



## Trees, structure and function BI1385, 10104.2122

15 Hp

Pace of study = 100%

Education cycle = Basic

Course leader = Michelle Cleary

### Evaluation report

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Evaluation period: 2021-10-26 - 2021-11-15

Answers 24

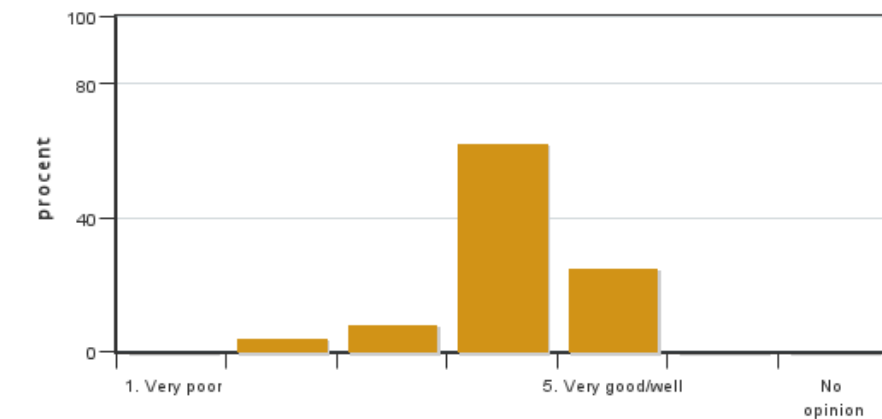
Number of students 34

Answer frequency 70 %

### Mandatory standard questions

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

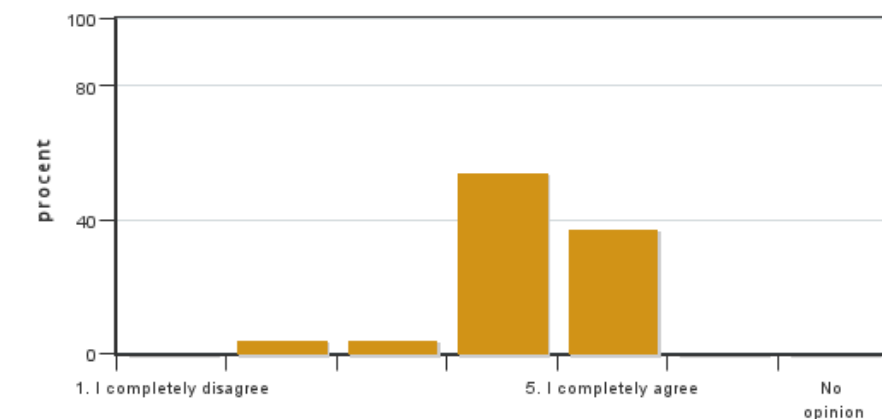


Answers: 24  
Medel: 4,1  
Median: 4

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

No opinion: 0

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

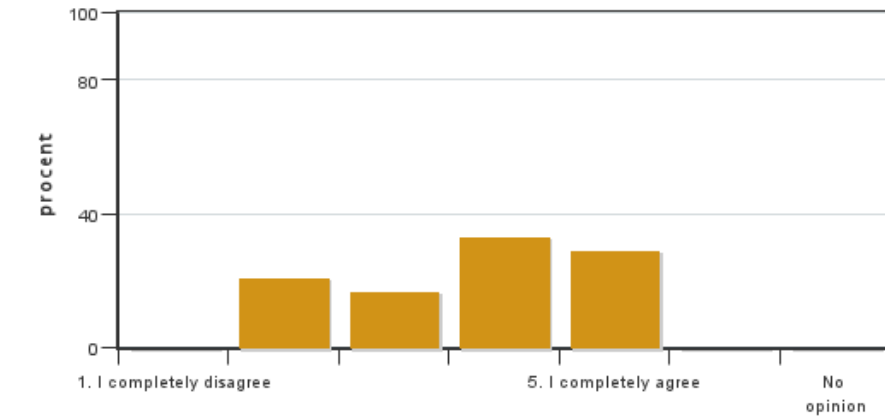


Answers: 24  
Medel: 4,3  
Median: 4

1: 0  
2: 1  
3: 1  
4: 13  
5: 9

No opinion: 0

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

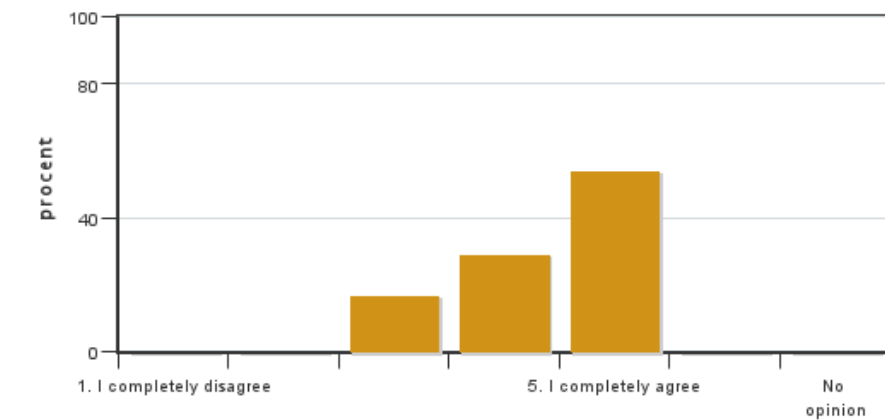


Answers: 24  
 Medel: 3,7  
 Median: 4

1: 0  
 2: 5  
 3: 4  
 4: 8  
 5: 7

No opinion: 0

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

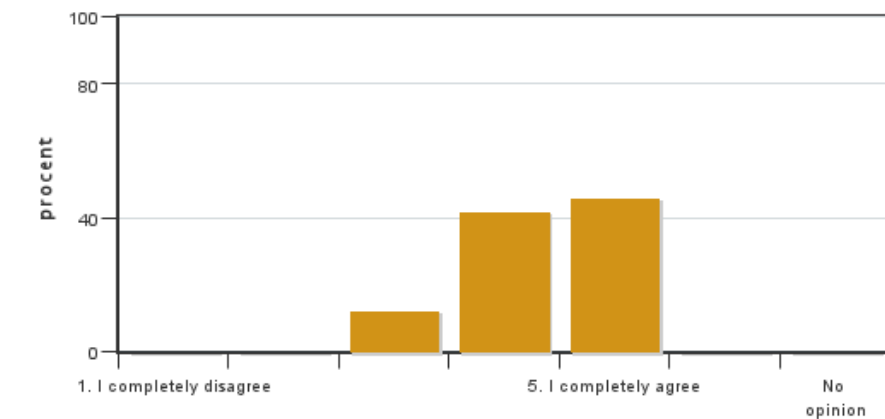


Answers: 24  
 Medel: 4,4  
 Median: 5

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

No opinion: 0

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

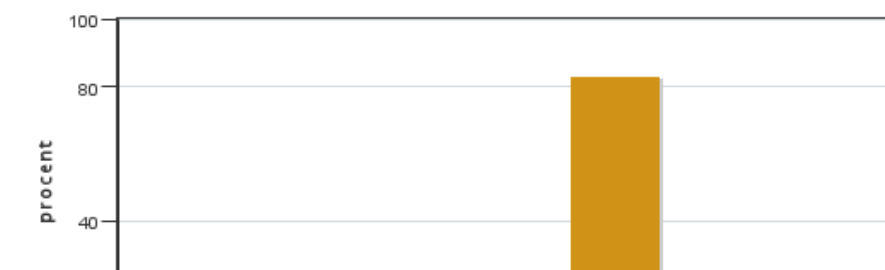


Answers: 24  
 Medel: 4,3  
 Median: 4

1: 0  
 2: 0  
 3: 3  
 4: 10  
 5: 11

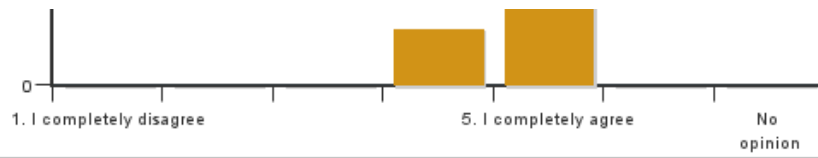
No opinion: 0

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



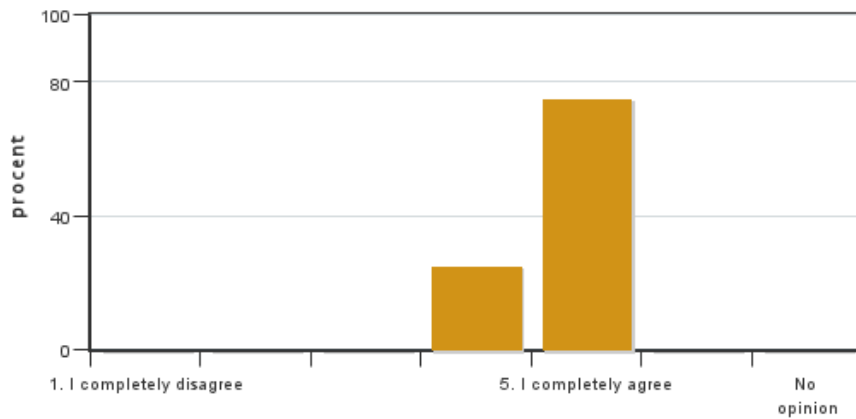
Answers: 24  
 Medel: 4,8  
 Median: 5

1: 0  
 2: 0  
 3: 0  
 4: 4  
 5: 20



No opinion: 0

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



Answers: 24

Medel: 4,8

Median: 5

1: 0

2: 0

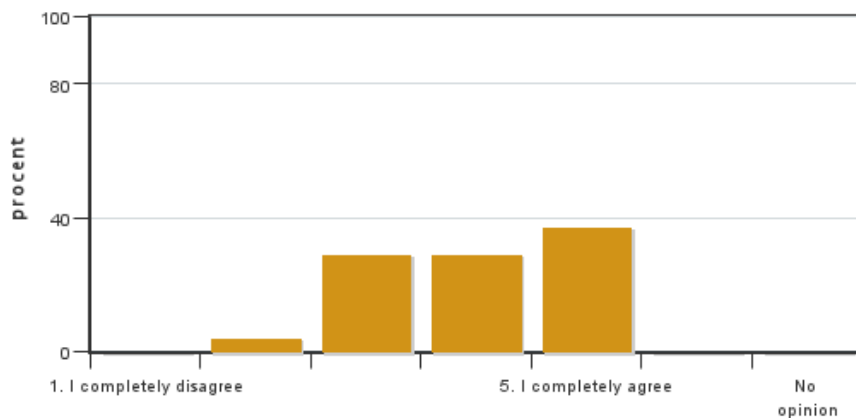
3: 0

4: 6

5: 18

No opinion: 0

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



Answers: 24

Medel: 4,0

Median: 4

1: 0

2: 1

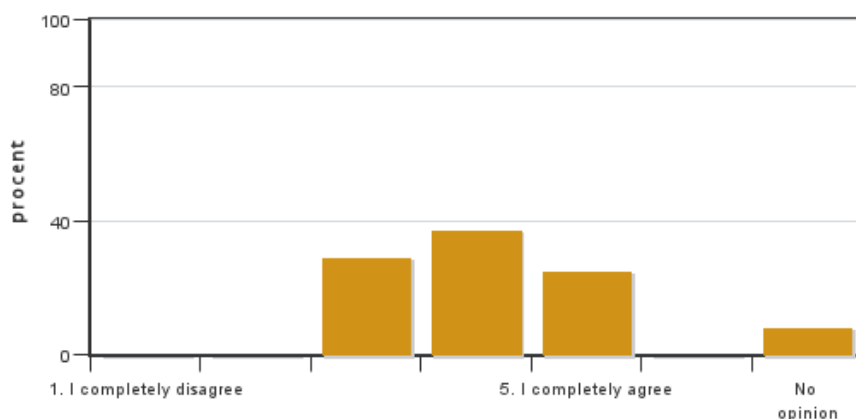
3: 7

4: 7

5: 9

No opinion: 0

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



Answers: 24

Medel: 4,0

Median: 4

1: 0

2: 0

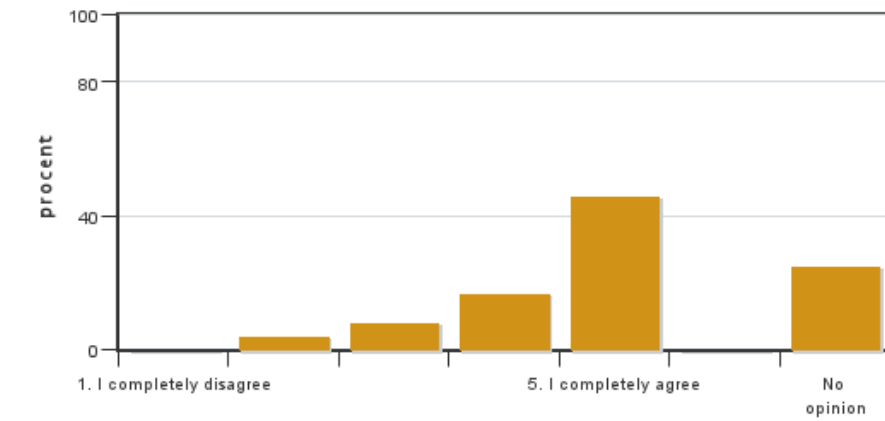
3: 7

4: 9

5: 6

No opinion: 2

**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).**

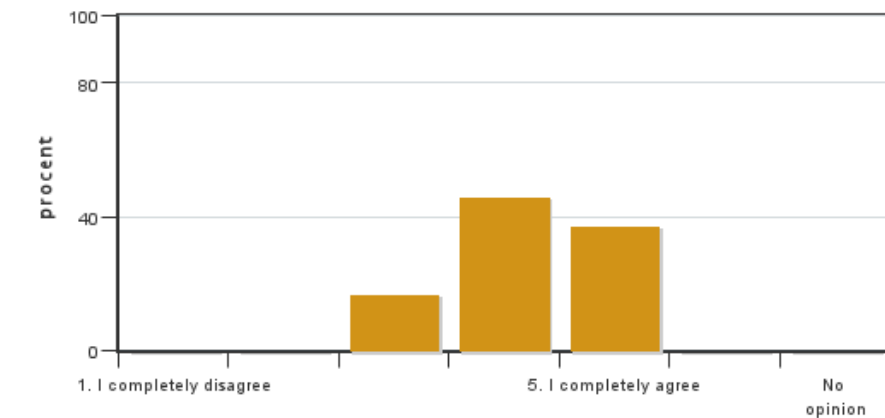


Answers: 24  
 Medel: 4,4  
 Median: 5

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

No opinion: 6

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

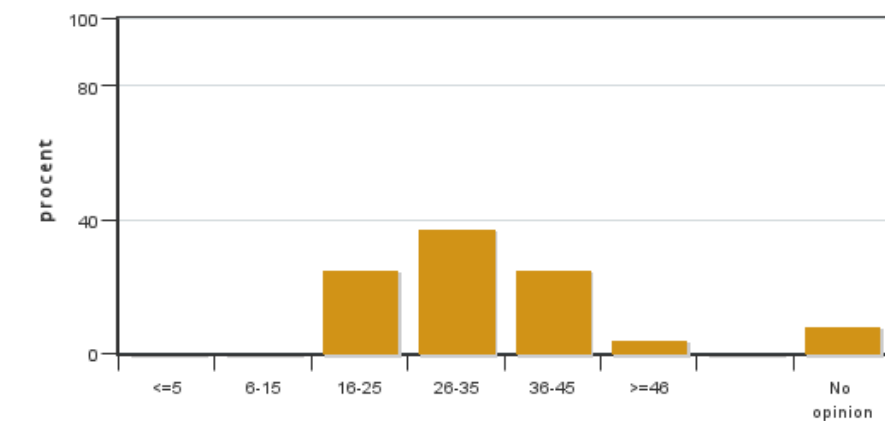


Answers: 24  
 Medel: 4,2  
 Median: 4

1: 0  
 2: 0  
 3: 4  
 4: 11  
 5: 9

No opinion: 0

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

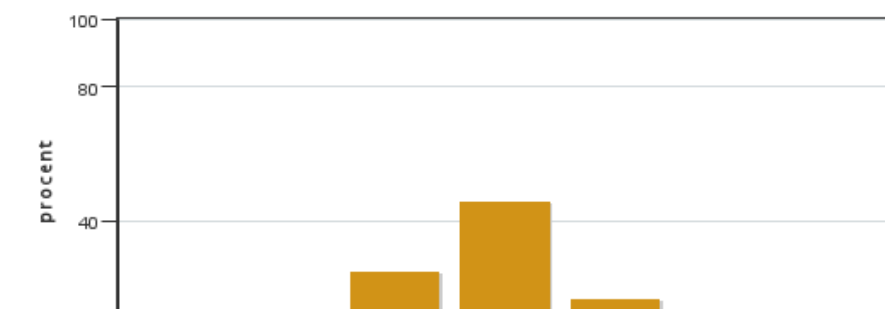


Answers: 24  
 Medel: 30,7  
 Median: 26-35

≤5: 0  
 6-15: 0  
 16-25: 6  
 26-35: 9  
 36-45: 6  
 ≥46: 1

No opinion: 2

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



Answers: 24  
 Medel: 3,6  
 Median: 4

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

No opinion: 0



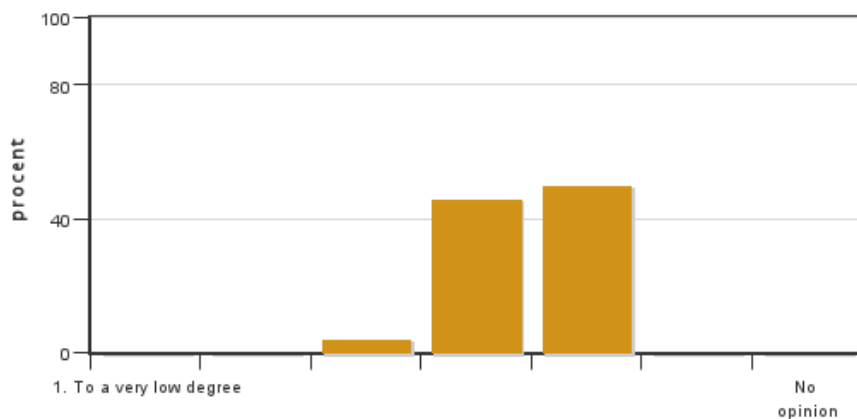
14. If relevant, please share what worked well when participating in teaching on distance

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

## Additional own questions

16. Please share how the course structure (modules 1-5), information (announcements) and communication (from course leader and teachers) worked when participating in the course. What was good and what can we improve?

16. Did the course literature help or supplement your understanding of the course subject and material?



Answers: 24  
 Medel: 4,5  
 Median: 4.5

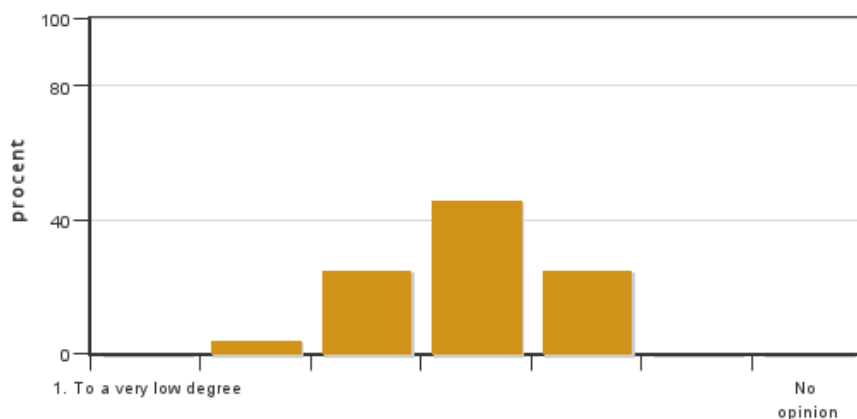
1: 0  
 2: 0  
 3: 1  
 4: 11  
 5: 12

No opinion: 0

17. Did the course align with your overall expectations? If not, what did you expect the course was about?

17. Did the course skim or skip over any particular subject you hoped would be focused on more?

17. Did the lectures keep you adequately engaged in the subject of the course?

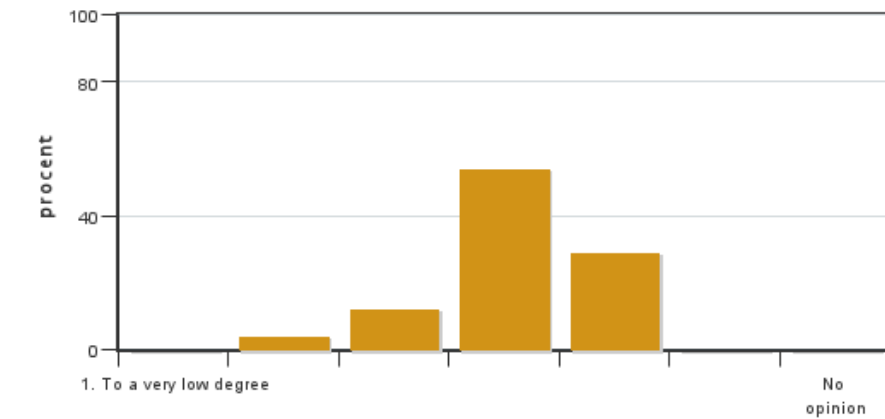


Answers: 24  
 Medel: 3,9  
 Median: 4

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

No opinion: 0

18. Did the lectures make you feel adequately challenged by the subject of the course?



Answers: 24  
 Medel: 4,1  
 Median: 4

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

No opinion: 0

### 19. MODULE 1

Please share how module 1 (Introduction to Forest and Landscape) worked. What was good, or what can we improve concerning:

- The lectures (Theme day - Introduction to F&L)
- The excursions (local tours - of Alnarpsparken and Västerskog)

### 19. MODULE 2

Please share how module 2 (Tree Identification) worked. What was good, or what could we improve concerning:

- The lectures
- The plant walks
- The literature
- The tutoring sessions
- The exam

### 19. MODULE 3

Please share how module 3 (Soils) worked. What was good, or what could we improve concerning:

- The lectures
  - > Soil formation and site fertility
  - > Soil water and nutrient cycles
  - > Soil biota and organic matter
  - > Urban soils (Thomas)
- The literature
- The decomposition group exercise; the urban tree growing conditions
- The excursion (to Romeleåsen)

### 19. MODULE 4

Please share how module 4 (Tree Anatomy and Development) worked. What was good, or what could we improve concerning:

- The lectures
  - > How a tree grows - tree design; Additive and multiplicative growth; Branching patterns; Tree anatomy and secondary growth (Michelle)
  - > Photosynthesis/respiration; Carbon and water relations of trees (Patrick)
  - > Reproduction anatomy and lifecycles; Seed requirements (Iva)
  - > Tree nutrition & fitness, Tree defenses, Abiotic challenges (Johanna)
  - > Symbiotic relationships, tree microbiome (Carmen)
- The literature (assigned and supplemental readings/videos)
- The group assignment #3 (Tree ID cards) and peer assessment

### 19. MODULE 5

Please share how module 5 (Mensuration and Biometrics) worked. What was good, or what could we improve concerning:

The lectures  
--> Single tree measurements and instruments  
--> Stand measurements and descriptive statistics  
The practical exercise for collecting field measurements  
The data and statistical exercises with own computers

## 19. FIELD EXCURSIONS

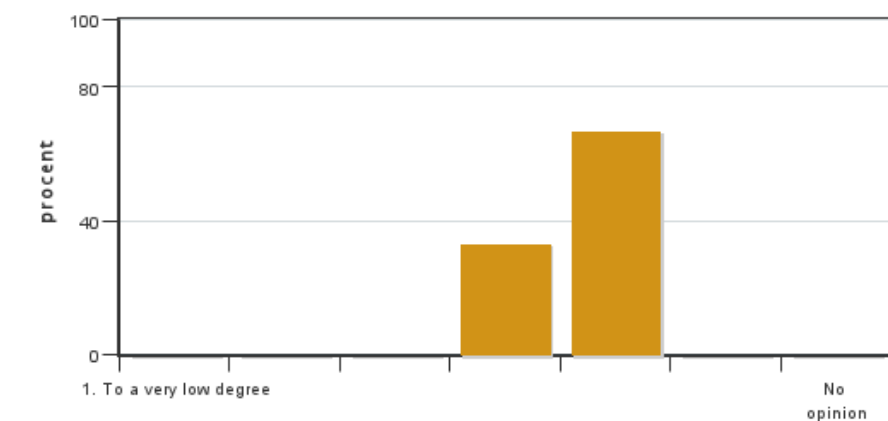
How was the quality of the off-campus field excursions to Skabersjö and the associated group assignment?

## 19. WAC

Did you refer to the WAC guidebook in the WAC module in Canvas during the course for your writing assignments and if so, did you find it useful?

## 19. WAC

Was the feedback you received on your Assignment #4 during the WAC evaluation constructive and helpful?



Answers: 24  
Medel: 4,7  
Median: 5

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

No opinion: 0

## Course leaders comments

This year offered several challenges to running the first year course of the new F&L program (Trees, structure and function) due to this being a 'hybrid' course of classroom and distant teaching because of certain restrictions in place and the recommendations from the university. Overall, the course turned out rather good, despite the suboptimal conditions and the majority of student felt that course aligned with their overall expectations. Students spent an average of 30 hours a week on the course. This course is designed to be an introductory course in tree biology where students learn everything about trees and their growth and development, from the roots to the canopy. The scope of topics within the course spanning five modules give students the requisite background for what will come in subsequent courses and years in F&L, though some felt the diverse topics were too heavy for one course. Due to the diverse background of the group and obvious differences in starting levels of biology and chemistry, and mathematics (use of excel), or years since taking the requisite levels for the program, it made it difficult for some students to grasp the concepts/information taught in the different modules. Probably next year I will request students to repeat some basics of biology and chemistry, and introductory Excel prior to the modules.

Students loved the mix of indoor and outdoor learning. In particular, the plant walks were a new and enjoyable learning experience for the students. I am pleased we had the possibility to have most of the planned local excursions. One excursion needed to be postponed due to a COVID-19 case in the class, and consequently the second writing assignment was postponed and overlapped with other planned work in the next module. Teaching via distance over Zoom, which occurred 2-3 times per week (as result of having to plan a hybrid course from the beginning) seemed to work well overall, in terms of the clarity and participation, though in-person lectures were of course preferred and most engaging for the students. A request for indoor laboratory sessions was made but it was never a possibility this year due to the restrictions. In future years, under non-pandemic circumstances, indoor labs will be part of the curriculum. Students need more 'selective' lectures to know what to better focus on. Different group work was designed in a way to vary the group participants on different assignments, giving them first experience of real situations for multitasking in different groups in a professional setting. In general, this went well but some students find difficulty in managing their participation to multiple groups, preferring to work in the same groups. Canvas was difficult to navigate for some students – it's very new and students require repeated instruction and practice. Communication throughout the course from all teachers in all modules via Canvas has been great.

Students commented on the pace of different modules, mostly in a positive way, but next year, soils (module 3) should be given more time, and a speedier pace should be made in the in tree identification (module 2). Suggested improvements could be to integrate soils and tree identification modules a bit more, and spending more time with

soil properties, textures, moisture and habitus in the beginning in connection to tree requirements of the different species learned. We could probably consider adding another 10 trees to the list for identification and more exercises, as students felt the pace during the module was slower than others. Students seek more exercises and examinations in all other modules for testing their knowledge on the different lectures and assignments. This will be incorporated more next year. Students found the textbook readings in Applied Tree Biology very useful and helpful to understand the lectures, though some students were not motivated to read the textbook if not tested.

The WAC guidebook was very useful and helped students a lot with their writing assignments. Individual feedback sessions were particularly favored and appreciated by students, providing them further clarification and better structure to the assignments, but students felt more time was needed to discuss.

## **Student representatives comments**

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### **Overall impression and expectations**

The overall impression of the course is positive, even though the brief overview of so many subjects made the information hard to grasp to many students. Many students write that their expectations are aligned with the course, even though some mention it being more brief than expected. It felt like an introduction rather than a course, one student wrote. Some other students mentioned that the level and tempo was higher than they would have thought. Other students liked the general approach to not dig deep into any subjects.

Some suggestions of improvement are: to record and upload the lectures on canvas and that everybody should talk in English as much as possible.

### **Prior knowledge**

The prior knowledge of some students seems not to be sufficient to understand the lectures even though they fulfill the criteria to apply to the programme. One student mentioned that it would have liked to be more prepared by repeating biology and chemistry from high school, something the course leaders can recommend before starting the programme.

### **Content and examination**

Many students comment that they liked the content, that it was relevant and interesting. Some students did not clearly see the connection between the course content and the learning objectives since some subjects were taught in very much detail (ex photosynthesis lectures) while others were presented more in an overview perspective (ex soil module). It was furthermore hard to grasp what the take home messages were from each lecture and what the students were supposed to learn from it.

Some are very satisfied with the course components and mention that the mix between excursions and lectures has been good. Some think they did not get a chance to learn what was in the lectures since it was presented too briefly on a high level. One suggestion is more seminars to get a chance to discuss the content and learn it. The group works have been appreciated but also a bit messy to keep many parallel works running and get in touch with every group member. Many students mention that they want a smaller test to show what they have learned.

### **Social environment, inclusiveness and workload**

Regarding the social learning environment, many people think it has been inclusive and respects differences of opinion. One student mentioned that since there are so many backgrounds in the class it is important to not forget and practise this issue. The students are a bit confused about the gender equality question and many have not experienced this issue being raised during the course. Furthermore, the course has mostly covered European and North American perspectives during the lectures, some students comment. Overall the workload seems to have been around 30 h per week. One student commented that the course could have had a heavier workload or more homework.

### **Zoom**

Most students consider the lectures on zoom not as good as the lectures in the classroom. Many people mention feeling tired, disengaged and exhausted, having a hard time concentrating on the content. The lecturer sometimes went too fast when not being able to notice if the students were following. It was also hard to do group work on zoom. Technical problems stole a lot of time and energy.

The interactive part of the zoom lectures are important to many students. For example the breakout rooms and the teachers asking questions during class. Some people comment that the presentations were good and well organized and that the teachers came well prepared. A zoom day, allowing people to be at home, could also be a nice break in a stressful week. A suggestion to make the zoom work better is to implement some questions after each zoom lecture



to check if the students have understood. One student suggest that the lectures could be pre recorded and then followed by a zoom room for questions.

### **Structure, accessibility and communication**

Overall the students seem satisfied with the course structure, information and communication. Many people mention “announcements” on canvas as a good place to communicate, but some also mention it being hard to navigate on canvas in the beginning. Therefore a student proposes that canvas should be gone through more properly by the teachers. Another improvement suggested is that mandatory classes should be marked to improve clarity.

The students are also satisfied with the accessibility of the course information. Some people mention canvas being a bit messy but that they can see the potential of using the platform if the teachers organize the information better. Now, for example, different teachers sometimes put information in different places.

### **Lectures and literature**

The course literature has, according to many students, covered relevant knowledge and been on a good level. One student suggested the lectures to build more upon the book Applied tree biology to clarify the reading.

Many of the students felt challenged at a good level by the lectures, and some mention that the literature helped to understand what was said in the classroom. One student writes that the level of the lectures varied a lot, and due to that, easier or harder to follow.

A lot of people write that they think that the soil module was skimmed and that they would have liked to learn more about that part. Also some people felt that the biochemistry, the biology, the mycorrhiza and other symbiotic relationships weren't given enough attention.

### **Module 1 - Introduction to F & L**

Almost all students felt that commented about this felt welcomed during the first week and were satisfied with the excursions as well as the theme day. One student suggested that it would be nice to know more about possible careers or continued education after the program. Another said that it would have been nice with some name games the very first day on the roll call.

### **Module 2 - Tree identification**

To many students, this was the favorite part of the course. The critique is mainly positive and many mention the plant walk as very helpful. Some students found the workload being too small, suggesting that we could learn for example soils or other biology related to the plants parallel with this module. Others think that the tempo was perfect and enjoyed a stress free start. The walks also functioned as a way to get to know the new class in a relaxed way. Furthermore some students write that the test was well organized and good for the motivation to learn.

### **Module 3 - Soils**

The overall opinion of this module is that it was interesting but rushed through and that more time is needed to learn the subject more properly. Some students write that they did not gain any knowledge from this part due to the high tempo. The excursion was an important part to settle the knowledge even though some students suggest it being scheduled late in the week instead of early, in order to know what to look for when out in the forest. Many people appreciated the group exercise.

### **Module 4 - Tree anatomy and development**

The critique about this module is mixed. Some people feel they learned a lot and mention the literature as very helpful. Many students found this module hard though. They write that it was confusing and a bit stressy. One person says that it is hard to know on what level we are expected to learn since the level of the lectures is irregular, another student proposes that the connection between the topics and the overall view of the interlinks in the biological systems we learned about could be better explained since it was not very clear . A third student suggested that we should have some tests or writing after the lectures to motivate learning. Furthermore, the peer reading was appreciated as well as interactive parts during lectures, ex photosynthesis exercise with Patrick.

### **Module 5 - Mensuration and biometrics**

The overall opinion is that this module was fun and that the students learned a lot. Some people think the lessons were hard to follow since they didn't understand the English of the lecturers. Many people want more help using excel, and one student points out the problem solving as the best way to learn the type of knowledge presented in this module. Therefore more energy should be put on solving problems and answering questions rather than reading about it, since the reading did not give that much. Some students write that too much focus was being paid on old measurement methods rather than new ones, and that it would have been nice to use even more different kinds of tools during the exercises. Many people enjoyed the outdoor exercises.

### **Field excursions**

Mainly positive feedback. Skabersjö was highly appreciated as well as the connected group assignment. One student thought the groups of six people were a bit too big to be able to write a nice text. Another issue to solve is the accessibility to a toilet when out on excursion.

### **WAC and individual meetings**

Most people find the WAC guidebook very useful.. One suggestion is that APA writing style should be included in the guide.

Many students are very thankful for the WAC meetings and write that they helped a lot. Some feel they were a bit too short to be able to discuss everything though. Some people miss that no feedback is given on the content and suggest that peer review could help with that.

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Kontakta support: [support@slu.se](mailto:support@slu.se) - 018-67 6600