SLU

Food waste - current situation and future opportunities
LV0116, 10296.2021

 7.5 Hp
Pace of study = 100%
Education cycle = Advanced
Course leader = Mattias Eriksson

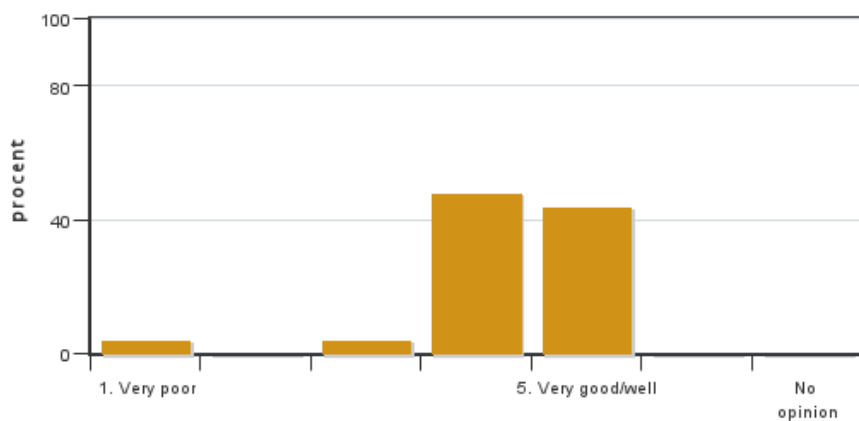## Evaluation report

Evaluation period: 2020-09-22 - 2020-10-01
 Answers   25
 Number of students 35
 Answer frequency   71 %

Mandatory standard questions

1. My overall impression of the course is:

Answers: 25
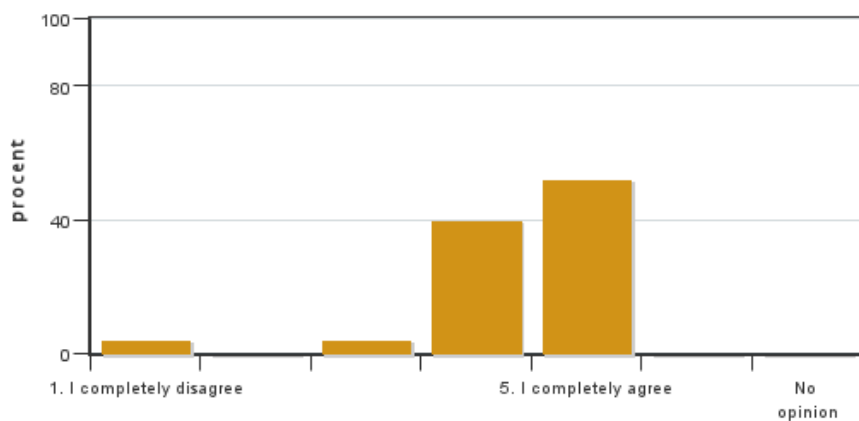Medel: 4,3
Median: 4

1: 1
2: 0
3: 1
4: 12
5: 11

No opinion: 0

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

Answers: 25
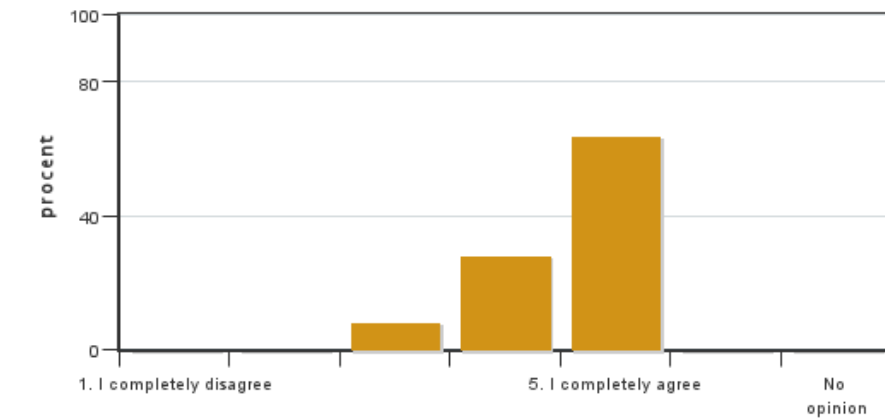Medel: 4,4
Median: 5

1: 1
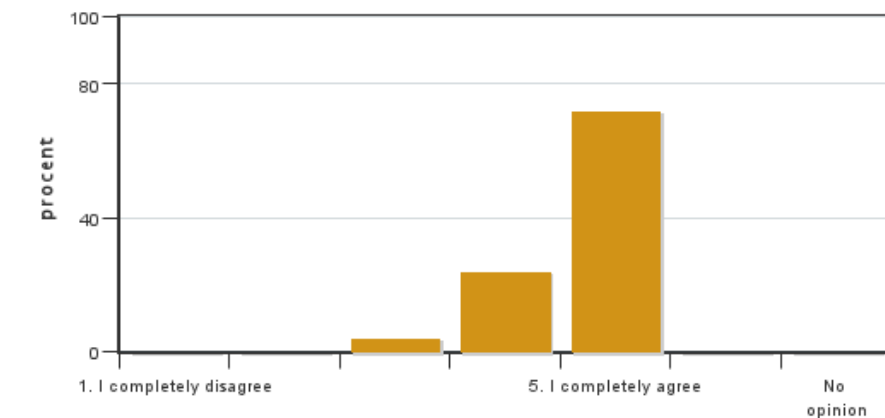2: 0
3: 1
4: 10
5: 13

No opinion: 0

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

Answers: 25
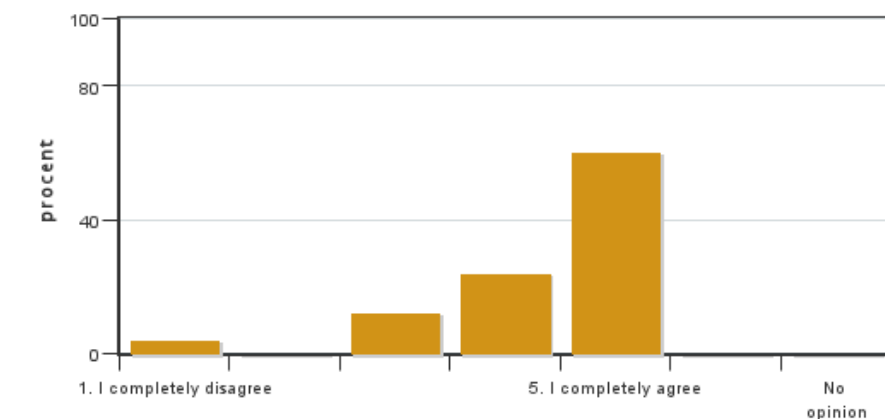Medel: 4,6
Median: 5

1: 0
2: 0
3: 2
4: 7
5: 16

No opinion: 0

4. The information about the course was easily accessible.

Answers: 25
Medel: 4,7
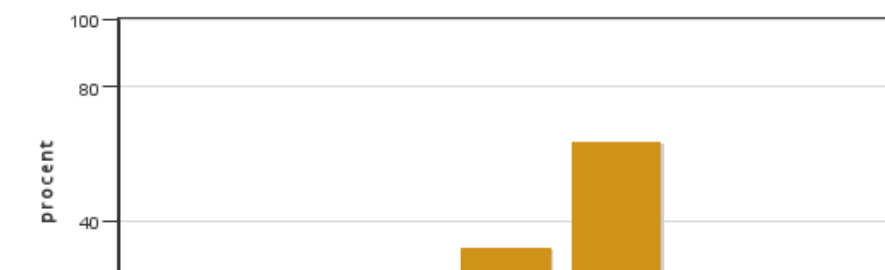Median: 5

1: 0
2: 0
3: 1
4: 6
5: 18

No opinion: 0

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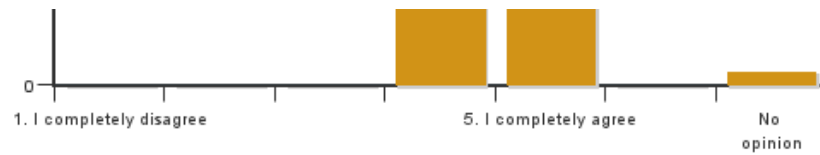

Answers: 25
Medel: 4,4
Median: 5

1: 1
2: 0
3: 3
4: 6
5: 15

No opinion: 0

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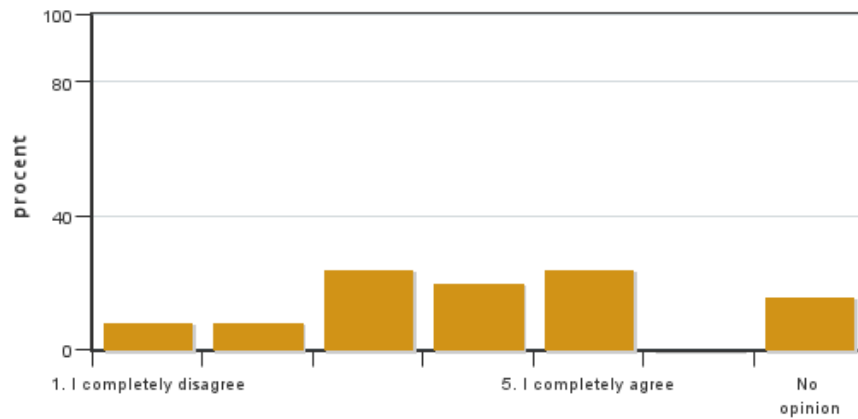

Answers: 25
Medel: 4,7
Median: 5

1: 0
2: 0
3: 0
4: 8
5: 16

No opinion: 1

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

Answers: 25
Medel: 3,5
Median: 4

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

No opinion: 4

8. The examination(s) provided opportunity to demonstrate what I had learnt during the course (see the learning objectives).
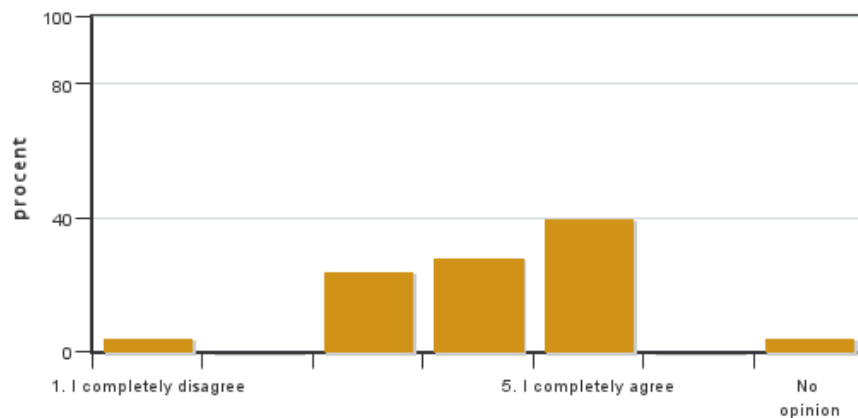
Answers: 25
Medel: 4,0
Median: 4

1: 1
2: 0
3: 6
4: 7
5: 10

No opinion: 1

9. The course covered the sustainable development aspect (environmental, social and/or financial sustainability).
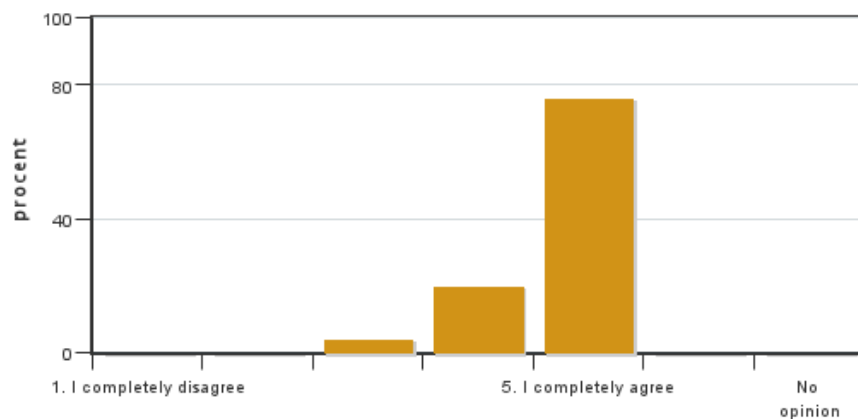
Answers: 25
Medel: 4,7
Median: 5

1: 0
2: 0
3: 1
4: 5
5: 19

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).
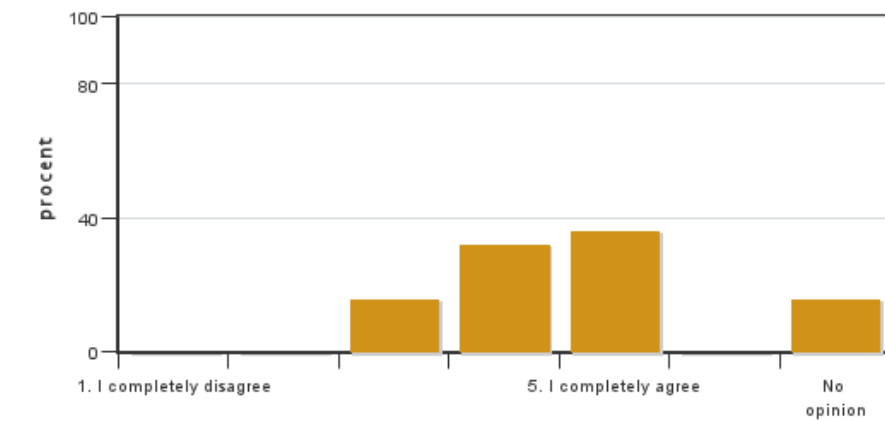
Answers: 25
Medel: 4,2
Median: 4

1: 0
2: 0
3: 4
4: 8
5: 9
No opinion: 4

11. The course covered international perspectives.
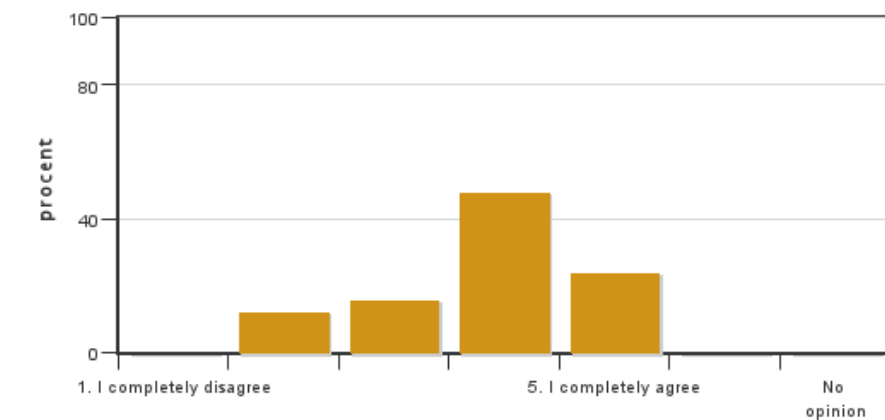
Answers: 25
Medel: 3,8
Median: 4

1: 0
2: 3
3: 4
4: 12
5: 6
No opinion: 0

12. On average, I have spent … hours/week on the course (including timetabled hours).
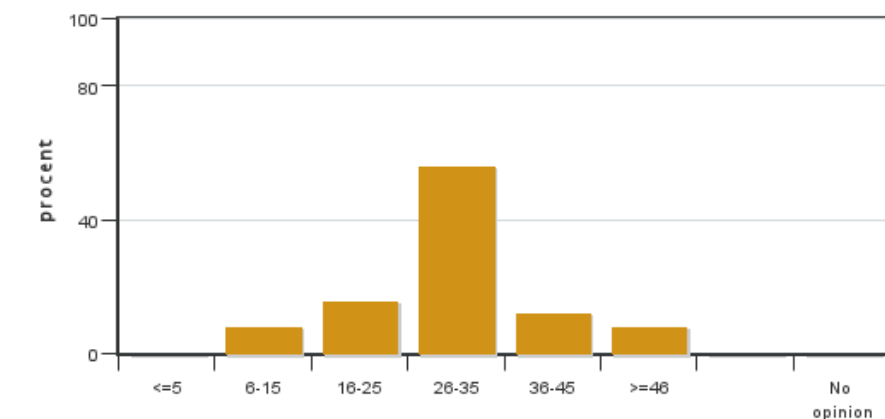
Answers: 25
Medel: 29,3
Median: 26-35

≤5: 0
6-15: 2
16-25: 4
26-35: 14
36-45: 3
≥46: 2
No opinion: 0

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

Answers: 25
Medel: 4,2
Median: 4

1: 0
2: 0
3: 4
4: 12
5: 8
No opinion: 1

0						
1. Very poor				5. Very good/well		No opinion

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. What is your educational background prior to this course.

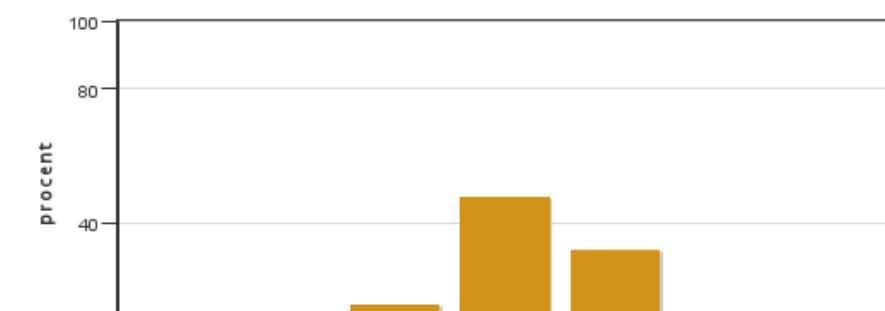**16. Was there an activity, task or assignment that was specifically good and should be kept for the course next year?**

16. Was there an activity, task or assignment that was specifically bad and should be removed or significantly changed for the course next year?

16. Have the lectures helped you in your learning process?
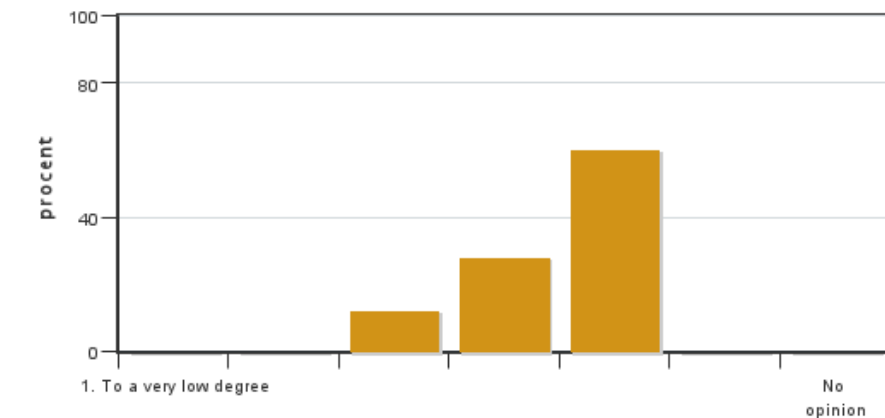
Answers: 25
Medel: 4,5
Median: 5

1: 0
2: 0
3: 3
4: 7
5: 15

No opinion: 0

17. Have the study visit assignment helped you in your learning process?

Answers: 25
Medel: 4,0
Median: 4

1: 0
2: 2
3: 6
4: 5
5: 11

No opinion: 1

18. Have the quantification project helped you in your learning process?

Answers: 25
Medel: 4,3
Median: 5

1: 1
2: 0
3: 3
4: 7
5: 13

No opinion: 1

19. Have the innovation workshop helped you in your learning process?

Answers: 25
Medel: 3,5
Median: 4

1: 1
2: 4
3: 6
4: 9
5: 5

No opinion: 0

20. Have the course book helped you in your learning process?
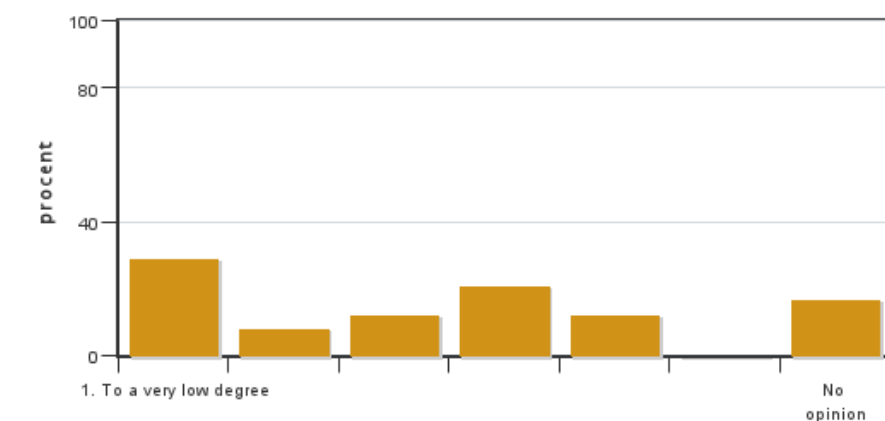
Answers: 24
Medel: 2,8
Median: 3

1: 7
2: 2
3: 3
4: 5
5: 3

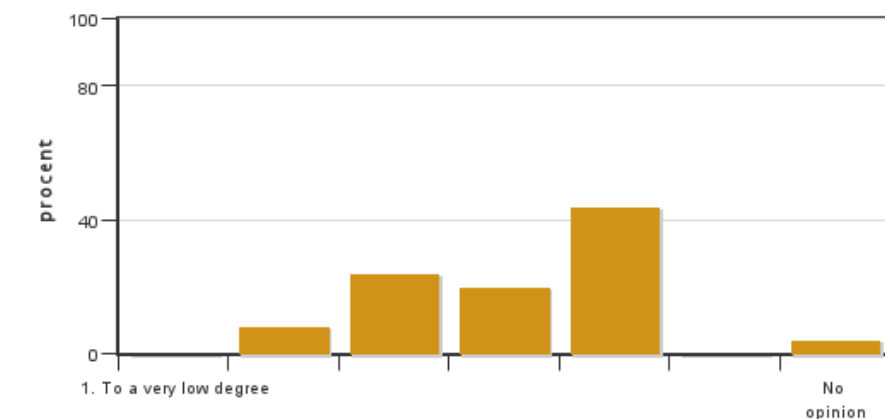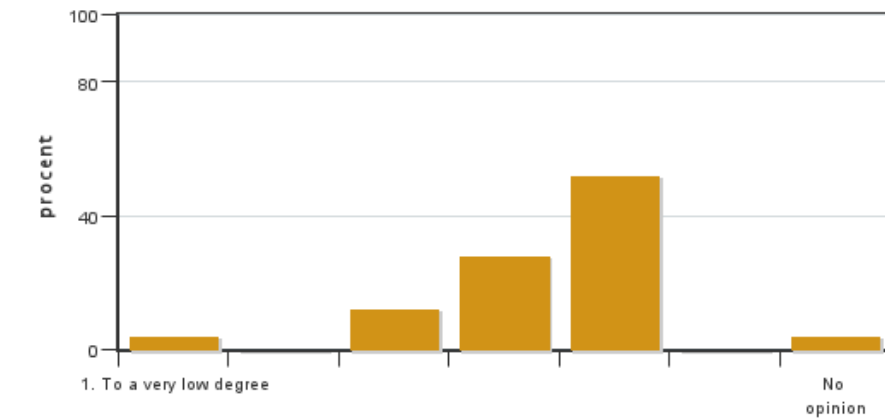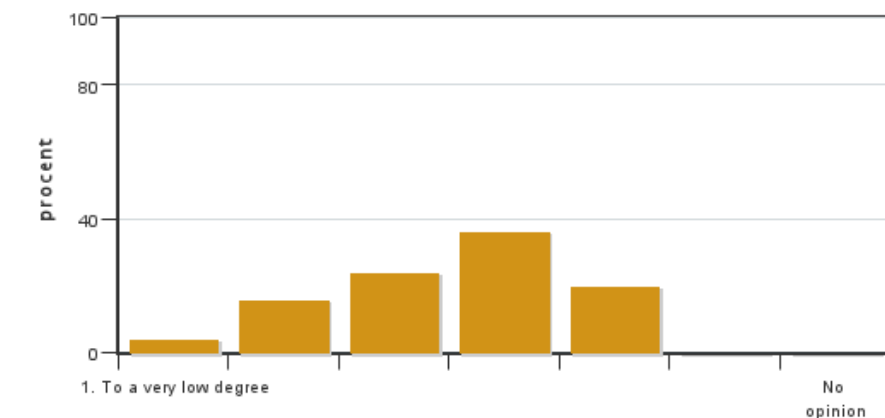No opinion: 4

Course leaders comments

In general the course was well received among the students that answered the course evaluation, especially given the circumstances that the course was given for the first time and that it was given online. However, there are aspects that can be improved and the course team plan to do the following improvements for the course next year:

- Keep the study visit format with individual study visits, even though this was developed for pandemic times.
- For the quantification project we plan to remove the template, but instead make the minimum criteria for the content more clear and visible.
- Exchange the lecture in statistics to a computer lab to shift the focus from theory to practical skills.
- Adjust the schedule for the innovation workshop presentations to fit in more time and more breaks that can be used for discussions and networking.
- Connect the study visit with the innovation workshop to ge a better exchange between these two tasks.
- Coordinate the lectures better to avoid the overlaps that was present this year.

- Map out the course content better in the first lecture to give a better picture of what to expect.
- Increase the demand for prior knowledge so that all students on the course actually have the knowledge that is needed to fully participate in an advanced course in food science.

Student representatives comments

A total of 35 students were registered on the course, out of which 25 persons (71 %) responded to the course evaluation. On average, the students weekly spent 26-35 (mean 29.3) hours on the course, scheduled time included. The vast majority of the respondents had sufficient prior knowledge to benefit from the course (4.6). However, some of the SFS master students would have appreciated information about the eventual overlap of knowledge from a previous course they had taken.

Most of the students had a positive overall impression of the course (4.3) and the course content was thought to have clear links to the learning objectives (4.4). They thought that the information about the course was easily accessible (4.7), that the various course components supported their learning (4.4), and that the social learning environment was sufficient (4.7). The physical learning environment was rated quite low though (3.5) as the students were not at the university except during the written examination. The students thought that the examination(s) corresponded well to the learning objectives (4.0), that the course covered a sustainable development aspect (4.7), international perspectives (3.8) and a gender and equality aspect (4.2). Even though international perspectives were covered to some extent, some students claimed that even more knowledge on how other countries are working within this field would have been good. Now, the main focus was Sweden in general and SLU based research in particular.

Overall, the course had a good structure and was very interesting, covering a lot of topics and food waste perspectives. However, one student highlighted that the perspective regarding food waste in the food processing stage (in the food supply chain) only was mentioned a few times and put forward a proposal that a food scientist perhaps could talk about this in a whole lecture in the future.

Due to the pandemic, the course was given on distance. The experience of participating in teaching on distance was rated relatively high (4.2) among the students, even though the vast majority missed meeting each other on campus. One thing that the majority of responding students highlighted as something good and helpful was that the lectures were being recorded. However, sometimes technical issues regarding publishing some of the recorded lectures on Canvas occurred. But in general the students thought it was good to have the opportunity to watch the recorded lectures whenever possible. This enables flexibility in planning your daily life and contributes to improved learning as you can listen once more if it is something you misunderstood or not fully put your attention to during the lecture. Another thing that was appreciated was the break-out rooms where the students had the possibility to discuss and socially interact with each other in mixed groups. However, as the teaching on distance made some of the students less interactive, focused and socially pleased, even more break-out room sessions (in groups of more than two people) would have been helpful. Several students also proclaim that they found it difficult to ask questions online. In general the internet connection worked properly but sometimes it turned out to be troublesome which made the students less focused. Working on distance also makes group work more challenging as it is hard to control that everyone in the group takes their responsibility and actively contributes to the common work.

Lectures helped the students in their learning process the most (4.5). However, some students proposed that less statistics should be regarded with such depth as it was during the course, due to the time-limited scope. According to the respondents, the study visit assignment (4.0) and the quantification project (4.3) helped the students more in their learning process than the innovation workshop (3.5) and the course book (2.8). This is aligned with the comments. The responding students are somewhat unanimous when saying they want to keep the study visit assignment as it engage the students to individually study how the reality deals with food waste. Deciding by yourself how to present the reportage was also appreciated (text, poster, podcast etc.) as it allows creativity. One proposal for the future is to visit either a factory, a food company, a biogas plant or a waste disposal site to see how they are working within this field. The quantification project was good as it made the students understand their own behavior as well as managing a research method. Some confusions occurred however regarding the statistical part. The innovation workshop enabled creativity as well. Some students thought this assignment was fun while some others did not like it at all. The lower score could be due to the major focus on carbon footprint (LCA), which the majority of the students had no previous knowledge about as it was not covered in the course. Regarding the course book, many students did not read it as it was not mandatory.

In summary, the course was comprehensive, providing the students with a broad understanding and a lot of perspective on the current situation regarding food waste and its opportunities in the future. Some suggestions that the students proposed in order to improve the course includes:

- Clearer instructions regarding the quantification project.
- Prolong the time that is devoted to the innovation workshop.
- Include information about LCA in the course if it is supposed to be assessed in the innovation workshop.
- Clarify what expectations you have on the students' performance. This will in turn encourage them to perform well on the different assignments, not just make them pass the course.
- Maybe there can be several assignments that the grade relies on, not just the written examination.
- Have fewer assignments for the relatively short period of time but make them more interactive. For example, the study visit could be connected to the innovation workshop in order to find solutions to real problems observed during the study visit.
- Despite having an individual study visit, arrange at least one common physical study visit.

- Include a literature list of relevant chapters in the course book to motivate the students reading it.
- Reduce the amount of statistics included in the course, or explain more in detail to the students what the results actually tells you.
- Inform about eventual overlap of knowledge.