Molecular and microbial ecology
BI1438, 30363.2324

 15 Hp
Pace of study = 100%
Education cycle = Basic
Course leader = Aurélien Saghai

## Evaluation report

Evaluation period: 2024-03-12 - 2024-04-02

 Answers   4
 Number of students 5
 Answer frequency   80 %

Mandatory standard questions

**1.   My overall impression of the course is:**
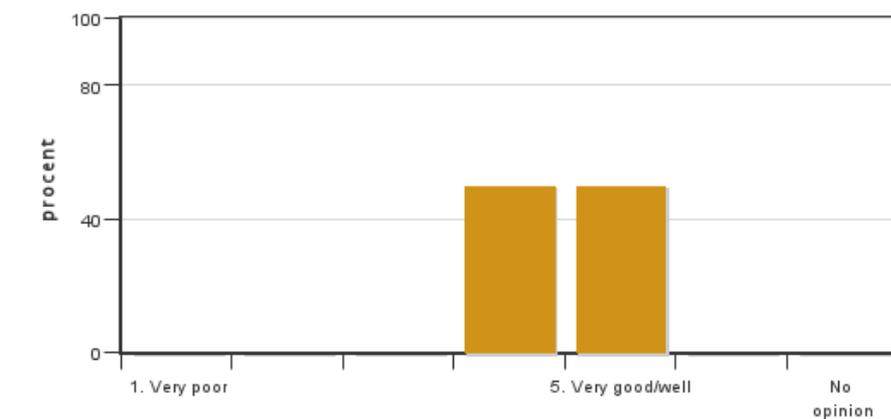
Answers: 4
Medel: 4,5
Median: 4

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

No opinion: 0

**2.   I found the course content to have clear links to the learning objectives of the course.**
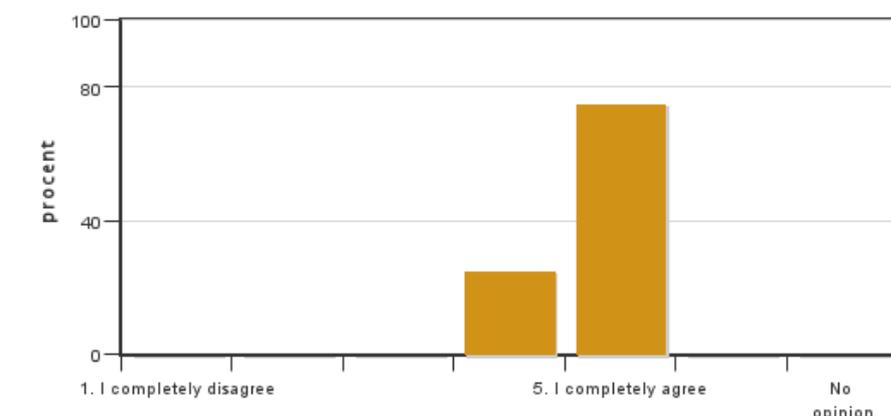
Answers: 4
Medel: 4,8
Median: 5

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

No opinion: 0

3. My prior knowledge was sufficient for me to benefit from the course.
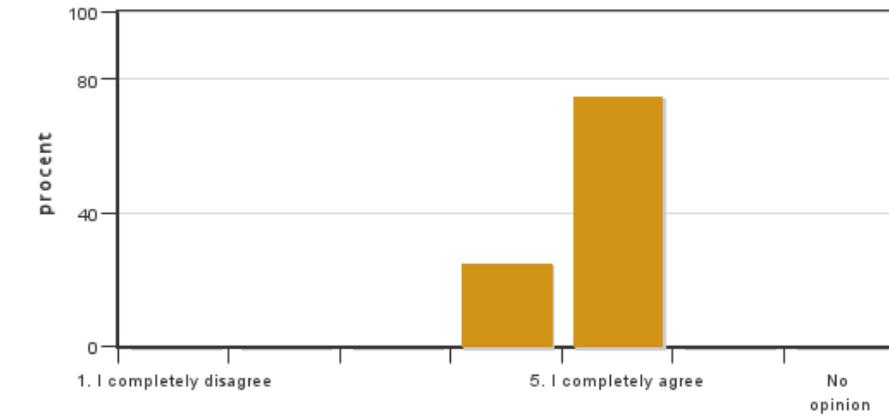
Answers: 4
Medel: 4,8
Median: 5

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

No opinion: 0

**4. The information about the course was easily accessible.**
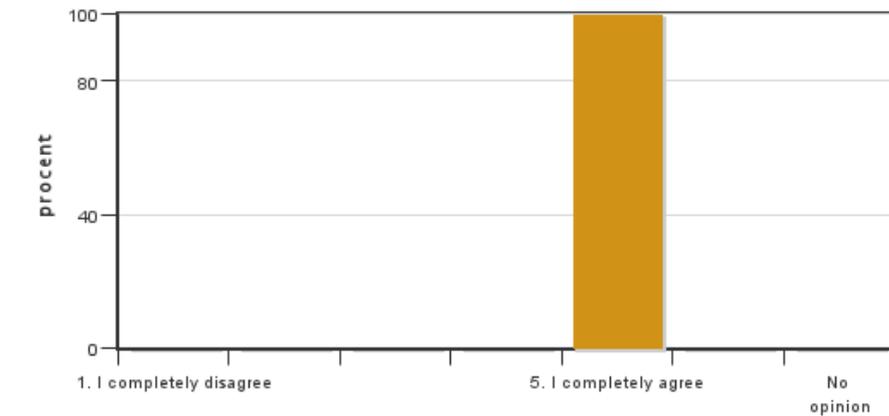
Answers: 4
Medel: 5,0
Median: 5

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

No opinion: 0

5. The various course components (lectures, course literature, exercises etc.) have supported my learning.
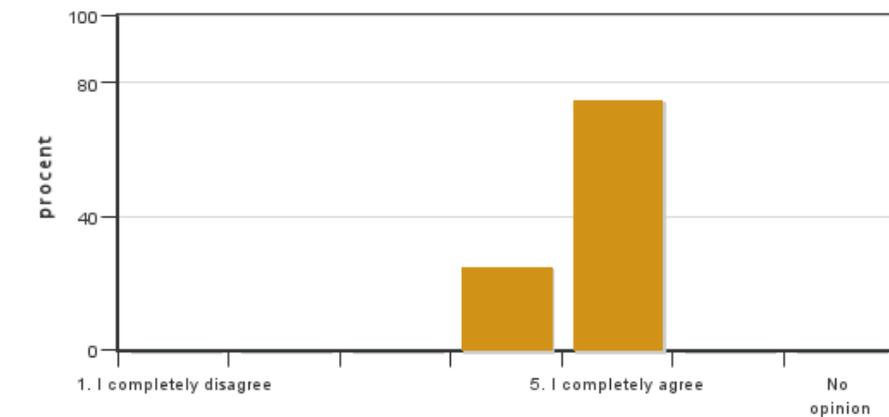
Answers: 4
Medel: 4,8
Median: 5

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

No opinion: 0

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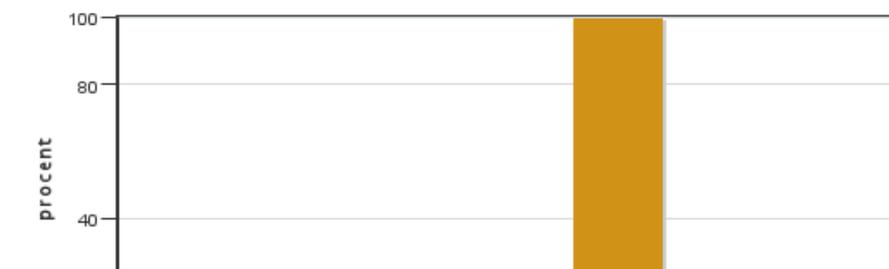

Answers: 4
Medel: 5,0
Median: 5

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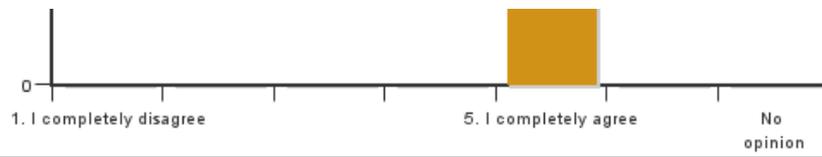
No opinion: 0

7. The physical learning environment (facilities, equipment etc.) has been satisfactory.
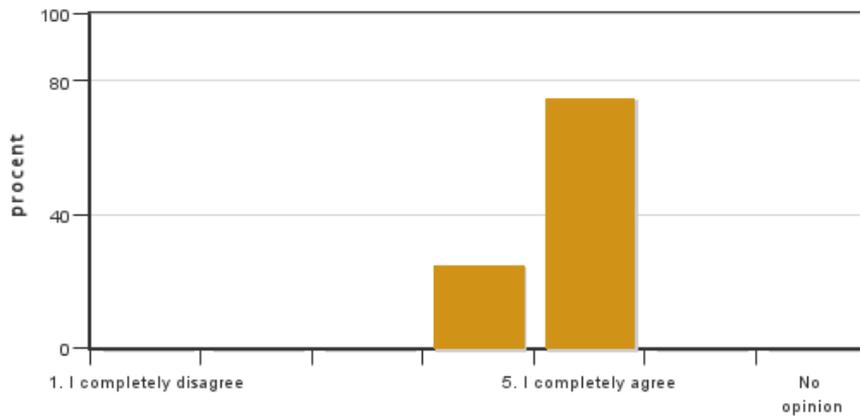
Answers: 4
Medel: 4,8
Median: 5

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

No opinion: 0

8. The examination(s) provided opportunity to demonstrate what I had learnt during the course (see the learning objectives).
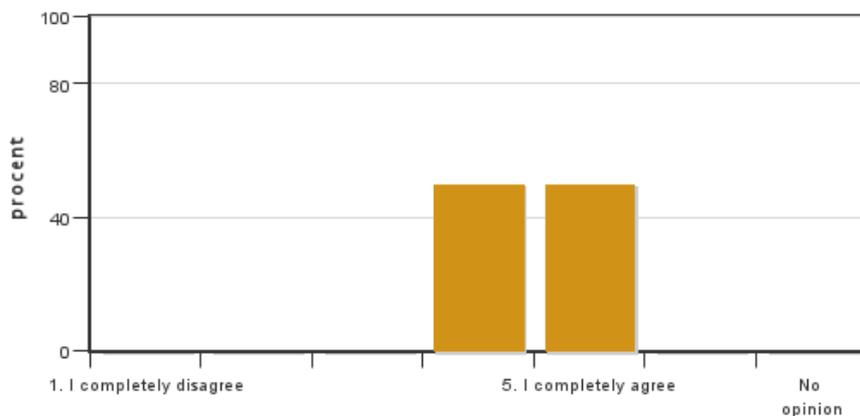
Answers: 4
Medel: 4,5
Median: 4

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

No opinion: 0

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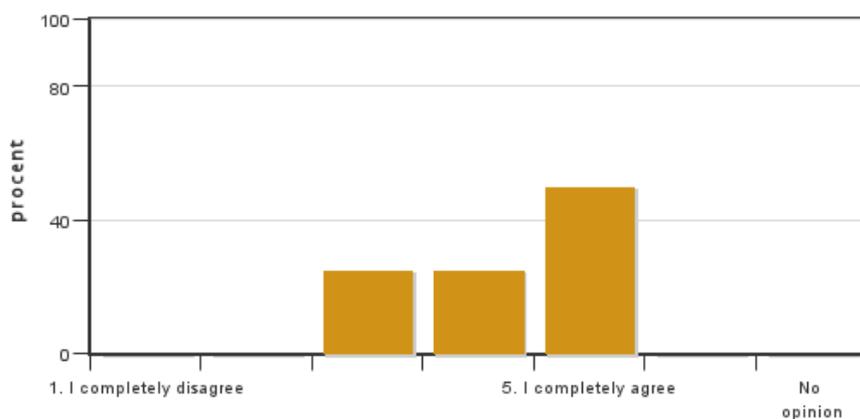
Answers: 4
Medel: 4,3
Median: 4

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

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).
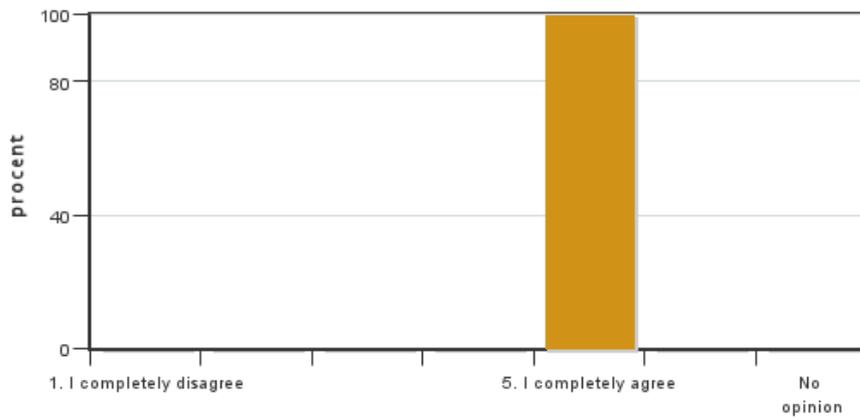
Answers: 4
Medel: 5,0
Median: 5

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

No opinion: 0

**11.   The course covered international perspectives.**
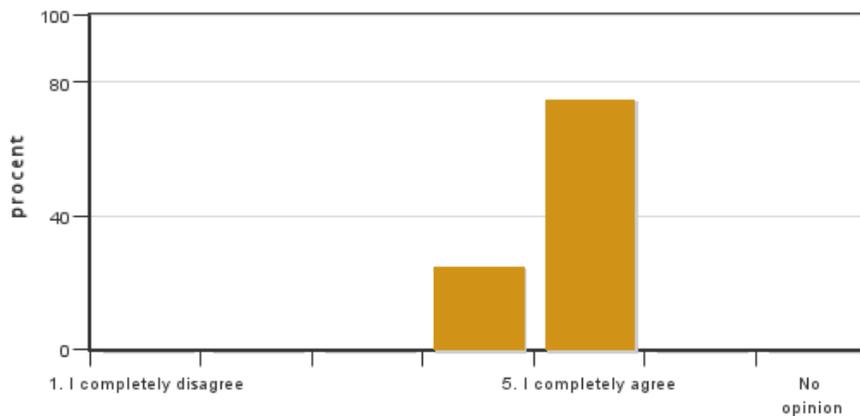
Answers: 4
Medel: 4,8
Median: 5

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

No opinion: 0

12.   On average, I have spent … hours/week on the course (including timetabled hours).
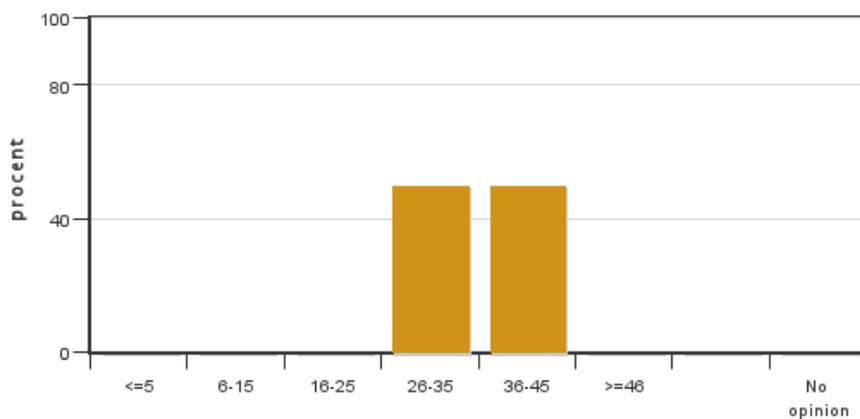
Answers: 4
Medel: 35,0
Median: 26-35

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

No opinion: 0

Course leaders comments

For this first year, five students took part in the course. Four of them answered the survey, which is satisfying. The group of students was motivated and showed a good level of engagement in the different parts of the course, although most lectures were attended by only 2-3 students. Study visits were particularly popular. Despite their background, all felt that their prior knowledge was sufficient to follow the course (average: 4.8).

Overall, the course received a grade of 4.5, which is satisfying given that the course was run for the first time. We are particularly happy to see that the students thought that the course had clear learning objectives, that the various components supported their learning, and that the learning environment has been inclusive. The students also noted that the Canvas page was well organized. In their evaluation, the students also indicated points that could be improved.

According to them, the meet the author sessions, where students get the chance to read a peer-reviewed article and

discuss it with one of the authors, lacked structure. For next year, the teachers will be asked to give a short introduction to the paper with some elements of context and prepare discussion points that will be communicated to the students beforehand to guide them in their reading.

The structure of the method lecture during the first week will be revisited. The initial idea was to have a more active participation of the students using a jigsaw approach (www.jigsaw.org) but the small number of students prevented us to do this activity. Hopefully this will be feasible next year. If not, the format of the lecture will be changed. More effort will be put in presenting the red thread linking the different parts of the course; this will be easier now that we have a better idea of what the different teachers taught in their lectures.

The different assignments and the time given to complete them were generally appreciated. However, we noticed lower attendance to lectures the day before a deadline. We will take this into account when making the schedule next year.

Regarding the computer lab, we agree with the suggestion made by the students to extend the time of these sessions to allow a deeper understanding of concepts and methods that most students are unfamiliar with. One idea is also to skip the sequence processing part and focus more on the biological interpretation of sequencing data. These labs will also take place in bigger rooms.

We think that improvements can also be made regarding the examination of the course, although no student has complained about this. The final grade was exclusively based on the exam but the idea for next year is to grade the lab report with 3 or 4 so that it counts in the final grade (it was pass/fail this year). Some students wished that more time between the deadline for the last assignment and the exam and we will see what is possible to do about this in next year's schedule.

Finally, the choice of the textbooks (if needed at all) should be revisited.

Student representatives comments

General questions:

The overall response to the course is very good, with a mean score between 4 and 5 for the obligatory questions.

Litterature:

Neither of the books were read by any of the students.

Meet the author:

The meet the author sessions is a great idea to get students interested in science and academia. There is however a wish for a more structured approach. The three sessions were all very different from each other so it was hard to know how to prepare and what to expect. Some sort of template for the authors to create consistancy could be good. One way to go about it could be to have a general introduction to the paper by the author followed by some prepared discussion points that could lead to a more open conversation.

Assignments:

The time allocated for the assignments were generally thought to be enough, with a slight wish for a day or two extra to get a better result. The fact that both assignments were split into two was an appreciated move. Dividing the work into smaller chunks made it more manageble, and the mid-point feedback was welcome.

Wet labs:

Overall the labs worked well. it was a appreciated to follow the entire process from extraction of material all the way to sequencing (and later data processing). The parts of the lab taking parts on the second floor (plan 3) were a bit cramp and would probably be harder to execute with a larger group. The compendiums were clear as was the help and instructions from the lab teacher. The labs for this course were all done together with the lab teacher which was fine since we were such a small group. Labs in previous courses have included much more individual work were lab pairs are expected to read the compendium and work independently from each other.

Computer labs:

The computer labs were thought of as bit confusing. The practical parts of the R-Studio lab weren't hard. It was just a matter of pressing ctrl + enter on lines of code, but understanding what we were doing and why was hard. There was alot of information in a short amount of time and a suggestion is to extend the time of the labs to allow for a deeper dive and better understanding. There were also some problems with the softwares and codes not working properly on the different OS for both the R-studio lab and the phylogenetic lab.

Summary:

Good stuff:
The course was generally very appreciated. The lectures were interesting and all the teachers and course admin were engaged and put alot of effort into making it work. We were always encouraged to email the lecturers and lab teachers if we had questions. The assignments and labs were good and interesting and felt relevant. The course admin also kept good contact with the students throughout the course, both in giving information about coming events (like field trips), and asking us how we experienced the course. The course gave a good understanding of molecular and microbial ecology and is definitely something that has been missing in the SLU the biology bachelor programe. It also had a focus on research and academia that have been missing in other courses.

Things that could be improved:
There were alot of different teachers teaching in many different parts of molecular and microbial ecology, which is a wide field so it makes sence to have a wide array of teachers, but this made it a bit hard to find the overarching leitmotif. The molecular methods taught in the beginning of the course works as a good way of tying it all together, but those lectures felt a bit rushed and a little too dense. Spending some more time on the methods and explaining how this will be the "red thread" throughout the course could be good. Since there were so many teachers there was also sometimes some confusion regarding what we had already talked about in previous lectures.