Faculty of Engineering

Minutes

Subject	Education Committee
Date and time	April 13, 2021
Location	Zoom
Invited	Associate Professor Massimiliano Errico, Program Coordinator, Chair Associate Professor Knud V. Christensen, Program Coordinator Associate Professor Shuang Ma Andersen Professor MSO Henrik Karring Associate Professor Martin A.B. Hedegaard Professor MSO Morten Birkved Associate Professor Morten Østergaard Andersen Program Administrator Mette Smølz Skau Student representative Christian Ringskær Student representative Sebastian Krogh Student representative Mathilde Snijder
Cancellation from	Martin A.B. Hedegaard and Morten Birkved

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1. Welcome

2. Possible modifications of the first semester courses of the master.

- Techno-Economic Assessment has been modified due to evaluations. Aspen has been removed due to the different background of the students coming from different programmes.
- The professors responsible for the Natural Product Chemistry course, left IGT. However, a new position will open up soon. The programme may buy the service outside, if the new hire is not a match for this course. Protein Technology has been merged into this course that has now changed name accordingly.

3. Follow up on last year's action plan from the status meeting

- Increasing the level of practical skills in the first year of the programme:
    - The programme has not been able to increase the practical skills at this time, mostly because of corona restrictions and the university lock down. However, the programme have used more instructors in

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the first semester chemistry. Unfortunately, it hasn't changed the results much. The drop-out seems to be increasing on the second semester.

- A drop-out analysis is required
    - done

- Increase the number of bachelor's and master's theses as well as final projects that are carried out in collaboration with the business community (both programs)
    - The programme already encourages this and has an average of about 50 % of company collaborations on the master level.
    - The number is lower on the bachelor level. Corona is part of the problem, but many students are also doing in-house projects with their supervisor's projects. The students should have direct contact with the companies through meetings and by presenting their work to the companies. The students should have a contact person in the company.
    - The bachelor students might not be very motivated to collaborate with companies on their bachelor projects since they have a chance to do it on the master project.

- Encourage students for other forms of business collaboration through student jobs, company projects, summer jobs, etc.
    - We can promote the In-Company better and have it more obvious on the website. However, there are already about 5 students doing an In-Company project this semester.

- Make a targeted master's introductory course with a focus on employability (only the civil engineering education):
    - This was done by the programme mentor Katrine Esmann Pedersen

- The master program wants to change title to Chemical Engineering and Biotechnology.
    - This has been done.

4. Exam statistics

- **Industrial Separation Technology**:
    - 50% failed but there were only two students, so it is not statistic significant
- **Design og Ideal Chemical Reactors**:
    - 37,9% failed: The course was offered as hybrid teaching, the theoretical lectures were given online in both asynchronous and synchronous way, while the exercise classes were in presence. More than 40 students

were enrolled but online but there were never more than 20-25 students present. This trend was constant all the semester. The teacher invited all the students to ask for personal or group meeting (through Zoom) if necessary but the offer was mainly accepted by the students already following the course. At the time of the exam, SDU was starting the lockdown and Ideal Reactor was the last course done in physical presence. At that time, it was announced that not showing up was not considered as a used attempt giving a reason to some student to postpone the exam. After a check of the re-exam, it appears that the situation will remain unchanged with about a total of 30 students passing the exam. It should be noted that the course was very positively evaluated by the students. The number of students who attended the course and the number of students who passed the exam is the same.

5. Unemployment rate and dropout rate

- Dropout
    - The drop-out rate has increased from 27% to 34% in the BEng, in the master it has increased from 15% to 29%
- Dropout monitoring:
    - The changed admissions criteria that makes it harder to get admitted was hoped to help, but the quote 2 interviews have been cancelled due to corona, and there won't be the necessary selections. This means that the drop-out rate is not likely to be better for the cohort that begins in the fall 2021
    - Many of the student who didn't pass the first-year requirement (førsteårsprøve) received dispensations due to the corona situation and were allowed back in the programme.
    - Some students dropped-out because they are not very interested in the programme. They might want to study Bio-Chemistry or Molecular Biology but haven't been able to meet the admission requirements on those programmes. Some of those programmes have heightened their admission requirements so we might be receiving more of the students rejected from those programmes.
    - An engineering programme can have a high status and have been chosen due to that, rather than sincere interest. Students who apply to Construction know what they are entering. They might not know what they are signing on to, when they apply to Chemical Engineering and Biotechnology.
    - It is important to communicate to potential students what the programme contains and that it is an engineering programme and not a science programme. It appears that many of the students who drop out, are students who hoped the program would be about something else.

- Many of “the good stories” that the programme is promoting are too science focused (cannabis technology, curing cancer with carrots etc.) The programme needs more stories about the technology part.
- UG.dk is fine but has a focus on biotechnology and technical chemistry. These terms might have to be explained further.

- Study start evaluation:
  - The students rated the mentors and “holdets time” high but was generally disappointed with the study start. That might have to do with the corona restrictions.
- Participation in the study start:
  - The low number of participants might have something to do with the time of day, the “holdets timer” were held. It is more motivating to have it between two lectures and not too late in the day.
- Unemployment:
  - Some students have troubles approaching the companies. They sometimes write poor resumes and are not very good at networking.
  - There is an elective on the master but there is only 30 spaces and the course is for the entire technical Faculty.
  - IDA offers some help with the resumes, but it is rather generic because it is for both TEK and NAT
  - It might be a good idea with more courses in business, entrepreneurship, economics, etc.
  - The programme needs to be tuned to give more insides about how to approach the work market.
- The dialog in the advisory board:
  - Next meeting May 6th. The advisory board is running well. The programme receives positive and useful feedback.
- Evaluation of the entire programme: Studenterevaluering af hele uddannelsen
- ZOOM og LÆRBAR
- SMU: The programme has not received the report yet.
- Research-based education, knowledge base and educational economy: Forsknings-basering, vidensgrundlag og uddannelsesøkonomi
- Teaching evaluations: it was discussed in the February meeting

6. Planning of Advisory board meeting

The next meeting is on May 6.

7. Planning of Future Education Committee meetings

Next meeting will be held in June

8. Any other business