Soil and water chemistry
MX0170, 20190.2526

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

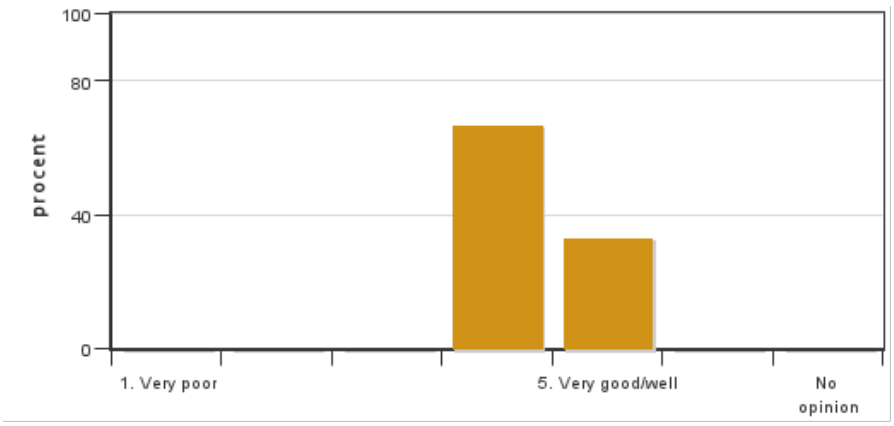
Evaluation report

Evaluation period: 2025-12-01 - 2025-12-24

Answers	6
Number of students	10
Answer frequency	60 %

Mandatory standard questions

1. My overall impression of the course is:

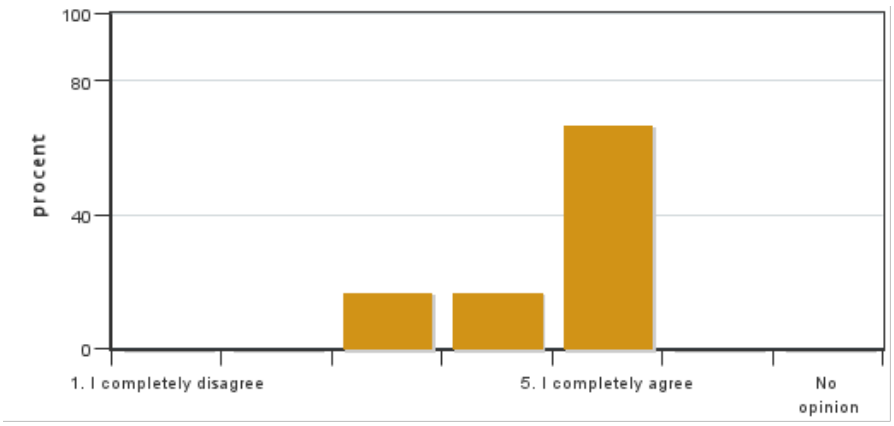


Answers: 6
Medel: 4,3
Median: 4

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

No opinion: 0

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

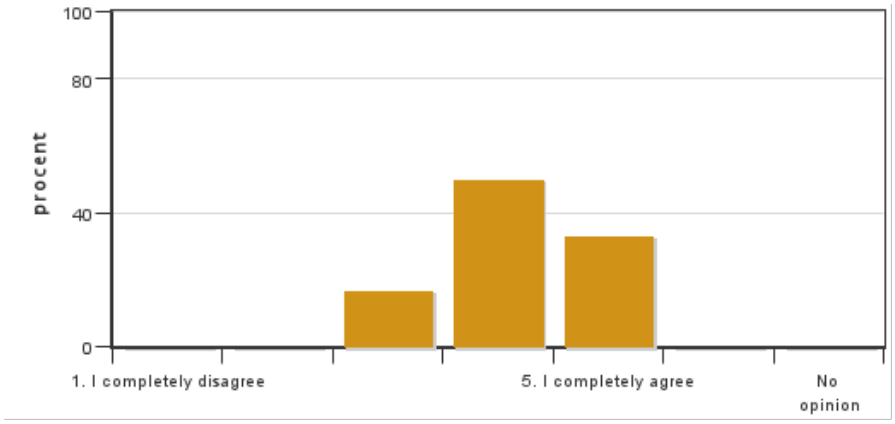


Answers: 6
Medel: 4,5
Median: 5

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

No opinion: 0

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

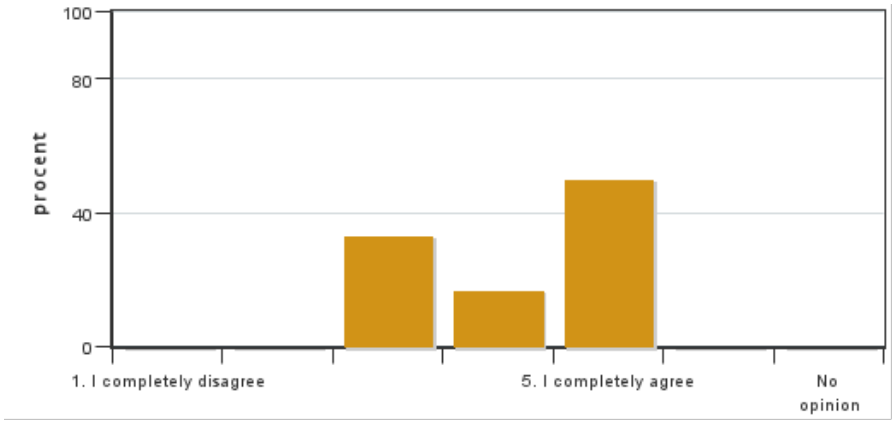


Answers: 6
Medel: 4,2
Median: 4

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

No opinion: 0

4. The information about the course was easily accessible.

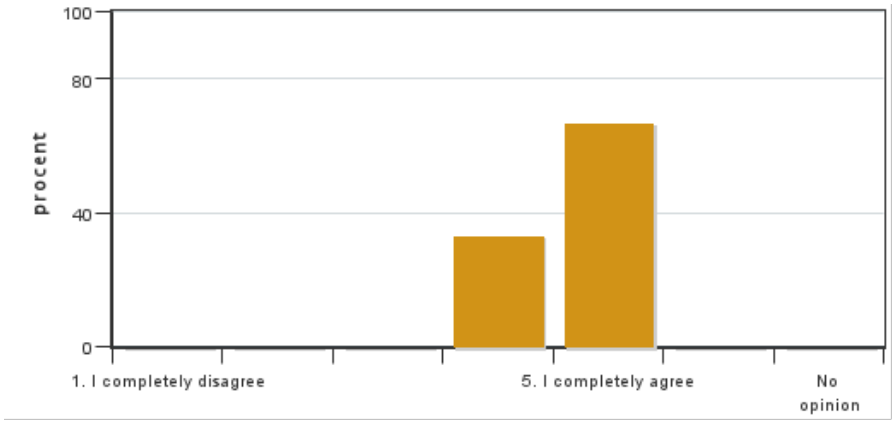


Answers: 6
Medel: 4,2
Median: 4

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

No opinion: 0

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

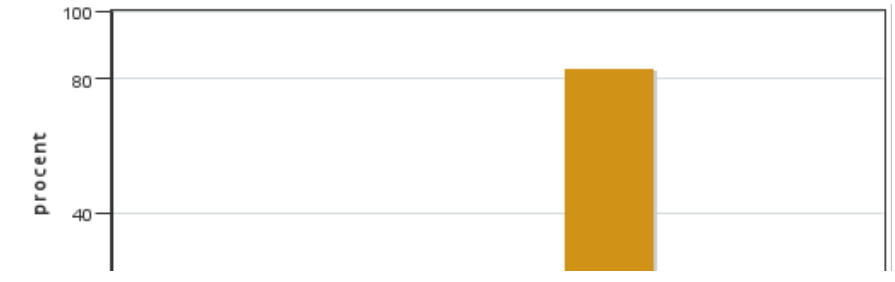


Answers: 6
Medel: 4,7
Median: 5

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

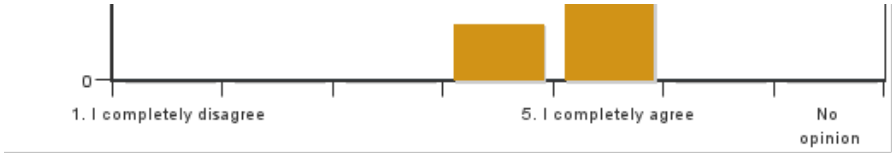
No opinion: 0

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



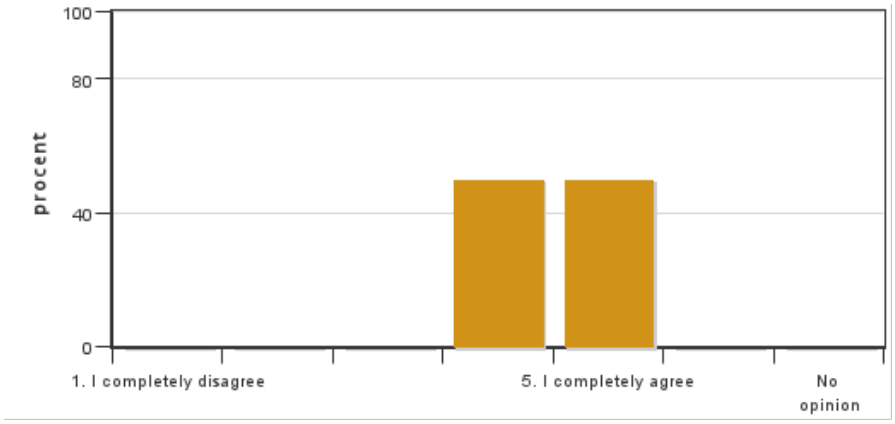
Answers: 6
Medel: 4,8
Median: 5

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



No opinion: 0

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

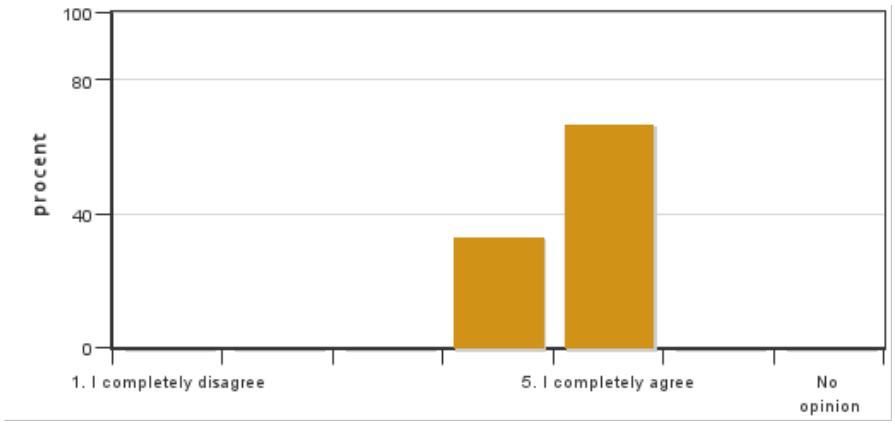


Answers: 6
Medel: 4,5
Median: 4

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

No opinion: 0

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

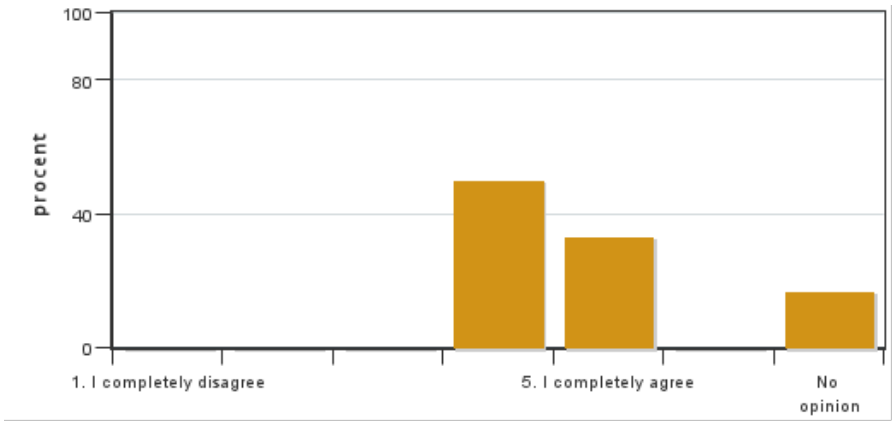


Answers: 6
Medel: 4,7
Median: 5

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

No opinion: 0

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

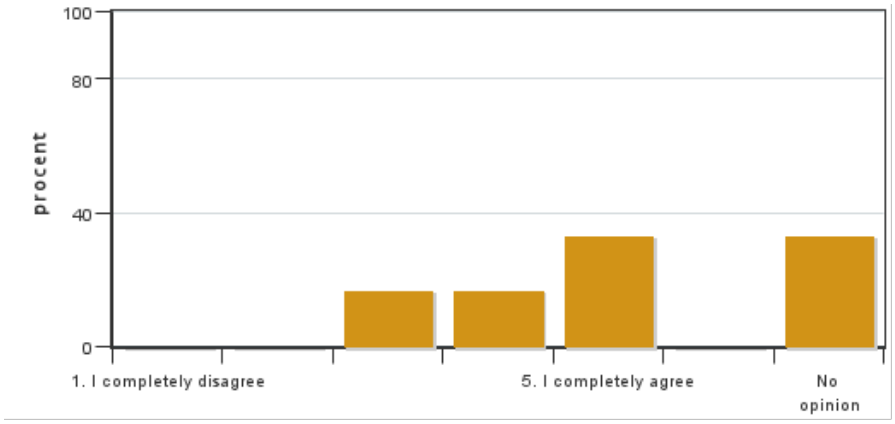


Answers: 6
Medel: 4,4
Median: 4

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

No opinion: 1

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).

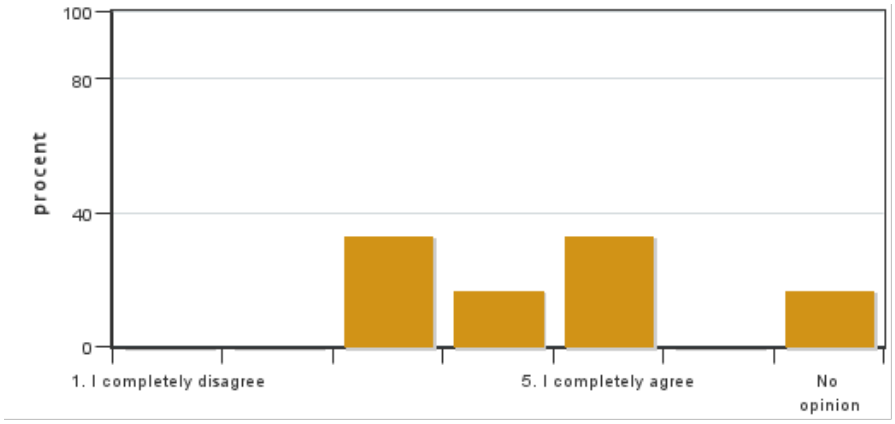


Answers: 6
Medel: 4,3
Median: 4

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

No opinion: 2

11. The course covered international perspectives.

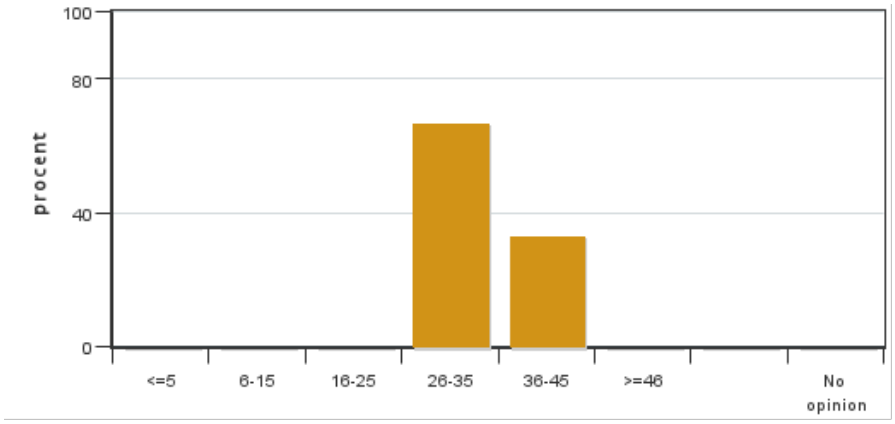


Answers: 6
Medel: 4,0
Median: 4

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

No opinion: 1

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



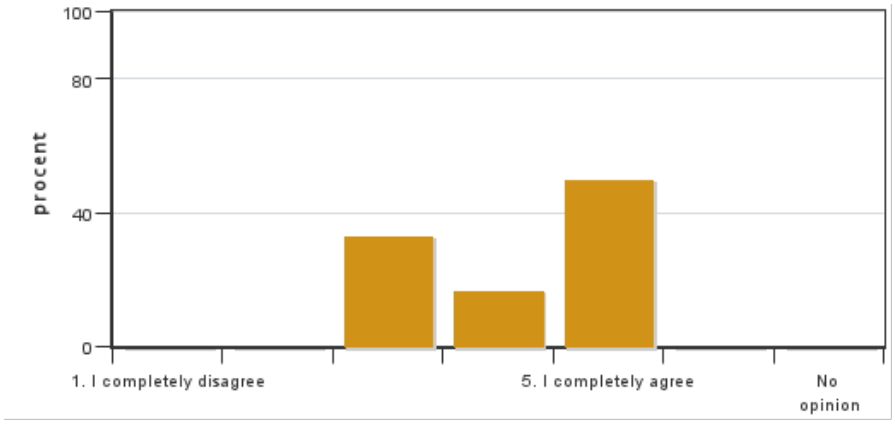
Answers: 6
Medel: 33,3
Median: 26-35

≤5: 0
6-15: 0
16-25: 0
26-35: 4
36-45: 2
≥46: 0

No opinion: 0

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?

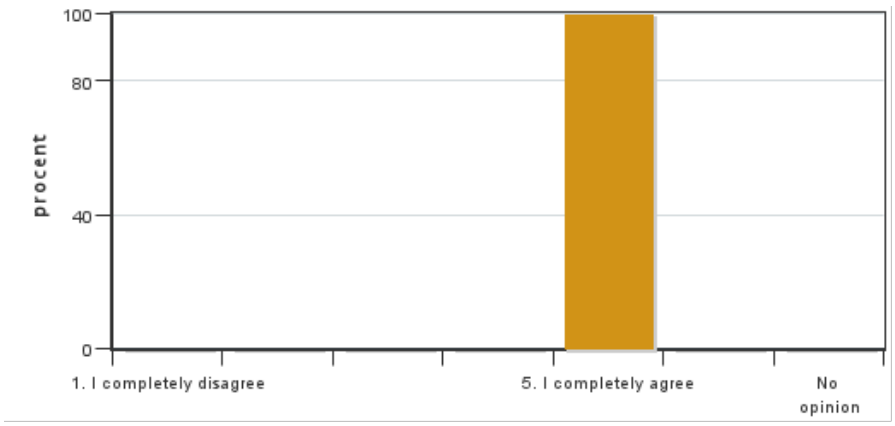


Answers: 6
Medel: 4,2
Median: 4

1: 0
2: 0
3: 2
4: 1
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?

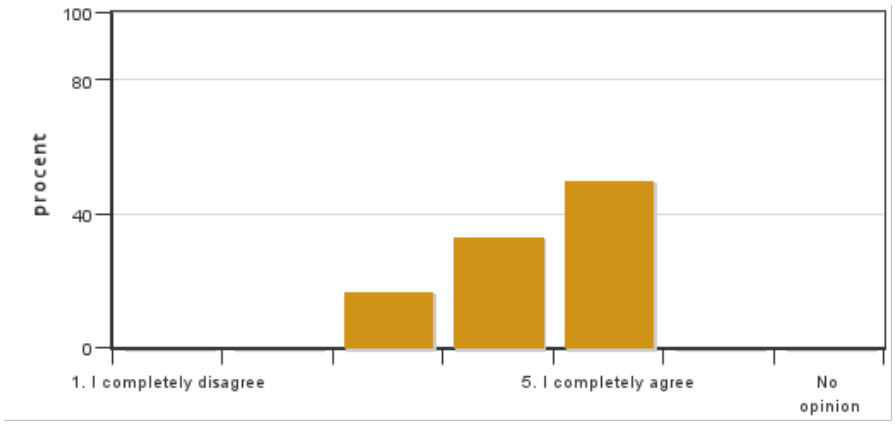


Answers: 6
Medel: 5,0
Median: 5

1: 0
2: 0
3: 0
4: 0
5: 6

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: 6
Medel: 4,3
Median: 4

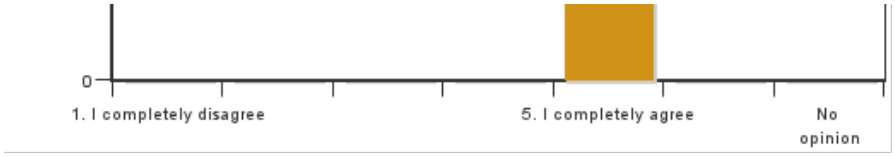
1: 0
2: 0
3: 1
4: 2
5: 3

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).

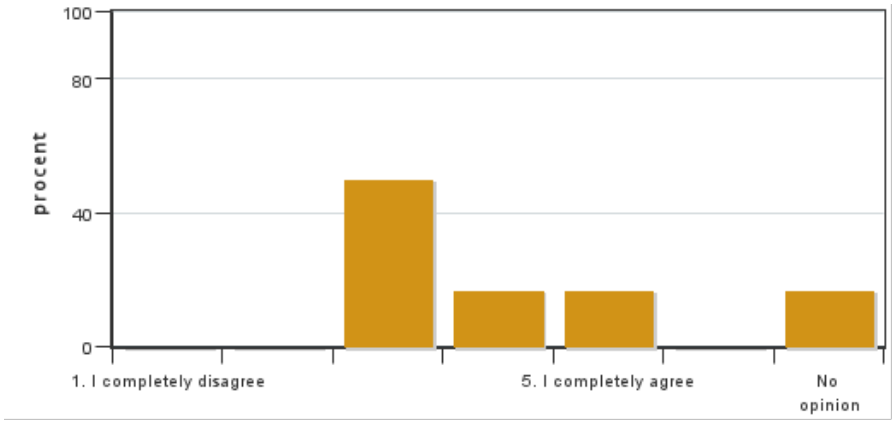
Answers: 6
Medel: 5,0
Median: 5

1: 0
2: 0
3: 0
4: 0
5: 6



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?

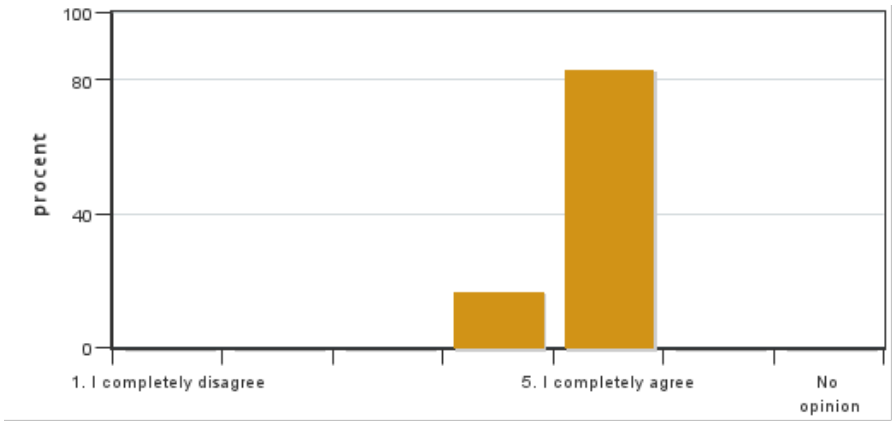


Answers: 6
Medel: 3,6
Median: 3

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

No opinion: 1

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)

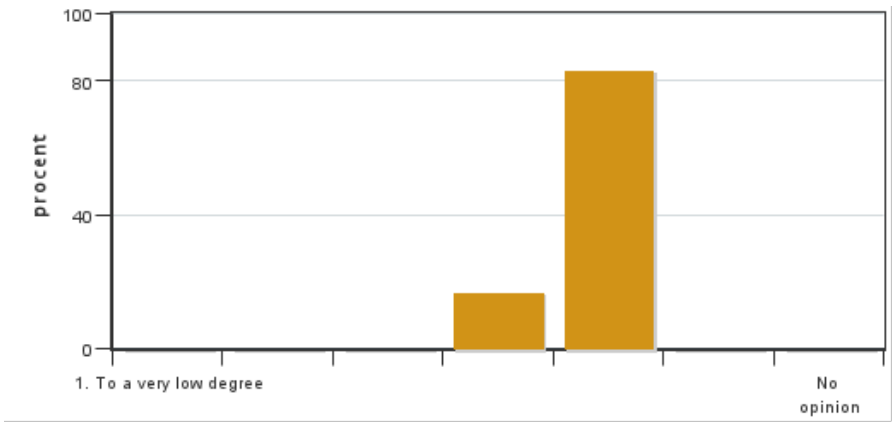


Answers: 6
Medel: 4,8
Median: 5

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

No opinion: 0

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

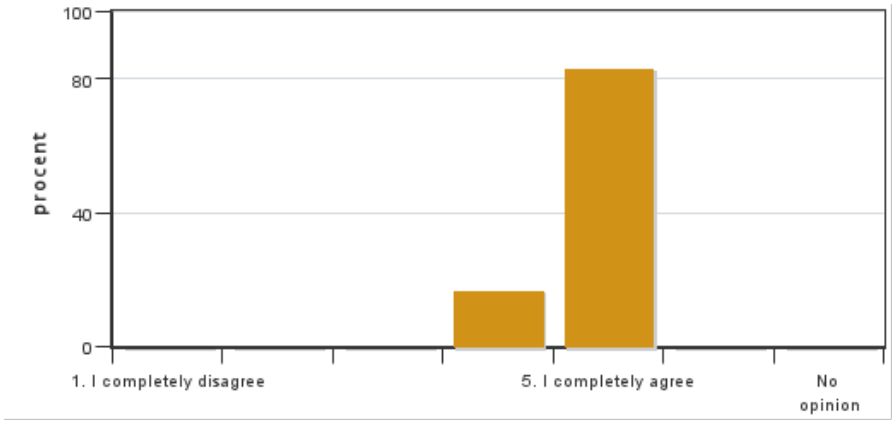


Answers: 6
Medel: 4,8
Median: 5

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

No opinion: 0

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

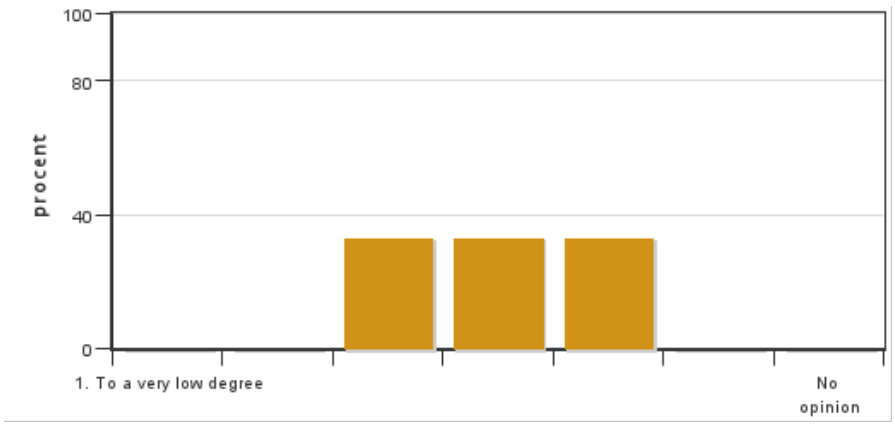


Answers: 6
Medel: 4,8
Median: 5

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

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?

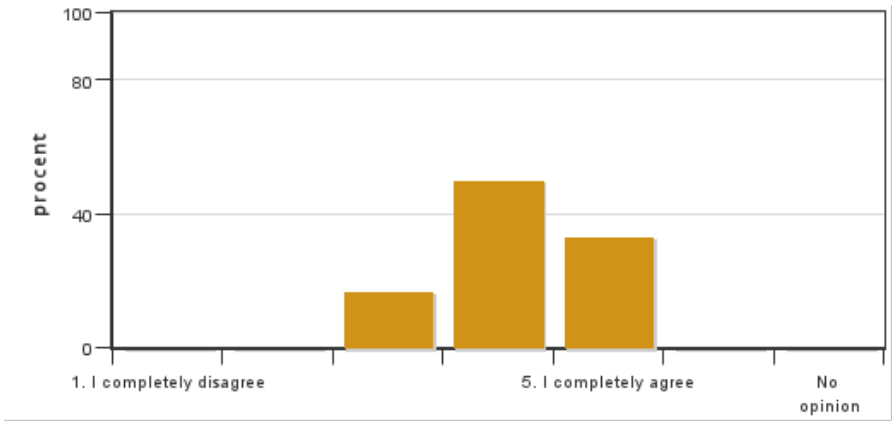


Answers: 6
Medel: 4,0
Median: 4

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

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?

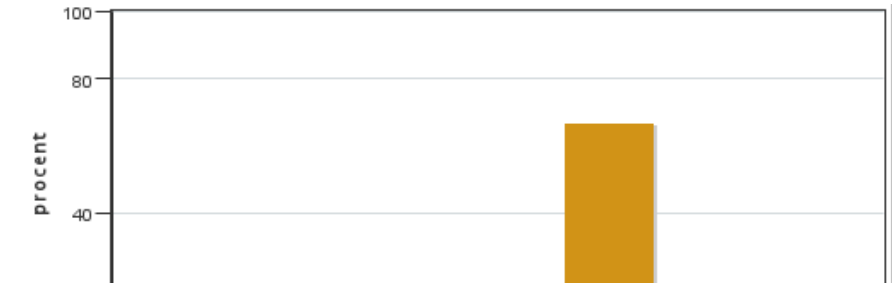


Answers: 6
Medel: 4,2
Median: 4

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

No opinion: 0

23. Would agree that "redox" is a relevant part of the course and the teacher (Dan Berggren Kleja) did a good job?

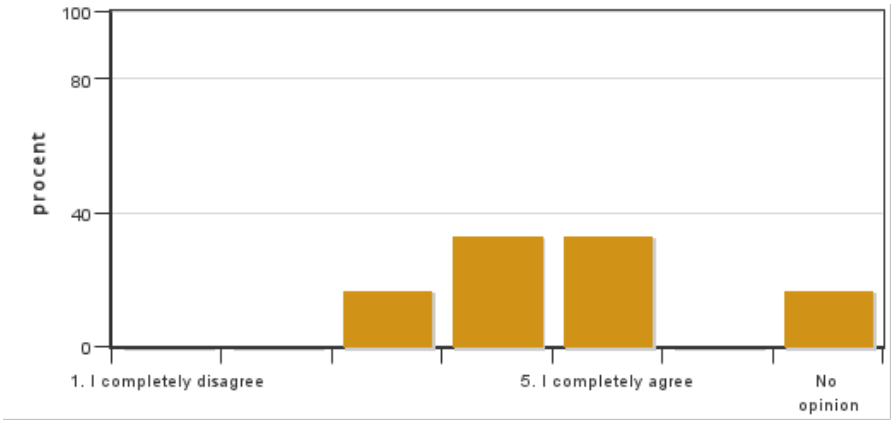


Answers: 6
Medel: 4,8
Median: 5

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

No opinion: 1

24. 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?

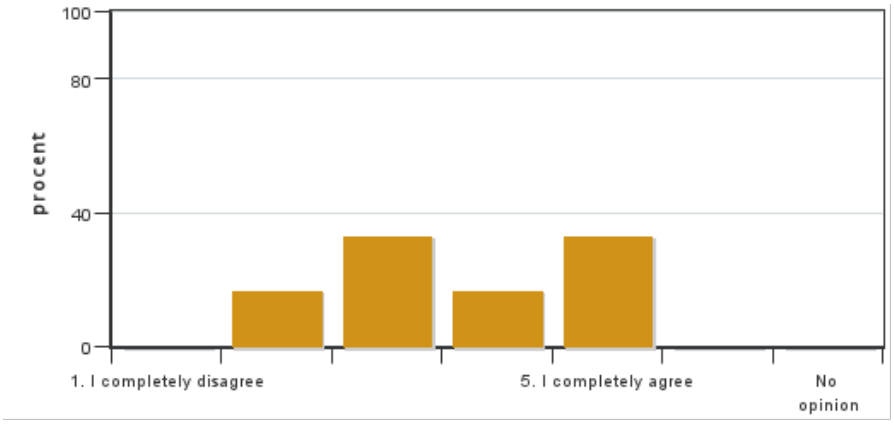


Answers: 6
Medel: 4,2
Median: 4

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

No opinion: 1

25. 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?



Answers: 6
Medel: 3,7
Median: 3

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

No opinion: 0

Course leaders comments

This was the first time we organized this 7.5 credit course, which, for the most part, was run together with the larger 15 credit course in Environmental Geochemistry (MV0218). Overall, the course went well, which the evaluation suggests, although there also were some issues that we hope to address until next year. These include the following:

- Timing of the lab seminar. This should be a little bit earlier to allow for more exam preparation. The unfortunate timing was due to a late change of the exam date. It will be considered whether it is possible to have the exam a little later, but the 2a/2b period boundary reduces available choices.
- The laboratory exercise. The lab went well considering it was the first time we organized it, and the students liked the theme (P tests in soils). There are slight changes needed to the methods and lab instructions, however.
- Visual MINTEQ exercise. The students complained that there was too little time to get used to the software in just 4 hours. The teachers agree – the solution is probably to either remove or to expand. The latter is the most likely option.

Student representatives comments

Theoretical part of the course was well planned and thought. It was a very useful course to deepen knowledge on soil chemistry. Moreover, the calculation workshops were very practical to better understand the concepts. However, a seminar the day before the exam was not very practical. Also, an exam date not directly after the course, allowing to have a study preparation period could be more advantageous. Materials on canvas could be organized better. Lastly, lab experiments were very useful, however the instructions could be improved for better results.