



BB2570 - System- och livscykelanalys

Examinationsgrad: 34/34

Undervisande lärare:

ABE { Anna Björklund (3 F, föreläsning), Rajib Sinha (1 F), Göran Finnveden (2 F), Björn Frostell (2 F)

TAs { Miguel Angel Postigo Pelaez (TA, LAB&PRO), Simon Jernselius (TA, LAB&PRO), Sania Merchant (TA, LAB&PRO),

BIO { Ines Ezcurra (1 F, PRO, kursansvar), Amparo Jimenez Quero (1 F), Lauren McKee (PRO), Vaibhav Srivastava (PRO), Veronique Choteau (PRO)

Kursen inkluderar undervisning inom: livscykelanalys, systemtänkande, bioteknik, hållbarhet och hållbarutveckling, projektledning och projektplanering

Övning/träning ges inom: livscykelanalys, systemtänkande, bioteknik, hållbarhet och hållbarutveckling, projektledning och projektplanering

Examinerade lärandemål inkluderar: livscykelanalys, systemtänkande, bioteknik, hållbarhet och hållbarutveckling, projektledning och projektplanering

TEN1, PRO1



Kursanalys

Allmänt om kursen: Kursen syftar till att ge studenter kunskaper om systemtänkande och livscykelanalys och dess användning för att prioritera, rangordna och välja hållbara lösningar. Kunskaper om hur man utvärderar bioteknologiska processer ur ett hållbarhetsperspektiv lärs ut genom praktisk användning av matematiska och statistiska modeller.

Vad var bra: Rolig, intressant, relevant & användbar i framtidens yrkesroll, bra föreläsningar, intressanta koncept & idéer, bra designad mot lärandemål, LCA Activity Browser programmet, blandning av sal- och för-inspelade föreläsningar, projektet, diskussioner, reflektioner.

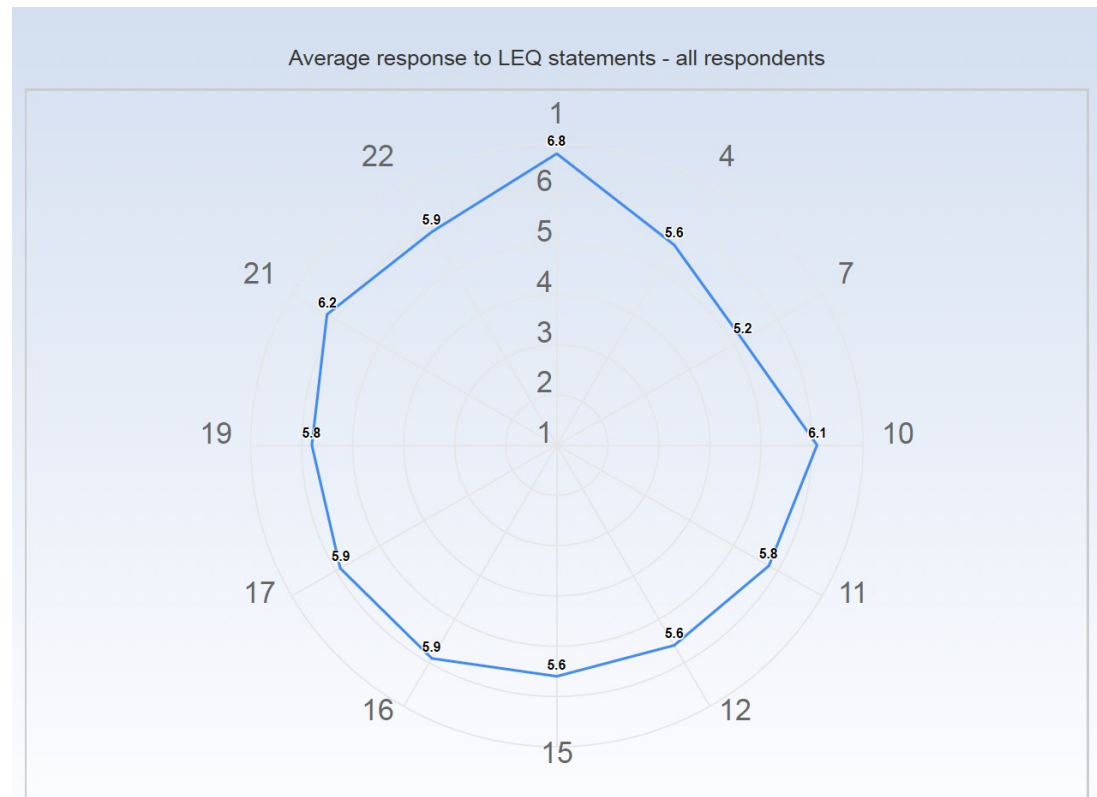
Vad behöver förbättras: Datorlabbets instruktioner och frågor; ge info om varför olika deadlines för uppgifter (reflektioner); diskutera med lärarna om flervalsfrågor för föreläsningar; utveckla en metod för att undvika ojämna bidrag, typ signerad kontrakt mellan studenter plus log-fil med studenters bidrag; diskutera med lärarna om flera projekt; be programmet om en doktorand som kan vara assistent.



Kursanalys

BB2570 - 2023-01-13
Antal respondenter: 35
Antal svar: 8
Svarsfrekvens: 22,86 %

LEARNING EXPERIENCE





Vidareutveckling för nästa kursomgång

Förslag på åtgärder:

- 1) Utveckla datorlabbetts instruktioner och frågor;
- 2) Ge info om varför olika deadlines för uppgifter (reflektioner mm);
- 3) Diskutera med lärarna om flervalsfrågor för föreläsningar;
- 4) Utveckla en metod för att undvika ojämna bidrag under projektarbete, typ signerad kontrakt mellan studenter plus log-fil med studenters bidrag;
- 5) diskutera med lärarna om flera projekt;
- 6) Be programmet om en doktorand som kan vara lärarassistent.

Dessa förslag kommer att diskuteras under möte med alla lärare under vår 2022 (mars eller april). Alla uppkomna problem kommer att diskuteras och åtgärdas.



Further development for the next course round

Suggestions for measures:

- 1) Develop computer lab instructions and questions;
- 2) Give information about why different deadlines for tasks (reflections, etc.);
- 3) Discuss with the teachers about multiple choice questions for lectures;
- 4) Develop a method to avoid uneven contributions during project work, such as signed contract between students plus log file with project contributions;
- 5) discuss with the teachers about more projects;
- 6) Ask the program for a PhD student who can be TA.

These proposals will be discussed during a meeting with all teachers in spring 2022 (March or April). All problems that have arisen will be discussed and solved.



Studenters kommentarer

Workload:

On average, how many hours/week did you work with the course (including scheduled hours)?

Comments (I worked: 21-23 timmar/vecka)

The **mixture of pre-recorded and in-class lectures** was an interesting approach. I am not a huge fan of pre-recorded material in comparison to classes directly given in class, but the fact that most classes were given either in person or recorded but with a reasonable margin of time for completion of the reflections or such was fine. The **project was a huge time sink**, especially depending on how much work one had to do in comparison to the other group members, but was **a satisfying project to complete**.

Comments (I am: **Internationell masterstudent**)

Adapting to this course was easier than I thought.



Studenters kommentarer

What was the best aspect of the course? (I worked: 6-8 timmar/vecka)

It was fun

Project - learning interesting ideas and doing it on our own is the best

What was the best aspect of the course? (I worked: 9-11 timmar/vecka)

The project was a good application of knowledge.

What was the best aspect of the course? (I worked: 12-14 timmar/vecka)

The discussions and flipped classes view

It feels like a very relevant subject that will be useful for the future

What was the best aspect of the course? (I worked: 18-20 timmar/vecka)

For me the feedback reflections was the best part of the course for me, because it helps me search deep into the course and know more about the course.

What was the best aspect of the course? (I worked: 21-23 timmar/vecka)

I think the course is very well-tailored to what it is meant to achieve: learning about LCAs and systems thinking in general. The teaching by different professors is well-coordinated and does not result in a more chaotic structure of the course, as other courses may suffer from. The project also allows you to get hands-on experience with the LCA Activity Browser to a high extent, which is good. Some of the examples in the course, such as the lecture about Food Systems, are especially intriguing in the way they were taught and the content of the lecture being thought-provoking.



Studenters kommentarer

What would you suggest to improve? (I worked: 6-8 timmar/vecka)

Only the computer lab questions ANSWER: will improve this next year

Also have MCQs based on lecture Along with reflections. Would suggest MCQs → Reflection ANSWER: good idea, will try next year, need to ask teachers to provide MCQs for their lectures.

What would you suggest to improve? (I worked: 9-11 timmar/vecka)

I hate groupwork where you do not get to choose your group. This time I had written almost 1/2 of the report before the rest of my group finished the report on the last day... Also the instructions for the Activity Browser exercise was not adequate, they expected more answers than the questions detailed.

Was quite confused about what we're supposed to know and remember. May be better in giving information in advance instead of for example one day before the exam

What would you suggest to improve? (I worked: 12-14 timmar/vecka)

The lab session could be more informative ANSWER: will improve this next year. However, it has been interesting to be introduced to a new programme but we felt a bit lost for the modelling in the project as we did not know how to efficiently use the programme ANSWER: will fix next year.

The course feels very unorganised and unprepared ANSWER: Very general and unspecific, and in contradiction with other students (course very well-tailored etc). The different lecturers had different approaches to what was to be done and in-class discussions about the LCA projects made the actual project harder since most of the group didnt attend class so we got very different ideas of what to do. We also got the projects quite late (ANSWER: projects were given first week.) so it would have been better to have more general examples to discuss during class. The computer exercises were quite unclear, especially since the files didn't work and the new files were only sent out in the zoom chat and not updated on canvas which led to many people not getting the new files ANSWER: will improve this next year. So there was a lot of sending the files from student to student. The reflections/quizzes before or after class constantly had different deadlines which made them harder than necessary to keep track of. Why not set the same time before for all before-deadlines and the same time after each class? In other courses there has been a set time, e.g. 5 pm two days after for all deadlines due after the lecture ANSWER: there is a good reason for this, and I do accept late submissions. Will explain better next year.



Studenters kommentarer

What would you suggest to improve? (I worked: 18-20 timmar/vecka)

I will encourage **more videos** both on the recorded lectures and from youtube, because everything may not be well explained on the presentation slides **ANSWER: will discuss with teachers.**

What would you suggest to improve? (I worked: 21-23 timmar/vecka)

On one hand, **most assignments seemed to take a really long time to get graded** **ANSWER: what assignments? Unclear. Reflections were graded timely, project reports were submitted after course completion and graded timely before final grading deadline.** Perhaps having TAs assist in the grading of these assignments and not just the labs would help move this task along. On the other hand, my biggest issue with the course lies on the project and communication in general. As mentioned, the experience within my project group was terrible. This can not always be avoided when groups are randomized according to topics of interest, but we found no way to get help. I know some of my group members (the ones that actually got work done) reached out to Ines regarding our issues, only getting a reply in a generalized announcement in Canvas. Group members got an infimum amount of work done in comparison to others, who therefore had to step up and complete the whole project to carry it forward, and we had no way of making them 'wake up'. Thus, providing further assistance in this regard (being more communicative, replying to emails, and offering assistance to such groups) would be greatly appreciated, especially if you consider how such assignments are Pass/Fail and, if these people get nothing/barely anything done, then they will still get a Pass thanks to the group completed by the others. **ANSWER: Work overload is an issue for teachers, and I sometimes fail to answer mails. Discussed the problem in teachers' lunch, will fix next year with signed contract and log file in Goole docs or similar.**



Studenters kommentarer

What advice would you like to give to future participants? What advice would you like to give to future participants? (I worked: 6-8 timmar/vecka)

Choose your project topic wisely and **focus on lca browser**. Project is heavily dependent on browser would suggest to **learn it in lab as much as possible**

What advice would you like to give to future participants? (I worked: 9-11 timmar/vecka)

Go to the lectures What advice would you like to give to future participants? (I worked: 12-14 timmar/vecka)

Work from the beginning on the course content, **it is not a difficult course but time-consuming**.

Be prepared for it to feel like a rather messy course and try to keep track of all the deadlines.

What advice would you like to give to future participants? (I worked: 18-20 timmar/vecka)

They should take their feedback **reflections** serious, it will help them know much more about the course

What advice would you like to give to future participants? (I worked: 21-23 timmar/vecka)

Organize your time effectively in regards to recorded lectures, assignments and, most importantly, the project. Get working on it early, **split the work up evenly among your group members**.



Studenters kommentarer

Is there anything else you would like to add? (I worked: 6-8 timmar/vecka)

Could add **more topics for project**. Could add something like a mini project in computer exercises

Is there anything else you would like to add? (I worked: 12-14 timmar/vecka)

The LCA project was interesting but it would have been good to get it a bit sooner cause nor it got a bit stressfull to have the time to fix everything before the presentation. And we had one **team member that didnt participate as much as the others** or do the things they said they would which led to another member having to fix things last minute.

Is there anything else you would like to add? (I worked: 18-20 timmar/vecka)

Generally, **LCA was an interesting course**, and the lessons learned has created a conscious effort on my part to help build a sustainable environment



Studenters kommentarer

The course was challenging in a stimulating way

Comments (My response was: +1)

Some parts were harder and more interesting than others.

Comments (My response was: +3)

The **project work really tested a lot**

I was able to practice and receive feedback without being graded

Comments (My response was: +3)

Lab exercise helped a lot

The course activities enabled me to learn in different ways

Comments (My response was: +3)

Working in project learnt a lot

I was able to learn by collaborating and discussing with others

Comments (My response was: 0)

Though discussions in class were stimulating, project work in which other group members refuse to collaborate makes discussion and the progress in the course extremely difficult.

Comments (My response was: +3)

Project was crucial



Studenters kommentarer

I was able to get support if I needed it

Comments (My response was: -1)

When facing the issues I have brought up with my project, the project supervisor often refused to see the issues in the group dynamic, and the course coordinator did not reply to group members writing about the issues faced. **ANSWER: Work overload is an issue for teachers, I sometimes fail to answer mails. I did however send a message to all students reminding of equal contribution in project work. Discussed the problem in teachers' lunch, will fix next year with signed contract and log file in Goole docs or similar. Got good input from colleagues.**

SPECIFIKA FRÅGOR: What is your impression/experience of the the Activity Browser program? (Used in computer labs and LCA projects)

It was **challenging but interesting to learn**. I understand it was the first year used but maybe for the project feedback, it would be interesting **that teachers would have some basic knowledge about it too**.

It was okay, it would have been good **to get some more clear instructions** on how to use it.

It was **good**

Amazing. I think that was the course Highlight

ANSWER: Great, then will continue with Activity Browser

Would have been good if the TA's knew what they were doing.

I thought the **program was pretty good**. Evidently, project-wise, there are a lot of processes missing from the databases utilized for the completion of the project, but that is not really something that can be avoided or fixed when coordinating the course. As a whole, however, **the program is relatively intuitive and straightforward to use**. The labs from the class helped in this regard, since they were not too difficult but got you working with the software and made you familiar with it. As such, knowing that the Icopt was used before, I would **recommend continuing to use the Activity Browser** going forward.

It is a **very good program**, though not all information are gotten from it.