UNIVERSITEIT TWENTE.

FACULTY ELECTRICAL ENGINEERING, MATHEMATICS AND COMPUTER SCIENCE

Minutes 167th PC-AM (OLC-TW)-meeting
Tuesday 20 April 2021, 15:45 – 17:15 hr.
TEAMS meeting

5 *Present:*   *Hil Meijer (chairperson), Bodo Manthey, Gjerrit Meinsma, Frederic Schuller, Anouk Beursgens, Lavinia Lanting, Linda ten Klooster, Lisa van Dissel, Sem Geerts, Pranab Mandal (Programme Director), Jan Schut (M-Coordinator), Judith Timmer (B-Coordinator)(until 17:19), Ginnie Renz (making minutes), Jasper Goseling (from 16:57 until 17:28)*

10 *Absent:*

1. **Opening**
    The chairman opens the meeting at 15:47. The draft minutes of Mastermath is added to point 6.

15

2. **Minutes 166th meeting 2 March 2021**
    Line 139: students had to wait
    Line 192: typo – grades

20 **Action Points:**
    378:        to remain on the list
    380:        done and to be removed from the list
    386a: to remain on the list
    387:        done and to be removed from the list
25 389:   done and to be removed from the list
    392:        done and to be removed from the list
    393:        done and to be removed from the list
    394:        changed to a 394a: Organise that both, teachers of module 2 and students create an overview of the workload of module 2, and discuss it.
30 395:   done and to be removed from the list

    378: There is a discussion ongoing to gather information about the Data Science track. So far, only one student has graduated, and 10-15 are following the program. Therefore the Master Coordinator is still waiting, but he expects to draw some conclusions soon.
35
    380 and 394: The chairman has talked to the module 2 coordinator about the scheduling of the exams. The module coordinator thinks that if exams are spread out throughout the module, students tend to work towards deadlines. The chairman has also suggested that students contact supervisors soon in the module and the module coordinator said this
40 would be easy to adapt. The last point mentioned during the discussion was the workload of the module. It has been suggested to have a more informed discussion based on an overview of the workload as viewed by teachers and students.

3. **Advices / correspondence**
45 -   Advice on use of R in AM module 5 (161)
        There are no comments made.

- Advice on new course Capita Selecta Statistics (162)
  There are no comments made.

50

- Advice on relaxing BSA norms (163)
  There are no comments made.

- Mail to Souren about reflection WSV-budget
55 There are no comments made.

- Mail to PD about the use of online surveillance tools
  The Programme Director thinks that the raised issue in the email about privacy is not
  something that the program can address. The chairman explains that if an AM student
60 raises an issue with online exams, the program should address these.

- Mail from Wormeester: update Working group on strengthening decentralised
  participation March 2021
  There are no comments made.

65

- Mail from Arets-Meulman: quick scan student well-being COVID-19 related
  The student members of the PC-AM had a meeting with Annemarie Arets-Meulman
  regarding the well-being of students at UT. During that meeting, students gave input
  directly, rather than via surveys. Student members think this is a good idea.

70

- Reaction from teacher Markov Decision Theory about the organisation of exam
  This will be discussed later in point 5.

4. Announcements
75 Gjerrit Meinsma announces that he will be leaving the Programme Committee in September
  2021.

  [AP Chairman: To send an email to recruit a new staff member.**]**

  The Programme Director mentions the pre-enrolment numbers. For the Bachelor, there are
  72 pre-enrolments (67 last year). Out of these, 27 are for the AM program only. Out of
80 these 72, 22 are Dutch, and many more are EER students. For the master, there are
  fewer pre-enrolments than last year.

5. Master evaluations Q1 and Q2
- Signal Values Table master Q1
  Meinsma points out that the course Introduction to Mathematical Analysis has some
85 terrible scores. The Programme Director explains that the organisation of the course in
  quartile 1 was terrible due to the teacher's illness. The communication between
  management and the teacher about his illness gave the impression that the teacher was
  still able to give the course despite his condition. However, this was not the case. At the

90   time, Programme Director and a staff member have tried to organise the exam for this course in quartile 1, while later a new teacher has been found to teach this course in the remaining quartiles.

- Signal Values Table master Q2
95   Geerts points out that most of the courses have a low score for workload, and he would like this to be addressed. He says that, out of the personal experience, the workload in master AM is relatively high for most of the courses. The Programme Director explains that it is also possible that the other courses have too little workload and then when a course has a correct workload, it appears high. The chairman suggests that Geerts looks at whether these courses have had a stable high workload in the past few years.

100

[AP Geerts: To check whether the specific master courses have a stable high workload over the years.**]**

- Statistics and Probability
105   There are no comments made.

- Complex Networks
There are no comments made.

110   - Markov Decision Theory & Algorithmic Methods
Beursgens explains that the email to the teacher reflects mainly that the exam had a question to reproduce a formula that some students had on their formula sheet. However, there is a broader problem in this course: each student has a different formula sheet. Beursgens suggests that the teacher provides one formula sheet for every student. Furthermore, the teacher often
115   takes questions from past exams. The Programme Director explains that teachers may ask that students provide their own formula sheet because they decide what is essential in the course based on the material and lectures. The Bachelor Coordinator, who used to be the teacher for this course and introduced the formula sheets on the exam, explains that this was indeed the point to introduce the self-made formula sheet for the exam of this course.
120   The chairman suggests that he helps Beursgens with a message directly to the lecturer about communicating about the formula sheet to students.

[AP chairman and Beursgens: To write an email to the teacher of the Markov Decision Theory.**]**
125

- Stochastic Processes
There are no comments made.

- Deep Learning
130   There are no comments made.

6. Mastermath
- Agenda OC meeting 9 April 2021
- Draft minutes 9 April 2021

Geerts and Manthey mention that the minutes reflect the meeting just fine.

135   -   Concept minutes OC meeting 2 October 2020
        -    Course evaluations:
           i)   Continuous Optimisation
           ii)   Systems and Control
           iii) Discrete Optimisation
140   -   Evaluation form
        -    Minutes OC meeting 11 October 2019

There are no additional comments made on these points.

145 **7. Participation UT-students in Mastermath courses**

Geerts thinks the participation of Twente students in Mastermath courses is low. He looked into the table with Mastermath courses presented by the University of Twente to AM master students, and he noted that these are not all courses that Mastermath offers. The Master Coordinator explains that in the table, the Mastermath courses presented are the
150 ones that are organised by the staff from UT and the ones that fit the program and tracks. Geerts explains that if a student wants to follow a Mastermath course, they need to look for it and then, most often, students refer to the table offered by the university. He wonders why not all of them are presented directly to students. Lanting agrees that the list of courses provided to students should be complete. The Programme Director explains that the listed
155 courses are the suggested course and the ones chosen most often, but if a student wants something different, they need to look for it on their own on the Mastermath website.

8. M-courses
     -    Request from teacher to rename Optimisation Modeling to Mixed-Integer Optimization
160   The members of PC-AM agree to rename this course.

[AP chairman: To write positive advice to rename Optimisation Modelling.**]**

     -    Time Series Analysis with applications in R
         Annika Betken asks for the approval of this course as she will be a new teacher for the Time Series Analysis and wants to adjust it a bit. The chairman wonders if a new course
165   is needed. Meinsma explains that the planned adjustments for this course will not entirely change the learning goals and content of the course. He further explains that most of the course will remain as it is. He thinks that the changes are significant enough to change the course, and it makes sense if it gets a new course code and a new description. He compares the new and old version and says that students from System
170   and Control can follow the course as it is, but they most likely will not be interested in following the course in the new form. However, most Industrial Engineering students will probably be interested in taking the new version of the course. In his opinion, the change in course is significant.

175   The chairman adds that he talked to Betken and that she told him that she planned to just teach the existing course with a personal twist, and later on make further changes.

The software should not be in the name, according to him, as the course should not rely on the software.

180   The decision is to keep the course code and name, but the course description should reflect the changes that now the software R will be used and that the course has changed its content a bit.

185   **[AP chairman:** To communicate to PD and the teacher of Time Series Analysis that she can teach the existing course and adjust the Osiris description of the course.**]**

- Finite Element Method (replacement of MM-course Applied FEM)
There is a proposal for a similar course as the previous Mastermath course Applied Finite Elements for PDE that is no longer taught. This new local course should replace
190   this, also in the SACS programme. Geerts says that this course seems more theoretical than expected.

[AP chairman: To write positive advice about Finite Element Methods.**]**

195   **New specialisation "AI4Health"**
First, the chairman makes an inventory of comments of all members about this new track. Geerts explains that he is unsure what this track is exactly about, and it seems rather broad. Lanting agrees that the track appears rather vague but that it looks interesting. Ten Klooster agrees, but she says that if the point of having a new master track is to have more students
200   interested in AM master at UT, she sees it failing. She says that many students that may be interested in the track may be the ones that are already interested in the Data Science track. Meinsma wonders whether there is enough staff to support all of the tracks and courses of Applied Mathematics.

Jasper Goseling joins the meeting at 16:57.

205

The chairman welcomes Jasper Goseling, the coordinator of the track. He explains the points made by the members of the PC-AM to him. Goseling explains this is a specialisation for the Master AM. Therefore, the requirements of joining this track are the same as for all the others AM master tracks. However, this track is more focused on applications of
210   mathematics. The students will learn mathematics as well as the implementation in the specific field. Therefore students of other programs are targeted as well. Geerts says that the way Goseling explained this track makes the track very interesting. However, he wonders why there is not more cooperation with medicine and healthcare staff from other programs. Goseling explains that some of the staff members who are already working on the
215   track have some expertise in the field and that students will be encouraged to take elective courses in other disciplines outside mathematics.

The chairman remarks that one of the mentioned goals behind this track is to increase the intake of AM master students. He wonders whether there is enough staff to support new
220   courses and the larger amount of students. Goseling explains that it is common that new staff members teach courses in their own specialisation, and if necessary, are encouraged to

develop new courses; hence this is independent of this track. He further explains that there are few supervision moments except for the last part of the track.

225   **9. New courses related to new specialisation**
0. Graphical Models and Causality
Meinsma points out that the lectures and tutorials are mandatory. The chairman sees it too and finds it unnecessary. Goseling thinks it is a mistake. The chairman points out that the learning goals are somewhat vague as well and need to be improved.

230

1. Uncertainty Quantification and Data-Driven Modeling
The chairman notes that one of the learning goals includes students' research projects, which most students do not have and suggest adjusting this. Furthermore, he suggests that the requirements are modified so that they mention existing courses, also for
235   students from other programs.

2. Reinforcement Learning
Lanting points out that in the description, it is nicely explained how the course will be organised, but it does not say which topics will be discussed. The chairman agrees that
240   the description of the course and learning goals are too vague and should be extended.

Judith Timmer leaves at 17:19.

3. Deep learning for medical image analysis
245   The chairman points out that this course also has obligatory attendance, which does not seem necessary. Furthermore, the learning goals of the course should be more specific.

4. Case Study DS&AI
The chairman notes that the exam part of the form is empty, and he suggests adding the
250   report there. Meinsma points out that the learning goals for this course a bit vague as well.

5. Research Topics AI4Health
In the content description, it is said that a student has an individual study program. The
255   chairman suggests adding that this program is within the AI4Health track.

6. Final Project (combined) (30 EC)
There are no comments made.

260   **[AP chairman:** To give positive advice for all AI4Health courses if their learning goals and content descriptions are adjusted.**]**
Geerts reminds the chairman to formulate the advice as "no, unless".

Jasper Goseling leaves at 17:28.

10. Master EER 2021-2022
265   This point will be discussed during the next meeting.

11. AOB / Questions before closing the meeting
   There are no questions.

270 **12. Closure**
   The chairman closes the meeting at 17:31.

Next meeting on 11 May 2021

275 **Action Points:**

Nr	Description	Meeting	Responsible
378	To organise the evaluation of the MDS track in February/March 2021.	15/09/2020	M-Coordinator
386a	To talk to the people responsible for organising the evaluation panels.	02/03/2021	Programme Director
394a	Organise that both, teachers of module 2 and students, make an overview of the workload of module 2.	20/04/2021	Chairman
396	To send an email to recruit a new staff member for the PC.	20/04/2021	Chairman
397	To check whether the specific master courses had a stable high workload over the years.	20/04/2021	Geerts
398	To write an email to the teacher of Markov Decision Theory.	20/04/2021	Chairman and Beursgens
399	To write positive advice to rename Optimisation Modelling.	20/04/2021	Chairman
400	To communicate to PD and the teacher of Time Series Analysis that she can teach the existing course and adjust the Osiris description of the course.	20/04/2021	Chairman
401	To write positive advice about Finite Element Methods.	20/04/2021	Chairman
402	To give positive advice for all AI4Health courses if their learning goals and content descriptions are adjusted.	20/04/2021	Chairman