## Kursanalys

| Kurstitel: Cultivation Technology | Högskolepoäng: 7.5 |
| :--- | :--- |
| Kurskod: BB1300 | Läsperiod: 1 |
| Kursen ingår i programmet: Biotechnoloy |  |
| Termin: H2020 | Examinator: Antonius van Maris |
| Kursansvarig: Antonius van Maris | ? |
| Antal registrerade studenter: $\quad$ Antal godkända vid sista kursdatum: ? |  |
| Svarsfrekvens kursvärderingsenkät (\%): | 95\% (61 of 64 who wrote the exam) |

1. Beskrivning av genomförda förändringar till detta kurstillfälle

- The course was adapted as required during the Covid-19 pandemic (online lectures, lectures made available as video and workshop, workshop time used as question hour, lab and written exam at AlbaNova).
- The chemostat modelling workshop was adjusted to better fit the available time.
- Parts of the book were updated and made freely available as PDF.


## 2. Sammanfattning av studenternas kursvärderingar

See attachments for the questions and outcome of the course evaluation questionnaire.

The overall course ( 8.5 out of 10 ), the teachers ( 4.35 out of 5 ) and the course lab ( 4.5 out of 5 ) were evaluated very positively by the students. This year, the exam difficult was rated high both concerning quantity (4.3 out of 5 ) and quality (4.4 out of 5 ).

Although looking forward to lectures with physical attendance, both students and teachers considered this a very successful instance of the BB1300 course.

## 3. Reflektioner kring kursens genomförande och resultat

a. Kursens styrkor:

- Well established course with appropriate format and diverse opportunities to study the material. The combination of lectures on theory (live or recorded), workshops, mid-term exam and lab course enables the students multiple opportunities to master and contextualise the course material.
- The availability of the recorded lectures seems to have had a positive impact on the course. Although it decreases the 'live' attendence, it enabled many students to catch up through self study ( $75 \%$ passed the regular exam) and also enabled students that had difficulty with the speed of the lectures to follow them at their own speed (see student comments).
- The exam is selective for those students that have achieved the course objectives. $75 \%$ of the students that took the exam (including students from previous years) passed the course. A large fraction of these students (33\%) achieved very high grades (A-B).
b. Kursens svagheter:

The lack of retention of basic information from high school or previous courses (e.g. basic mathematics and mass balances) by a sub population of the students necessitates repetition of that material and slows down the learning experience of other students. I think the students would benefit from more courses in the first two years that demand active use of basic mathematics and/or engineering skills in a biotechnological context. That should activate and maintain the engineering skills that are in line with a Bsc level engineering education and prepare for the MSc level education.

## 4. Förslag till förändringar för kommande kurstillfälle

None needed, aside from hopefully returning to non-Covid-19 version.

## 5. Övriga synpunkter

N.A.

## Bilagor:

1. Course evaluation outcome (excel file)
2. Course evaluation questionnaire (below)
3. Grade distribution 2020-2021 main examination (below).

## Course Evaluation Questionnaire Cultivation Technology BB1300

Instructions: Encircle the most appropriate answer. Leave empty if not applicable to you in 2020-2021.

## General

1. Which percentage of the lectures did you attend?
0-10\%
20-30\%
30-70\%
70-90\%
90-100\%
2. Which percentage of the workshops did you attend?:
0-10\%
20-30\%
30-70\%
70-90\%
90-100\%
3. The course organisation was good:
Totally disagree
Disagree
Neutral
Agree
Totally agree

## Teacher: Lectures

4. The teacher clearly explained the subject material:

Totally disagree Disagree Neutral Agree Totally agree
5. The teacher presents the subject material in a stimulating and instructive way:
Totally disagree Disagree Neutral Agree Totally agree
6. The teacher speaks clearly and at an appropriate speed:
Totally disagree Disagree Neutral Agree Totally agree
7. The teacher was available for questions outside lecture/workshop hours:

Totally disagree Disagree Neutral Agree Totally agree

## Teacher: Lab course and chemostat workshop

8. The teacher clearly explained the subject material:

Totally disagree Disagree Neutral Agree Totally agree
9. The teacher presents the subject material in a stimulating and instructive way: Totally disagree Disagree Neutral Agree Totally agree
10. The teacher speaks clearly and at an appropriate speed:

Totally disagree Disagree Neutral Agree Totally agree
(See other side for questions 11-20)

## Course specific

11. Compared to the number of credits (7.5) the study load of the course is:
Too low Low Correct High Too high
12. The study material (book, lectures, exercises, canvas) is appropriate for the course: Totally disagree Disagree Neutral Agree Totally agree
13. The workshops contributed to my understanding of cultivation technology:

Totally disagree Disagree Neutral Agree Totally agree

## Lab course

14. The organisation of the lab course was good:

Totally disagree Disagree Neutral Agree Totally agree
15. There was a good connection between lectures, lab course and learning objectives: Totally disagree Disagree Neutral Agree Totally agree
16. The lab course contributed to my understanding of cultivation technology:
Totally disagree Disagree Neutral Agree Totally agree

## Exam

17. I knew what was expected of me for the exam:
Totally disagree Disagree Neutral Agree Totally agree
18. The exam was representative of the study material:
Totally disagree Disagree Neutral Agree Totally agree
19. There was sufficient time to write the exam:
Totally disagree Disagree Neutral Agree Totally agree

## Conclusion

20. What is the overall score you give this course? Rated from 1 (bad) to excellent (10).

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

## Comments:



Figure A3.1 Number of students with a certain grade for the regular exam of BB1300 in the 2020-2021 instance after completion of FX.

