



Plant biology- for future forestry SG0242, 30017.2021

7.5 Hp

Pace of study = 100%

Education cycle = Basic -

Course leader = Judith Felten

Evaluation report

Evaluation period: 2021-02-17 - 2021-03-03

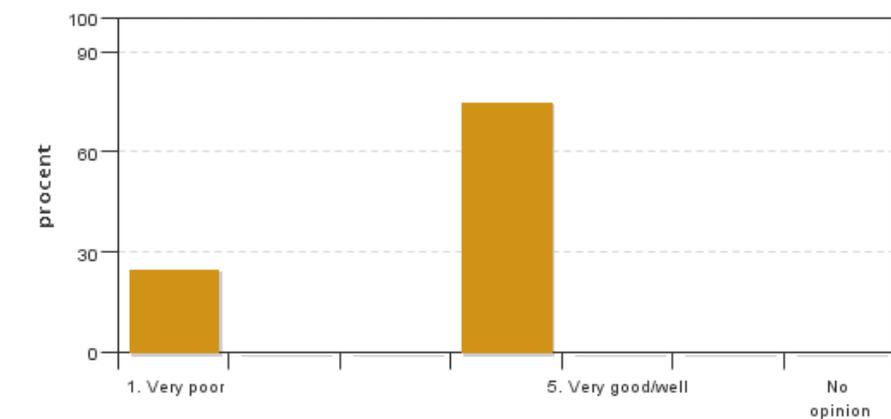
Answers 4

Number of students 6

Answer frequency 66 %

Mandatory standard questions

1. My overall impression of the course is:

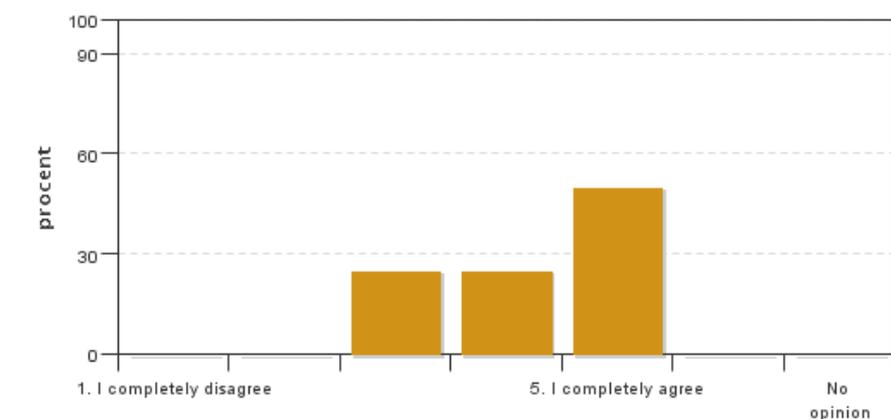


Answers: 4
Medel: 3,3
Median: 4

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

No opinion: 0

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

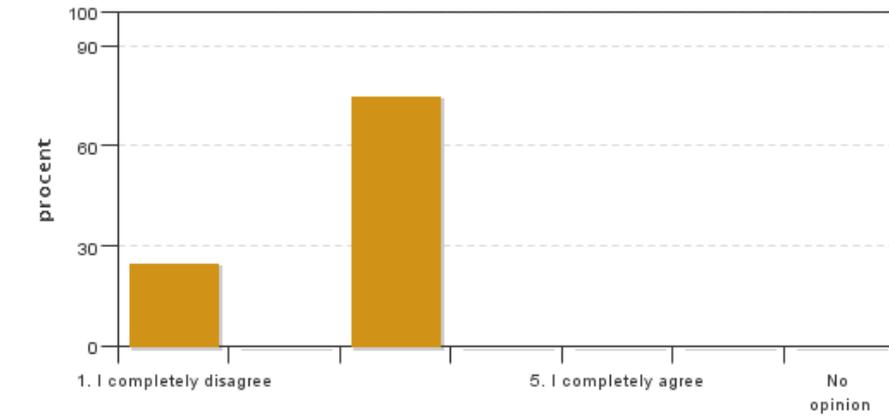


Answers: 4
Medel: 4,3
Median: 4

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

No opinion: 0

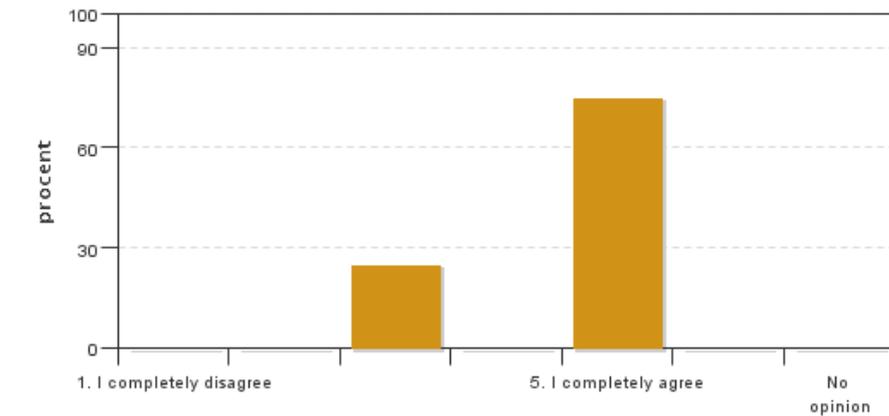
3. My prior knowledge was sufficient for me to benefit from the course.



Answers: 4
 Medel: 2,5
 Median: 3

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

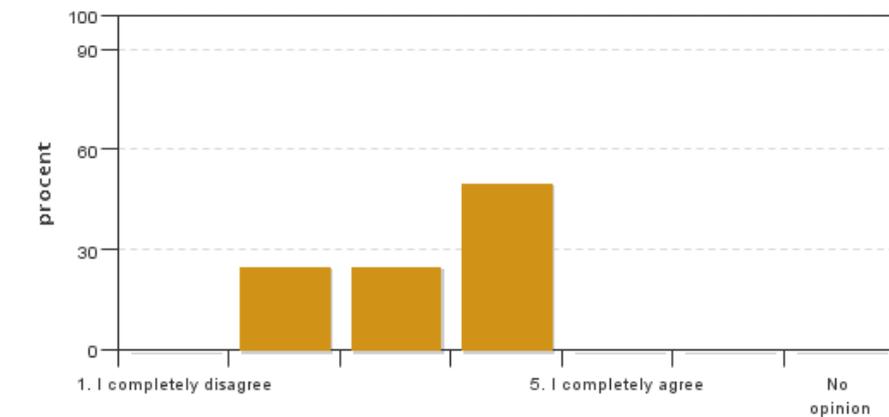
4. The information about the course was easily accessible.



Answers: 4
 Medel: 4,5
 Median: 5

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

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



Answers: 4
 Medel: 3,3
 Median: 3

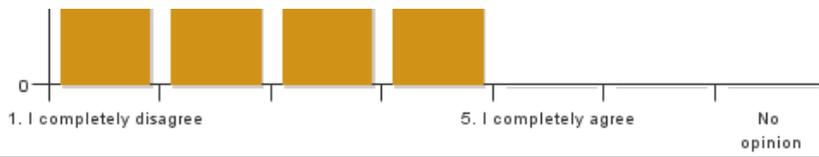
1: 0
 2: 1
 3: 1
 4: 2
 5: 0
 No opinion: 0

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



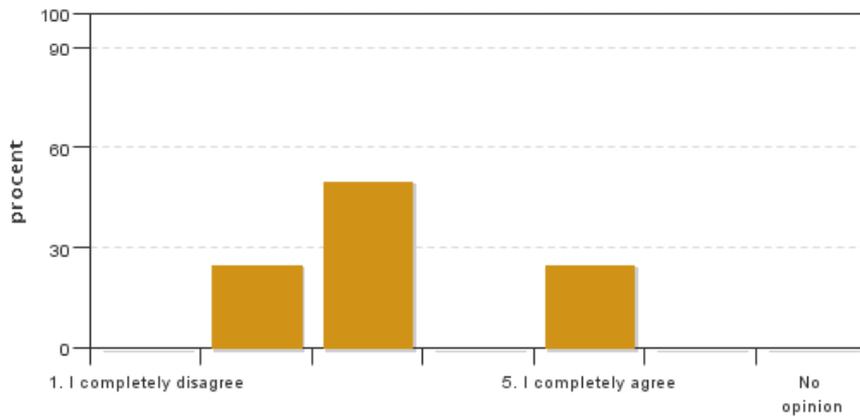
Answers: 4
 Medel: 2,5
 Median: 2

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



No opinion: 0

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

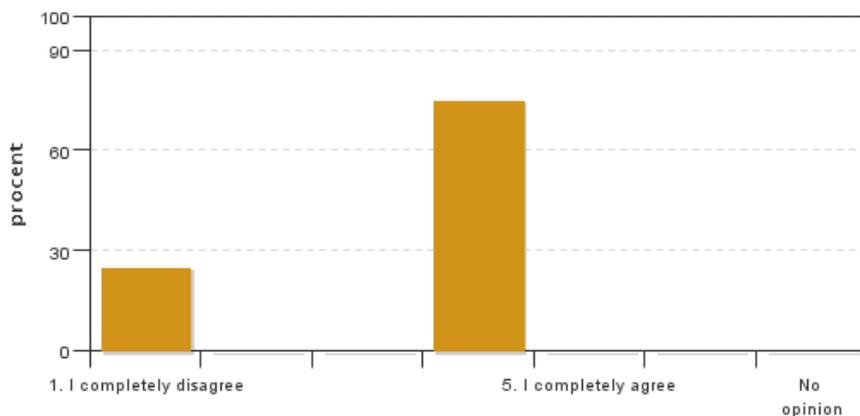


Answers: 4
Medel: 3,3
Median: 3

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

No opinion: 0

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

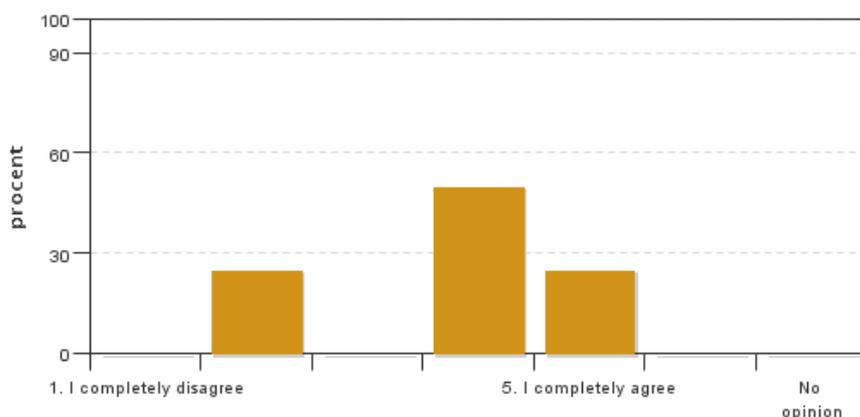


Answers: 4
Medel: 3,3
Median: 4

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

No opinion: 0

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

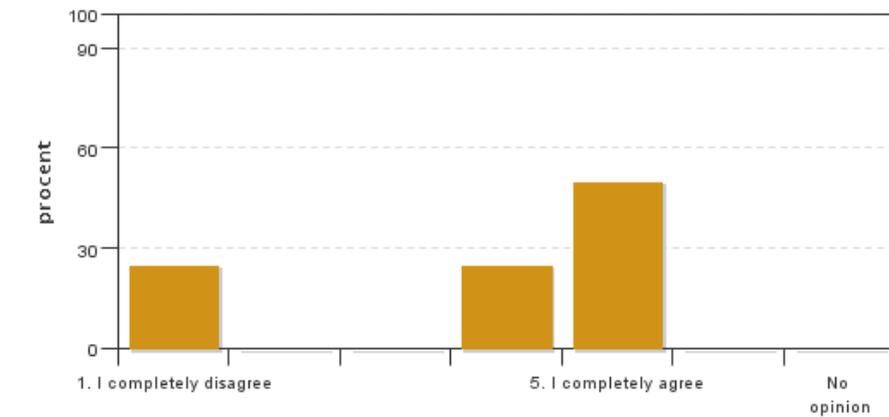


Answers: 4
Medel: 3,8
Median: 4

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

No opinion: 0

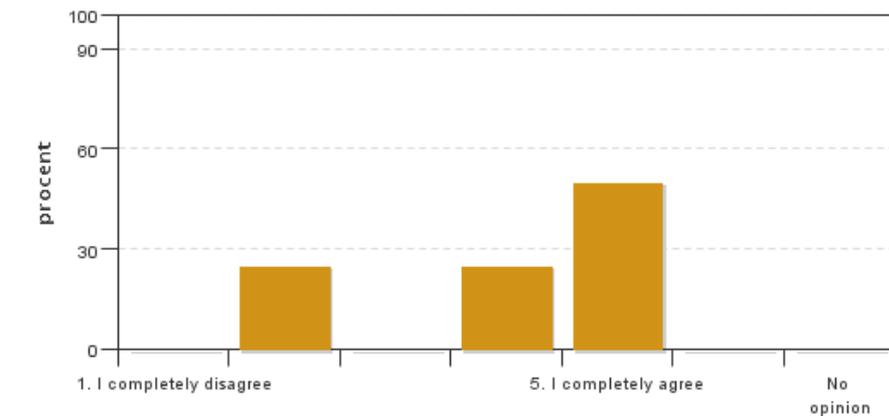
10. I believe the course has included a gender and equality aspect, regarding content as well as teaching practices (e.g. perspective on the subject, reading list, allocation of speaking time and the use of master suppression techniques).



Answers: 4
 Medel: 3,8
 Median: 4

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

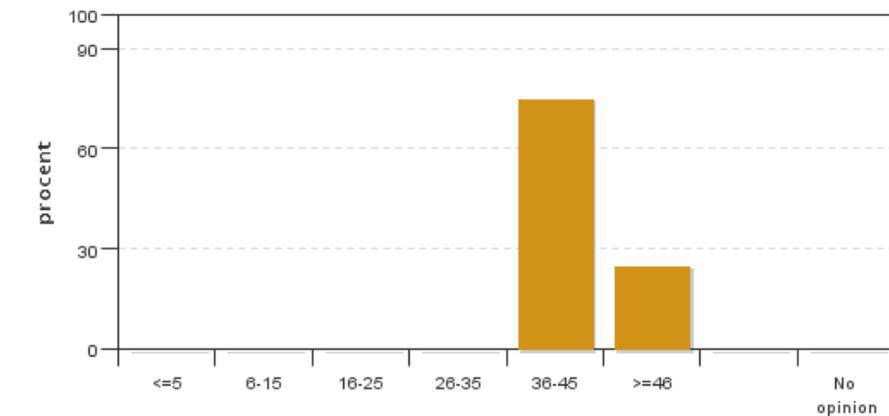
11. The course covered international perspectives.



Answers: 4
 Medel: 4,0
 Median: 4

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

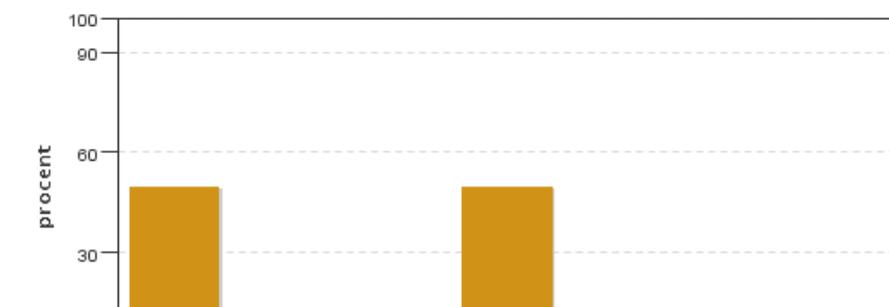
12. On average, I have spent ... hours/week on the course (including timetabled hours).



Answers: 4
 Medel: 41,5
 Median: 36-45

≤5: 0
 6-15: 0
 16-25: 0
 26-35: 0
 36-45: 3
 ≥46: 1
 No opinion: 0

13. What is your overall experience of participating in all or part of your course online?



Answers: 4
 Medel: 2,5
 Median: 1

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

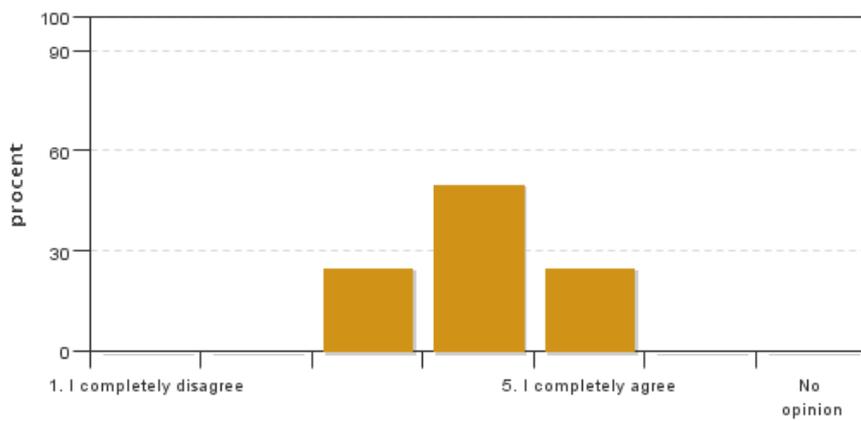


14. Please share what worked well when participating in teaching on distance

15. Please share what worked less well when participating in teaching on distance

Additional own questions

16. The peer-review phase of the essay was useful for my learning and worked out well. Please comment your answer.

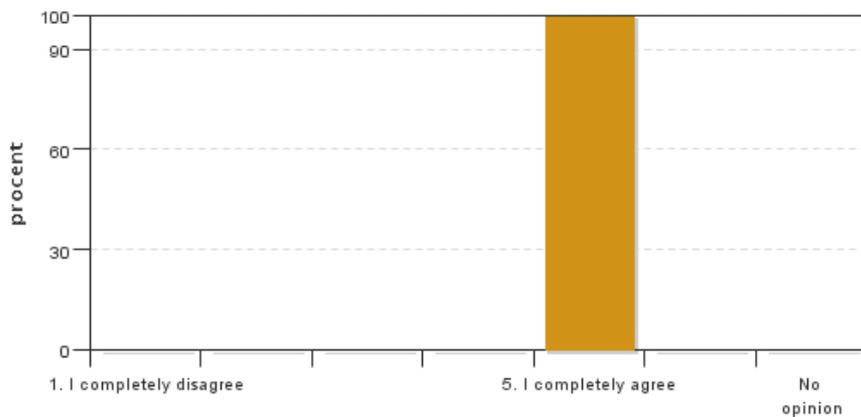


Answers: 4
Medel: 4,0
Median: 4

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

No opinion: 0

17. The structure of contents on Canvas was easy to follow and the platform was a good solution to get an overview of course schedule, deadlines, course content and submit assignments.



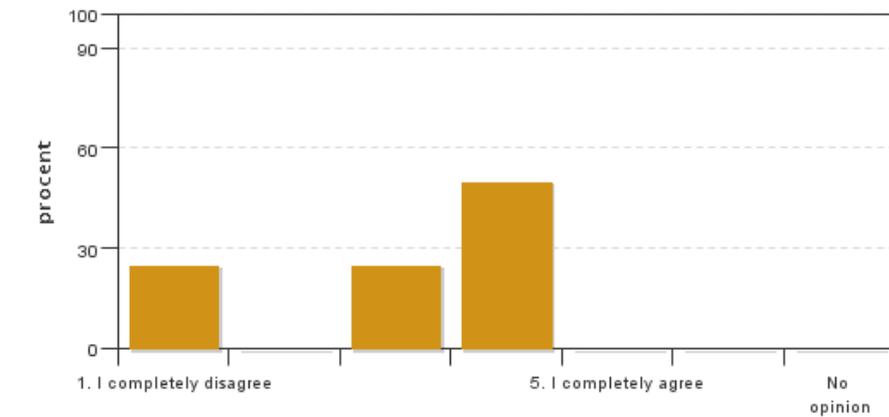
Answers: 4
Medel: 5,0
Median: 5

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

No opinion: 0

18. The content of the lab (please disregard the online-format here) and the process of writing the lab-report helped me to understand the concept of promoter analysis and gene expression discussed in previous lectures.

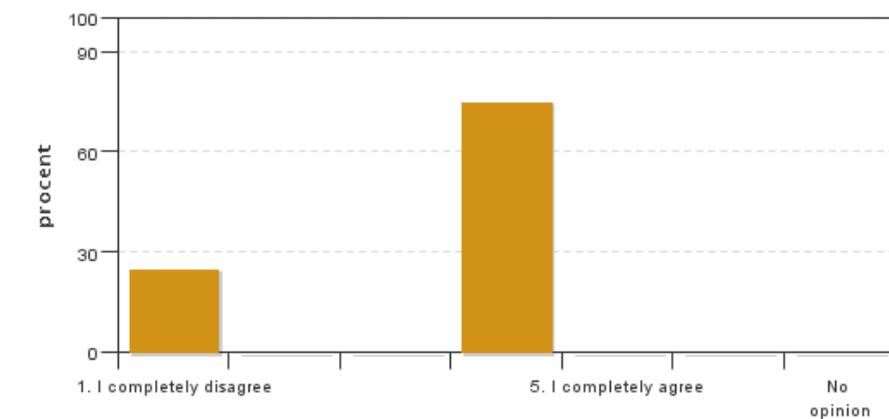
Please comment on any improvements that we could make to the lab-content (if we would keep the same experiments and do it on campus).



Answers: 4
 Medel: 3,0
 Median: 3.5

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

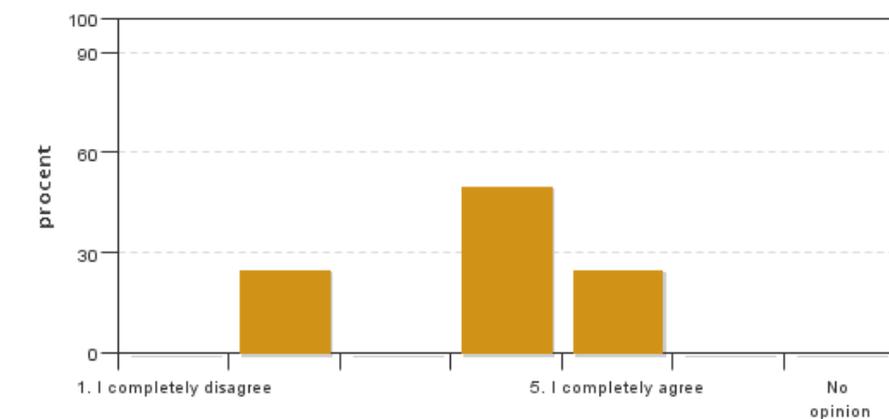
19. What I learned during the lectures on genomes (Nathaniel Street) and plant biotechnology (Ove Nilsson) as well as during the tutorial on gene expression (Judith Lundberg-Felten) in the beginning of the course helped me to understand the following lectures on other subjects.



Answers: 4
 Medel: 3,3
 Median: 4

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

20. I was satisfied with the competence of the teachers chosen for the respective lectures.



Answers: 4
 Medel: 3,8
 Median: 4

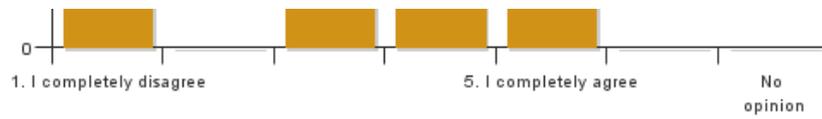
1: 0
 2: 1
 3: 0
 4: 2
 5: 1
 No opinion: 0

21. The teachers created a friendly, open and supportive learning atmosphere.

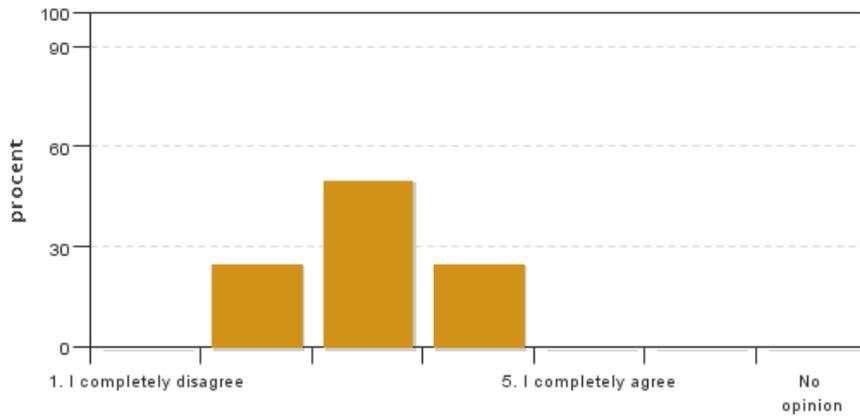


Answers: 4
 Medel: 3,3
 Median: 3.5

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



22. Despite that the lectures were held by many different teachers I could see the connection between them and got an idea of the bigger picture of plant biology and biotechnology.

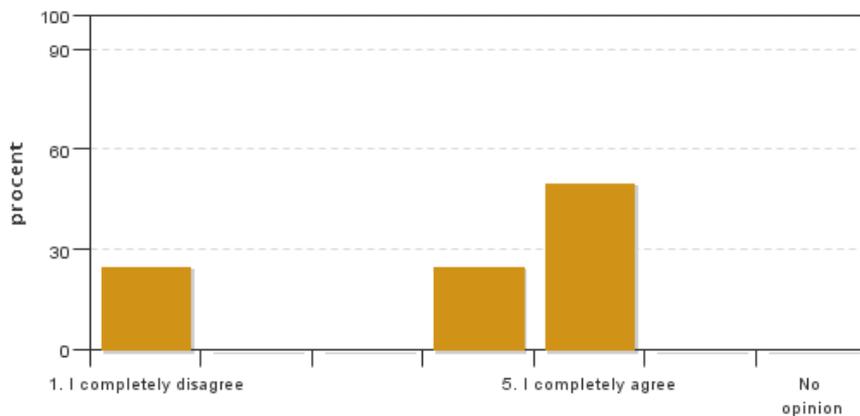


Answers: 4
Medel: 3,0
Median: 3

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

No opinion: 0

23. I had enough opportunities to ask questions and get answers from the teachers when I needed further clarifications.



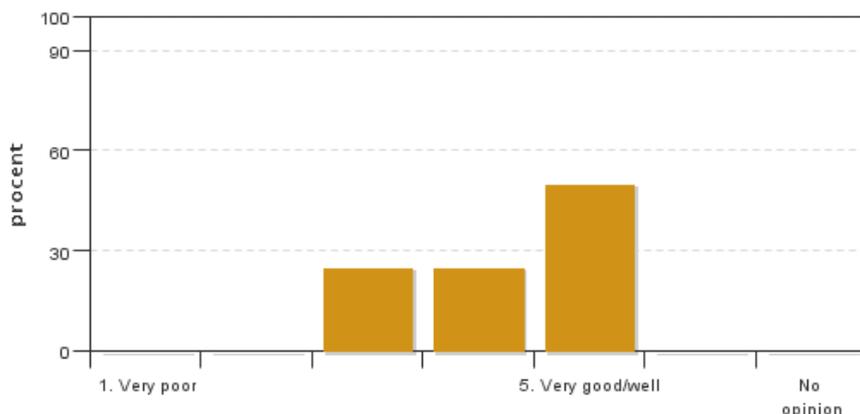
Answers: 4
Medel: 3,8
Median: 4.5

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

No opinion: 0

24. Was there any difference for your learning between
1) pre-recorded lectures with zoom time for discussion and exercises or
2) live-zoom lectures with some interaction during the lecture
and if so, which format did you prefer and why?

24. How was the quality (e.g. audio, video, speed, length, comprehensiveness) of pre-recorded lectures? Please comment on any improvements you think should be made.



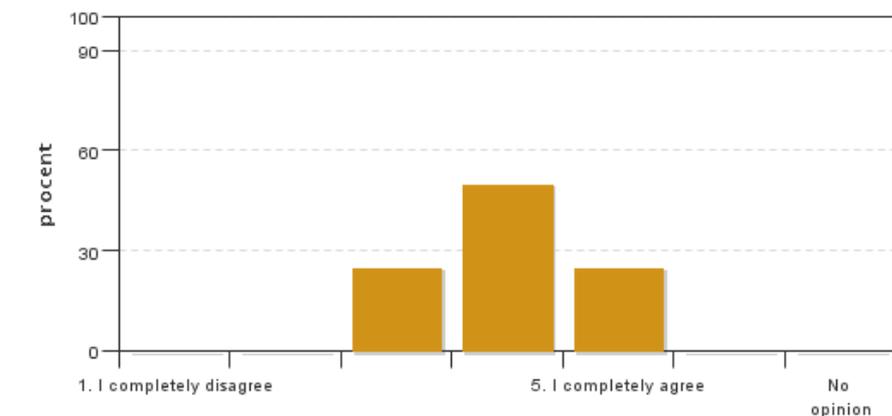
Answers: 4
Medel: 4,3
Median: 4.5

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

No opinion: 0

25. How was the quality of live zoom lectures (audio, video, speed, length, comprehensiveness)? Please comment on any improvements you think should be made.

25. The pre-exam quiz was a useful step prior to the exam to test my knowledge from the first two course weeks.



Answers: 4
Medel: 4,0
Median: 4

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

No opinion: 0

26. When courses on campus are possible again, we can decide whether to move back to a complete off-line format of the course e.g. live lectures, labs, presentations and exercises in classroom, or to keep some of the online parts to create a new hybrid-format for the course. Please comment which parts you personally would prefer to have live and which parts you think are beneficial to have online/recorded.

26. Please let the course-leaders know about any improvements that we could make prior or during the course concerning communication, organization or other aspects you may want to address.

Course leaders comments

- A worrisome criticism from some of the students was a not welcoming atmosphere and their feeling of not being respectfully treated at some course occasions. On one hand the situations, which the students referred to in this evaluation, show that we need to be clearer about expected background knowledge and learning outcomes and that this shall be clear to teachers and students at all time through the course. On the other hand, we teachers need to be more aware of our own behavior and how it could be interpreted by the students, as none of the concerned teachers was aware of having behaved in a way that could have been perceived offensive. After having taken note of this criticism, the course leaders have discussed with the pedagogical responsible at the department who was also present during the literature presentation, which was one occasion that received criticism from the students. All of the four teachers present during the literature presentation paid special attention to the atmosphere as some criticism had come up already in the previous year's evaluation. From our perspective the atmosphere was respectful, while we also asked questions that went deeper into the subject and challenged the knowledge of the students. I suggest to make use of the pedagogical department at SLU (EPU) to have a neutral observer present at the next literature presentation in this course to see how we can improve. Also we can be clearer about the expected background knowledge that we will ask questions on and communicate this in written, so that the students can feel better prepared. Another point of concern is that these issues that seem to have occurred at several moments throughout the course, were only communicated in the course evaluation after the end of the course, when it was unfortunately too late to do anything about it for the present course occasion. For future course occasions I would recommend creating short weekly briefings between the student representative for the course and the course leader or a selected teacher, to be able to address such issues as early as possible. Another way would be a weekly anonymous survey where students can report complaints and express constructive criticism.
- The structure in Canvas was much appreciated and was improved from previous course occasions. The students went through the contents very independently without needing reminders and they handed in assignments on time. On the side of the teacher community, I as a course leader needed to insist at occasions in discussion with other teachers to keep all communication inside Canvas and not to send out exercises etc. via email. Given the student's feedback I think this was a good decision even though it may have required extra efforts from the teachers. This should be kept as is for future courses. Another good tool that we used this year was the discussion forums in the different course moments (e.g. organisatory question, lab question, rehearsal questions). The students used these and according to comments in the evaluation

appreciated them.

- Lecture format: The online format was not optimal to favor interaction and I could see that students had more difficulties to keep up with the course this year as compared to previous course occasions, contents being the same. This is understandable in retrospect. Yet I am happy to read that the students found that we had managed the transition to onlinelectures well and it supported them. If future occasions would be also online, discussions should be taken to reduce some of the course content, we adjusted some of the content on the fly when the students reported that need to us. The students appreciated in general the lecture material made available. Some students preferred the pre-recorded lectures, others the live zoom lectures. Generally, there was a request for more discussion questions that can create more interaction in such an online format, and those would of course also be advisable in offline formats. Students commented that the course should go back to an offline format when possible, but that lectures from guests might be kept online. I would suggest that we go back to an offline-format as soon as possible, but make the now recorded resources available in the next years for students via Canvas and teachers make room for some discussion exercises in groups during their lectures. In previous evaluations students reported difficulties when they had missed a lecture. Existing re-corded materials could serve therefore as a backup.
- There are numerous teachers involved in the course, which can make contents appear somewhat fragmented, some student could see the connection between lectures, others had difficulties. To make the students see the connection of the lectures and their own progression through the course from the start, I recommend adding a scheme at the beginning that connects the different aspects visually. This could make it possible for the students to see the progression right from the start and not only in the end.
- Lab: the content of the labexperiment was new and aimed at reducing the complexity of the previous lab experiments and to connect better to the lectures. However, it was difficult for the students to grasp the content and the resources made available were extensive for only 1 day in the schedule. For me it is difficult to distinguish the effects of the content from the format, as these are so tightly connected. In the future I suggest splitting up the moments and have a theoretically part (lecture) going through the theory behind the experiments and protocols on day 1, do the GUS-staining on day 2 and mounting of sample and observation on day 3 followed by a discussion about the results. This would give the students a better opportunity to familiarize them with the content over time and many occasions for asking questions to clarify any doubts. This should then be carefully evaluated again in the next course occasion with physical presence to see how the contents are perceived when the format is more optimal. Upon the student's request the lab-reports were written in pairs this year, which could be a format to keep in subsequent years.
- Genes/gene expression lecture change: These lectures and the tutorial were moved to the beginning of the course, it helped somewhat but I still see that the student have difficulties understanding this course moment. In other courses teachers have worked with "wordlist" about the most difficult terms. Making such a keyword-list for our course could maybe help the student use the new terms more frequently, as I could see that concepts like promoters, markers, transcripts, genome etc. are still very unfamiliar to some students despite our efforts to strengthen these course parts. Maybe such a word-list that could be learned like vocabulary and used throughout the course would help the students to get more familiar with these concepts.
- The multiplechoice exam half-way was new and appreciated. It gave both the course-leaders and the students an opportunity to see where they were with the learned contents.
- The peerreview phase of the essay was improved slightly as students got more specific instructions of how to peer-review their essays. That has led to a more thorough assessment of the essays by all students and created fairer chances for everyone to get feedback before the final submission. This should be kept for the future.
- The outcome of the exam was better than in previous years, despite the students reporting fatigue with the online format throughout the course. It may have been due to the possibility to use course materials for writing the exam. Where we previously had complaints about the exam, the level of the questions seemed to have been appropriate this year.

Summary of aspects to improve:

- Teacher attitude awareness to create a welcoming, stimulating, and inclusive learning environment
- Clear listing of expected background knowledge (communicate ahead of coursestart to students (with some

- resources for refreshing such knowledge) and teachers)
- Lab should be spread out over several days
- Keyword list of most important terms (and using them where appropriate by all teachers in the course)
- Courseoverview document to connect the different areas of the course
- Create a possibility for students to report any issues that need improvement, e.g. on a weekly base not just after the course
- Clearer instructions for literature presentation and expected background level for the associated questions
- Invite a neutral observer from the pedagogics department to the next occasion of the literature presentation to get some external input on the atmosphere

Summary of aspects to keep:

- Canvas structure (with daily student to do dates) and all information exchange through Canvas, discussion forums associated to organisatory aspects, lab and questions and rehearsal
- Availability of recorded material (from this year) even when going over to offline lectures (as a backup when students miss lectures or need to review them again)
- Peerreview with clear instructions on how to give feedback
- The halfway multiple choice test
- Gene expression and genomes lectures and tutorials at start of the course

Student representatives comments

- As the course leader says, the most worrisome criticism from the course evaluation is students not feeling welcomed and respected. This is fundamental in keeping students encouraged and keeping a safe environment. This is something that really has to be worked on to next year. Even though it should not be like that, there is a uneven balance of power between a student and a teacher. The teacher is the one scoring?the grades and students may because of this?not be eager to criticize them during the course. In retrospect I felt that I could have done better?as a student representative in bringing up this problem. Due to the course being online I did not however have that much contact with the other students during the course?and did not really see the length of the problem until towards the end of the course when we discussed it. I think both proposals are great ways to use to report problems during the course. I think having a anonymous way of reporting problems is a must. Anonymous surveys would enlighten problems but it would be beneficial to also include the student representative in them if this method is to be used in the future. Having a student perspective when discussing a solution to a problem is beneficial for everyone. Having weekly briefings with the student representative is also a great way and the representative could be used as a middleman for students in reporting problems. Having weekly briefings would create a opportunity to highlight potential problems before they become real.?
- The canvas page was really good and was very much appreciated by the students. Having all information coming through the same channel is great and I think it was really good that the course leader insisted on using canvas to the other teachers. Experience from previous courses is that it can get quite messy if information comes from different places. It might be a little more work for teachers but I know it was appreciated by the students. Having forums for discussion was great and also a great supplement in the online format.
- Going back to normal lectures should be done as soon as possible. A general opinion seemed to be that discussion was quite hard through zoom. In normal conditions students can discuss lectures on breaks and after class but in zoom that is not quite possible and this element got kind of lost in the course. If an online format is to continue, discussion sessions and more discussion questions would be nice to implement. Having this years recorded lectures available for next years students is a great opportunity and will probably be very appreciated.
- Visualizing the connections of the subjects in the beginning of the course is a great proposal which I think will help a lot. Also having teachers bring up this visualization through the course, explaining the connections of their specific subject would make it even more understandable.
- The lab report. Doing the lab through a online format was not optimal and doing this offline should be of greatest interest. If next years is still online it might be better to have something else instead of the lab. Writing the lab report in pairs was really good in the sense that you could discuss hard to understand parts with someone and I personally felt that it was in these discussions I started to grasp it all. This could be nice to have next years or have it as an option so that students that want to write solo can still do it. The proposed method of splitting the lab into 3 days seems smart and would create time for students to think about what they have done each day and thereby understand it better. As said by the course leader this also creates more opportunity to ask questions.

- Having a wordlist with important terms would be nice. This might also be implemented in the mid-course exam. Having multiple choice questions for the terms on the test would make it so the students will learn what they mean and thereby have it easier to use and understand them later in the course.
- The peer-review segment is a great supplement for the upcoming bachelor's thesis and the instructions should be kept to have every student make thoughtful reviews.
- The exam. Some student thought the time was quite sparse but the results show that the questions and time was quite appropriate for an online exam overall.

Kontakta support: it-stod@slu.se - 018-67 6600