

Minutes: Advisory Board Meeting for Engineering programs in Engineering, Innovation and Business

Friday 29th of October 2021 from 12:30 - 15:00

The meeting was held at Banke, Ormstoft 5, 6400 Sønderborg

Invited to the meeting: Bende Egebro Daugaard (OJ Electronics), Philip Baxter (Banke), Sara Lind Kolbeinsdottir (Danfoss), Ronen Hadar (LEGO), Claus Hegelund Sørensen (Linak), Niels Albert van Dulmen (Danfoss), Dwivedi Sanjeet Kumar (Danfoss), Raluca Nemes (LM Wind Power), Neda A Henriksen (Danfoss) Marianne Stenger (SDU), Fei Yu (SDU), Arne Bilberg (SDU), Silke Tegtmeier (SDU), Christina Skytte Møller (SDU)

With apologies: Silke Tegtmeier (SDU), Neda A Henriksen (Danfoss)

Agenda:

1. Welcome and guided tour at Banke, followed by lunch

We started the Advisory Board meeting with a guide tour by Rasmus Banke, CEO in the company. After the guided tour Philip gave a presentation of the current challenges and opportunities for the company during lunch.

2. Theme of the meeting:

The future of Engineering, Innovation and Business?

Marianne started this part of the agenda by presenting status and numbers for the program among other numbers for the current uptake for 2021. On the bachelors there has been an acceptable number of applicants and 26 students started on the program in September. On the Master program the picture is unfortunately not the same. The last 2 years there has not been offered scholarships on the MSc in EIB, as there right now is high focus on building up the CIE (Center for Industrial Electronics) and CIM (Center for Industrial Mechanics) sections. So, all the scholarships go to the Electronics and Mechatronics master programs and this is directly reflected in the number of applicants for the EIB master program. The program only received 31 1st priority applicants in 2021,

which is very low compared to the number for the two other master programs (MC: 204, ELEC: 159). Only 11 students have started on the MSc EIB program in 2021.

Then Arne took over and presented the organizational changes on the Technical faculty and introduced the research areas that the section is focusing on. In relations to the organizational change, the Technology, Entrepreneurship and Innovation (TEI) section is no longer part of the Mads Clausen Department but is part of the Department of Technology and Innovation. The other educational programs in Sønderborg are part of the Department for Mechanical and Electronics. The Mads Clausen department is still represented in Sønderborg via the Nano Syd section but has no educational programs in Sønderborg, only in Odense.

In relations to the research areas, the section is focusing on general engineering and how to generate innovate products and production of the future. A big focus for the researchers is the Smart Factory, where the digitalized and automated factory of the future is designed and developed. The researchers work with virtual simulation tools where virtual prototypes and digital twins of the production can be tested in a virtual VR environment before implementation. So, focus now is in the direction of digitalized sustainable manufacturing and supply chains.

Going back to the educational program, Marianne presented how the program is built on columns within Technology, Entrepreneurship, Business and Innovation. Looking at the current staff and the research areas that Arne presented there is a small mismatch. Most of the staff within the areas of entrepreneurship, business and innovation is no longer employed, so the program must be changed in the direction of the digital and automated manufacturing. But should the program turn into a Production Engineer? Should we consider closing the MSc program and change the bachelor to a Bachelor of Engineering program with an internship? For this and many other considerations we need the input from the advisory board, so the rest of the meeting was arranged as a workshop/scenario building.

The advisory board members were asked to work in groups and consider following three questions:

- 1) Industry trends and other drivers affecting future competencies
- 2) Consequences and response strategies
- 3) Concepts/draft scenarios for creating sustainable competitive advantage?

Output of the workshop:

The advisory board members had a lot of good comments to the future competences that the program should focus on, such as circular economy, sustainability, digital tools for project managers, data analytics, data sciences, big data, digital supply chains, IOT and

digital products, digital production technology and electrification. There should also be focus on how to navigate politically, value creation for the customer, simulation and modelling as new business opportunity, keeping the teaching staff's competences up to date, involve companies in the teaching, more direct involvement of companies, offer internship on the program and investigate scholarship funding via local companies. It will also be relevant to teach the students in problem solving and business modelling.

The advisory board recommends that we keep most of the program as it is, and the rest should focus more on the research areas within the digitalization and automation production and data-handling.

As a conclusion, the program has now a lot of good input to work with. As a comment to the advisory board – the program has a lot of direct contact with companies and a lot of company involvement in the teaching, so this we are doing already, which we should be better to communicate so it's more visibly.

The program will now focus on how to adapt the program with some of the above mentioned suggestion in the program with the current teaching staff and the research areas in the section.

3. AOB

No further comments