



## Bioenergy - Technology and Systems TN0352, 30187.2122

10 Hp

Pace of study = 35%

Education cycle = Advanced

### Evaluation report

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**Evaluation period: 2022-05-29 - 2022-06-19**

Answers 4

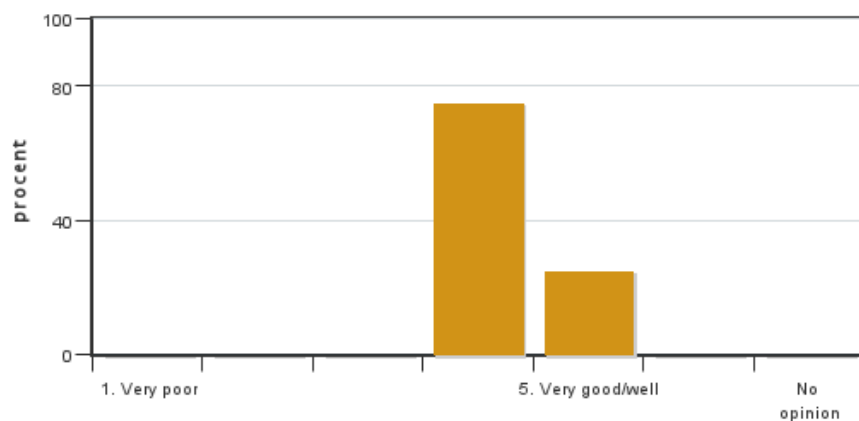
Number of students 11

Answer frequency 36 %

### Mandatory standard questions

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

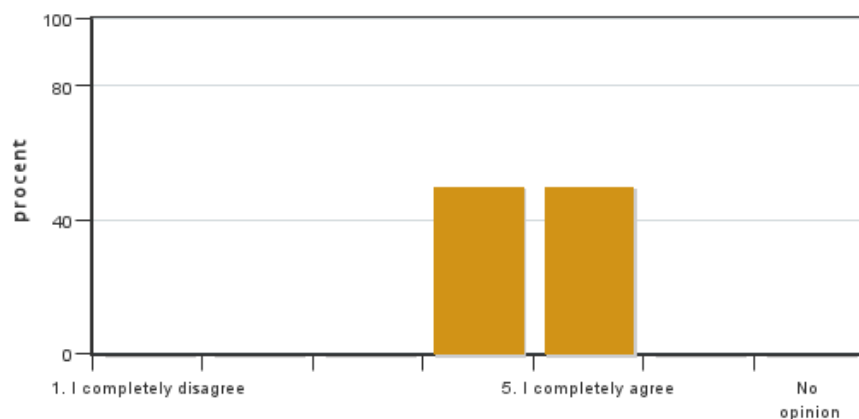


Answers: 4  
Medel: 4,3  
Median: 4

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

No opinion: 0

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

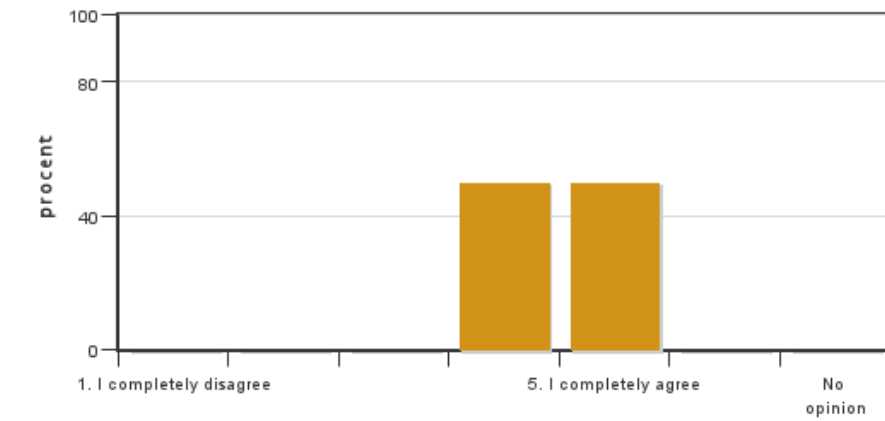


Answers: 4  
Medel: 4,5  
Median: 4

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

No opinion: 0

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

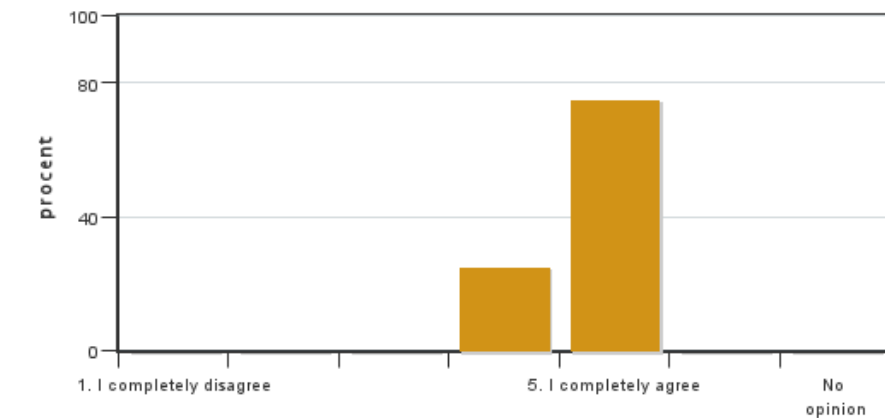


Answers: 4  
Medel: 4,5  
Median: 4

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

No opinion: 0

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

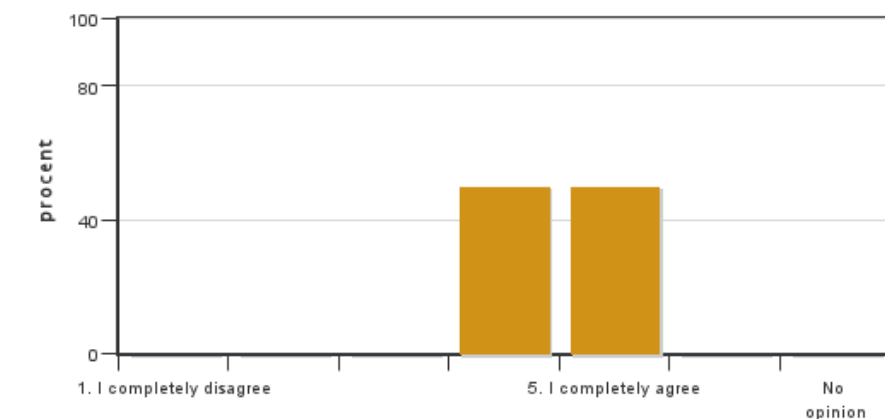


Answers: 4  
Medel: 4,8  
Median: 5

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

No opinion: 0

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

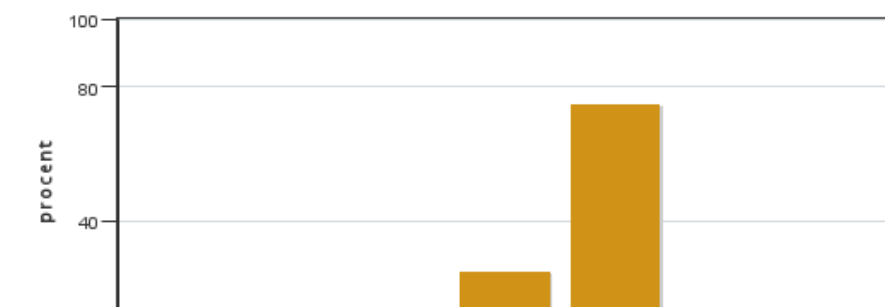


Answers: 4  
Medel: 4,5  
Median: 4

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

No opinion: 0

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



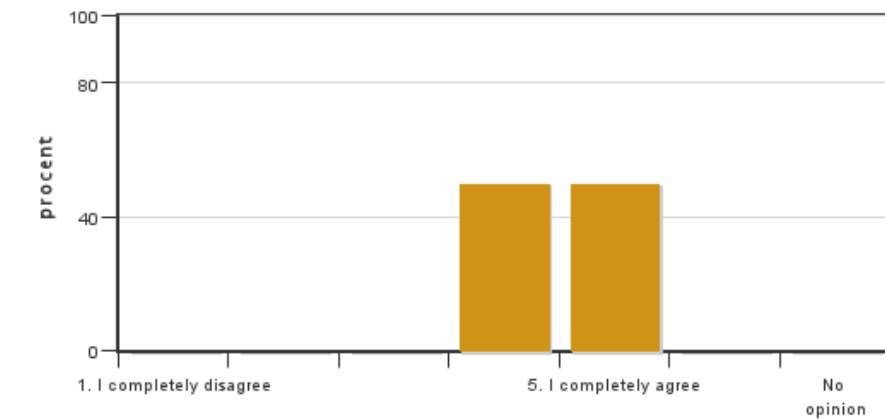
Answers: 4  
Medel: 4,8  
Median: 5

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

No opinion: 0



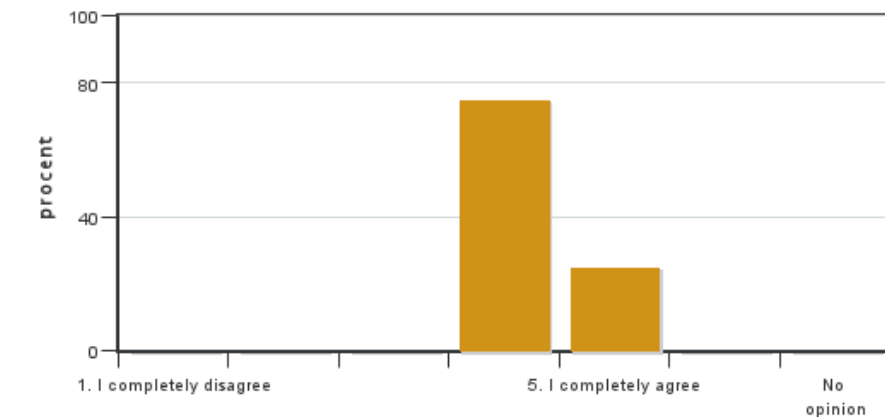
**7. The physical learning environment (facilities, equipment etc.) has been satisfactory.**



Answers: 4  
Medel: 4,5  
Median: 4

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

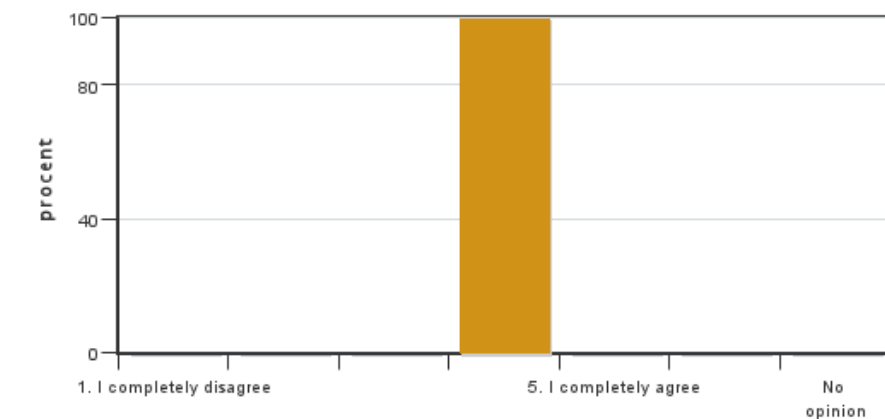
**8. The examination(s) provided opportunity to demonstrate what I had learnt during the course (see the learning objectives).**



Answers: 4  
Medel: 4,3  
Median: 4

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

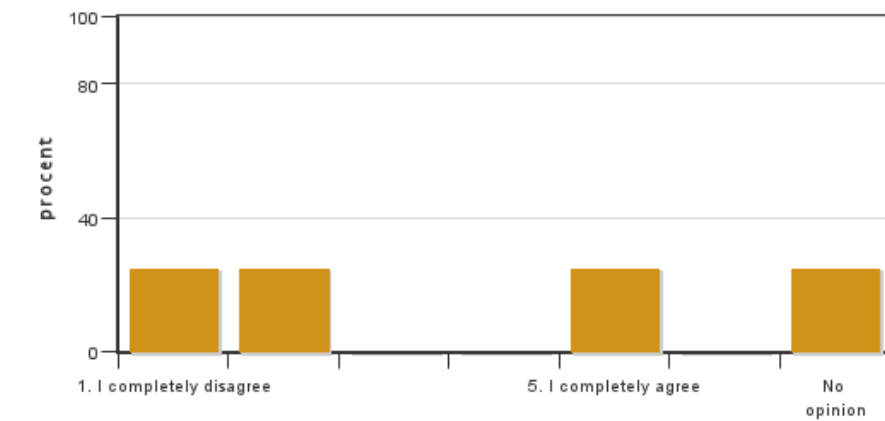
**9. The course covered the sustainable development aspect (environmental, social and/or financial sustainability).**



Answers: 4  
Medel: 4,0  
Median: 4

1: 0  
2: 0  
3: 0  
4: 4  
5: 0  
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).**

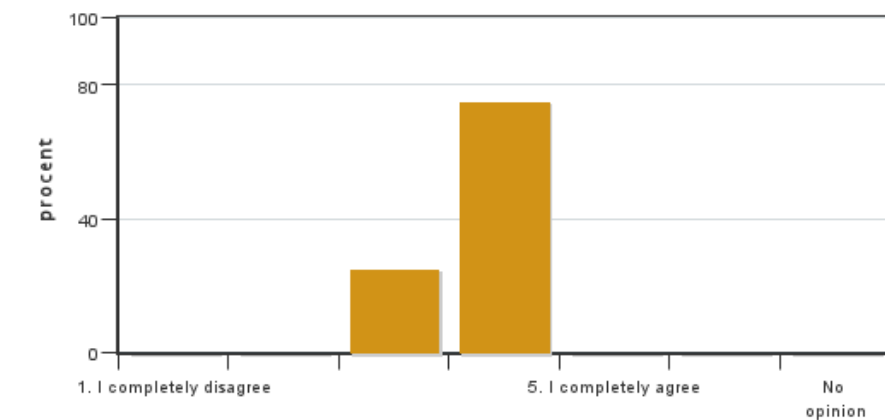


Answers: 4  
Medel: 2,7  
Median: 2

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

No opinion: 1

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

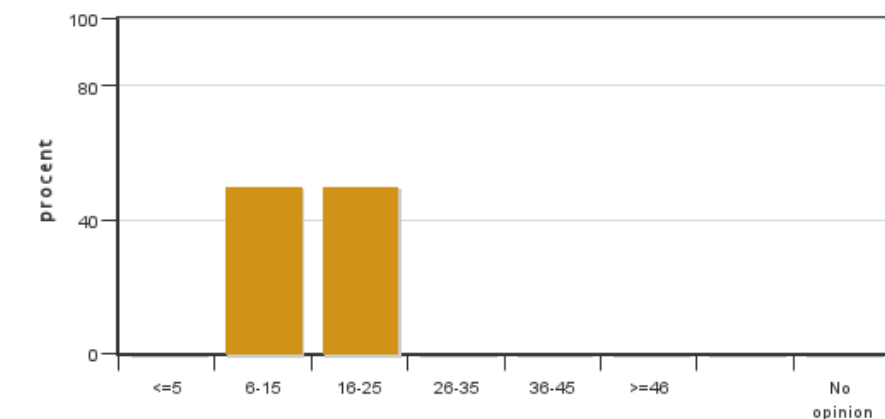


Answers: 4  
Medel: 3,8  
Median: 4

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

No opinion: 0

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

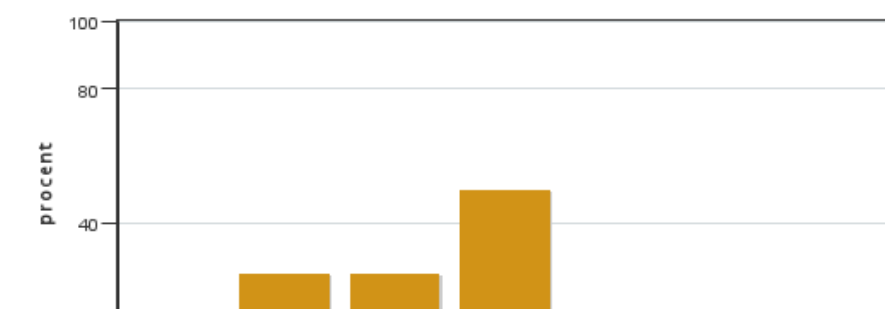


Answers: 4  
Medel: 15,0  
Median: 6-15

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

No opinion: 0

**13. If relevant, what is your overall experience of participating in all or part of your course online?**



Answers: 4  
Medel: 3,3  
Median: 3

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

No opinion: 0

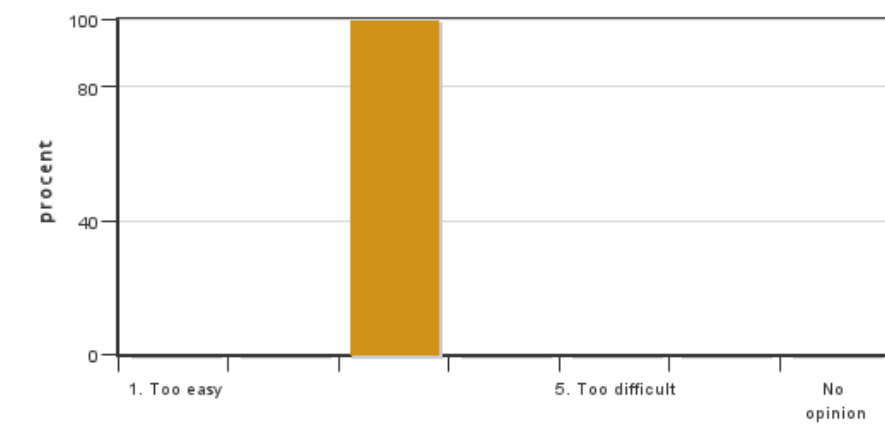


14. If relevant, please share what worked well when participating in teaching on distance

15. If relevant, please share what worked less well when participating in teaching on distance

## Additional own questions

16. The course's degree of difficulty was ...

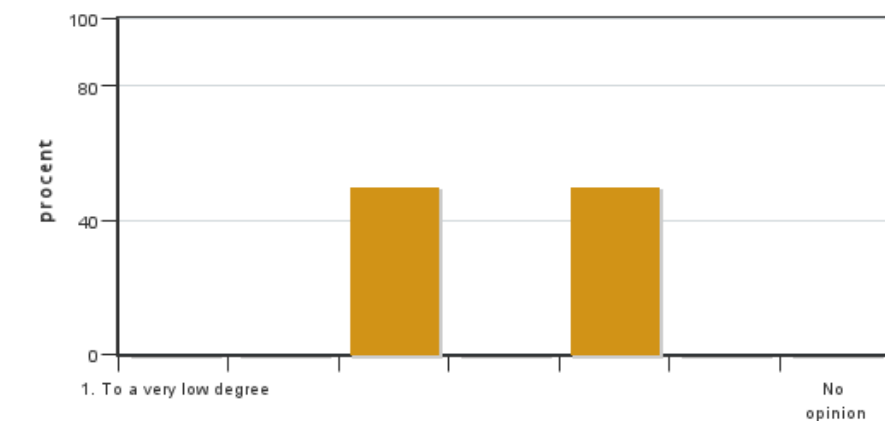


Answers: 4  
Medel: 3,0  
Median: 3

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

No opinion: 0

17. The course has developed my writing skills

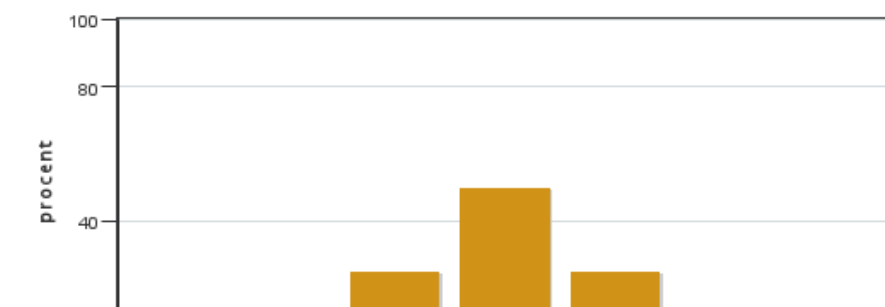


Answers: 4  
Medel: 4,0  
Median: 3.5

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

No opinion: 0

18. The course has developed my skills in oral presentation



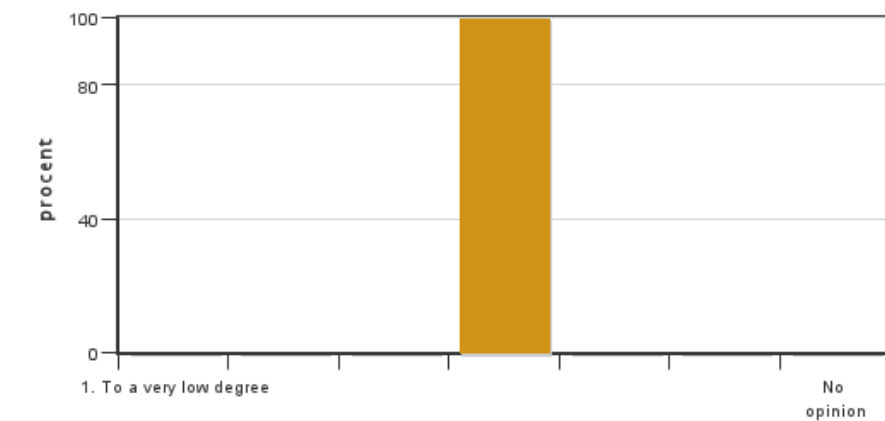
Answers: 4  
Medel: 4,0  
Median: 4

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

No opinion: 0



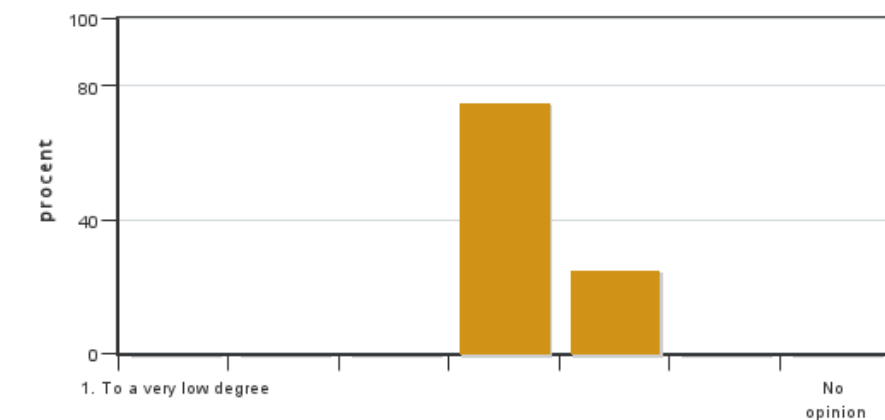
19. The course has developed my problem solving skills



Answers: 4  
Medel: 4,0  
Median: 4

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

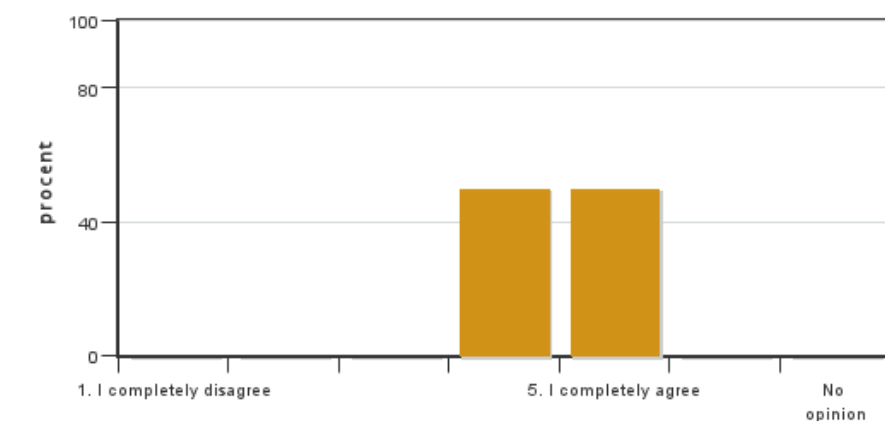
20. I have received constructive feedback on the assignments



Answers: 4  
Medel: 4,3  
Median: 4

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

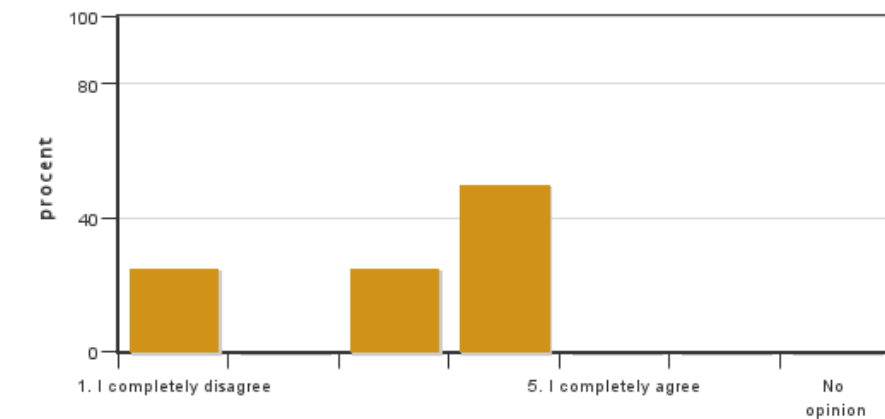
21. I think the teachers have been engaged in their teaching



Answers: 4  
Medel: 4,5  
Median: 4.5

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

22. The virtual study visits were relevant and interesting

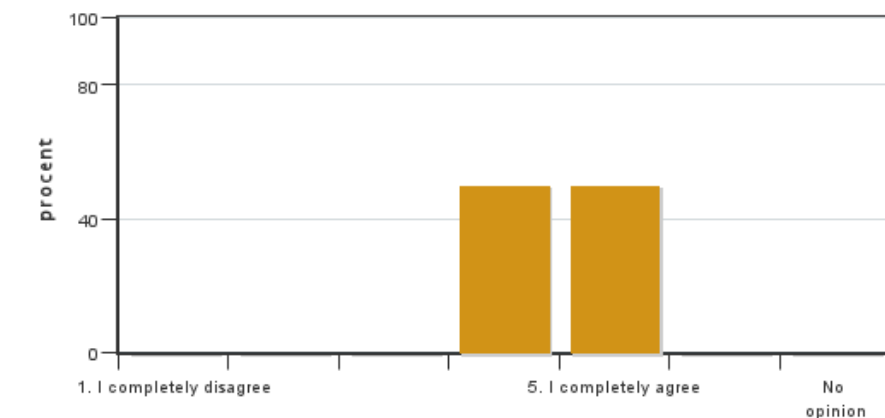


Answers: 4  
 Medel: 3,0  
 Median: 3.5

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

No opinion: 0

### 23. The balance between the different blocks was appropriate



Answers: 4  
 Medel: 4,5  
 Median: 4.5

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

No opinion: 0

### 24. Any specific aspects in the course you are satisfied with

## Course leaders comments

The response frequency on the course evaluation was 4 students out of 10 (who fully participated in the course). We thank for the responses, which are a valuable contribution for the continuous progressive development of the course. We also like to thank the student representative for a thorough analysis of the evaluation and the complementary input provided. The general course impression rated 4.3, but this has to be considered in relation to the rather low participation. However, based on the complementary comments by the student representative we also have the impression that the course was appreciated.

Based on previous course evaluations including the current evaluation we believe that structuring the course into three blocks is still appropriate to cover the rather broad range of bioenergy. One specific comment related to the aspect of biodiversity is highly relevant and we will consider to include this aspect more in the coming course.

The first part of the course (solid biofuels) was performed on distance with no physical meetings due to the restrictions. We agree with the comments from the students that physical teaching is preferred, especially when it comes to study visits and seminars. We hope that all the parts of the course can be given under "normalized" conditions next year. However, those activities that are suitable for remote teaching/supervision will remain. Furthermore, it is easier to engage qualified guest lectures in other parts of Sweden for dedicated topics if they can participate on-line.

Our ambition has been to include both theoretical and practical aspects in the course activities, where e.g. study visits can provide insights to be considered and used for problem solving in the assignments and for the examination. We appreciate the comments regarding this, which indicates that we are on the right track. When organizing study visits, we are dependent on the willingness and accessibility to the plants dictated by the plant owners. This has worked well and we hope to keep that confidence with the external actors.

## Student representatives comments

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The course TN0352 Bioenergy- Technology and systems had an answer frequency of 36% (4 of 11 students) which has been taken into consideration when summarizing the course evaluation. With a lower answer frequency, some of the feedback about this course presented in this summary has been formulated after consulting and discussing with fellow participants throughout the course

This course was partly preformed on distance (first part of the semester), due to covid 19. According to the comments in this evaluation, and by consulting with fellow course participants, the general opinion is that was successfull with remote teaching and learning due to the circumstances. Students have mentioned that the distance education worked especially well when writing the different projects and discussing the projects with the supervisors. Having remote consulting meetings with project groups is something that could be continued for future course. In some cases, especially during the lectures with seminare-like structure, the remote teaching/lectures was not as appreciated and the general opinion is that this course is probably best held on campus in the majority of the cases.

The flexibility from all the teachers and course responsible Åke was very appreciated by us students. The teachers all constantly had an open dialouge with the students, enabling the course to be formed in a way that suited the students and the students' schedule.

The study visit at Löfstad Gård was very successfull and the general opinion from the class was that it gave a lot of valuable knowledge about biogas and agriculture. This knowledge was both applicable on the examination, but also during the biogas project. The digital study visit at Stockholm Exergi was however not as appreciated and would most likely be more giving if it was held on site (if possible), which should be considered to next years course.

The examination form (projects and exam) is a good way of showing that the theory both can be used in problem solving cases, analyzing and consulting. This way of examining the students seems to have been appreciated by the students. Having three different projects seems to not have been to demanding on the students work load, since the process of research also gave a lot of valuable knowledge to the e.g seminars or exam.

By: Emma Nedstrand

Date: 2022-06-20