



## Environmental geochemistry MV0218, 10322.2526

15 Hp  
Pace of study = 100%  
Education cycle = Advanced  
Course leader = Geert Cornelis

### Evaluation report

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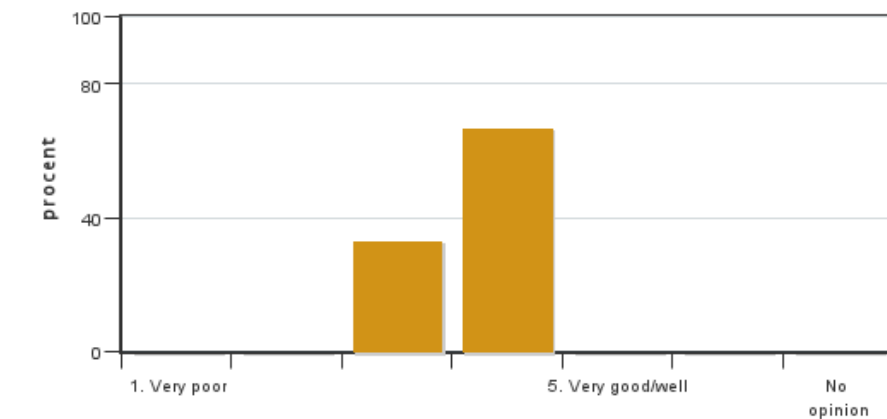
Evaluation period: 2026-01-11 - 2026-02-01

Answers 3  
Number of students 5  
Answer frequency 60 %

### Mandatory standard questions

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#### 1. My overall impression of the course is:

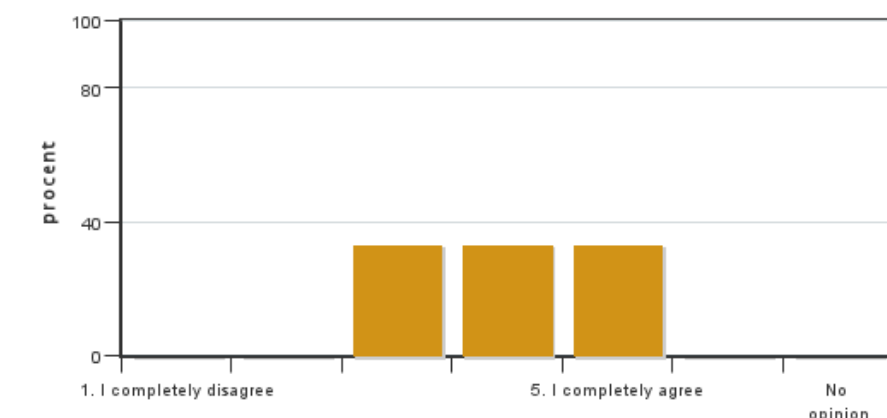


Answers: 3  
Medel: 3,7  
Median: 4

1: 0  
2: 0  
3: 1  
4: 2  
5: 0

No opinion: 0

#### 2. I found the course content to have clear links to the learning objectives of the course.

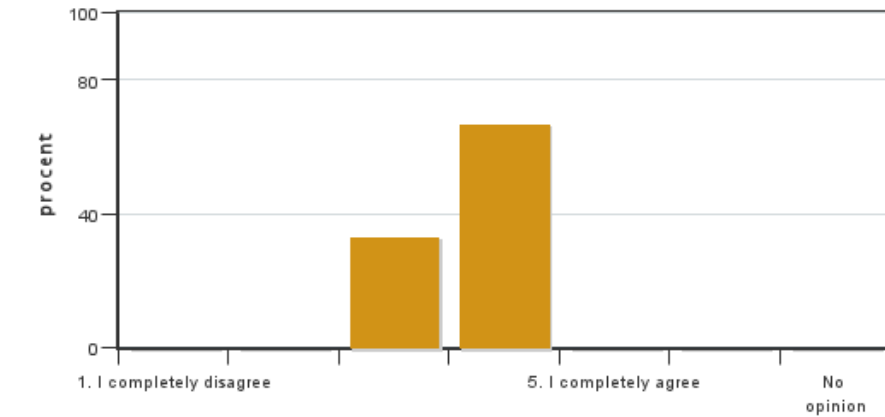


Answers: 3  
Medel: 4,0  
Median: 4

1: 0  
2: 0  
3: 1  
4: 1  
5: 1

No opinion: 0

**3. My prior knowledge was sufficient for me to benefit from the course.**

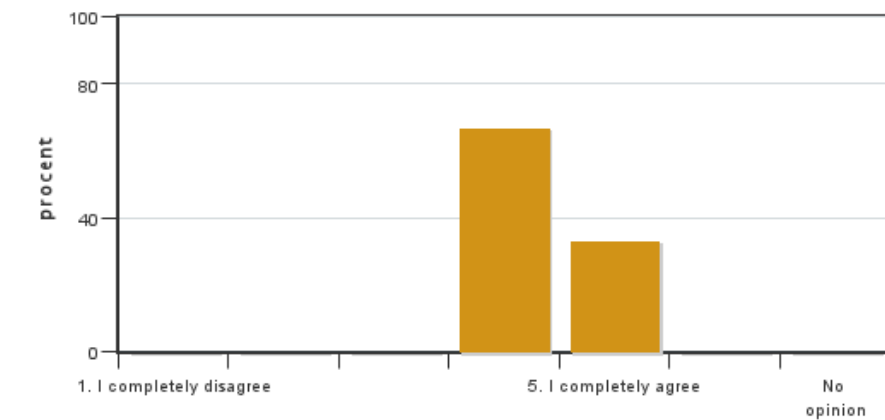


Answers: 3  
 Medel: 3,7  
 Median: 4

1: 0  
 2: 0  
 3: 1  
 4: 2  
 5: 0

No opinion: 0

**4. The information about the course was easily accessible.**

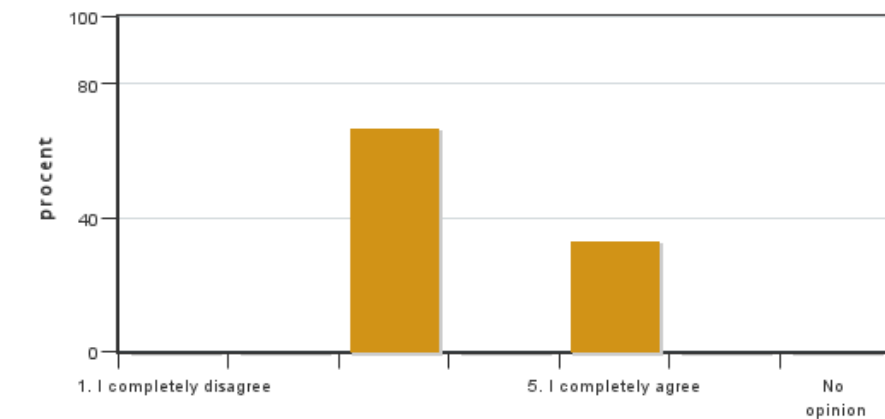


Answers: 3  
 Medel: 4,3  
 Median: 4

1: 0  
 2: 0  
 3: 0  
 4: 2  
 5: 1

No opinion: 0

**5. The various course components (lectures, course literature, exercises etc.) have supported my learning.**

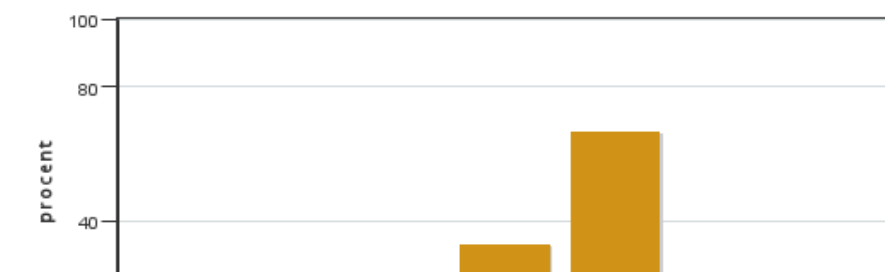


Answers: 3  
 Medel: 3,7  
 Median: 3

1: 0  
 2: 0  
 3: 2  
 4: 0  
 5: 1

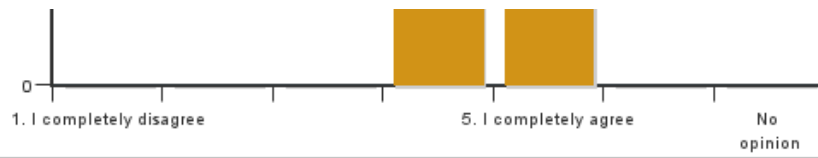
No opinion: 0

**6. The social learning environment has been inclusive, respecting differences of opinion.**



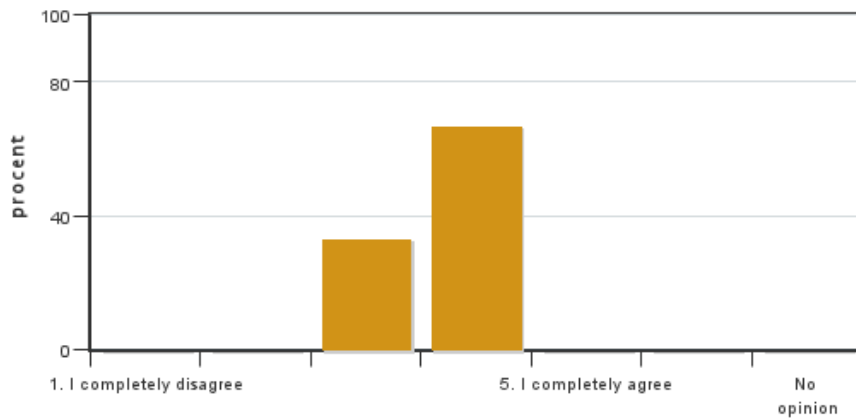
Answers: 3  
 Medel: 4,7  
 Median: 5

1: 0  
 2: 0  
 3: 0  
 4: 1  
 5: 2



No opinion: 0

**7. The physical learning environment (facilities, equipment etc.) has been satisfactory.**

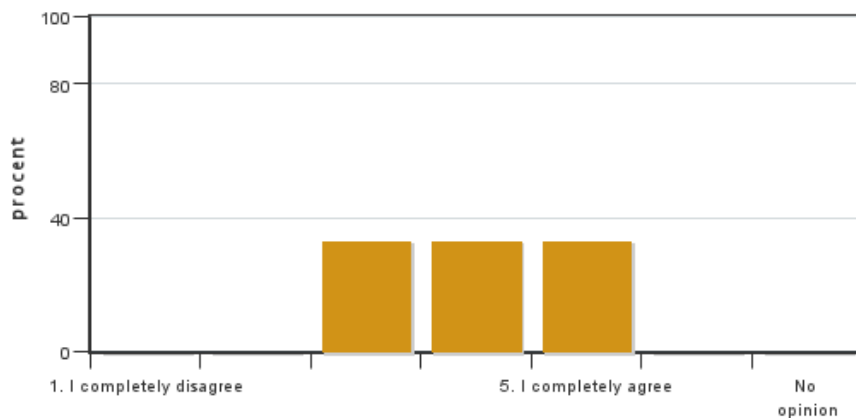


Answers: 3  
Medel: 3,7  
Median: 4

1: 0  
2: 0  
3: 1  
4: 2  
5: 0

No opinion: 0

**8. The examination(s) provided opportunity to demonstrate what I had learnt during the course (see the learning objectives).**

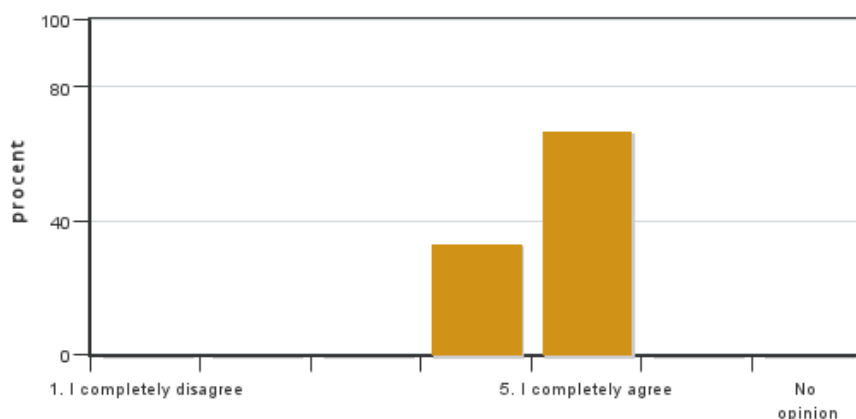


Answers: 3  
Medel: 4,0  
Median: 4

1: 0  
2: 0  
3: 1  
4: 1  
5: 1

No opinion: 0

**9. The course covered the sustainable development aspect (environmental, social and/or financial sustainability).**

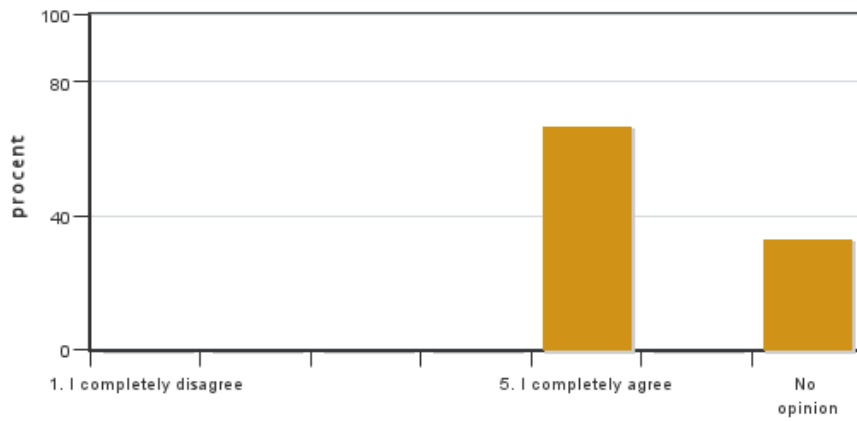


Answers: 3  
Medel: 4,7  
Median: 5

1: 0  
2: 0  
3: 0  
4: 1  
5: 2

No opinion: 0

**10. I believe the course has included a gender and equality aspect, regarding content as well as teaching practices (e.g. perspective on the subject, reading list, allocation of speaking time and the use of master suppression techniques).**

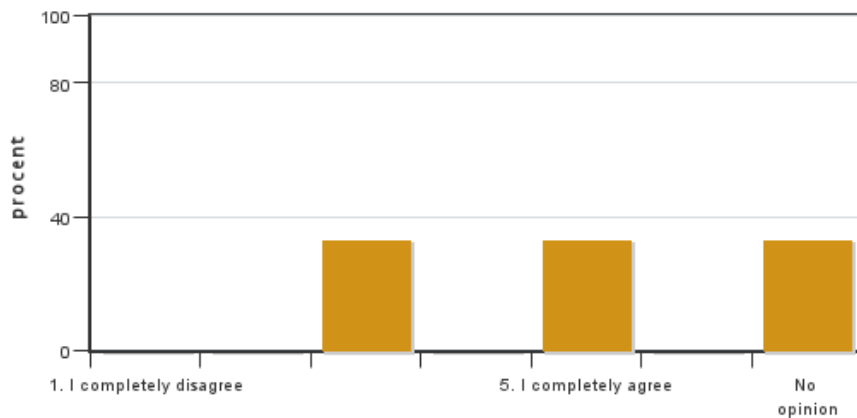


Answers: 3  
 Medel: 5,0  
 Median: 5

1: 0  
 2: 0  
 3: 0  
 4: 0  
 5: 2

No opinion: 1

**11. The course covered international perspectives.**

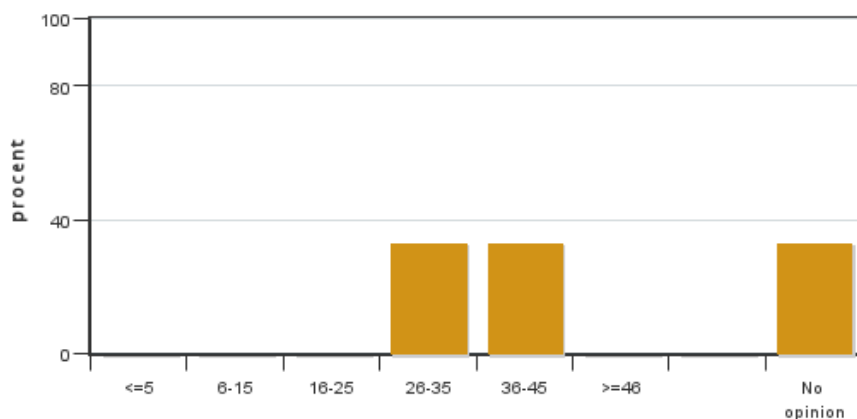


Answers: 3  
 Medel: 4,0  
 Median: 3

1: 0  
 2: 0  
 3: 1  
 4: 0  
 5: 1

No opinion: 1

**12. On average, I have spent ... hours/week on the course (including timetabled hours).**



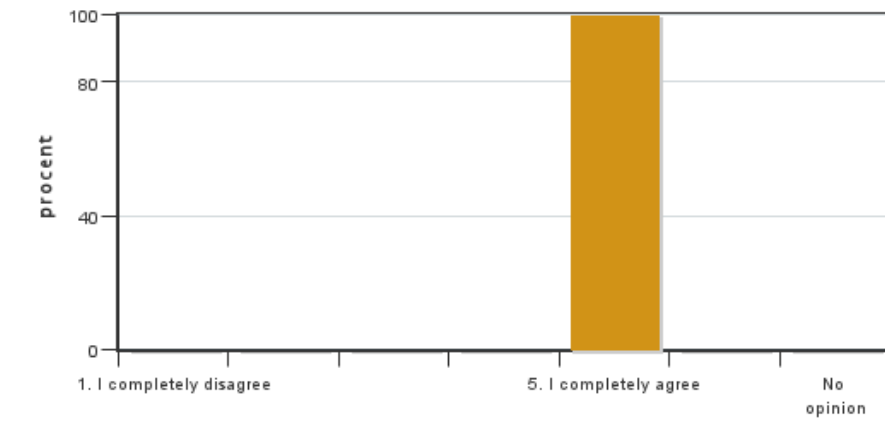
Answers: 3  
 Medel: 35,0  
 Median: 26-35

≤5: 0  
 6-15: 0  
 16-25: 0  
 26-35: 1  
 36-45: 1  
 ≥46: 0

No opinion: 1

**Additional own questions**

**13. An important element of our course is that you do not only learn new concepts of geochemistry but also apply them in a quantitative way. You first solved limited problems on paper in various exercise sessions and then used Visual Minteq modelling on complex problems. How do you evaluate this quantitative approach and more particular the initial step of solving limited systems on paper. Do you agree it is important to your learning or not at all?**

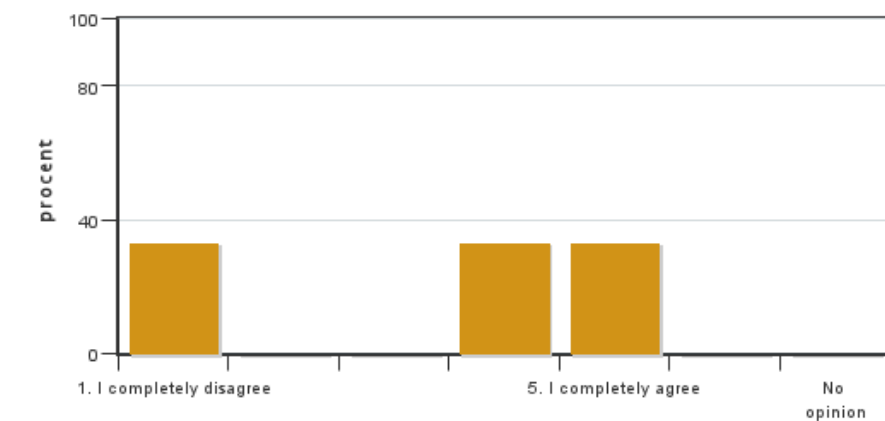


Answers: 3  
 Medel: 5,0  
 Median: 5

1: 0  
 2: 0  
 3: 0  
 4: 0  
 5: 3

No opinion: 0

**14. Do you think introduction to chemical concepts is very much needed to prepare you for the rest of the course?**

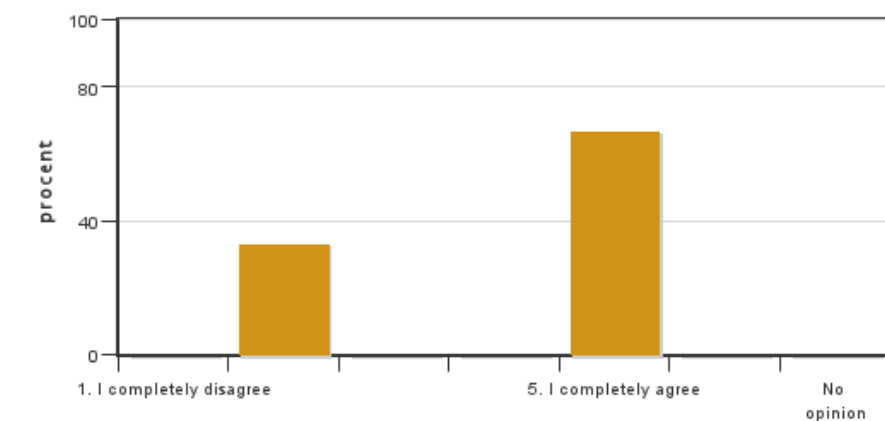


Answers: 3  
 Medel: 3,3  
 Median: 4

1: 1  
 2: 0  
 3: 0  
 4: 1  
 5: 1

No opinion: 0

**15. Would agree that "Minerals in soils and waters" and "mineral weathering" are a relevant parts of the course and the teacher (Vadim Kessler) did a good job?**



Answers: 3  
 Medel: 4,0  
 Median: 5

1: 0  
 2: 1  
 3: 0  
 4: 0  
 5: 2

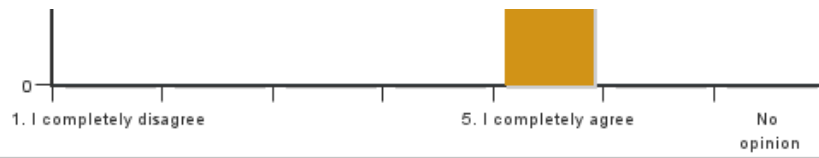
No opinion: 0

**16. Would agree that "the carbonate system", "complex formation" and "solubility" are relevant parts of the course and the teacher (Jon Petter Gustafsson) did a good job? ("Phosphate: yield vs. Eutrophication" and Visual MINTEQ have separate questions).**



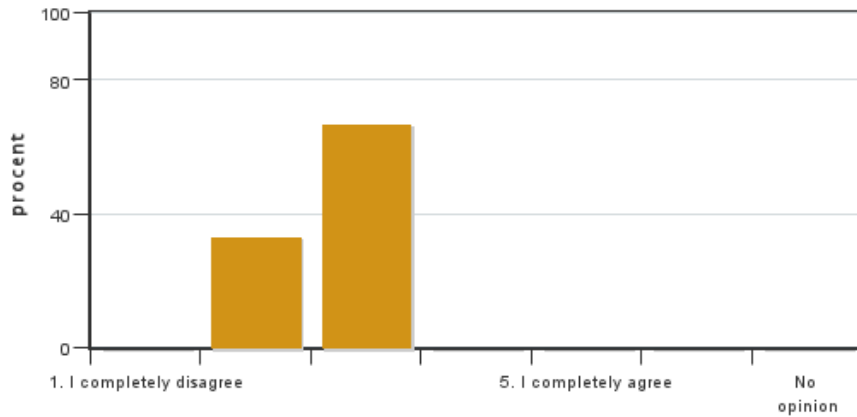
Answers: 3  
 Medel: 5,0  
 Median: 5

1: 0  
 2: 0  
 3: 0  
 4: 0  
 5: 3



No opinion: 0

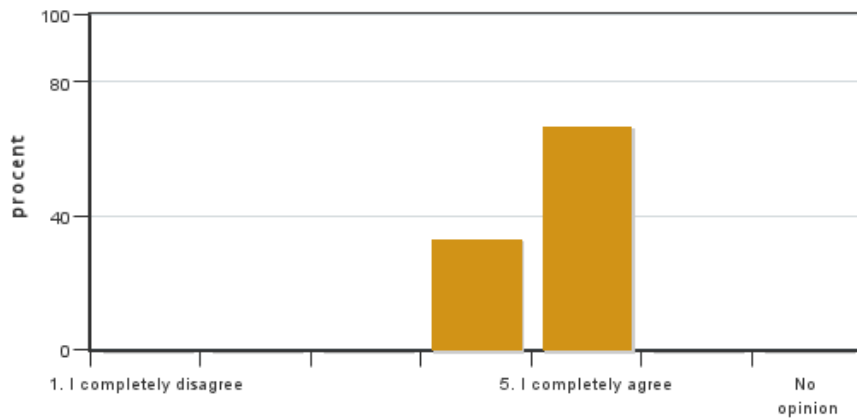
17. Would agree that "organic matter" is a relevant part of the course and the teacher (Marie Spohn) did a good job?



Answers: 3  
 Medel: 2,7  
 Median: 3

1: 0  
 2: 1  
 3: 2  
 4: 0  
 5: 0  
 No opinion: 0

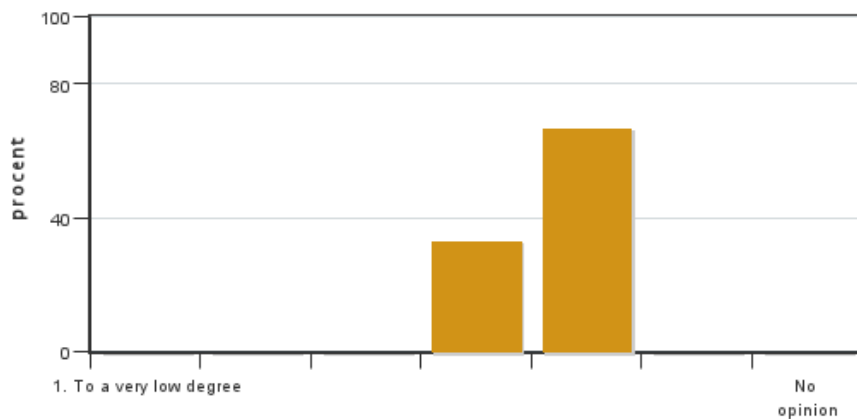
18. Would agree that "adsorption and ion exchange" including the exercises is a relevant part of the course and the teacher (Geert Cornelis) did a good job? (Soil acidity has a separate question)



Answers: 3  
 Medel: 4,7  
 Median: 5

1: 0  
 2: 0  
 3: 0  
 4: 1  
 5: 2  
 No opinion: 0

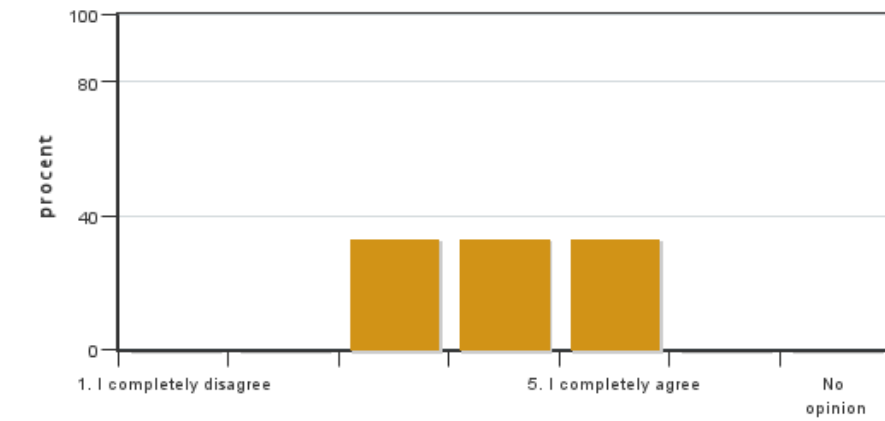
19. To which degree is "soil acidity and countermeasures" (Geert Cornelis) an interesting and relevant part of the course?



Answers: 3  
 Medel: 4,7  
 Median: 5

1: 0  
 2: 0  
 3: 0  
 4: 1  
 5: 2  
 No opinion: 0

20. Do you agree that "Phosphate: yield versus eutrophication" (Jon Petter Gustafsson) was an interesting and relevant lecture?

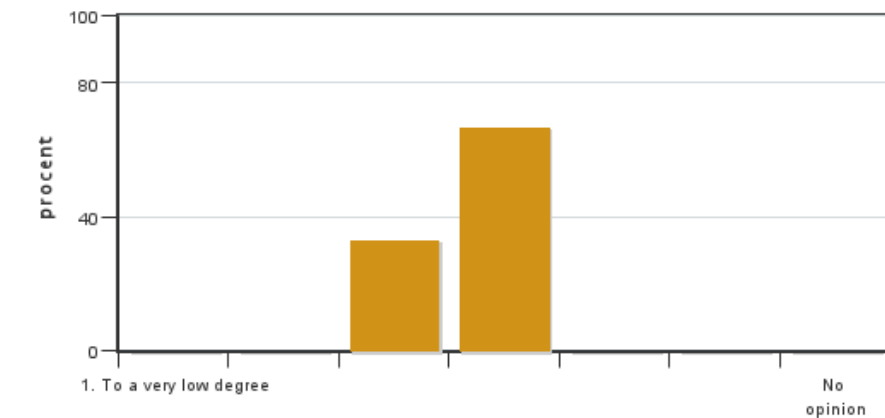


Answers: 3  
 Medel: 4,0  
 Median: 4

1: 0  
 2: 0  
 3: 1  
 4: 1  
 5: 1

No opinion: 0

**21. How important do you feel the lab was to the course. The goal was for you to better understand quantitative concepts by handling soils in reality. How well have we succeeded with that goal?**

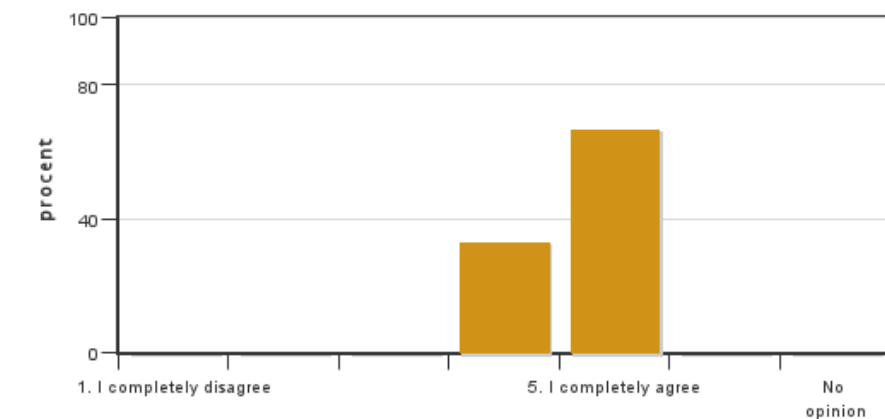


Answers: 3  
 Medel: 3,7  
 Median: 4

1: 0  
 2: 0  
 3: 1  
 4: 2  
 5: 0

No opinion: 0

**22. Would agree that "sources and fate of organic pollutants" is a relevant part of the course and the teacher (Georgios Niarchos) did a good job? (Fugacity has a separate question)**

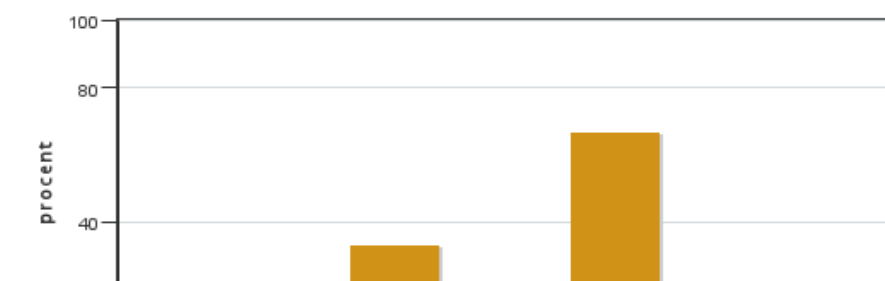


Answers: 3  
 Medel: 4,7  
 Median: 5

1: 0  
 2: 0  
 3: 0  
 4: 1  
 5: 2

No opinion: 0

**23. Would agree that "Fugacity concept" is a relevant part of the course including the exercises and the teacher (Georgios Niarchos) did a good job?**



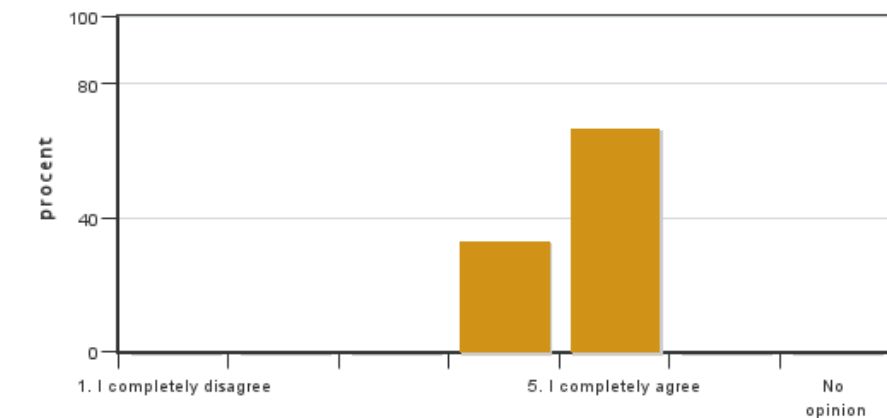
Answers: 3  
 Medel: 4,3  
 Median: 5

1: 0  
 2: 0  
 3: 1  
 4: 0  
 5: 2



No opinion: 0

**24. Would agree that "redox" and "remediation of contaminated soils" are relevant parts of the course and the teacher (Dan Berggren Kleja) did a good job? (Ecological risk assessment has a separate question)**

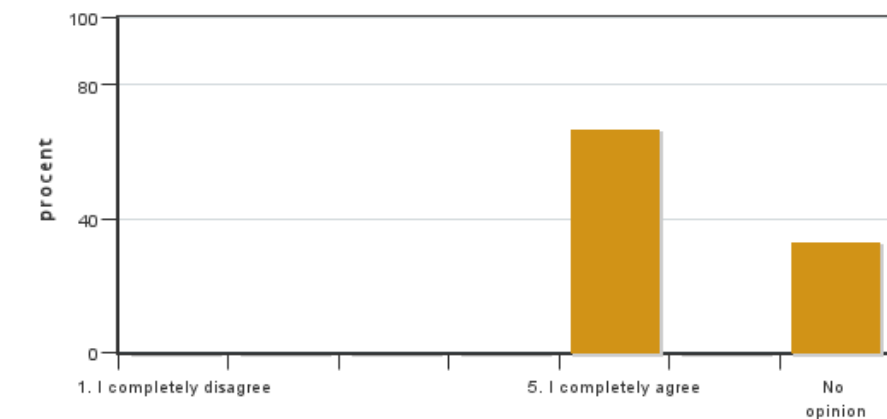


Answers: 3  
Medel: 4,7  
Median: 5

1: 0  
2: 0  
3: 0  
4: 1  
5: 2

No opinion: 0

**25. To which extent was "pesticides" an interesting and relevant part of the course? Did the teachers (Harald Cederlund and Mats Larsbo) do a good job?**

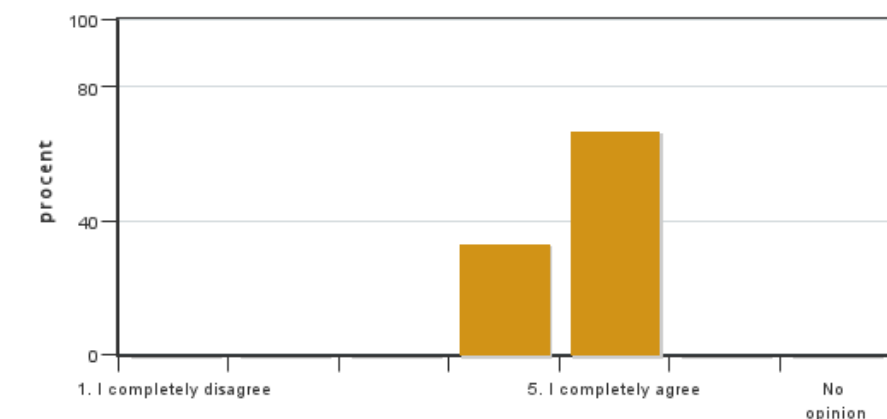


Answers: 3  
Medel: 5,0  
Median: 5

1: 0  
2: 0  
3: 0  
4: 0  
5: 2

No opinion: 1

**26. How well did Visual Minteq modelling (water chemistry and adsorption) contribute to the course goals? Did it succeed in combining the different inorganic parts of the course together? Did the teacher (Jon Petter Gustafsson) do a good job? (There is a separate question for biotic ligand modelling and include lab modelling assessment in your answer to the lab part)**

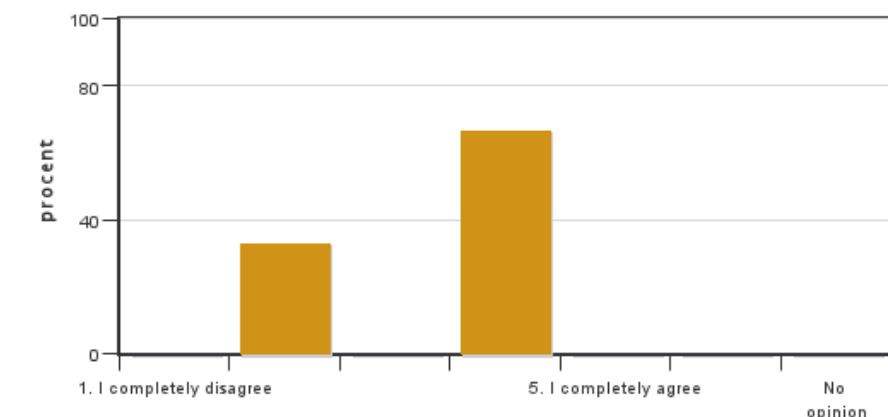


Answers: 3  
Medel: 4,7  
Median: 5

1: 0  
2: 0  
3: 0  
4: 1  
5: 2

No opinion: 0

27. This year, we have expanded risk assessment in this course. It now encompasses environmental risk assessment, ecological risk assessment, the risk assessment workshop and biotic ligan modelling. How interesting and relevant were these different parts and do you feel you have a solid background now in risk assessment?

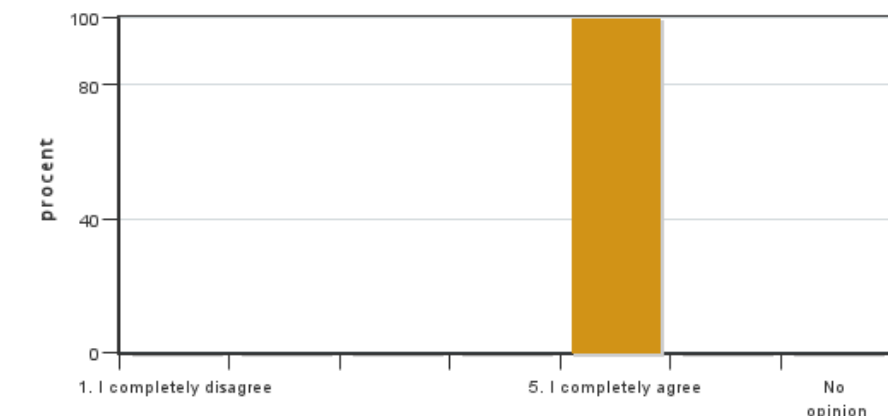


Answers: 3  
 Medel: 3,3  
 Median: 4

1: 0  
 2: 1  
 3: 0  
 4: 2  
 5: 0

No opinion: 0

28. Do you agree that "Colloidal chemistry" and "Microplastic fate in environmental systems" (Geert Cornelis) were interesting and relevant lectures?

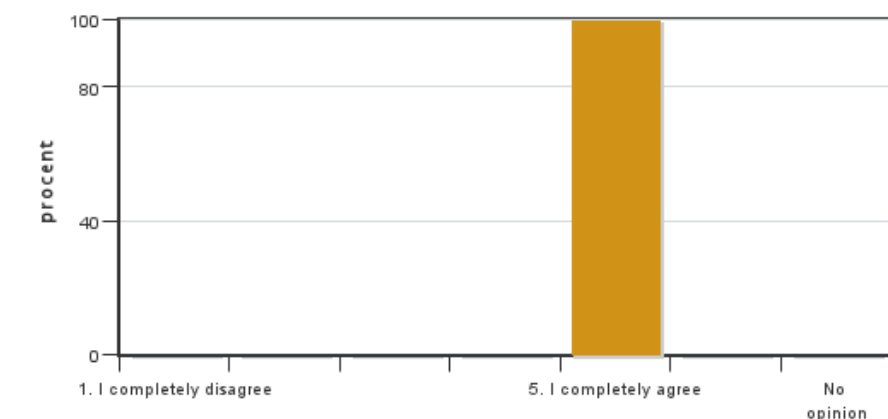


Answers: 3  
 Medel: 5,0  
 Median: 5

1: 0  
 2: 0  
 3: 0  
 4: 0  
 5: 3

No opinion: 0

29. Would agree that "PFAS" is a relevant part of the course including the exercises and the teacher (Lutz Ahrens) did a good job?

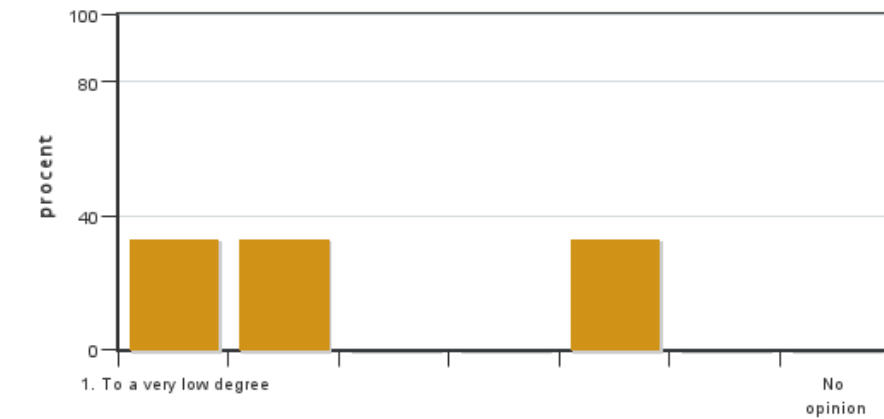


Answers: 3  
 Medel: 5,0  
 Median: 5

1: 0  
 2: 0  
 3: 0  
 4: 0  
 5: 3

No opinion: 0

30. Do you experience the literature seminar, at the end of the course as useful and relevant?



Answers: 3  
 Medel: 2,7  
 Median: 2

1: 1  
 2: 1  
 3: 0  
 4: 0  
 5: 1

No opinion: 0

## Course leaders comments

We have made substantiate changes to the course this term. Most importantly, there is now the option to read only part of the course (MX0170) which we foresaw to be attractive to agronomy students. We therefore grouped fundamental geochemistry aspects and the more applied ones having agronomic implications (acidification, phosphate chemistry, pesticides) in the first half of this course. MV0218 then continues focusing on risk assessment, contaminated soils and contaminants being researched intensively right now (plastics, PFAS, colloids). After meeting with the student representative, it seems this division has not been perceived as neative to the MV0218 students. There was still a logical distinction between the MV0218 and Mx0170 courses and the links between the two parts of the course felt strong and logical as well.

As each year, the two apers that were appreciated most were the chemistry introduction at the start and the lab. We have kept the Mv0218 lab as it has been each year. While perceived as challenging, especially the modelling part, it still seems a pedagogically important part of the course to take theroy to practice. Some more guidance on the modelling part would have been good. It was also too bad the ICP-MS broke down preventing the students to use their own data but we supplied the students with data from previous years and it seems we have reached the intended learning outcomes that way. We also seem to have alleviated some overlaps between course parts as intended and the different course modules seem to work better together now. The course thus has lived up to expectations. It is as always perceived as demanding but rewarding. Moreover, it seems that other universities do not offer similar courses, which is relevant for EnvEuro students that are choosing courses at different universities.

There were some less positive comments as well and those will be investigated further, but the overall set up of the course seems to work well.

## Student representatives comments

60% of the students filled in the evaluation. The average overall impression of the course was 3.7 on a scale of 1 to 5. According to the responses, the information about the course was easily accessible and there were no issues with inclusivity or respecting different opinions. It was pointed out that some lecture slides were too much dominated by graphs. A bit more text explanations would have been helpful for learning from them. It was commented that the exam covered some parts of the course very deeply, while others were not touched at all. The modelling part received very positive feedback. The introduction to chemical concepts and soil mineralogy received diverse feedback. While some students were happy with this part, others thought it would have been better to dive deeper into the structure of minerals instead of basics of chemistry and that the soil mineralogy was explained too fast. The lecture on organic matter received less positive feedback. The lab left a positive impression, but it was pointed out that more guidance and availability from the lecturer during the modelling part would have been desirable, as the tool was completely new for all of the students. Mixed feedback was given to the part on risk assessment. Some comments pointed out that the lectures were quite repetitive. Colloidal chemistry and PFAS, including the visit to the water treatment plant were assessed very positively. The opinions of the students on the literature seminar were diverse. While the topics were broad and interesting, one comment mentioned that we could have presented alone instead of in pairs to cover more topics and have a more interesting discussion, given that there were only a few students presenting. The first part of the course was combined with another course (MX0170), but there have been no complaints or issues with that.

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Kontakta support: [support@slu.se](mailto:support@slu.se) - 018-67 6600