

**Minutes of the online meeting of the Programme Committee ME/VU**



Date : **Wednesday March 31, 2021**

Time : **08:45 – 10:30 hour**

Room : **Home office**

Present:

Chairman:

PC-members:

M.B. de Rooij

B.R. van Eijk, H. Steenstra (absent), I.T. van der Veen, M. Shahi (absent), A.H. Vuuregge, S. Wilcox, M.E. Toxopeus, E.E.G. Hekman, J. van Asselt(absent), M.I. Abdul Rasheed, E.T.A van der Weide, T. Tankink, D. de Jong (absent), P.C. Roos(absent), C.L.B. Geuß, M.T. Khan.

Permanent guests:

E.M. Gommer, A.F. Heutink, G.G.M. Stoffels.

Evaluation committee:

J. van Manen, E.M. van Os.

Minute maker:

P.K. Ravilla Subramanyam

Guests:

Absent:

<mentioned above>

**1. Opening + Introduction**

The chairman opens the online meeting at 8:45.

**2. Announcements**

M.B. de Rooij welcomes T. Tankink, C.L.B. Geuß, and M.T. Khan, a few (prospective) student members who attended the meeting.

**3. Minutes last meeting March 3<sup>rd</sup>, 2021 / Minutes FC (annex)**

Page 1: no remarks

Page 2: no remarks

Page 3: no remarks

Page 4: no remarks

Action points:

1: stays

142: can be removed. A.F. Heutink added the required information for the statics documents. It is a bit now clear about the number of students graduating in the separate timeframe, for instance, statics on the number of students graduating within 1 year, between 1 and 2 years, between 2 and 3 years.

E.M. Gommer suggests putting an agenda point in the future to discuss further on finding ways to reduce the delays in the masters using the statical figures.

145: Stays, can be discussed in the next meeting along with agenda Matlab-> Phyton in education point.

#### **4. Q2 evaluation**

The evaluation committee presented the results from quartile two.

##### **Bachelors: Module 2 Energy and Materials**

###### *Engineering Thermodynamics 1:*

From a response rate of 22%, the course scored an average of 3.1. This score is insufficient for a bachelor's course. The main comment from the students is to have a high-quality recording of the lectures. Nonetheless, the students preferred real lectures with detailed explanations on theory rather than quiz lectures. The on-campus tutorials had positive feedback but on the other hand, students felt that the English of the teachers could be improved.

###### *Modelling & Programming 2:*

Scores sufficient with an average of 3.6, but the questionnaire was filled by only a few students of about 10%, not many conclusions could be drawn. The main recommendation is to retain the case study since it made more sense than an exam in their opinion. However, they desire that the case study is not planned for the exam week.

B.R. van Eijk wondered for the high score than previous years. E.M. Gommer answered that this module is redesigned by a teacher from a mechanical engineering background with the help of M.E student assistants.

###### *Material Science 1:*

An average score of 4 is observed which is quite good for a bachelor course. The main recommendation is to have more theory-based exercises than calculations-based questions for their practice.

The teacher comments that he is working on the students' recommendation.

###### *Project Analysis Energy Systems & Academic Skills 2:*

The course scores a sufficient of 3.5. The recommendation is that the students need to know what they will expect in the exams.

###### *Calculus 1B:*

It scores an average of 3.8, which is sufficient for a bachelor's course. The students stated that they would like to know an elaboration on answers to the exercises from the book and also the answers should be public. The students also would like to see a variety of GraspLe exercises.

The teacher agreed to the students requesting the variety of GraspLe exercises and would consider as a valuable recommendation for next year. However, he wonders if publishing all the solutions would improve the course.

Toxopeus wondered for inclusion of the point in the questionnaire "The way of making notes with online education was good".

E.M. van Os thinks that is an open question stated by the students.

I.T. van der Veen pointed out the comment from the teacher of Calculus 1B regarding the availability of the full solution in the online portal Slader. The students were able to access the Slader for free earlier, but now, it requires a subscription for getting the solutions. This must be communicated to the teachers.

##### **Bachelors: Module 6 Product Design**

###### *Tribology:*

The course scores a sufficient 3.6 on average. The main recommendation is to have a proper connection with the lectures and the content of the book and correction in the mistakes and typing errors.

## Masters

### *Design, Production and Materials:*

Scores an average of 3.8, which is sufficient for a master course. The main recommendation was to decrease the workload to match the ECs. And also to make sure that the course description is in line with the content of the course.

E.M. Gommer added to the point that she received complaints regarding the workload. Chantal is gathering a group of students to discuss the course load.

### *Energy from Biomass:*

Scored insufficient with an average of 3.3. The low scores were obtained due to poor communication of the requirements for the exam. A recommendation was made to make sure the schedule and requirements for assignments and oral exams are clearly mentioned for students in advance.

Toxopeus highlighted the poor interaction of teachers with students in the Q&A section and feels like this is an important thing to consider.

### *Failure Mechanisms & Life Prediction:*

It scored an average of 3.9 which is sufficient for a master course. The only recommendation is to use more real-life examples during the lectures.

### *Flexible Multibody Dynamics:*

The course got an average of 3.8 and the main recommendation is to try to lower the study load, especially at the end of the module. FFF must be updated with up-to-date information and the FEM reader should be properly organized.

### *Manufacturing Facility Design:*

The course scores an average mark of 3.9. The committee recommends increasing the pace of the lectures and record them and also making sure that the answers are published for the exercises.

### *Plastic and Elastomer Engineering:*

A good score of 4.0 for the course. The main recommendation was to make a reader for the course and recording the lectures.

Toxopeus pointed that most of the evaluation results say that the lectures are not recorded. Suggests that the education program have a small discussion with the concerned teachers for any support.

## VU: SEMESTER 1 & 3

J. van Manen briefly presented the course evaluation of VU semester 1 Manufacturing.

### *Semester 1:*

Mathematics scored well with an average of 4.6.

Project and Academic skills were combined in one evaluation which scored 4.1. This will be split up in the next evaluation.

Both Intro to Mechanical Engineering and Statics scored more than 3.5.

Material science scored very well with 4.8.

Continuous Assessment 1 scored an average of 3.9, which is also a good score.

E.T.A van der Weide highlighted the low success rate for statics but has relatively high scores. J. van Manen clarifies that the evaluation was assessed just after the exam. Thereby the students' opinions might not have influenced based on the grades they obtain.

A.H. Vuuregge remarked that the comments received for the course Project and Academic skills was actually for semester 2 and not for semester 1. J. van Manen considered this remark and promises to make sure that this feedback will be recorded in the evaluation of sem 2.

### *Semester 3:*

The semester had a mixed regime where many courses scored well. However, few courses like Dynamics and Manufacturing 2 scored very low.

The teachers of the Dynamics course agree with the evaluation result and stated to improve on the recommended points.

In contrast, the teacher of Manufacturing 2 did not agree with the evaluation. Inconsistent feedback for the panel meeting and evaluation questionnaires did not match, the earlier resulted in positive feedback. Nonetheless, the responses received are from more or less 10 students.

S. Wilcox commented that the possibility of the two groups of students having a different opinion in the same class. Where the first half was concentrated on lectures while the second half was focused on completing the project and teamwork.

J. van Manen pointed that the students were asked to consult other students as a response to the teachers for the questions sent by students. And also, the students had access to TA assistance in the last few weeks before the exam. Sarah commented that the reaction from the teacher is maybe due to a large number of questions and thereby he directed to the TA.

E.T.A van der Weide highlighted the lowest score of almost 0 for clear lecture and structure of the lecture for the Dynamics course. J. van Manen clarifies that the pre-recorded lectures did not match with the structure of the course. A.H. Vuuregge mentioned that the students felt the teacher could not explain the tutorial clearly and also the content of the lecture did not match with the problems during tutorials.

B.R. van Eijk pointed out the comment of the teacher where the formulation of questions was changed during the resit and resulted in better grades for most of the students.

The evaluation committee leaves the meeting at 9:25.

### **5. Progress Students**

G.G.M. Stoffels made an overview of the students' performance based on the advice received for their binding recommendations. About 22% of students received positive feedback and 40% of students got a piece of neutral advice, 20% received negative feedback while 17% of students did not continue with the course after February. Compared to the last year, a slight improvement in the number of students receiving positive advice, however, the number of students discontinuing is also increased.

### **6. Actuality of the programme**

B.R. van Eijk discussed the outcome of their subcommittee meeting where the points to be investigated further were identified. The research topics are further divided into sub-sections to address the current topics, also look into the VU, TU Delft, Eindhoven. They would like to gather the opinion of the students regarding the current situations in their modules. The second investigation is to address the topics that new students would like to have. Following the same with companies and research groups.

Toxopeus suggested involving the people from the recently passed alumni students who are currently working in the industry. This may lead to easy communication with the interesting topics to be involved. E.M. Gommer agrees and conveyed that is also considered.

### **7. Correction terms for MSc courses + Yearplan ME 2021**

E.M. Gommer quickly presented the action plan for the year 2021-22. Most of the points are duplicated

from last year and few added action points.

Internationalization of the curriculum is one such point picked up from last year, where the committee is already working on that. Few actions involve exploring the possibility of getting international features and making part of the curriculum internationally focused.

Secondly, new action points to solve problematic issues with international students. Because of getting some signs of bottlenecks concerning study progress and social integration of specific groups. Gommer wants to focus on knowing the reasons causing this with the intervention involving a list of people including the student committee like Isaac Newton.

Another new point concerns the visitation report which had comments on final qualifications. Actions involve reformulating or sharpen the final qualification of the program. They are still looking for interested people.

A recurring action point for bachelor is regarding the growing number of students. The activity involves meeting with each module team every year to find what is needed to maintain the quality of education.

Further, a new action plan for the extension of minor offers. Aircraft engineering was introduced which saw a huge amount of subscription from the students. The problem occurred due to seldom interest in few minors from technical students. Thereby, two new minors are planned to set up in the coming years.

E.T.A van der Weide asked if the addition of new technical minors will have negative feedback from students with a non-technical background. Gommer agrees but the current main focus is to set up some interesting minors.

M.T. Khan suggested for Automotive engineering course as a minor. Gommer appreciated that is a good idea and further she is willing to see any proposal on minor courses.

Finally, the Actuality of the program, as discussed earlier is also added to the action plan list.

Toxopeus insist on discussing the action points in the year plan. Gommer agrees to have them discussed on a half-year basis with an agenda point in the year plan.

### **8. Minors student teams**

M.B. de Rooij introduced and seek comments for the proposal for the two minor courses for the student teams related to engineering and management.

Gommer liked the proposal that it covers certain needs of the student team but wonders if any of the courses from a respective minor can be combined with the other minor.

Rooij questioned the number of students actually doing this. E.M. Gommer and G.G.M. Stoffels commented that there are a lot of students interested to do such a course which offers 30 ECs when combined. Stoffels also highlighted that the maximum number of students they proposed is 20.

B.R. van Eijk pointed out that the proposal did not indicate the study load involving the extra time on top of the part combined with the student team. G.G.M. Stoffels highlighted that the proposal contains a split-up of ECs and thinks that the theoretical part EC may be considered as the extra.

In conclusion, PC members decided to discuss the relation of the current minor of Ton Bor and check the possibility of overlap in master courses. Generally, the panel members are positive and liked the proposal.

### **9. Matlab -> Python in education**

This subject will be put on the agenda for the next meeting for further discussion.

### 10. **Fundamental knowledge students**

E.T.A van der Weide discussed the point that was raised during the staff meeting of the course Engineering Fluid Dynamics. The concern was about the basic fundamental knowledge of students starting their master thesis. The majority of the teaching staff agree that the students lack the ready fundamental knowledge than the teachers' expectation and have an impact on the topic they choose for their research topic. The staff wonders if this is only the case in the course of Engineering Fluid Dynamics or also the same with other courses. They think the possible root cause is due to the students involved in their bachelor assignment mainly focuses on the work done for the large projects as a part of the team. The staff also propose an idea of getting the students involved more in individual projects to gain theoretical knowledge.

Toxopeus agrees with the fact that the students will be concentrated on their part of the project, however, he is not sure if the individual assignments would be a solution considering that most of the current courses are examined individually. He suggests having more reading time provided for the students so that they can reflect on the acquired knowledge.

M.B. de Rooij and E.M. Gommer also agree with the point from the staff teachers. Gommer thinks that the solution can not be drawn in a short time and should be discussed further to address effectively.

### 11. **Any other business**

S. Wilcox underlined the unclear information in EER regarding the free-rider in the project groups. It was also from her experience that the structure to investigate was not mentioned. She would like to look more into this during the upcoming EER discussion.

M.T. Khan had a suggestion regarding Calculus exams where the final answer are considered and the solution steps are not accounted for in the grading. Gommer asked Taha to share a written document of the same to discuss in the next meeting.

E.M. Gommer would like to discuss the grating period of the master exams. Rooij agrees to put that on the agenda for the next time.

### 12. **Subjects next meeting**

M.B. de Rooij stated that the points Matlab -> Phyton, Year plan, and few other things from this meeting will be forwarded to the next meeting.

### 13. **Closure**

The chairman closes the meeting at 10:36.

# UNIVERSITY OF TWENTE.

MECHANICAL ENGINEERING (ME/VU)

	<b>Action: (Agenda point)</b>	<b>Introduced on:</b>	<b>To be completed on:</b>	<b>To be completed by:</b>
1	Let the evaluation committee discuss the course evaluations (in response to PC-377)	01-11-2001		
145	Find out how many/which courses use Matlab	03-03-2021		E.M. Gommer A.F. Heutink