Analyses of environmental data 1
SV0019, 10303.2324

7.5 Hp
Pace of study = 25%
Education cycle = Advanced
Course leader = Lenka Kuglerova, Robert Spitzer

Evaluation report
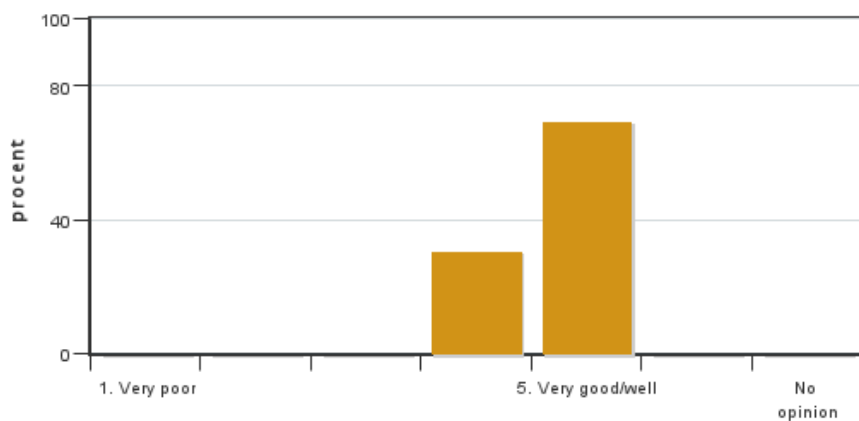
Evaluation period: 2024-01-07   -   2024-01-28

Answers   13
Number of students   17
Answer frequency   76 %

Mandatory standard questions

1.   My overall impression of the course is:
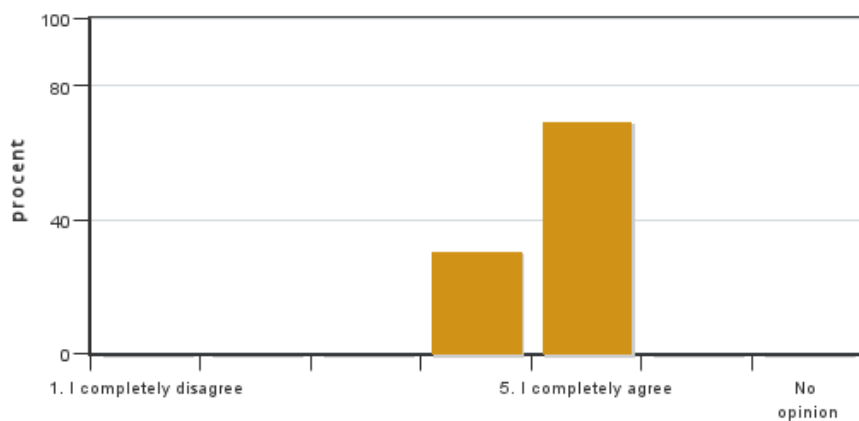

Answers: 13
Medel: 4,7
Median: 5

1: 0
2: 0
3: 0
4: 4
5: 9

No opinion: 0

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

Answers: 13
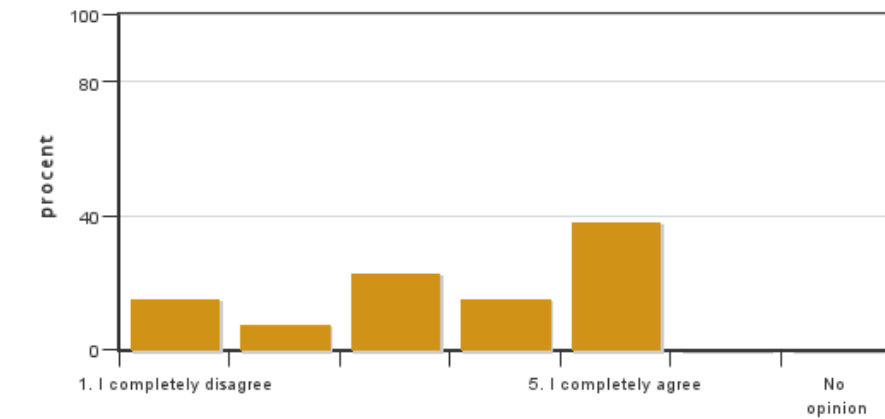Medel: 4,7
Median: 5

1: 0
2: 0
3: 0
4: 4
5: 9

No opinion: 0

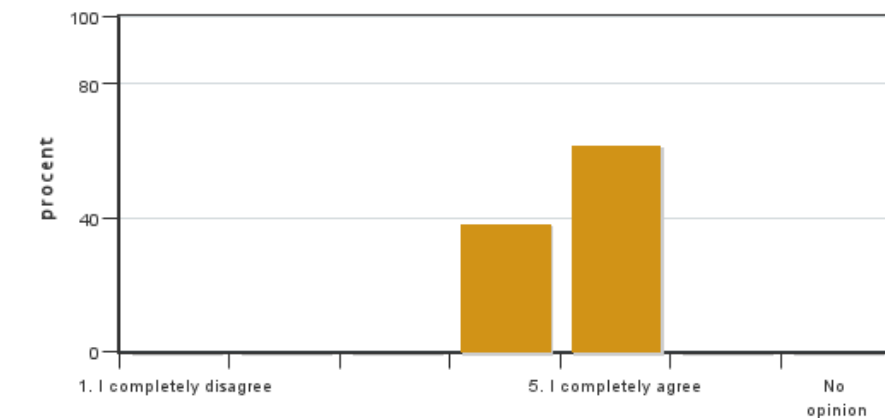**3. My prior knowledge was sufficient for me to benefit from the course.**

Answers: 13
Medel: 3,5
Median: 4

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

No opinion: 0

procent — 100, 80, 40, 0

1. I completely disagree   5. I completely agree   No opinion

4. The information about the course was easily accessible.

Answers: 13
Medel: 4,6
Median: 5

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

No opinion: 0

procent — 100, 80, 40, 0

1. I completely disagree   5. I completely agree   No opinion

5. The various course components (lectures, course literature, exercises etc.) have supported my learning.
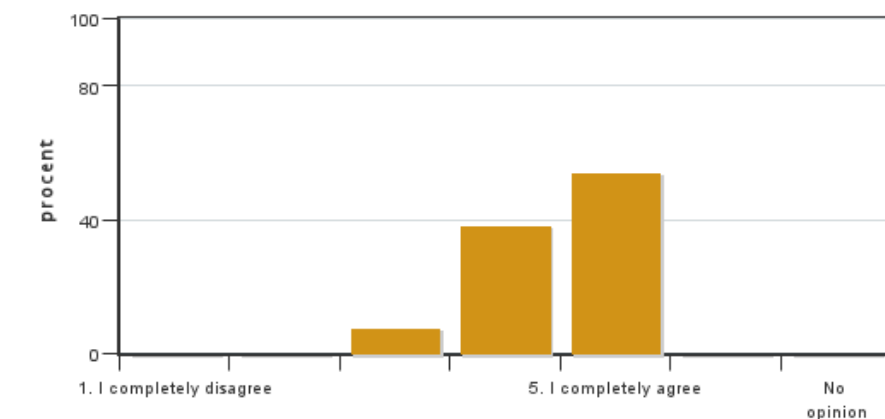
Answers: 13
Medel: 4,5
Median: 5

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

No opinion: 0

procent — 100, 80, 40, 0
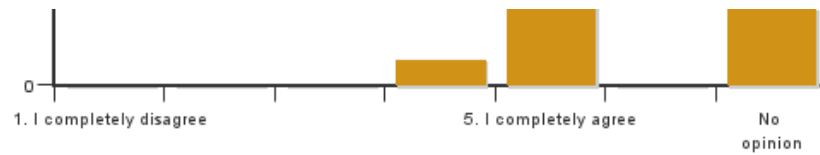
1. I completely disagree   5. I completely agree   No opinion

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

Answers: 13
Medel: 4,9
Median: 5

1: 0
2: 0
3: 0
4: 1
5: 9

procent — 100, 80, 40

No opinion: 3

7. The physical learning environment (facilities, equipment etc.) has been satisfactory.
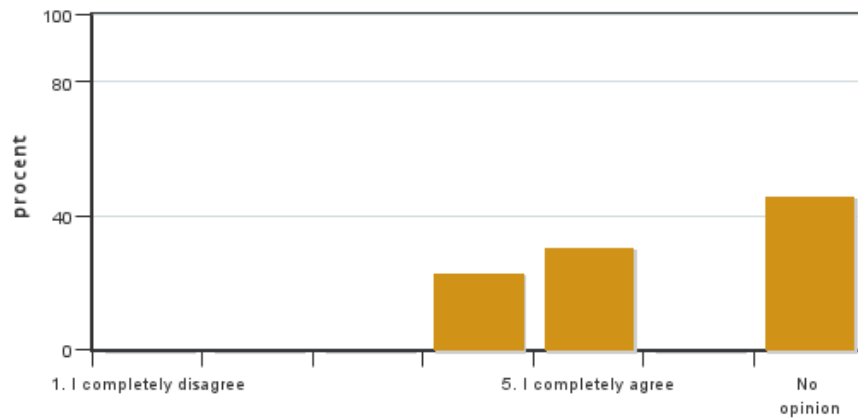
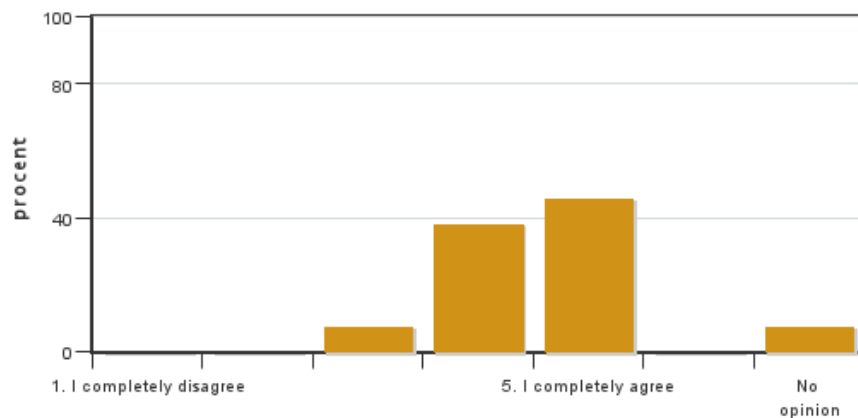Answers: 13
Medel: 4,6
Median: 5

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

No opinion: 6

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

Answers: 13
Medel: 4,4
Median: 4

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

No opinion: 1

9. The course covered the sustainable development aspect (environmental, social and/or financial sustainability).
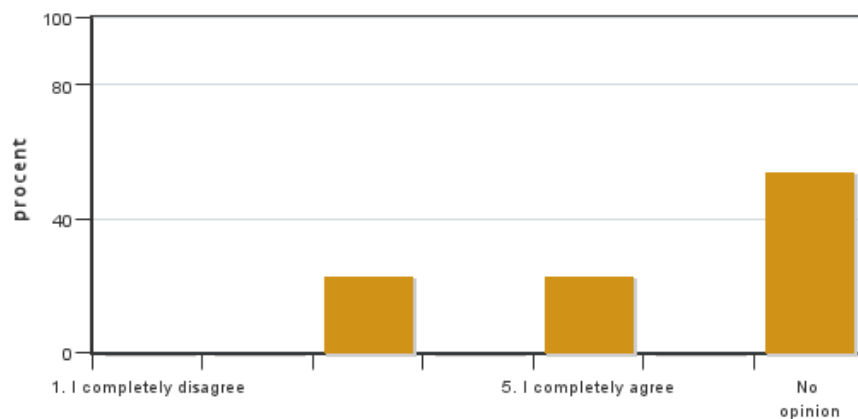
Answers: 13
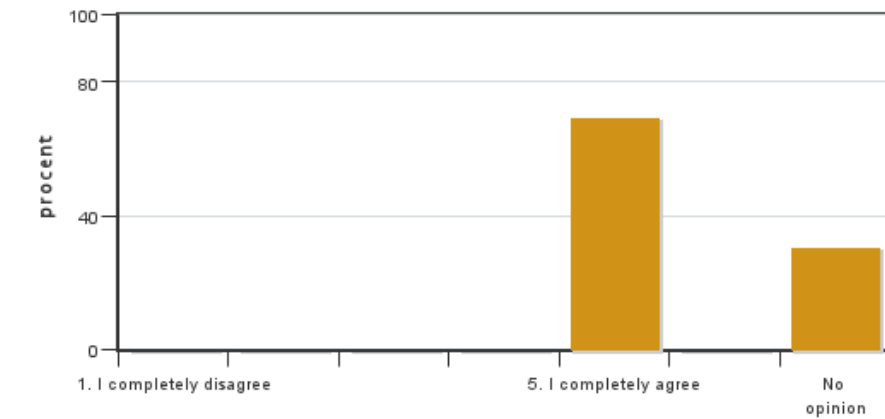Medel: 4,0
Median: 3

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

No opinion: 7

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: 13
Medel: 5,0
Median: 5

1: 0
2: 0
3: 0
4: 0
5: 9

No opinion: 4

11. The course covered international perspectives.
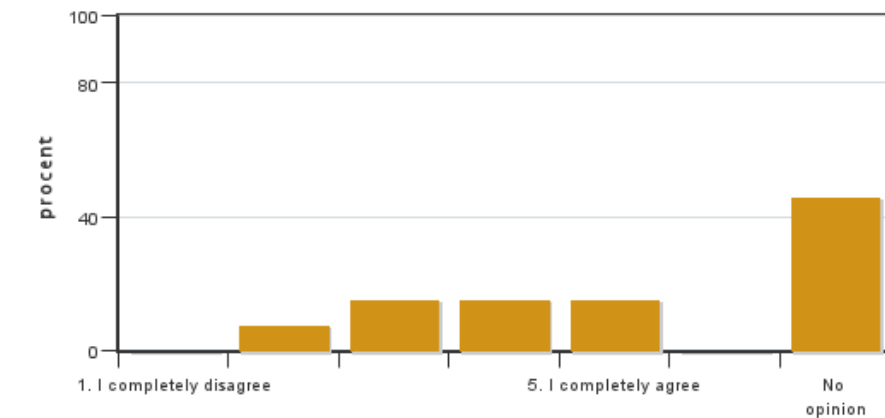
Answers: 13
Medel: 3,7
Median: 4

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

No opinion: 6

12. On average, I have spent … hours/week on the course (including timetabled hours).
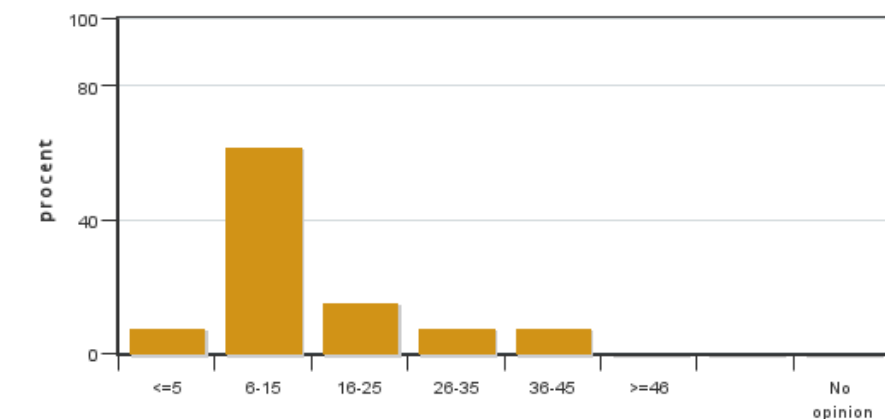
Answers: 13
Medel: 14,8
Median: 6-15

≤5: 1
6-15: 8
16-25: 2
26-35: 1
36-45: 1
≥46: 0

No opinion: 0

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

Answers: 13
Medel: 4,2
Median: 4

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

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

Course leaders comments

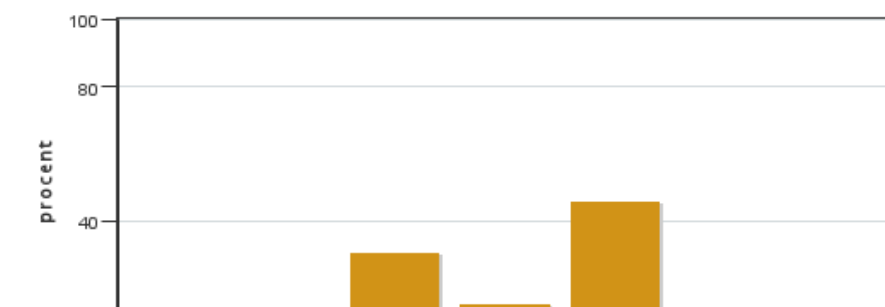The course has been offered at SLU for the first time during the first and second term in autumn 2023. This is a location independent course at 25% pace. In total 13 out of 17 students has filled the course evaluation, which is a good score (76%). The course leaders repeatedly highlighted the importance of the course evaluation to the students, which seemed to work. A few changes will be made in the course content and structure for next year based on the evaluation.

The overall impression of the course was very good and thus no major changes are planned. The course will continue to be given in 10 individual modules, each spanning ca 2 weeks, with assignments within each module and without a final exam. This seems to be appreciated by the students. Grading is pass/fail (not grades), which also worked well. It seems that the average time the students spend on this class was a little higher than the planned for 25% pace (about 10 h a week). This will be considered when creating assignments next year (they will be a little shorter).

In respect to assignments, they generally worked but two things will be especially considered next year. First, more specific wording and questions in the assignments to avoid misunderstanding. In the second part of the course, assignments will be created to be a bit more independent of the computer labs, so that students also need to create codes on their own, not only copy-paste. This was not appreciated. This requires only minor updates from the teachers. Feedback on assignments on Canvas was much appreciated, and will be continued.

The students were generally satisfied with the structure of the course but they would have liked to meet with the teachers once in-between modules. Next time we give this course, we will ensure this possibility. Some students also suggested that recordings of the computer labs would have been helpful. While we see the benefit of it, we will not record the computer labs because of multitude of reasons (inducing GDPR, storage options, intellectual property etc.). But considering that some students wanted to go back to the instructions during computer labs, we will make the online tutorials even more descriptive, and we will offer extra help to those who need it. Some students also suggested a few more real lectures about statistics. This is not a statistical course so we won't include lectures but we will consult statisticians to include some of this information into the tutorials. We will also make sure that we introduce R packages. Finally, some students felt like they could not ask questions during the computer labs. This was a misunderstanding because this is exactly when we encouraged student to ask questions, rather than email afterwards. We will make sure that this is highlighted next time. Besides that, we offered 2 h consultations after the computer labs where questions can be asked. We had very low attendance of those consultations so we will highlight the benefit of it next time.

Canvas structure, the schedule and provision of information was evaluated positively, no changes are planned. We will make sure to keep high standard for Canvas information. For the learning environment, this is location independent course with its ups and downs. Overall, students were OK participating online and appreciate the online foundation. Those who are in Umeå can always attend classes in-person (as we offer that option). Unfortunately, distance courses offer limited social options and some students suggested a group work. We will not introduce group projects to the course because this would be difficult to organize, considering the students being in different parts of the country. We prefer this to be individually-learned type of class.

Student representatives comments

Course evaluation summary

Analysis of Environmental data 1

SV0019

28 aug 2023 - 14 jan 2024

Seventeen students participated in this course. Of these, thirteen students answered the course evaluation (76%).

Here I summarise the main comments on every question on the evaluation form and what the students graded the topic related to the specific question/statement (0-5).

- **My overall impression of the course is:**

Positive aspects were that the course was basic enough but at the same time let you explore R, it was interesting working with real data, learned how to use a new data handling program. The only negative comment was that the assignments could be misunderstood, maybe because of unclear wording.

Average score: 4.7

Median score: 5

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

Good with having specific modules focusing on one area at a time.

Average score: 4.7

Median score: 5

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

The course was challenging for students with no or little background in R, some intro courses would have been nice. One or two more short lectures regarding basic statistics like F-values and such would also have been nice. It seems like students had a varied background and as a result the course varied in how hard it was.

Average score: 3,5

Median score: 4

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

The only thing to note was that sometimes information was only found in assignments. It would have been nice if this would have been under respective module on the homepage, but generally not a big problem.

Average score: 4,6

Median score: 5

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

The overall opinion was that the lectures were good, the markdown documents were very appreciated. Sometimes the pace was a bit to quick. Lectures and assignments in later parts of the course could have been more challenging for the student, not only copying code.

Average score: 4,5

Median score: 5

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

No comments

Average score: 4,9

Median score: 5

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

Canvas worked well!

Sometimes people in the classroom didn't hear what people online were saying and were thus a bit left out in the discussion.

Average score: 4,6

Median score: 5

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

a bit too much copy paste. Good with having assignments instead of a final test.

Average score: 4,4

Median score: 4

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

A bit unclear, lots of students had no opinion of this. Two comments said maybe, but not explicitly.

Average score: 4,0

Median score: 3

- **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).**

No comments.

Average score: 5,0

Median score: 5

- **The course covered international perspectives.**

A few articles from around the world. Quite many had no opinion of this matter.

Average score: 3,7

Median score: 4

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

≤5: 1

6-15: 8

16-25: 2

26-35: 1

36-45: 1

≥46: 0

Most people spent 6-15 hours. But people with no prior knowledge in R spent significantly more time.

Average hours: 14,8

Median hours: 6-15

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

Most found the online format working well. Good structure on canvas, consistent assignment format, clear expectations for deadlines and grading. However, students thought it was limited time to ask questions, so maybe have a bit more of opportunities to do so. Students also hesitated to ask questions online, especially basic questions.

Average score: 4,2

Median score: 4

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

Some keywords were flexibility and structure. To summarise, it was the best of two worlds. Having good structure while being very flexible with especially attendance.

Comments expressed special thanks to Lenka and Robert, as they were good in responding to emails! Their responses were prompt, consistently friendly, and patient. Additionally, the detailed feedback provided after each assignment were valuable.

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

There was a consensus that it would be nice having one more opportunity to ask questions / reminder lecture between assignments. There were some wishes to having recorded lectures. There were little social interactions, a group work would have helped with that as well as learning from each other.

- **The course was composed of ten distinct modules, each spanning roughly 2 weeks. What is your perception of this structure?**

This worked very well! Maybe having consultation, the week after the lecture to have time working a bit on your own first.

Average score: 4,8

Median score: 5

- **Here you can write any comments you have related to specific modules (1-10). For a reminder, they are listed below. Please provide any feedback on any specific module, what worked, what did not work, were there some modules that were better than others etc. Anything that can help us to improve this course in the future. If you have nothing to add, leave empty.**

Module 6 could have had a bit more comprehensive html markdown to follow as a tutorial. Wishes to put more time on module 4-7, as these felt most important. Modules 4 and 5 were harder than the others.

Generally, the teachers for all modules were good in explaining and answering questions.

- **How do you evaluate the feedback you received on your assignments (via Canvas comments)? Was it sufficient?**

Generally, it was much appreciated that the feedback was thorough, even when you had passed the assignments.

Average score: 4,8

Median score: 5

- **Was there anything you were hoping to learn in this course and did not? Some particular method or technique that you heard of and it was not included in the course?**

There were a mix of very specific things that students wanted to learn, these were:

- back-transform results from mixed linear modules when response and predictors are transformed.
- How to present transformed predictors in scientific papers,
- learn to use the lidR packaging.
- more content on how to do test design.
- try some machine learning algorithm if possible.

More generally it would have been nice to get a few articles listed after every module in which they used the method/technique that we learnt in class and one article that used another, to allow us students to explore a bit deeper.

- **Please add anything else you would like to share with the course leaders. We appreciate all constructive feedback.**

The course is important for students pursuing a PhD position. Lots of comment saying thank you to lecturers and course leaders. Some advice for future courses is having a few more small theoretical lectures, as the one Lenka had for module 4.