillingen på de digitale forelesningene. 1 til 5, der 1 er meget uklar og 5 er meget klar.

*How clear was the presentation of the different topics during the online lectures? Rate on a scale from 1 to 5 (1=very unclear, 5=very clear)*



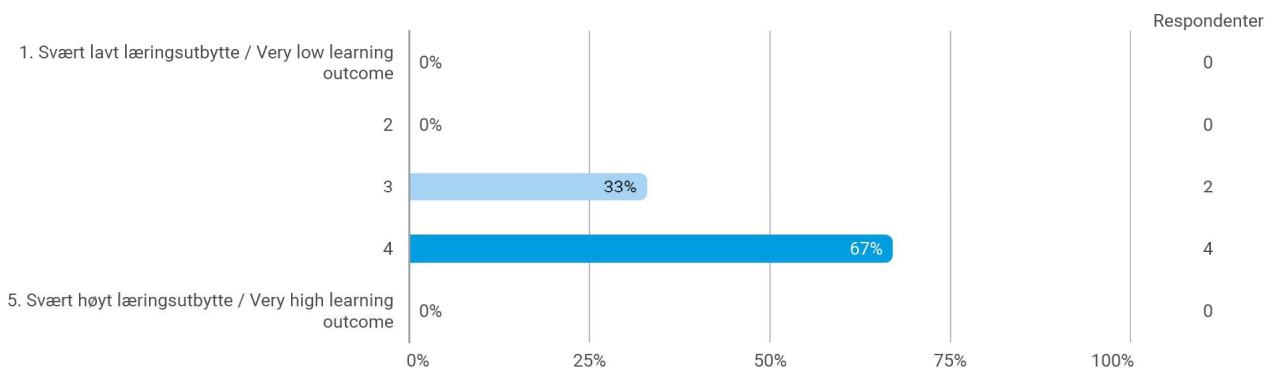
## Hvordan har læringsutbyttet av de tradisjonelle forelesningene på campus vært? 1 til 5, der 1 er svært lavt læringsutbytte og 5 er svært høyt læringsutbytte.

*How good was your learning outcome from the in-campus lectures? 1 to 5, where 1 is very poor learning outcome and 5 is very high learning outcome.*



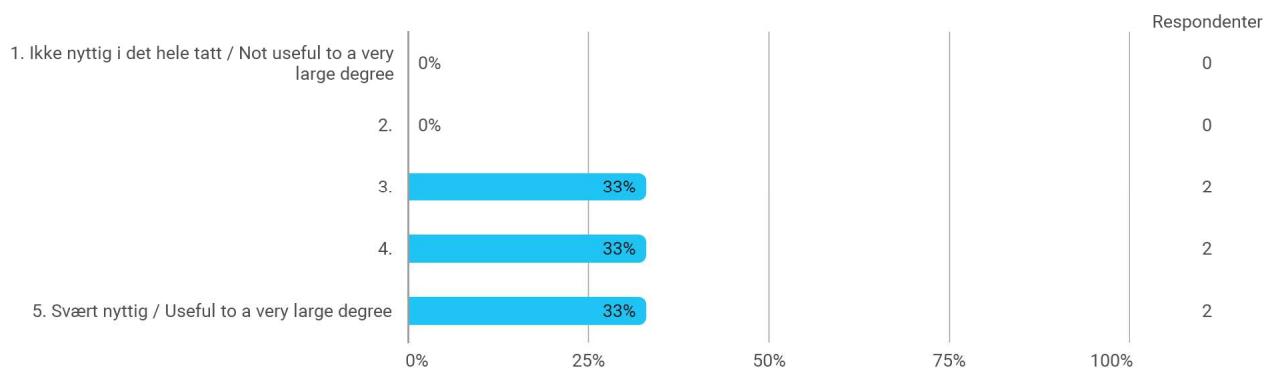
## Hvordan har læringsutbyttet av de digitale forelesningene vært? 1 til 5, der 1 er svært lavt læringsutbytte og 5 er svært høyt læringsutbytte.

*How good was your learning outcome from the online lectures? 1 to 5, where 1 is very poor learning outcome and 5 is very high learning outcome.*



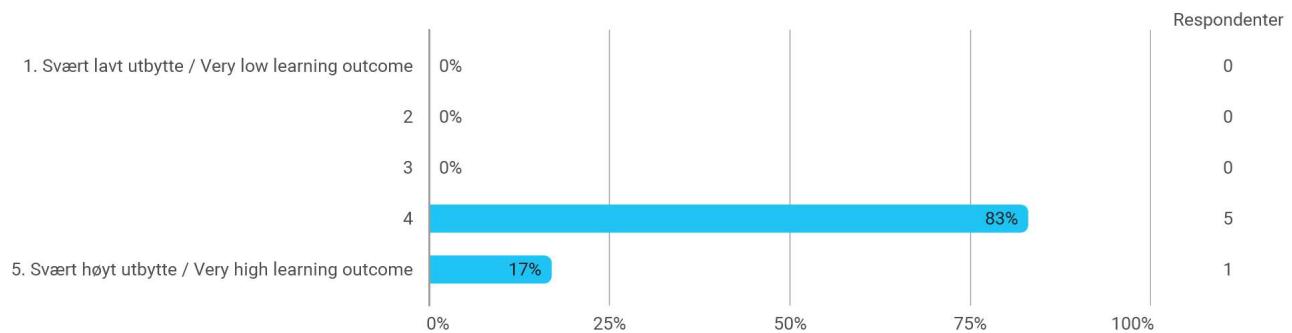
## **Har forelesers spørsmål til studentene under forelesning og regneøvelser bidratt positivt til læringsprosessen?**

*The lectures and particularly the exercises 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?*



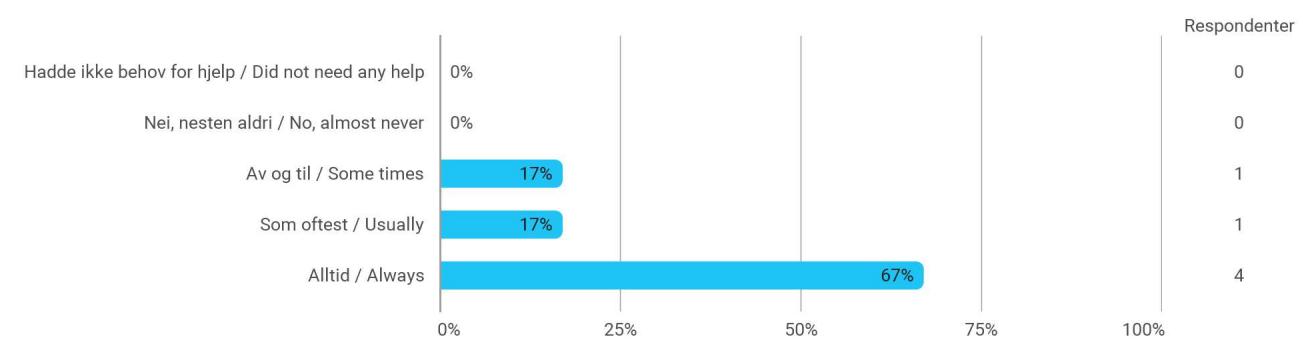
## **Kurset inneholder også fire obligatoriske øvelser basert på beregningskjemisk programvare. Hvordan har læringsutbyttet av disse øvelsene vært? 1 til 5, der 1 er svært lavt og 5 er svært høyt læringsutbytte.**

*The course also contains four compulsory exercises based on the use of computational chemistry software. How would you characterize the learning outcome of these exercises? Rate on a scale from 1 to 5 (1=very low learning outcome, 5=very high learning outcome)*



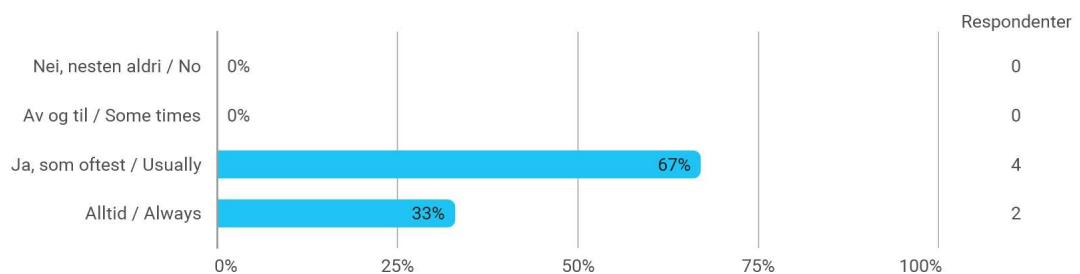
## Fikk du hjelp med dataøvelsene når du trengte det?

*Did you get help to do computational exercises when you needed it?*

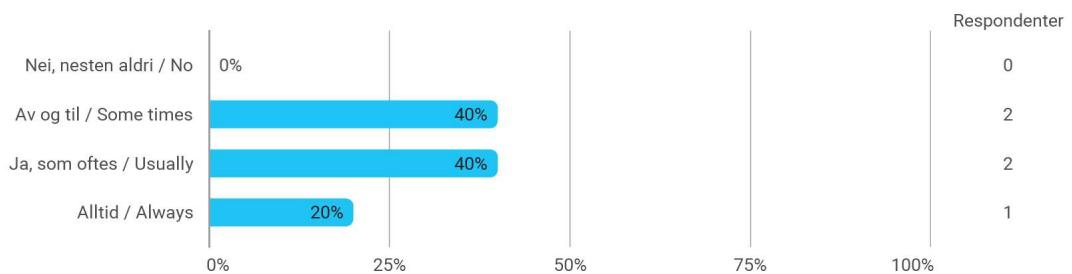


## Ble dataøvelsene godt forklart av oppgaveteksten?

*Were the exercises well described in the text?*

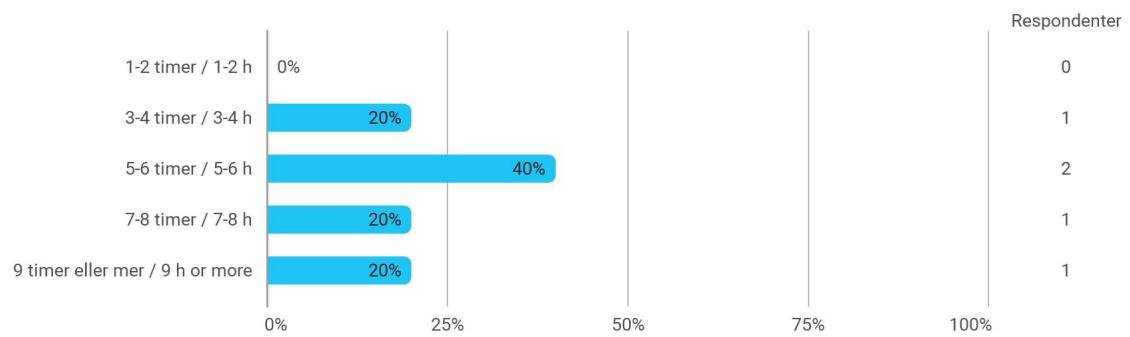


**Due to the covid-19-situation, there was no access to the computational resources in UiB PC Labs. Were the exercises well adapted/simplified to the use of external computational resources (easy software installation, performing simulations etc)?**



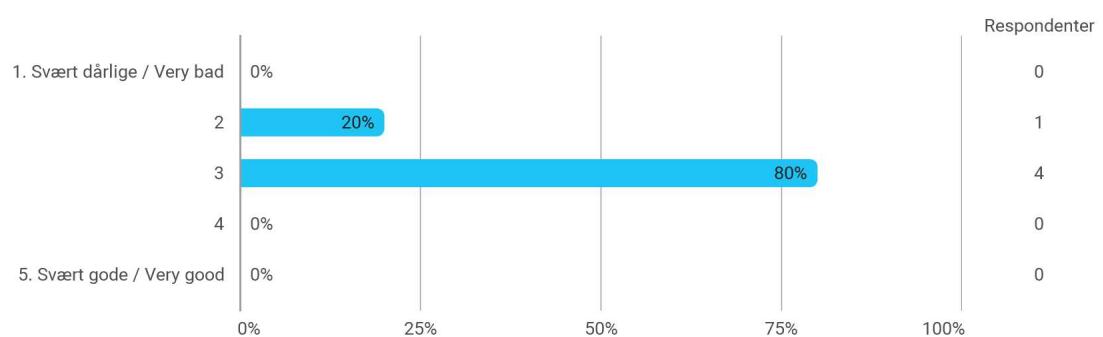
## Hvor mange timer brukte du i snitt på hver av dataøvelsene (inkludert både tid på datalab og rapportskriving)?

*How many hours (including writing the report) did you use on average for each of the computational exercises?*



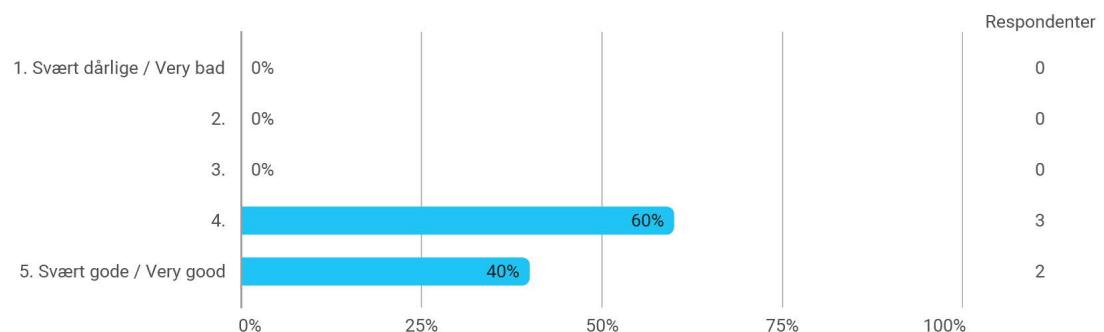
## Hva syns du om læreboken? 1 til 5 der 1 er svært bra og 5 er svært dårlig. /

*What is your opinion of the textbook? Range on a scale from 1 to 5 (1=Very bad, 5=very good)*



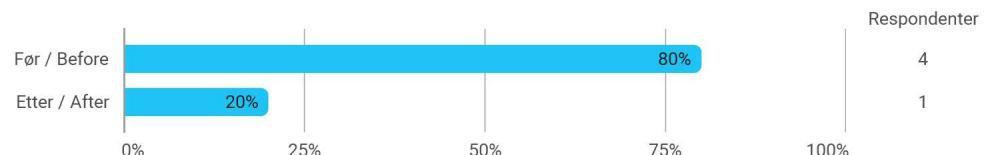
## Hva synes du om presentasjonene som er lagt ut på MittUiB?

*What do you think about the presentations of the lectures presented on MittUiB?*



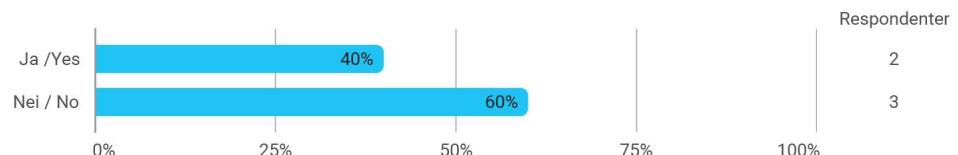
## Synes du at kvantemekanikk-delen av pensum bør undervises før eller etter delen av pensum som omhandler molekylær mekanikk? /

*Do you feel that the Quantum Mechanic part should be Before or after the Molecular Mechanic part?*



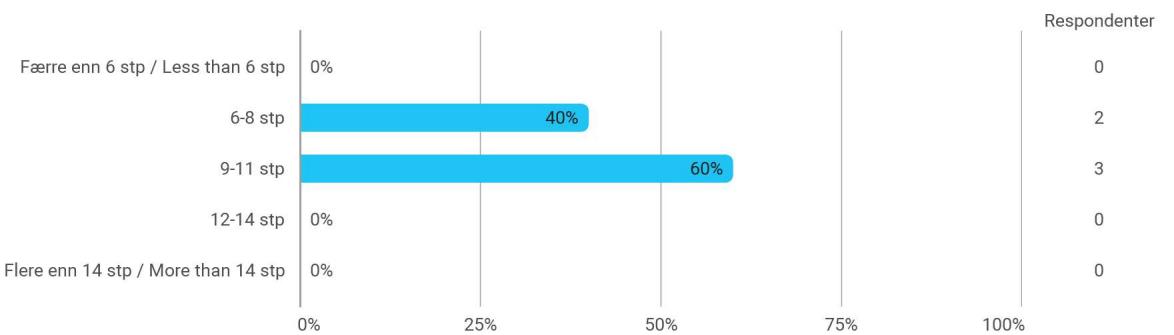
## Opplever du at det du har lært på KJEM220 vil være relevant for framtidige studier / forskningsaktiviteter?

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

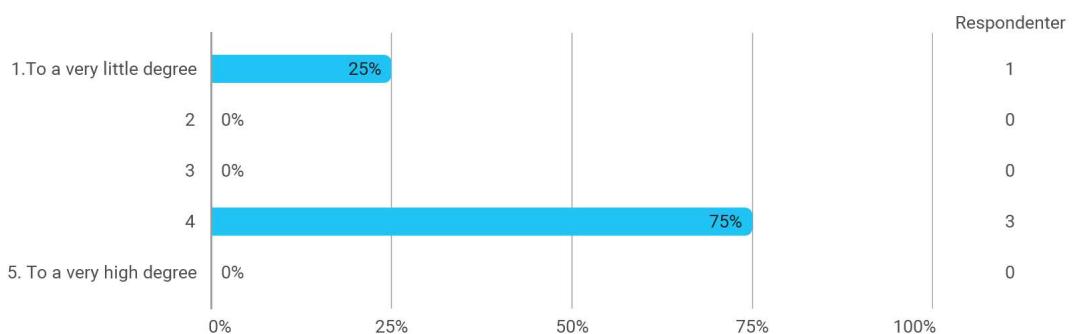


## **10 studiepoeng skal i snitt tilsvare ca 13. t arbeid (organisert undervisning + egenaktivitet) per. uke. Hvor mange studiepoeng mener du emnet KJEM220 tilsvarer?**

*10 stp corresponds to a workload of approximately 13 h/week (lecturers and self study). How do you consider the amount of work involved in KJEM220?*



## **To which degree have you reached the learning outcomes?**



## **Hvordan har kontakten med foreleserne vært? 1 til 5, der 1 er svært dårlig kontakt og 5 er svært god kontakt.**

*How has the contact with the teaching staff been? Range on a scale from 1 to 5 (1=very poor contact, 5=very good contact)*

