Minutes of meeting (2023-04) in the Study Board of Build, Energy, Electronics and Mechanics in Esbjerg 05.03.2023

Present:
Matthias Mandø (MMA) (Chair), Daniel Ortiz Arroya (DOA), Morten Eggert Nielsen (MEN), Rokas Sukauskis (Vicechair), Visnu Ritesh Vijayakumaar Palanisamy, Mads Pagh Nielsen (MPN), Anette Larsen (ALL) (secretary), Christian Winther Dissing (CWD)

Absent:

Basira Khaksar

Copy:
Sara Lindberg Hildebrandt, Britta M. Jensen, Anne Linde Poulsen, Pia Vestergaard Jensen, Christian Winther Dissing, Mads Pagh Nielsen, Tamas Kerekes, Gitte Hageman Christensen, Head of department, Rikke Steensbæk.

Minute taker: ALL

Agenda

1. Approval of agenda
2. Semester evaluations, autumn 2022
3. Study programme revisions, status
4. AOB

Minutes

1. Approval of agenda
Agenda approved without comments.

2. Semester evaluations, autumn 2022
We will go through each individual semester. There are new questions which should secure more constructive feedback.

Please see enclosure below.

3. Study programme revisions, status
MMA goes through timeline and overview:

- MMA has reviewed all proposals from PECT and AIE.
- Everything will be sent round for your comments.
- There are not many new descriptions, but they have been moved around.

Specific changes:
- Do not forget to remove references from third semester to fourth in signal processing.
- AIE – There has been a lot of discussions about the programming course on AIE 2 semester.
- There is a wish in the BEEM study board and among the teachers that this should be a 10 ECTS course with emphasis on imperative programming. After clarification with Head of Studies and

Head of Department we will continue with the 5 ECTS course Real time systems and graphical programming, same as BSc Energy.
Subsequent decision: the course will be a 5 ECTS course in both study programmes, AIE and Energy.

- SEE – PECT is changed to Fluid and Process Systems (FPS), thus retiring direct reference to combustion in the study programme.
- OES remains the same.
- SEE model in study programme to be changed.
- Changes in APEL are undecided, we have to choose which way to go: an umbrella Master's or two separate Master's programmes. At this point, it is unclear which strategy to follow:
  - APEL remains the same, and a new study programme in Artificial Intelligent Systems is created. This is a long process.
  - APEL changes its name to XXX and there will be two specialisations: Advanced Power Electronics and Artificial Intelligent Systems. If we choose this, the change must be ready before the summer holidays. MMA can prepare this, to be sent to the dean, cc. MPN, LAR (Head of Department mail).
    Subsequent decision is to go with the former option.
- Mechanics and Civil engineering, two unresolved issues:
  - We must get commitment from Build; this is difficult given their current situation. Hopefully we will know more next week.
  - Certification. Micro credentials are not enough, there has to be ECTS.
  - If we do not resolve these issues, we will continue with the current study programme for Civil engineering. This will require a solution to the concrete course.
- BSc in energy will remain the same with no change.

4. AOB

There are two cases where MMA wants a hearing in the study board.

4.1. Application to attend second reexam in August

We ask the study board to discuss and decide whether a student may take the 2nd re-examination of a course in August.

Background
A student of Mechanical Engineering is applying for a re-examination in Process regulation, instrumentation and safety in August.

He has taken the exam and re-exam in Process regulation, instrumentation and safety (27.03.2023 and 26.04.2023).
For various reasons, re-exams in the subject are offered in both April and August, which is unusual. A re-exam is thus already planned for August. Alternatively, the next ordinary exam is in March 2024.

Information about the student's situation
The student lacks in his education:

- Diploma engineering internship
- Bachelor project
- Course in Process regulation, instrumentation and safety

Diploma engineering internship and bachelor project
The student is currently in an internship, which ends at the end of September. Ordinary exam V23 is expected. After this, he will write his bachelor's project, which also ends with an ordinary exam in winter 2023.

Course in Process regulation, instrumentation and safety
Normally, when you have to take an exam in a subject for the third time, you have to follow the course, and this is in the spring of 2024. If the student must follow the subject, it will thus extend the study time.
The student has access to all lectures online.

What should the Study Board pay particular attention to?

- That you normally have to follow a course when you have to take the exam for the third time.
- That the ordinary course is in the spring, after the student is expected to have completed all other exams, incl. Bachelor project.
- That 2 re-examinations are usually not offered from the beginning.

Comments:
- In general, we should observe the rules.
- This case is different because he is set to finish his education shortly.
- It is a good point that he has access to online lectures.

Decision:
- The student must prepare a study plan and then the study board will allow that he takes the reexam in August.

4.2. Application to "switch" semesters

One student under the IRS study programme wishes to switch semesters so that he takes second, third and fourth semesters in a row and then finishes with the first semester project. This is due to the fact that there are only two students in this year, and they would like to work together.

Exemption granted.

Action points, incl. responsible people – Study board meeting 03.05.2023

- ALL will prepare a revised study plan for IRS student (not a new individual study programme).
- Study board will contact Mechanical Engineering student about study plan

Action points, semester evaluations, autumn 2022 (Study Board meeting 03.05.2023)

General

- MMA to contact semester coordinator to remind him that questionnaires must be filled out.

2. The semester's coherence and planning

- MMA will talk to Jan Christiansen about registration of inventory.
- The department are planning employment of 2-3 people to address the lack of teaching resources on civil/mechanical engineering.
- Course: Computer based analysis: Discussion about redoing the course. The course will be revised for the next revision of the study curriculum.

3. Project

- Get information about acquisition of equipment out to students via supervisors.
- MMA will also talk to Jan Christiansen about electrolyzer.

4. Courses

Course, programme, semester, and teachers	Agreed upon follow-up
PBL 1st semester	A lack of information, coordinators have already talked to teachers. Also, next year, the exam will be changed.
Applied Engineering Mathematics EN3 and AIE3	
Electrical Machines AIE5 and DS5	We will continue to discuss the issue of online teaching and find ways to improve this.
Kontinuummekanik, rumbjælker og stabilitet BYG5 and MASKTEK5	MPN to discuss with Build.

5. Study environment

- There have been 3 anonymous indications on SurveyXact from students about harassment. The study board emphasizes the no tolerance policy on harassment. The study board will ask study secretaries to send out mail about harassment/abusive behaviour.

Enclosure to 2. Semester evaluations, autumn 2022

The semester evaluation of the autumn semester 2022 was the first time the study board used the newly formulated questions in the questionnaire. These new questions were formulated by a task group with members of both the department's study boards. The new questions aim to extract more constructive answers from the students and the task group has tried to make the questions easily understandable for the students and to reduce the number of questions. The purpose of these changes is to ensure that data from the questionnaire becomes more valid and to make it a better experience for the students to reply. In addition, there has been added 9 new questions regarding the study start for the students who have come from outside AAU and started on the first semester on the master's programmes in accordance with AAU's revised quality assurance system.

The response rate ended on 53 for the BEEM study board and 66 in total for both of the department's study boards. Hence, there has been a rise in the response rate compared to the two previous autumn evaluations where the response rates were 62 and 57 respectively. Looking at the response rates from each individual semester, only a few students from mechanical engineering responded except on the 5th semester were 67 % responded. Furthermore, the response rate was low on Energy 3rd semester, 38%, and OES3, 22%.

Action point:

- MMA to contact semester coordinator to remind him that questionnaires must be filled out.

Comments:

- The response rate is high, as per the enclosed excel sheet. In Esbjerg it is 53 percent which is a bit lower than Aalborg.
- Mechanical engineering only has a few replies. There are already allocated 15 minutes at semester start up for the evaluation, however, MMA will remind ASKR (semester coordinator) that he should make sure the students answer the questionnaire.
- Ensuring the quality of the study programmes and the study environment are important for the study board, so we need some quantity in the feedback.

To ease the study board's processing of the results from the evaluation, CWD has gone over the results and identified which critical points the study board needs to process. The study board processes the points where the students give critical as well as positive feedback. The positive feedback will be highlighted in the end where the study board will discuss the courses with highest ratings from the students.

These minutes are structured in correspondence with the sequence of the questions in the questionnaire to the students. The table under Courses indicates what and where the students give feedback to and how the feedback is reflected in both quantitative and the qualitative data as well as who the relevant teachers/coordinators are. In the column, 'Agreed upon follow-up', it is noted how the study board has decided to follow up on each point.

1. The study start on the first semester of the master's programmes

Only two students have answered the questionnaire regarding the study start but it is only a small number of students who have joined the programmes from outside AAU. These two students rate their study start very favourably across all the 9 questions.

- No comments from the Study Board.

2. The semester's coherence and planning

Overall, the students rate the coherence and planning of the semester very well. The most critical semester is the 3rd on Civil Engineering where 5 out of 10 rate is as 'poor' or 'very poor'. In the comments, the students from this semester explain that the courses came too late in the semester which made it stressful to make the project because they needed the knowledge from the courses to make this. In addition, the students remark that it was unclear what the purpose of 'Computer-baserede analyser' was and a couple of students also point out that this course should be split in two courses. Other than that, the students give the following critical comments across all the semesters:

- 1st semester: Better coherence between the PBL course and the project. The tools that are taught in the course come too late to use properly in the project. A student also notes that some of the links on the Moodle page does not work.
- 3rd semester: A student wishes earlier scheduling of exams in January to help international students plan their travel. The student also notes that there is a lack of inventory in the electronics lab.
- 5th semester, Civil Engineering: There is a lack of cohesion between the project and the courses. Criticism of the course "Kontinuum-mekanik" which will be discussed under courses.

Action points:

- MMA will talk to Jan Christiansen about registration of inventory in the labs.
- Employment of 2-3 people for civil engineering.
- Course: Computer based analysis: Discussion about redoing the course (part of study programme revision)

Comments:

- For Civil Engineering a lot of D-VIPs are used. We are trying to man up and hire 2-3 scientific staff for civil engineering.
- In the corresponding semester evaluations from the semester group meetings, the civil engineering students do not seem quite so unhappy on the 5th semester.
- We believe that this semester is poorly rated by the students because of courses being late in the semester and postponed teaching, and that this is an isolated case.
- Computer based analyses. Teacher was away for a course at the beginning of the semester. Purpose of the course is unclear to civil engineering students: they get theory first, and not the practical work, and do not see the coupling. We want to redo this course and are discussing other ways to do it.

- The course has two parts Steel structures and Finite Element analysis (FEM). The main concern is teaching in steel structure. Teacher was away at the beginning of the semester.
- Scheduling of exams. This is really a puzzle for the study office and MMA finds that they are quite fast and it will be not be possible to schedule them faster.
- Lack of inventory in electronics lab. A better system could be established. MMA will talk to Jan Christiansen to see if we can figure something out and improve the system.
- Coherence between courses and project. This is an issue for both civil and mechanical engineering. MMA has already talked to teachers, and we are trying to coordinate.
- PBL on 1st semester Energy. No action will be taken. As mentioned above, MMA has already been in contact with the PBL teachers about these comments.
- Critique of Kontinuum-mekanik to be discussed under item 4.

3. Project

Likewise, the students rate their projects very well. Generally, they have yielded a high academic outcome from the projects and had a satisfactory cooperation with their supervisor. However, there were a few points of critique.

- AIE1 and AIE3: Some students note that they wish for better lab equipment and tools.
- Civil Engineering 3rd semester: There is a lack of teaching in concrete foundations which is used in the project.
- Civil Engineering 5th semester: Again, it is noted that the students wish for more teaching in concrete since it is used in the project. On the other hand, the courses in 'Termodynamik' and 'Kontinuum-mekanik' lack relevance.
- APEL1: A student wishes for better lab equipment such as an electrolyzer.

Action point:

- Get information about acquisition of equipment out to students via supervisors.
- MMA will also talk to Jan Christiansen about acquiring an electrolyzer.

Comments:

- Lab equipment and tools. The students should always talk to their supervisor, and they will usually find a solution. Equipment costing less than DKK 1,000 can we generally just buy. If more expensive we have to seek funding from the section or external funding. LeadENG projects can fund up to DKK 10,000 MMA will make slide for semester coordinator with this information to be given to students at startup meetings.
- Rokas - it should be sufficient to develop proof of concept: buying smaller equipment, and it will work with an actual physical system. MMA agrees.
- Daniel – most of my students have got the equipment they want.
- Lack of teaching in concrete foundations. This has been addressed in connection with our ongoing study programme revision and extra teaching has been allocated in the meantime (so we do not wait until revised study programme becomes effective.
- Thermo-dynamics is relevant for Civil Engineering, and it must be placed somewhere.

- Electrolyzer. The main problem, says Rokas, is that in simulation in industry no one uses small electrolyzers. MMA have had talk with lab responsible in Aalborg. Generally, we can borrow equipment, including electrolyzers in Aalborg.
- MPN is already working to get more equipment for the labs.

Project oriented work

Comments:

- PBL method. Some students cannot see the value of PBL as a method. The PBL teachers give the students what they find is useful.
- Rokas – as a Master's student I see the relevance; the student has a responsibility to understand how this is relevant and how PBL relates to the engineering field. CWD confirms that later on in their studies, according to the survey, the students do see the relevance.
- It is interesting that on Civil no one finds PBL a good approach, compared to the Energy students.

4. Courses

Course, programme, semester, and teachers	Quantitative data	Qualitative data	Agreed upon follow-up
PBL 1st semester	5/7 students on civil engineering rate the academic outcome from the teaching as 'poor' or 'very poor'.	- lack of information regarding the exam. - lack of academic outcome.	A lack of information, coordinators have already talked to teachers. Also, next year, the exam will be changed.
Applied Engineering Mathematics EN3 and AIE3		- a wish for more focus on the 'applied' part of the course.	CWD will send the student's feedback to the teacher.
Electrical Machines AIE5 and DS5	Only 1/11 students rate the academic outcome from the teaching as 'good'. 4 rate it as 'very poor'.	- Several students are dissatisfied with the course being taught online.	We will continue to discuss the issue of online teaching ad find ways to improve this.
Kontinuummekanik, rumbjælker og stabilitet BYG5 and MASKTEK5	9/10 students rate the academic outcome from the teaching as 'poor' or 'very poor'.	- Very harsh criticism of Lars Pedersen's teaching: poor online teaching methods, lack of commitment and preparation, errors on slides, poorly presented course assignments.	MPN to discuss with Build.

Comments:

- In general, courses are well rated, however there was critique of four courses.
- The PBL course on 1st semester. A lack of information, coordinators have already talked to teachers. Also, next year, the exam will be changed. No further action.
- Applied engineering mathematics on 3rd semester. This is a surprise; the course is usually well received. Also, there are no comments in the semester evaluations from the semester group meeting. There was a lack of "applied" examples. We will take no action, but keep this in mind. The comments will be sent to the teacher. We await next year's evaluation and assess whether the problem persists.
- Electrical machines, 5th semester: both planning and academic content and quality of teaching. Whenever we have video transmission there are technical issues. We have no golden solution, but will continue to discuss the issue of online teaching and we have encouraged all lecturers to take courses in online teaching. It has also been stated that using Teams has been better evaluated by students than when the video system in the class rooms. Also, we should give freedom to teachers to try new things to make this better.
- Continuum Mechanics. The course is not included in the study programme after the revision we are currently planning. MPN will discuss follow-up on the critique with Build.

5. Study environment

5.1 The psycho-social study environment

- Only very few students do not feel comfortable in their study programmes. One student on Civil Engineering 5th semester completely disagree that they feel comfortable and comments that they feel it is a competitive environment and feel looked down on by some fellow students.
- Some students are concerned that 'Smuthullet' might be moved or closed because it helps the social study environment greatly. ASK have after this meeting presented plans for a new placement of Smuthullet.
- A student from AIE3 proposes that the groups for lab practices get mixed to integrate the international students with the Danish students.

Comments:

- Discussion about how to systematically avoid personal conflicts. There is nothing to address as such. Students are always welcome to have a conversation with our student counsellor, Heidi. A mail is sent out every year about the university's no tolerance policy on offensive behaviour. This could also be more a question of different mindsets than harassment.
- Proposal about mixing Danish and international students in lab exercises. This is difficult because of planning. MMA For the 7 semester, where there is an new uptake of int. students, we plan to make it mandatory to have mixed groups between students with an BSc from AAU and Int. students.
- Smuthullet. As the student bar is in the B wing of the building which will be handed over to Energistyrelsen, it will be moved. Head of Campus is working on a solution.
- Smuthullet's prices. We cannot dictate prices; students work there and sell beverages to make money to go on a study trip. No action.

5.2 The physical study environment

- Group room C1 121 is noisy according to one student.
- Suggestion to have screen monitors for each table in room C1 121.
- A student on AIE1 notes that the soldering irons in the student workshop should be improved.
- A student from Civil Engineering 3rd semester comments that it is inconvenient being on the top floor far away from the canteen.

Comments:

- Lab equipment was discussed above.
- Room C1.121. MMA has already raised this with Campus Service, no further action.
- Screen monitors. We cannot buy big screens for students.

5.3 Harassment and abusive behaviour

- 1 from EN1 Esbjerg, 1 from AIE5 and 1 from Civil Engineering 5th semester.
- The types of discrimination include bullying, discrimination based on ethnicity, based on religious reliefs and 'other'.
- All three students have experienced this behaviour from fellow students and one also from lecturers.
- None of them has contacted anybody regarding their experiences.

Action point:

- Study office to send out mail about harassment/abusive behaviour.

Comments:

- This is the first time, someone in Esbjerg reported harassment or abusive behaviour.
- It is important that we address this. We have a no tolerance policy. This should be taken up during semester group meetings where coordinator can inform about possibilities: You can get help anonymously; or contact the study board. Also, it should be stressed that they can have anonymity/confidentiality.

6. Top10 courses

The study board also wishes to highlight the positive feedback from the students and has calculated which courses with at least five respondents the students has rated the highest.

1. How do you rate the planning and the academic content of this course?

Top10	Course	N	Weighted average
1.	Videregående statik og styrkelære	11	1,1
2.	Modern digital control	11	1,5
3.	Probability theory, stochastic processes and applied mathematics	8	1,5
4.	Fundamental Energy System Physics and Topology	23	1,5
5.	Calculus	35	1,7
6.	Geoteknik og fundering	9	1,7
7.	Dynamik og udmattelse	10	1,7
8.	Grundlæggende konstruktionsmetodik	10	1,8
9.	Thermodynamics, Heat Transfer and Fluid Dynamics	13	1,8
10.	AC Circuit Theory	13	1,8

2. How well do you think that the quality of the teaching has contributed to a high academic outcome?

Top10	Course	N	Weighted average
1.	Videregående statik og styrkelære	11	1,2
2.	Fundamental Energy System Physics and Topology	23	1,3
3.	Modern digital control	1	1,5
4.	Probability theory, stochastic processes and applied mathematics	8	1,6
5.	Thermodynamics, Heat Transfer and Fluid Dynamics	13	1,6
6.	Geoteknik og fundering	9	1,6
7.	Calculus	35	1,7
8.	Grundlæggende konstruktionsmetodik	10	1,7
9.	Dynamik og udmattelse	10	1,8
10.	Data structures and algorithms	10	2,0