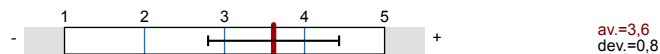


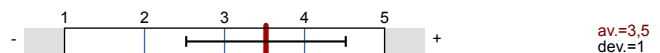
Smart Environments (201300132)  
 B-CREA, 1B 15/16  
 No. of responses =57; Response rate = 53.3%

Overall indicators

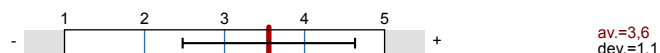
Module (Scale width: 5)



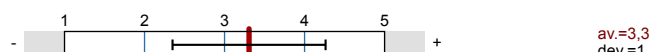
Learning (Scale width: 5)



Project (Scale width: 5)



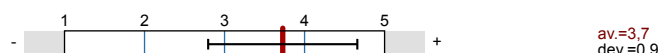
Assessment (Scale width: 5)



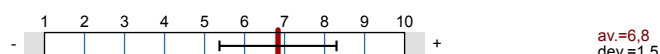
Effort to put into study (Scale width: 5)



Appreciation (Scale width: 5)



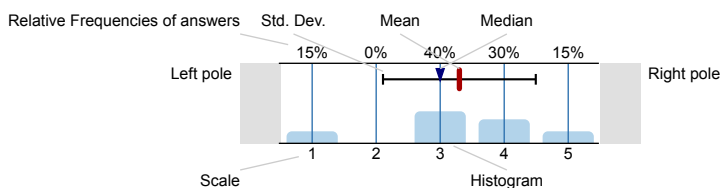
Appreciation (scale width: 10)



Survey Results

Legend

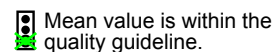
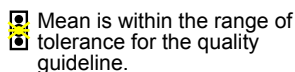
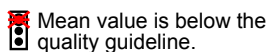
Question text



n=No. of responses  
 av.=Mean  
 md=Median  
 dev.=Std. Dev.  
 ab.=Abstention

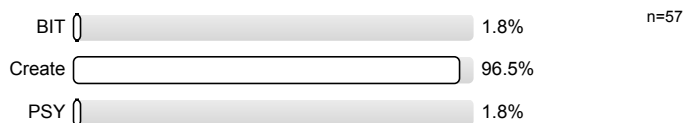


Description of quality symbol



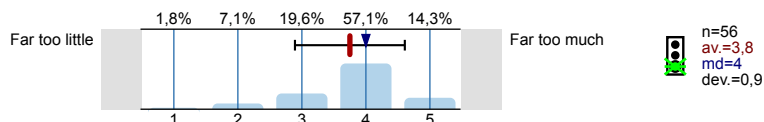
1. General

1.1) I am a student in...

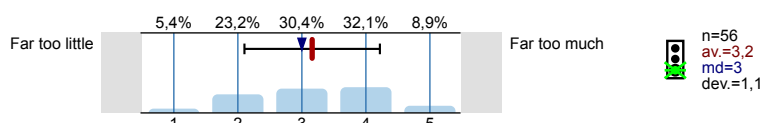


2. Module

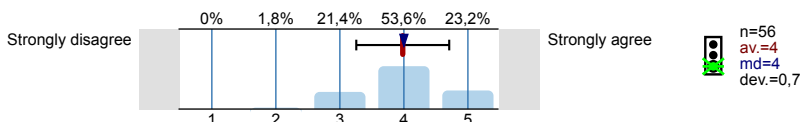
2.1) As a whole, I found the module challenging



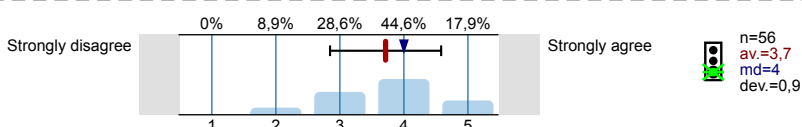
2.2) In general, I had enough prior knowledge to successfully do the module



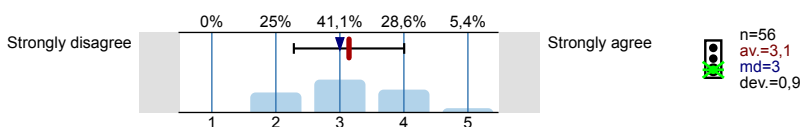
2.3) As a whole, I learned a lot in the module



2.4) The module was logically put together. Consider for instance: parts of the module were connected well; good sequence of module parts

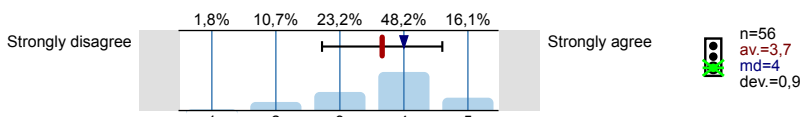


2.5) The module was well organised. Consider for instance: clear assignments, clear rules for assessments

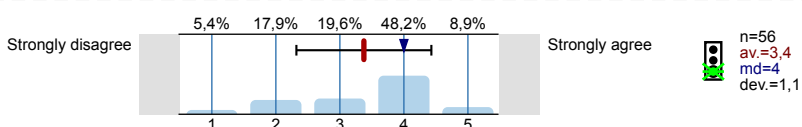


### 3. Learning

3.1) I have learned a lot from the teachers, tutors, teaching assistants, etc.

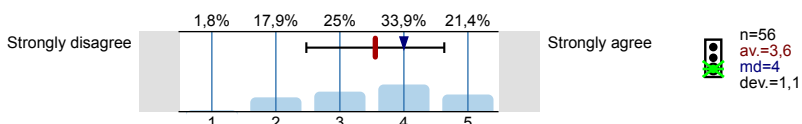


3.2) In general, the teaching and learning in the module were a good fit for how I learn. Consider for instance: thinking things through before taking action; learning in cooperation; applying theory in reality.

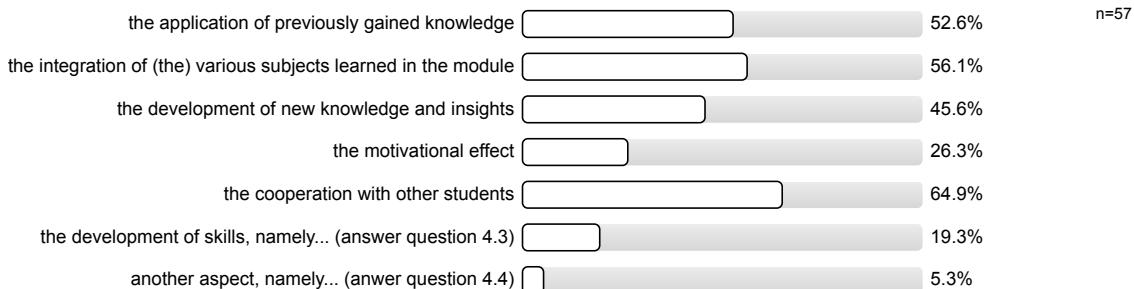


### 4. Project

4.1) I have learned a lot from doing the project

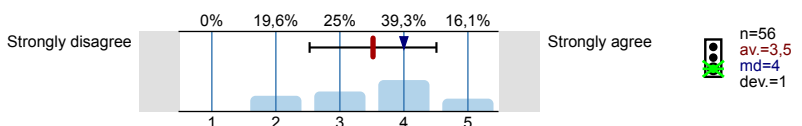


4.2) I found the following aspects of the project very valuable (more than one answer possible)

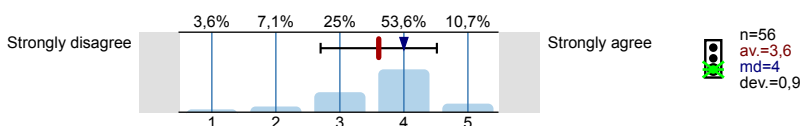


### 5. Assessment

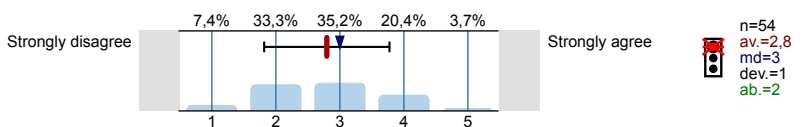
5.1) Throughout the module I knew on time how I would be assessed. Consider form and content (e. g. written/verbal exams, presentations, assignments)



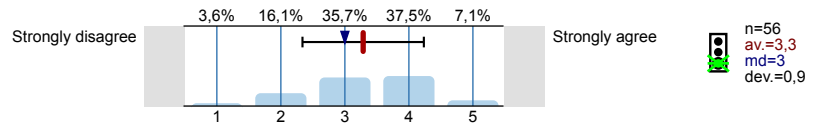
5.2) The tests were suitable to determine whether I'd learned sufficiently



5.3) I got useful feedback on the assessments I made (including possible intermediate assessments)

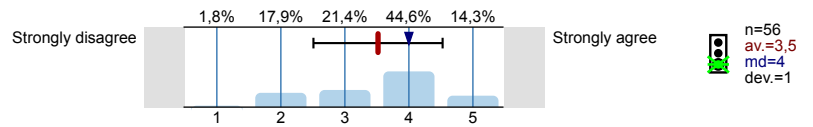


- 5.4) Throughout the module I had enough time to prepare for each assessment



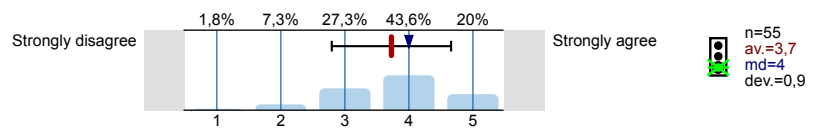
## 6. Effort to put into study

- 6.1) In general, the amount of study time I had to put in was doable. Consider the entire module and possible fluctuations of workload in it.

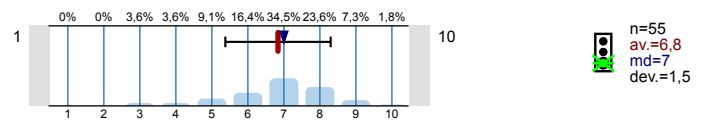


## 7. Appreciation

- 7.1) Based on the module, I would recommend this UT study programme to others



- 7.2) In summary, I give the module the following grade.  
1 = very poor; 10 = excellent

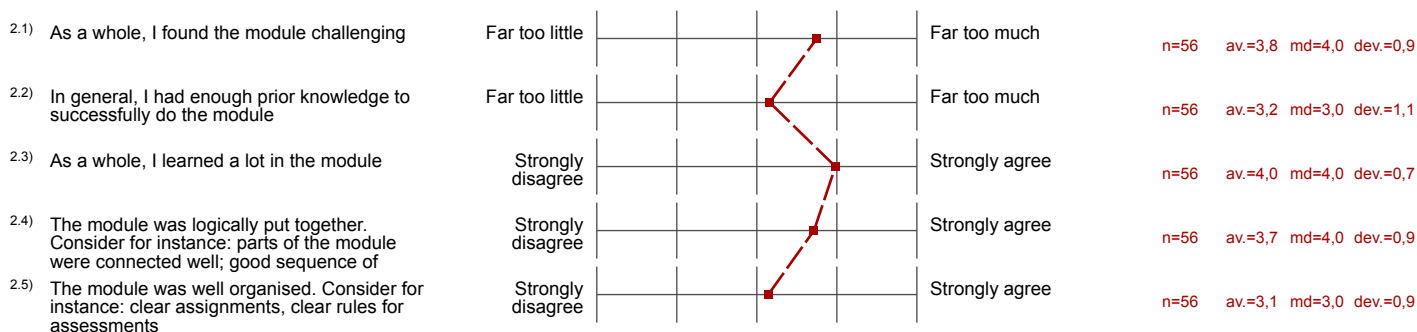


# Profile

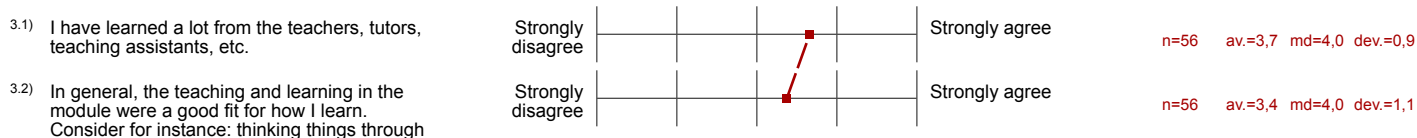
Subunit: SEQ 2015-2016  
 Responsible for modules: 201300132 B-CREA  
 Name of the course: SEQ2015  
 (Name of the survey)

Values used in the profile line: Mean

## 2. Module



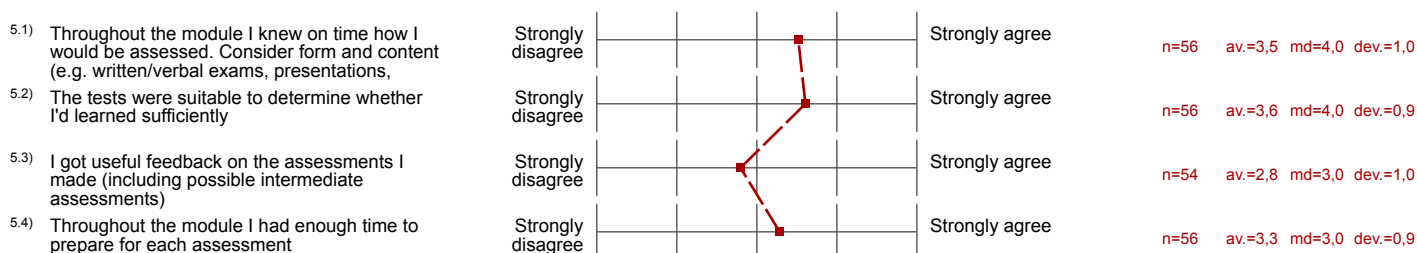
## 3. Learning



## 4. Project



## 5. Assessment

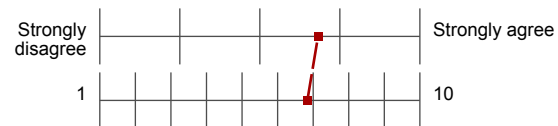


## 6. Effort to put into study



## 7. Appreciation

7.1) Based on the module, I would recommend this UT study programme to others



n=55 av.=3,7 md=4,0 dev.=0,9

7.2) In summary, I give the module the following grade.  
1 = very poor; 10 = excellent

n=55 av.=6,8 md=7,0 dev.=1,5

## Comments Report

## 4. Project

4.5) I would like to suggest the following improvements of the project to the teachers:

- - We had to make a project plan for our own made smart environment. That was a good thing, because it was fast after we presented our idea's. But when we were busy working on our project and other stuff. we needed to present our idea again, which was in my opinion a bit too much and not necessary at all.
- I would suggest leave that 2nd presentation out or do it earlier in the module, not at the end where everyone is busy doing their projects and can spend their time better

- - (5 Counts)

- .

- /

- A project tutor

- Be more motivating to women in technology!

- Clearer information about the timeline in the beginning of the module. Clearer information about what documentation is needed.

- Everything was good

- I cannot think of any specific improvements at the moment

- Instructions about deliverables and presentations could have been more clear and this information could have been provided earlier

- It could be useful to integrate Sketching with other courses as well. All the others were (partially) working together, but Sketching was an outsider.

- Make sure deadlines and requirements for the deadlines regarding the project are clearly written down within the module manual.

- Make sure the grades are uploaded correctly the first time. Since almost every grade i got had been adjust afterwards. For me the issue here was not that big, but for people who didn't get high grades, they could get in trouble because the grades differ than they had expected them to be.

Also please make sure the module manual is correct. Since the last day of the module someone discovered the cluster average calculation of ItE was different. This got me really freaked out, since I'd to pass my resit for math. With I saw as a formality since I already passed the module!

- Make the grade a 1-10 mark , not just pass/fail.

- None

- Not really clear what is expected, more feedback, more contact hours, show more intrest in the students work. instead of pass/fail now grade the project.

- Push a little more and see if groups make progress because it isnt fun and doesnt deliver as good of results when nobody is concerned about groups that do not function. Our group for example didnt do anything before the Christmas. I also think that we should do more of the evaluation/documentation, I've heard that it was too much previous years butnow it was too little I feel.

- Remove 'distributed' from the requirements of a smart environment.

Don't give a lecture if it consists entirely of watching videos.

- Set up clearer rules for the project, nobody knew where to start.

- Start earlier with explaining how the arduino works and what you can do with it. Because we learned this kind of late, we couldn't start working on our project in the begin of the module

- The grading is too complicated with all the bonus points and stuff make it simpler :D

- The sketching teaches should give more frequent advice on your progression

- home study

## 7. Appreciation

7.3) I found the following to be the strongest points of the module:

- - the assignments were a good combination with the new stuff we learned during the lessons  
- I still like the lecture + working for yourself combination
- -
- -physical computing
- .
- A lot of the things we've learned was of use in the project.
- Actually making things that you can use, such as the musical instrument or how the joystick works.
- All course were great, except the project
- Arduino stuff was cool
- EDF
- Everything you learn comes back in the different subjects
- Good integration of the subjects
- I did learn new things in this module
- I thought the Smart Environments Lectures were very interesting and academic.
- It built up nicely.
- It gives you a good introduction to the mathematics behind engineering. It is great to develop your first smart application and knowing the ins and outs of an Arduino is a valuable skill.
- Nice project and all the subjects come good together like for example EDF and Physical Computing
- Programming & Physical computing
- Programming final assignment
- Programming with arduino  
Project of both module and programming
- Project (2 Counts)
- Project and programming
- Smart environment, edf
- The Project.
- The assignments really help to understand the new information.
- The courses were working well together
- The good guidance
- The physical computing lessons/tutorials
- The project
- The project, because I think it was interesting and useful
- The subjects supplemented eachother
- The very entertaining end assignment for Programming and Physical Computing.
- Very challenging project
- Very coherent. Various kinds of subjects.

- Working in partners really helped to get the assignments done, since if you didn't know sth mostly your partner could help you.
- actually creating something with the things you have learned
- connection between all courses
- it was a lot of fun
- management, everything was very clear
- practicals
- project
  - working together
  - assignments in groups of two students (good learning effect)
  - content of the module
  - Physical computing
- project and the bonuspoints
- the project was very nice because you could think of anything you wanted to make.

7.4) These are my suggestions for the improvement of the module:

- - too much sketching for one lesson, I'd rather had it two times a week
- - (4 Counts)
- - more lectures before the tutorials
  - more explanation on how the arduino works (and more help)
- -not making so big steps in physical computing
- .
- Another Math and Modelling teacher
- Another math teacher (so not mr. Boldy). Our math was too easy for him which makes his explanations more difficult than needed.
- Clear deadlines and make sure they're within the module manual.
- Don't give weekly assignments....it's university not elementary school.
- Fuck sketching.
- Get rid of the signing-off system and make the assignments smaller, also, lower the grade for sketching resit and make mathematics resit not only one big resit, but three separate resits, since some people only failed one test out of three but they had to take all three for the resit
- Give more clear guidelines in Sketching of what skill level exactly is expected of you.
- Give more feedback in the Sketching course on the intermediate portfolio.
- I was a minor student, but the first years didn't know what this was, so they were a bit afraid of letting us into their group and we ended up in with all the minor students in 1 group. I wanted to work with other create students, but that didn't happen, which is a shame
- In sketching the way we get feedback, we are assessed was awful.
  - The lectures were in Dutch %40 at least. The assistant used Dutch as an international student I found that very discouraging. The instructor's english was not sufficient and I am glad that sketching is done.
- Less mistakes in grading(!)
- Little bit more warnings at the start. Keep up with everything, this is the contacts page of blackboas if you need to contact a teacher when you're not there for sketching, keep up with math the tempo is high. Stuff like that.
- Make Sketching more useful for the rest of the module. (Or remove it! People would love that too!)
  - Maybe the order in which the two parts of EDF are put (Music, Electric Systems), could be switched, because in PPC we did it in the different order (Electric Systems, Music).
- Make it clear how the assignments in EDF and PPC are weighed
  - Better English in sketching
- Make math more comprehensible. Lessons took far too long explaining things in a unnecessarily complicated fashion. These concepts could be explained more simply
- Manage project better.



- Math was too easy in beginning. Sketching took too much time next to the assignments in lessons
- More explanation on what we can expect
- More guidance for people without prior knowledge
- New teacher that coordinates the project
- Perhaps make it less practical, and more theoretical.
- Physical computing is too hard
- Sketching
- Sketching must be organised better
- The study load is way too high in my opinion. It also seems as if teachers are making mistakes with the grades quite often. When the module manual says the division is 70% IMM and 30% EDF, you can't just change that all of a sudden.
- The weekly math exercises should be accessible the entire week, not just the weekend.
- Think about the prior knowledge needed for minor students. This should be clear before they will start this module.
- better teaching in math
- drastically change sketching
- halfway check-ins for project and start earlier with the physical computing assignment.
- idk
- it was too big of a change from module one. we had to do too much assignments and I got really stressed this module.
- math lessons  
english of sketching teachers  
final marks without corrections
- none
- sometimes it was really hard for the student assistants to sign off every single assignment carefully and completely. Often they didn't have time to sign your work off during the practicals, since there were a lot of students who want to sign off. That's the reason why the answers they signed off weren't always correct, so they signed off wrong answers which aren't really helpful for the exams.

# Evaluation TOM 2

2016/02/01

|                           |  |
|---------------------------|--|
| Present students          | Yasmin Salce, Megan van den Brink, Robin Fabianek          |
| Present committee members | Beerend Gerats (Chairman) & Ruben van den Berg (Secretary) |
| Present teachers          | N/A  |

Opening of the meeting at 12:46.

## General Remarks

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There was a get smart lecture but no teacher showed and nobody knew what it was. A lot of biking around due to the roster, same lectures in different classrooms, you had to take your Arduino stuff everywhere.

## Courses

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### Smart Enviroments

Test was okay. Sometimes the teacher was unclear in what the deliverables were. A lot of slides, a reader would be nice.

### Project

There was not a lot of guidance. At the start of the module you had no idea what you would be able to make at the end. Let's see some examples from previous years. It was not clear what the final deliverable is and how the grading worked. You could get a pass if it worked, is not rewarding. The demomarkt was too long and you started too soon. Say free beer sooner.

### Programming and Physical Computing

In the first lessons there were some processing which didn't was used in the Arduino part, could be put in the first module. In this way you can stretch the Arduino part. The reader was good, it was taught after the reader, evaluation/grading was good and teacher was great. The exam after the Christmas break on 8:45 was not that nice. The extra material was bit spread through bb, no structure.

### Introduction to Mathematics and Modelling

MC Boldy is going to fast through his slides. Maybe he can do more steps and draw it out. The lecture did not have enough structure, like putting all the formulas together instead of just randomly put them through the slides. Matimatik fur Engineers und Natürwirtschafften was a useful book for some German students. There were three tests, which were okay. When doing the resit, you always have to all the three parts. Mylab+ weekend test was not nice since it does not except answers like  $x^2=x*x$ .

## Sketching

The 5.0 resit rule was not told before. Why not offer it too everyone? The non Pepijn was very bad in English and explained a lot in Dutch. Pepijn knows how to teach in English. Maybe divide English and Dutch students to. You did not get feedback for your first portfolio, you only got an ! If it was not okay.

Workload was very different how good you are. But if you keep track of the assignment the workload is good.

## Engineering our Digital Future

At grading he forgot the percentage of the grade which lowered the grade. Also they switched % in grades of IMM and EDF, it was different in two location. There was a seminar where you could see your own test before the resit, great. You did not have the answers and you had to discuss everything together. But if you had a lazy group it did not help a lot. However it worked if you had people showing initiative. So give the answers after discussion then you have the correct answers but don't tell beforehand. Looked like the assignments so it was fine. Only the sheet music was hard since some people do not have music experience. Signing off for extra points was a good structure.

## Portfolio Course

No explanation for portfolio. There was no clear explanation for cultural challenge. There is no structure between tutors.

## Closing

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Closing of the meeting at 13:32

Secretary Tom Onderwater, Chairman Ruben van den Berg

Students: 6

Teachers: Hans Scholten

*Opening 12:45*

### **Module in a whole:**

It is very difficult. There is a lot of physics and mathematics. Especially if you did not have Mathematics B it is a lot of catching up. But it feels like it is doable. But you do need a lot of help to make it. For math Eddy is very helpful.

For Physics there was a build-up course.

Programming is difficult

Module in a whole is very good. Things fit well together and you see things coming back in other subjects. A good CreaTe module.

### **Smart Environments**

The lectures are nice, but the test was a bit useless. It was only learning the sheets and there were no practical applications. You have to study a lot and the questions were not all related to the questions on the test. The only purpose of the test was recognizing a smart environment when you see one. It is good to check your project whether it is a smart environment or not. There were people who failed the test they did not know what a smart environment was.

The lectures were entertaining and it was clear with a lot of videos and examples. It was clear where he was talking about.

Project: It is difficult to begin. You don't know what tools you need to use and how to use it in your project. You find out how to do something better on the go. Which is a good thing.

There was a brainstorming course. This was in MOD 1

There is a presentation at the beginning of this week and at the end of this week. It might be handy to know how to fill it in and how you can make your project better in the middle. There are no coaches. Hans can be contacted if you want to know more.

### **Programming and physical computing**

For programming there are not enough student assistants. More help is needed. For physical computing it was good to do it together, it went faster and you could get your things done faster. The leaps were very big and it was hard to catch up every time again. The joystick was the biggest step. A lot of the stuff is thrown at you. It is a bit confusing at times. It would be better to give a better step by step overview. But the reader is very good for the step for step overview. A very good reader. But you still have to figure out the last step.

The lectures from Edwin are interesting and fun. He understands how they think and he tries to get into your mind-set even when he is going very fast.

Everybody wants to sign off at the same time. Also the signing of is not going very good. Some mistakes get made. But this might be because the form is a bit weird.

The signing of is motivating for some and demotivating for others. Some will work harder for it but some feel that it should be more of a thing that should come out of yourself. Not getting points feels a bit like a punishment. And the motivation to do it should also come out of yourself.

The programming part was doable in the end.

### **Introduction to Mathematics and modelling**

The beginning was a lot like mathematics B. so it started out very easy and people did not learn something yet. For the Mathematics A people it was very difficult. The explanation was not done in a clear way. He explained it more difficult than you needed it to. If someone else explained it it was a lot easier.

The A people asked for help from Eddy and now it is going good. In hindsight after the help of Eddy the coin dropped.

For B it was too easy and it could be more difficult, but for the A people it should not be harder.

The lectures from Boldy are very boring. They should contain more practical parts because that is the way you learn something. **Less talk more doing**

There is only one student assistant. He is very helpful. But there should be more.

This year it is tried to make the connection between mathematics and EDF. This integration works really well and helps.

There is way to get extra points (0,5) but this is not very clear. You get it from a test on the internet.

### **Sketching**

If you can't draw you hate it. It goes very fast and if you don't have something done you have to move on. The teacher is all about sketching and if you don't like it you don't exist for him.

Some people like sketching, it is a creative outlet. And some people can relax, others see it as a problem and get very stressed.

The lectures that are given contain a lot of exercises. If something is not nice you have to do it later and this gives you a lot of work afterwards. But this is the same for every other subject that has something you can't do very fast.

Sketching is given at a very high level. But you really learn something. You did not know everything about the constructions and now you know. Sketching is mostly just a lot of practice.

There were comments given on the work already made. But this is not important for now.

It difficult to compensate for sketching. It is given by industrial design and it totally loose from the rest.

## **EDF**

Very good lectures and inspiring. Erik puts a lot of effort in it and you can see that coming back. The assignments are doable and pretty useful. The lab session was a bit of a throw in the deep but it was pretty useful. In hind sight it was pretty easy.

There was a physics come back course but the subjects given here did not come back to EDF. The things missing where Electric circuits and sound engineering. (Sinus cosines) It should fit better. The build-up course discussed the very basics of physics like newton's law etc. It should go more to EDF.

The students have no idea yet how they will do with EDF. The test was good though. It was multiple choice and it was very oversee able.

There was sheet music and a lot of people did not know how to read it. They had to google it. Maybe it should be done differently?

## **Portfolio Course**

People just do the project. The portfolio is not really used that much. There is also a cultural challenge (?) thing. It is not clear and nobody knows if it is obliged to do. Tutoring has its own line, it is coordinated by Gerrit.

In the last years there was a personal challenge. This was something that you filled in yourself. It could be a Photoshop course.

Some tutors are a bit vague.

# Evaluation TOM 2

2015/11/23

|                           |  |
|---------------------------|--|
| Present students          | 4 students   |
| Present committee members | Tom Onderwater (Chairman) & Beerend Gerats (Secretary) |
| Present teachers          | -  |

Opening of the meeting at 12:44.

## General Remarks

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### **Positive points**

- The students experience this module as fun!
- They like that EDF and Sketching are being taught from the start, without expecting any prior knowledge from the students (in contrast to some courses within the first module).
- It is clear to the students what is expected from them per week. This structure is feeling good, since it helps them with keeping on track.
- Blackboard is well structured.

### **Points of improvement**

- At the start of the module it was unclear how "signing-off" worked. Fortunately, this is clear now.
- Once this module there was a lecture within the timetable, called "Get Smarter", but there was no event. Also, once there was a lecture which was not included in the timetable for all tutor-groups.
- The grading is a bit vague, since some courses are within a 'cluster' and some are not. Maybe it is better to have a clear weight for all courses for the final grade (for example, Math: 10%, Programming: 20%, etc.).

## Courses

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### **Mathematics and Modeling**

The mathematics is not too hard to perform, although the students get the feeling that the teacher explains things in a difficult way sometimes. When the students ask for an explanation personally at the teacher, he explains it in a more easy way.

The students think it is still unclear what they have to learn for the exams. "Natural logarithms" was something that was not included within the lectures, but was present at the exam. Students which never followed 'Wiskunde B' at their high-school, didn't know the same rules apply to this topic as normal logarithms.

The real test was a bit more difficult than the practice exam, but was still a good representation.

Some students are not sure why they learn the book in an aberrant order. For example, they went from chapter 1 to chapter 3, without having to learn chapter 2.

## EDF

The lectures are interesting. Also, the students think it is nice that musical theory is implemented sometimes. However, one student think it is a bit strange to have this topic on music within the course, since they are not using it any further. Others think it includes nice examples and they like knowing things about this topic.

The course fits within the CreaTe curriculum.

It is great that it is clear what things in the lecture slides are mandatory to learn for the test and what things are not.

The students don't think they earn more information from the book than from the lectures. These are enough for understanding the material.

## Sketching

All students consider this course as fun. However, some students lose some motivation when they have to construct the sketches themselves, since they are not that skilled.

The teacher explains the learning material very well, and is very helpful. It is experiences as nice that the teacher is walking around the classroom, looking to all drawings, also if people didn't ask for help. This causes good feedback to all students. Also the student assistants are good.

The students think it is strange that only students with a '5 or higher' as final grade have a resit option. This makes the pressure on getting a sufficient grade larger.

The practicals are very intensive, since the students don't have enough time to finish all assignments within the practicals. On the other hand, the students think that the course shouldn't include less assignments. An option might be, having two sketching practicals instead of one, per week.

The students are spending most time on Sketching, of all courses this module.

The course does not have a strong relation to the other courses within this module. Doesn't Sketching fit better within the "Human Factor" module?

## Smart Environments

The lectures are clear, structured and nice.

Once, the teacher spend half an hour on getting the lecture set-up to work (within the Agora). Another students explains that this may be caused by the fact that the lecture was moved to this room shortly before the start of the lecture.

The students don't know what they have to learn for the exam. The teacher uses so many stories and examples (which is really nice), that the students don't know which of these they have to learn.



## Programming and Physical Computing

Some students would like to have a little bit more explanation in the slides. For example, within the “selfie”-assignment, the students had to search a lot within their book for methods. It would have been nice if the teacher did explain some methods within the slides first.

The book is really good.

Since the first two weeks is about programming without Arduino's, where the other weeks are about programming with Arduino's, one student suggests that it might be better to implement the first two weeks within the first module of CreaTe. Then the second module can start off with programming Arduino's. Another student think this will cause too much to learn for the first module.

Whenever there are questions, the answers of the teacher and student assistants are quick and clear. Unfortunately, one student had an error within its code that couldn't be solved by the student assistant.

## Project

There was a lot of time to come up with an idea for the project. Unfortunately, there are still some students without a project group and therefore without an idea. Probably these are the students which didn't do the Kick-In (and have no group to work with) or follow this module for their minor.

The students think it is not fully clear how the project should be performed, and what outcome is expected at the end of the module. On the other hand, this might be the idea to let the students free in whatever they come up with.

It might be nice if there were student assistants available for the working hours of the project.

## Closing

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Closing of the meeting at 13:20