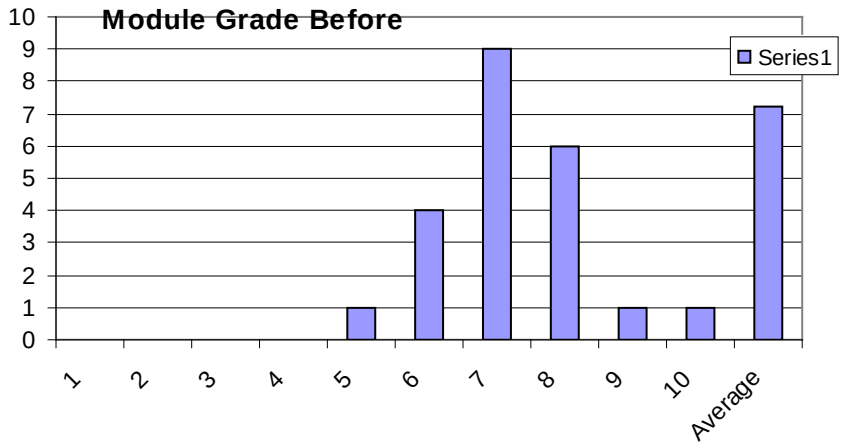
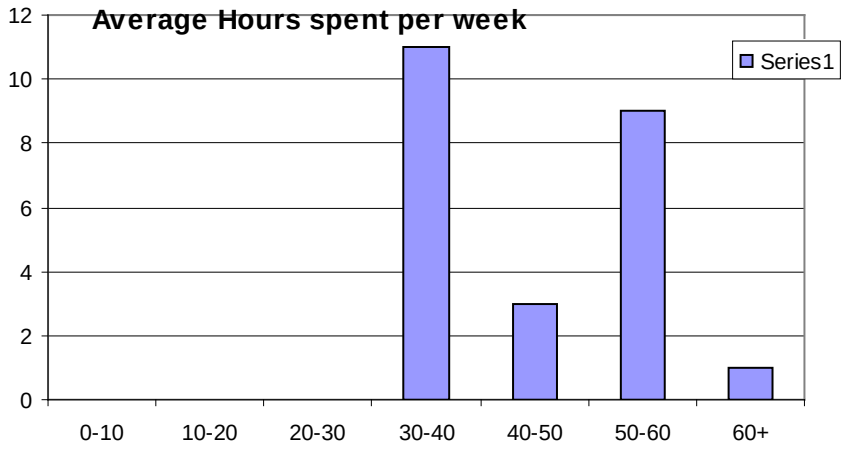
Mid-Term Evaluation Smart Technology Module 5a CreaTe
Date: 2 October 2014
Means: Monkey Survey online questionnaire
# of participants: 22

1) Module grade at start of questionnaire: 7.23 average



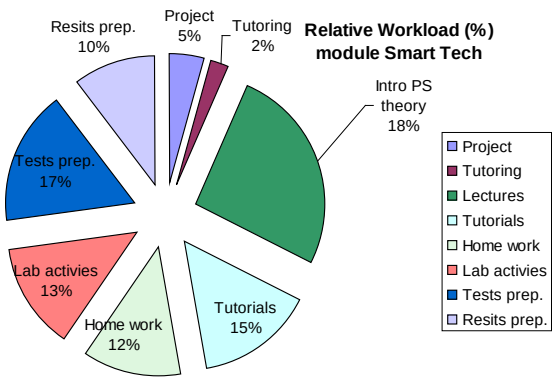
2) amount of hours spend on average in this module



Workload seems way above the expected average of 42 hours per week...

3) Take answer at 2) as 100%. How is it divided over parts of module?

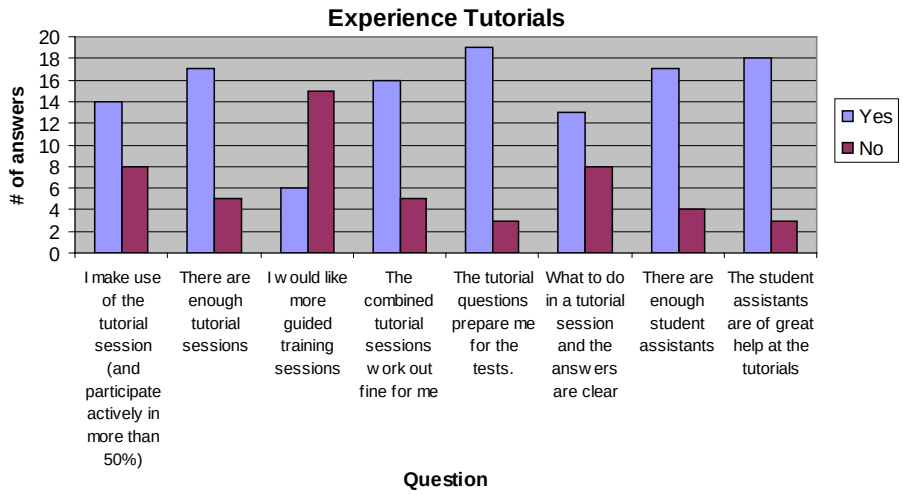
Green should be the lectures not Intro to PS and DB (bug…)



Comments:

I've been sick, so I haven't really attended lectures and or tutorials that much, but I think there are too many lectures at the beginning which drains you so much that you can't really do any homework or prepare for tests when you go home.

4) experience of tutorials



Comments:

Updating portfolio.

What's a guided training session? Again, I've been sick so I haven't been using the tutorial sessions, but I would like to.

I have not done the tutorial questions yet, so I would not know whether they actually are helpful in preperation of the test

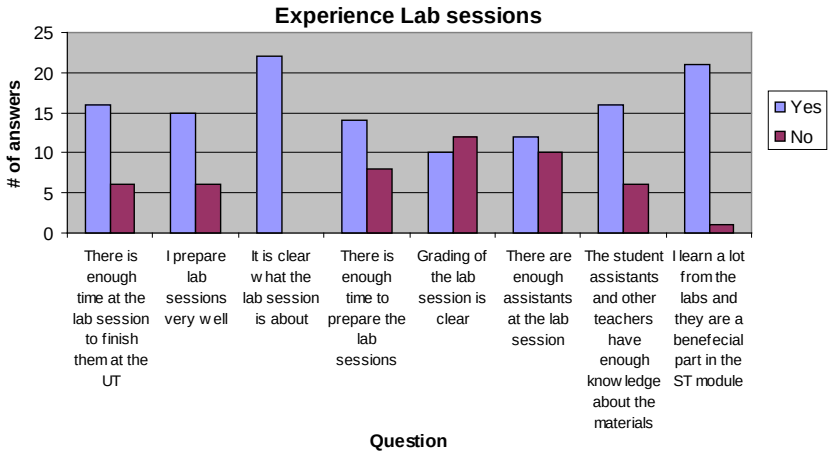
Do not attend all the tutorial sessions because I usually have other NM lectures at the same time.

There were not enough exercises for the second test and especially the second order differential equation. I looked online for more, but had no solutions to check them. Also, the tutorial sessions are way too noisy for me personally to concentrate. I however, go to the UB during these hours to study on my own. The assistance are sometimes to sparse, but most of the time sufficient.

For students it would be better to have a lecture, tutorial and a lecture again in one day. This module we had lectures on one day and tutorials on the other which just doesn't work out, because you will

lose the students their attention.
More tutorial sessions!!
I think the combined sessions are.confusing, theres too much to do for multiple subjects. I usually end up doing only 1 subject.
Questions in a tutorial question can not be made if you missed a lecture for a subject that has no book available - slides alone won't do!
Furthermore, student assistants are doing great and if they don't know something, they can often direct you to another student assistant that knows more on the subject.
I like Youp a lot!

5) Experience of lab sessions

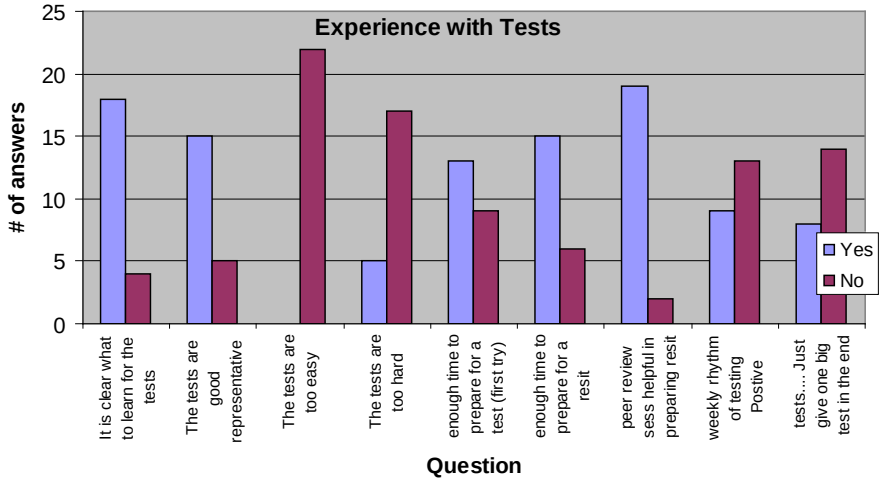


Comments:
They're awesome.
Grading? I so far had 1 lab session back, the resistive sensing of sensors. Still awaiting the rest of the results
There are enough assistants at the lab session = no for C&E

More messing around should be encouraged, just play and see the response but not in mandatory question/restricted guided form
Grading take some time
A lot of general equipment like oscilloscopes and the program to make screenshots of the oscilloscope didn't work and caused us to have weird results. We had to wait a long time for the student assistants and they all didn't know what was wrong with our oscilloscope, so maybe more SA's and general knowledge about the equipment there?
Please upload the labsession pdf a little earlier. If you have already made an important appointment a week before on that day you can't really prepare the lab session as well as you would've liked too.
Furthermore, I think the labsessions are very benificial to understanding the works of electronics.
Make them an little bit smaller
Little mistakes can get you stuck during a lab session, especially when assistants do not know whats going on.
Difficult.to finish in time. If all goes well no problem but as soon as something goes wrong there is not enough time and the student assistants are always busy
For the first time the lab sessions are quite easy to finish in time. But if there's a problem, often related

to the wrong settings of an oscilloscope, it takes a lot of time to wait for assistants and if the assistants are there, it takes a long time for even them to fix these issues.
I find it good that the lab sessions are easy to prepare and if you do it at home beforehand the labsession is much doable

6) Experience of the Tests

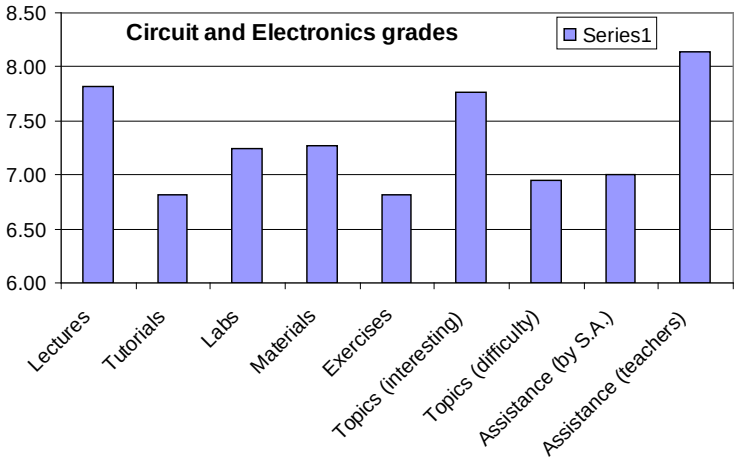


The peer review sessions are VERY helpful. I would like more pre-tests to see what kind of questions to expect in the real one. Practicetests please!
It is the combination of the resits and two later an other exam, what give not enough preparation time. You have now a combination of a big test and small test.
I do like the tests on monday, except that I in the first module have some camps I really want to go to. But that is my problem.
The problem is that technically seen, there is enough time for studying, but after a LONG day of lectures and trying to keep up with what the teacher is saying, your brain is just tired and then it is VERY difficult to study at home.

The peer review sessions are VERY helpful. I would like more pre-tests to see what kind of questions to expect in the real one. Practicetests please!
Just old school tests are better
Please do give me one massive test (or two, maybe one diagnostic), this keeps stress during the week down and gives me a lot more room to breathe. We have exam weeks for this. Where we can study for one whole 'white' week straight. This worked for me in the past and I have no clue why it wouldn't in the future. Better one big stress moment ten several small ones *kuch* TOM *kuch*
The peer review sessions are very helpful but the weekly test are too much. Though I don't want one giant test per se
I do like a weekly test, but please do it on another day. We students have a lot of camps in the first module, so this means we can't really learn in the weekend (I know, it's not the best excuse, but it's true) Secondly, having a test on monday causes some people, including me, to stress out the whole weekend and learn. This means that I don't really feel rested after the weekend.

These are a lot of tests... and every week. That means the stress is continuous. 1 big test is also not nice but this is also a lot, find a solution halfway of both ends. I really like the peer review test sessions, 1 more student assistant might be helpful.
Nice to have lots of tests, but if you fail one test and need to prepare for the resits, you lose most of the time you otherwise have for studying for the next test.
Peer review sessions are very helpful.
Monday morning is not a great time to have a test. I have a busy weekend, always.
I need the time to learn for the resit which means that you only have saturday and sunday for the real test.. not enough time

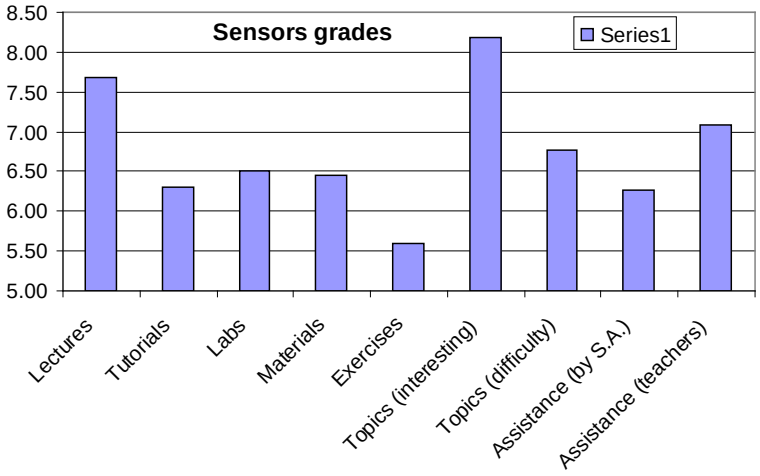
7) Opinion about Circuits & Electronics



Comments:

As said before, exercises are good, but to few in some places. The story book is well made and fits perfectly, the Hambley book is confusing and doesn't fit with the formulas and practices in the story book.
I do not need much assistance so therefore those topics have lower notes (same for other subjects) 1=bad, 10=good?

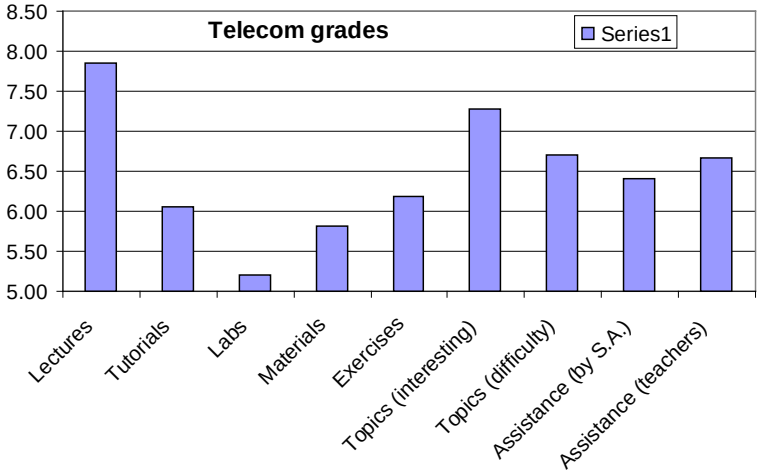
8) Opinion about Sensors



Comments:

Tutorial sessions & exercises NVT
Answers of the excersizes would be helpful
The reader is outdated, so please update it. For example, some of the links in the reader have expired. Secondly, some of the topics are really easy and some are really difficult, so maybe stabilise it. Finally, the exercises are good, but they are very weirdly formulated which causes me to wonder what I should answer.
What is the difference between lab and tutorial here?
Question are really vague and there is no direct feedback or awnsers for the questions
not possible for me to finish sensors lab session in class....
I think the sensors assignments are a lot of work and difficult. It is a lot to figure out on your own.
The reader and lab sessions are hard to follow if you've been away from the Arduino for a while.

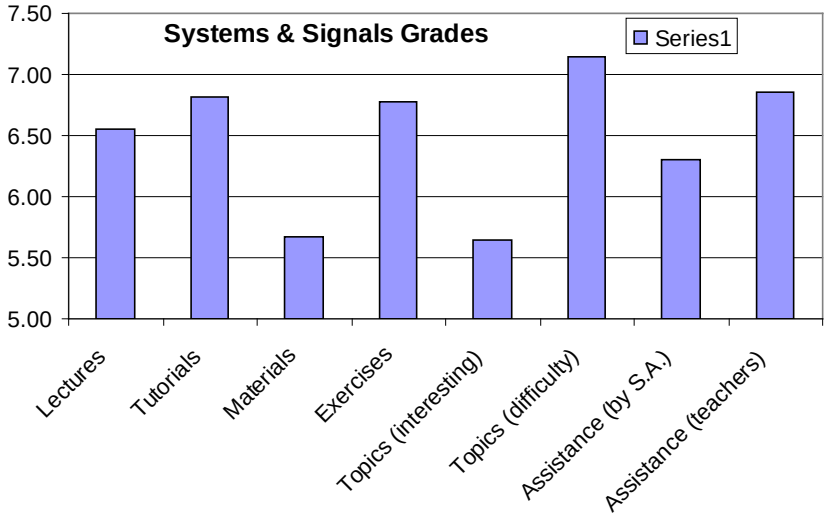
9) Opinion about Intro to Telecom



Comments:

Telecom has no lab sessions so far. Difficult but manageable and, YEAAAAAH finally some difficult topics I can sink my teeth in!
No lab sessions yet for Telecom
I haven't seen the teacher at a tutorial session
No labsessions yet.
We did not have any lab sessions yet
answers are usefull to have

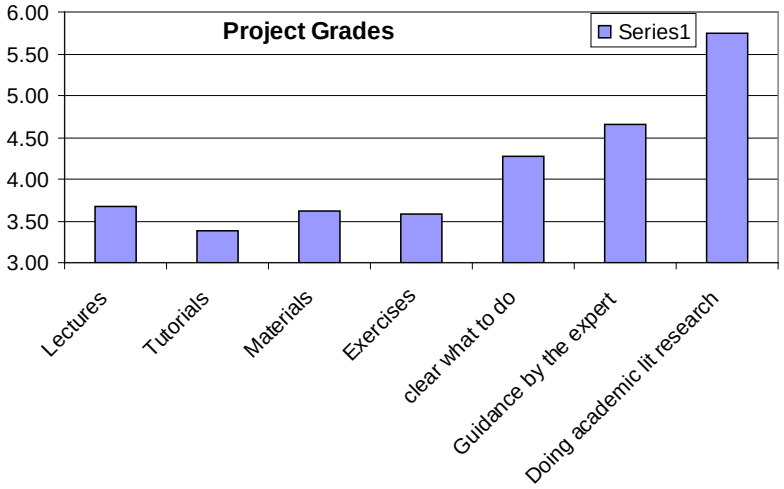
10) Opinion about Systems & Signals



Comments:

Please don't give us powerpoints as learning material, It just doesn't work. Furthermore, math is math. It stays boring, but we do need to learn it.
to much exercises, some are way to easy. (just make a list of exercises you definately should do..)
I like the math being so integrated with other subjects and being tested together.
Should be a book available or at least links to clear explanations on the web.
The subjects (as is stated in the test schedule) do not have any further materials as the slides. I do not know whether this is incorrect in the schedule or the materials are actually not there.

11) Opinion about the project (autsj...)



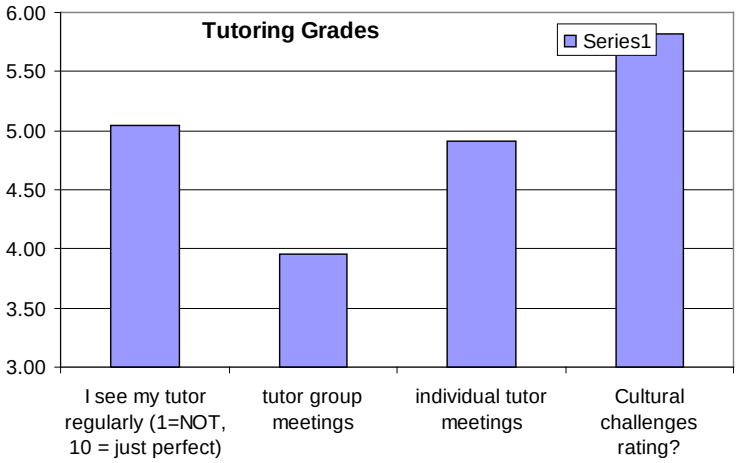
Comments:

badly organized, boring, not interesting lectures, boring activities, not useful activities.

AND REALLY GOOGLE LESSONS AND LESSONS ON TO REFINE SEARCHES, I MEAN REALLY.
Guidance is awesome, best feedback on any written text I have had so far in this module and maybe the course. Academic research is, not really that fun, but I see it is necessary.

No exercises but the assignments and no tutorial sessions also. The lectures are not that interesting. By now I hope people know how to use search engines. Also, two lectures had exactly the same topic?! Why?
No tutorial sessions yet
My expert Mark Bentum had some personal problems which caused me to miss a deadline. I know he couldn't help it, so I haven't really formed an opinion yet about his guidance.
still no feedback from expert....
Good that this is a bit smaller individual project
I get why this project exists, however I still do not like it. That is why the doing academic research has got a 10, because it is really good to learn. I am not aware of any tutorial sessions. The guidance by the expert also took really long until it finally started, I was told the feedback would be at least half a week earlier as it actually was.
unclear..
We still have no response from the experts yet, New Media doesn't even have an expert.

12) Opinion about Tutoring (more autsj...)



Standard deviation is enormous. Best to view the raw data also:

Answer Options	1	2	3	4	5	6	7	8	9	10
I see my tutor regularly (1=NOT, 10 = just perfect)	8	1	0	2	0	2	1	3	0	5
How do you rate the tutor group meetings (1=no group meetings/bad, 10 = absolutely fruitfull and helpfull)	9	0	2	1	4	1	0	0	2	2
How do you rate the individual tutor meetings (1=no/hardly any meeting, 10 = absolutely good)	8	0	1	0	4	2	0	1	3	3
How do you rate the challenges offered? (1=whatever..., 10 = this is definitely an asset of tutoring)	5	0	2	0	3	2	1	1	5	3

Comments:

Haven't had any group tutoring yet
I hardly see him so thats good.
I can talk to my tutor with all my personal issues and questions.
Had no tutoring session yet so ignore
I have X as a tutor and I think the personal meetings are way more useful than group meetings, because we can discuss my problems/difficulties instead of sitting in a group, bored out of my mind, because I want to do something useful. I did like the guest lecture X and X organised from a 3D animator, that was very interesting to me.
Tutor meetings are not helpfull at all; we already know anything he tells us. (it doesn't add anything). I really enjoy the painting course offered.
I think the tutoring feels like a bit of a joke. My tutor does not have the needed skills. We do meet up regularly but it is not of any help. It feels like an empty course.
Haven't heard from tutor (X) yet.
I did not have any meeting with my tutor yet
i do not see my tutor at all most of the time, but i am fine with this
Tutoring is not benificial in any way, it just wastes my time completely!
I like the challenges offered but they were full when I signed up.

13) Does module correspond with your expectations?

Ehm, sort of. I guess different kind of teachers would be cool. I really need some help with Math. The telecommunications teacher is really cool and enthusiastic and X and Y are the best teachers from CreaTe. It is really more difficult than I expected, but I see it as a challenge.
No
Yes
In the beginning I was worried that this module was to easy but now I see that it is super exciting and challenging. However, I have an issue with the weekly tests. But I stated that before.
Fairly. Though I expected a bit more programming, interfacing sensors and calculating eg filters were some of my expectations
Yes, in most aspects.
Yes, even beyond. Verry technical and hard, but very informational.
Yes, as theoretical as i expected
It is heavier then expected because of multiple large subjects.
Yes.
It is quite exactly as I was expected, although I forgot the research question was this module.
we do learn stuff about electronics which is good.
yes
Yes
Yes. Sort of.
Yes
yes

14) Strongest points of this module?

The electronics book and lectures
none
The interwovenness makes the module pleasant to follow since all subjects are explained from several angles
The difficulty and the interwoven courses are definitely plus points.
All subjects are related to each other. Circ & Elec relates to Sys & Sig and all subjects relate to the overlapping theme
Lab sessions and doing everything instead of just only learning the theory behind it.
It gives a very nice technical fundament, what can be very handy in my later career.
-
Combined tests with review sessions.
The module is difficult, but the weekly tests and resits, help me in understanding and learning the topics. The topics in each course are similar and seem well planned and coordinated.
I like the practical aspect about the module and I find the material very interesting.
Really good, helpful teachers for all subjects, there's lots of guidance available.
It offers a lot of information and (almost) all the information we get is transferred over multiple subjects without too much of recap.
after this module you are confident to working with electronics
it is the technical module

the knowledge lasts long

Sensor and Telecom and Circuits and Electronics
I really have the feeling that I am learning useful things.
I have the feeling that I really learn something useful especially compared with the New Media module.
I also really like the combined tests and integration of the subjects.
Good execution of tom model
It has good connections between the courses

15) Weakest points of this module

Maths
test system
project

The interwovennessmakes it crap to follow parts of the module, if you miss one thing the rest is harder it kills the personal development thingy that Uni's are so proud of. It makes is a mass machine school like setup. *kuch* TOM *kuch*
I have no clue.
The weekly test. If you're sick or having a bad week you'll get a delay which is pretty hard to fix with this way
All the lectures which makes you lose your focus.
WAY TO MUCH SUBJECT IN ONE MODULE, i think the older system where you split up the subject over the year would be much nicer. More time focus on it and way more doable. Little packages to learn and more time to let it sink, what will contribute on the technical inside.
-
The sensors assignments that are a real challange plus a lot of contact hours.
Although the material of the module is interesting, I have problems to learn it properly (due to time problems).

The high frequency of tests, resits and lab sessions are exhausting and I would prefere the to have one big test at the end.
It's a lot of pretty difficult theory in one module. I think it's easier to do spread over the year.
It is a lot of the same thing.
the project is very unclear.
the research project is a nice idea, but i feel a little bit lost
Tutoring, Project
A LOT of lectures which take a lot of energy and if you miss 1 thing in the beginning of the lecture then you have no clue what the entire lecture is about.
It is REALLY unclear what we have to do for the project many deadlines have passed but we still have no feedback from the experts.
Project doesn't really fit in.
to much tests and to less time

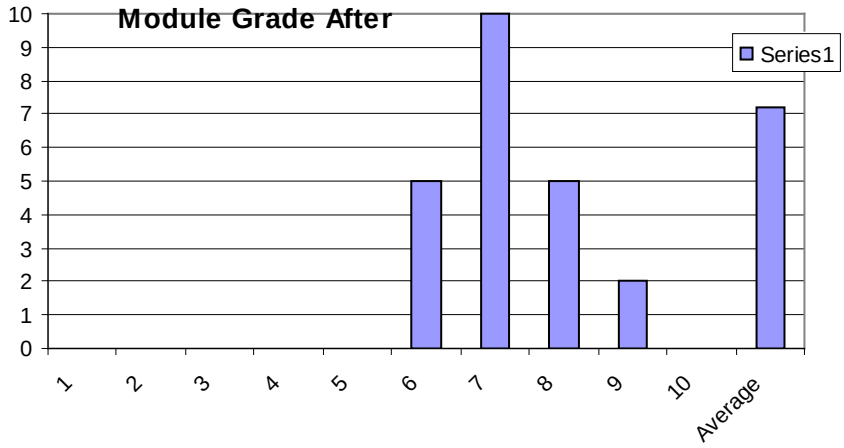
16) Additional Suggestions?

Yes, one big complicated project divided in chunks for Sensors. Let's make an amplifier ourselves with a lot of extra stuff and combine all the knwoledge; more freedom!
few big tests instead of more smaller ones, less assignments
More playroom. More real word show of how stuff works.

Not that I can think of now.
See previous question
-
It would be nice to have the results of the sensors assignments some time before the test about the material so that there is time to assess your own knowledge.
Everything is going really fast so it would be great if things could slow down a little bit and we would have more time during the day to do exercises. (yes we can do them in the evening but my brain is completely done at the end of the day)
nope

17) Module grade at the end of the questionnaire

now a 7.18 and the outliers are gone…



TOM Evaluation – Quartile 5 ST

17/09/2014

Present students	Tom Onderwater, Abel Gerritse, Claudia Westerveld, Margot Rutgers
Later students	
Present committee members	Beerend Gerats (voorzitter) & Ruben van den Berg (notulist)
Present teachers	Erik Faber

Opening of the meeting at 12:43

General Remarks

The whole module has a good cohesion, everything is well related to each other and courses interact with each other's subjects.

There are too many lectures on one day, which gives you too much theory for one day. A solution would be to combine this together with tutorials and spread out the lectures. However this was only a one-time problem.

Work pressure is too high if you want to make all the assignments, since you have a lot of lectures during the day. However it is not the meaning to make all the assignments, so you need to make a selection

It is nice, that there are no deadlines for assignments this eases the work pressure.

Courses

Systems & Signals

The teacher has difficulty in choosing the right words and finding the good terms. However he wants to explain it even if you don't get.

The lectures lack examples and since there the slides are not self-explanatory and no book references are missed. Luckily during circuits & electronics the formulas are used in examples.

Sensors

Good teacher, lectures are clear and the reader is good especially the references.

The bad part of the course is making circuits with Arduino which some people haven't done since last year January (half year difference). Suggestion to give a recap lecture.

Also the student assistants are not always well prepared and need too much time in answering questions.

Circuits & Electronics

Great book, Erik is a great teacher and Cora can answer all your question perfectly.
It is difficult, but on a challenging level.
Also is this the course where all the other courses of the module come together.

You have too less time for assignments and people need more time to ask question.
Suggestion is to plan an hour before the lecture to ask question, people will come if they really have questions.

Tests

The test (about C&E and S&S) was difficult but do-able if you had learned. More difference between the kind of questions, now there was too much insightful question and almost no questions you can learn by heart.

Also a formula sheet would be nice since it was not clear which formulas you should know by heart and which were given on the test.

Closing of the meeting at 13:52

TOM Evaluation – Quartile 5 ST

10/07/2014

Present students	4
Later students	-
Present committee members	Beerend Gerats (voorzitter) & Rob Meester (notulist)
Present teachers	Erik Faber

Opening of the meeting at 12:43

General Remarks

The modules are still quite full but with what they teach the students find it understandable. The small exams during the course are supposed to be small tests but the students find these tests actually quite big. Also the re-exams or redo for the tests are planned quite close to the follow up test making learning for the next test very hard and very cramped. Also resulting in when you get behind you will probably stay behind. Students suggest maybe spreading the ST module over 2 quartiles?

The courses however are still properly built on each other and support each other well.

Courses

Telecommunications

The teacher is considered very good and very enthousiastic. However there is a high amount of study material and students are unsure which parts they need to get out of this. Maybe a summary of what the students actually need to get from this course?

Control systems

Teacher uses a very low amount of examples in comparison to the theory but since the course just started no full judgment can be made yet. He's very quick in his theory but not making clear what the actual goal of the course is. The potential of the course is however quite high according to the students.

Sensors

The students would like a quick refreshment of the arduino itself. On the material front the reader refers to certain pages which no longer exist because the reader is outdated.

Apart from that he students would like the student assistants to show them an at least solution. The assistant could then explain the at least situation and when interested you can dig deeper yourself with having the basic knowledge. Last the test is very theoretical for a practical course which confused the students a bit in what they had to expect for the test.

Circuits and electronics

Students are content. Having a session before the exam was very useful. However the questions in the exam were not fully representing what had been learned. Students had to think 1 step further so having a few test questions of the same level would be nice. It was also very clear which formulas you needed for the course.

Project

The intent to teach literature research is well received by the students. However the project has become a bit chaotic. Deadlines are not clear or not met, not everyone gets feedback in time. Students would also like a bit more time for working and less time for google lessons.

TOM Evaluation – Quartile 5 ST

31/10/2014

Present students	Bouke, Fabian, Kasper, Peter, Kevin, Marijn, Carmen, Wouter, Sven, Abel, Margot, Freek, Ibrahim, Sven a lot of other 2nd years but they did not contribute
Later students	
Present committee members	Jelle (voorzitter) & Ruben (notulist)
Present teachers	Mark Bentum, Cora Zalm, Erik Faber

Opening of the meeting at 12:45

General Remarks

The subjects paste op elkaar aan, most structured module as organization and how corsers related , everyone agrees. Blackboard is blackboard. Somebody knows their things.

Test were on mondaymorning no !!! Just had weekend still fuzzy, if I were more awake

Good thing in the test in the morning you still have the knowledge

It would be self-study and the test

Self-study self-responsible you have to preform everytime

BOuke: time later, Monday is the best day

Fabian: you had test on Monday rest of the week on new subject, I fail the first test during a new subject and I'm late. New way of working no problem

Jelle: the module would still continue all tests at the end

Casper: First test, was directly after gogbot badly planned, lot of failed

Margot: everybody delayed because failing the first test

Peter: GOGBOT was not the reason, I did not do enough, people needed to wake up you need to do

Marijn: core problem if you fail the test or unable to make it you are immediately legging behind, there has to be a solution

Kevin: it added up to get it, you don't get the new stuff because you don't get the old stuff

METHOD OF EXAMINATION

Wouter: lot of small tests, final resit is 3 hours, final is too small, test seperatly to big

Peter: People like the weekly stuff more, he likes the final test.

Fabian: every quartile smart tech, study load has increased but you have a clue what you are doing since it is integrated. Put it together is better. Still have a choice.

Wouter: some of the math, like laplace. Usefull if you can see what it is used for, implement this.

Carmen: lot of lectures in the beginning, no self-study not enough time because of too many lectures. Later in module it adapted.

Carlijn: mind is done after day of lectures

Peter: Where would you put self-study time

Carmen: made more than 40 hours a week

TEACHING METHODS

Margot: excellent teacher, teacher knew there topic, could ask questions anytime

Abel: there was structure, I like more practical implementation in the beginning to make it clear.

Peter: Not everything has to be focused, you need some abstract knowledge. It's good after to knowledge because you know

BOuke: it was after the test but should before the test

Freek: lot of things are abstract, when Edwin tells us things in practical way to understand the abstract way

Fabian: peter breedveld, there was a lecture would take up to 2 hours no time for tutorial. 4 hours in lecture time.

Nicer to abstract first then practi 7

Other way around 11

3 people in the way

BOOKS

Kevin: Systems and signals hand out but after the test no references to be better. Give large reader and links to sites

Peter: I agree, but give options for books not verpllicht but still usefull for someguys

Almost everyone used book and will pay €50 for a better book

Margot: Some teacher don't understand that slides is presenting material not study material

Bouke: book of story was really good

Wouter: you can use slides put explanation in notes beneath

Abel: NOT ONLY SLIDES

Fabian: I take notes, and uses the slides with your notes especially with systems and signals

Wouter: Incubation time problem

Fabian: so you should use notes

Wouter: some people it gets boring to low or high level so not possible to take the notes and ask teacher

Carmen: someone is afraid to ask , so you need to have clear , don't know how to follow lectures

Peter: this is for the teacher to determine.

Abel: small thing make lecture available before lecture, some form of written something, give a reference

IB: did not do practical with the math,

Carmen: there was a lab session for numbers, but no laplace then it became too complex

Wouter: Group sessions are good, for math. PEOPLE AGREE

You could have done this in the sessions

Ib: He was not at the tutorial session

Fabian: question teacher: math was different for everyone how can this be solved. You need the math in the end.

Erik: there are always differences, especially with math the gap is the biggest

DIFFUCLTY

It is too much time for the module

Margot: but you know that when you chose smart tech, it is worth it

Fabian: Study in the weekend was extra heavy, but still problem

BOuke: people who already had experienced

Marijn: wants to be rewarded for 60 hours a week

Peter:also 60 EC but I don't care because I needed to work hard and that is good

Courses

Systems & Signals

Carmen: Better teacher, he likes to explain does the extra mile

Kevin: some handout needs to be here

Freek: make mindmap

Wouter: he uses a lot of formulas, usesfull of worked out version of that

Fabian: example exercise

Duitser: Liked the inter

Circuits & Electronics

Nice,

Book was good, eric had cool demo's

Good practical part

GOOOD GOOOOOOOOOOD

Marijn: document with overview different components time domain was great but earlier

Sensors

Wouter: shame of sensors, lot problem with arduino's. Hard to help with the problem for study assistants.

Peter: Small lecture in first year probleming solving on circuit boards and structure you board nicely

Abel: make more building rules

Margot: With sensors you had weekly assignments, it was half a year since Arduino, needed to catch up, how does it work again lecture

Carmen: points for question but not detailed enough feedback

Telecom

There where a lot of formulas, het spiekbriefje hielp met formulas.

Freek: test was nice, on good level not too hard, not too easy

Fabian: implementation was good, too much to tell you, info overload.

Tom: teaching was good you start to process info during lecture

Carmen: only end solutions not able to detect

Duitser: you can focus by understanding, cheat sheet for every test

CHEATSHEET was good!

Control Systems

Sven: full day on matrix and we did not use it

Carmen: most thougest subject of the module,

Max: the bond graphs are too hard

Casper: nobody knew how bond graphs worked, but we were expected we did

Peter: there was a lecture on bond graphs and that was useful, only nobody was there. Lecture about partial derivatives are, but not everybody knew that. Was assumed we knew things but we didn't.

WOuter: too much info during a lecture

Duitser: He did not know what we know

Margot: the matrixes was difficult and at the tutorial session was few people they explained everything there. People don't dare to go to tutorial session

Duitser: people should go

Margot: peole skip lecture because need to clear your mind

Erik: don’t give up to quick

TEACHER

Mark is hardcore grades the day after and the lectures were happy

Casper: mark too much information

Wouter: most of them were willing to help, different compared to last year

GENERAL

Take more time for this evaluation

Test peer reviews are good

How can 10,5 EC examend in one test in 3 hours,

Erik: that is sampling

Ib: can you still go to the final resit? Yes you can.

Closing of the meeting at […]

Evaluation – TOM Module 5 (Smart Technology)

12/11/2014

Present students	Abel Gerritse, Bouke Regnerus & Peter Verzijl
Later students	-
Present committee members	Ruben van den Berg (voorzitter) & Beerend Gerats (notulist)
Present teachers	Erik Faber (@ 13:10)

Opening of the meeting at 12:45

General Remarks

Moment of having the tests (mostly on Monday morning): students like this moment to have their tests, because now they have the opportunity to spend time learning during the weekend right before the test, causing a better preparation at the students. On the other hand, there are some students who try to keep their weekend free of study-related activities, resulting in a more worse preparation for the test. Especially when there is a weekend full of activities (say a three day during camp of a student/study association) it might cause troubles. **The timing of the test**: most students don't feel awake enough to make their test on 8:45 on Monday morning. They propose to have the test starting at 10:45 to get (hopefully) better results. Because there are also a lot of students (estimated on 50%) who prefer to have their tests on Friday, it is a good thing to have the first test on Monday and the resit on Friday.

Peer-reviews: unfortunately, there are some students who see the first test as a sort of 'practice exam' and go immediately for the resit as their 'real exam'. The reason for this can be the absence of practice exams before the first test. Besides that, there were some students who didn't get the rule at which a student had to go to the peer-review in order to get the permission to make the resit. However, the peer-reviews were experienced as very helpful/useful.

Workload/Study load: A few students (mostly students which have less experience with physics topics) make all of the assignments of all courses. When they fail the first test, they are making all the assignments over. This is causing a very high workload for these students. The reason for this is that these students have problems knowing which assignments are necessary to make and which are less necessary. A solution for this problem would be, letting the teacher assign priorities at the given assignments. In this way, these students know what are the most important assignments. Also, they could tell which extra assignments are helpful to make if a student has troubles with a certain topic.

Assignments: A suggestion of the students would be, having some assignments which look like the questions asked at the tests before the tests. Most of these questions go a little bit further then the regular questions which are in the book. They would like to see some of these questions a little bit earlier than only on the tests. Also a practice exam would help with this.

Courses

Systems & Signals

There is **missing a hand-out or book**. The slides, which are online at Blackboard, are understandable during the lectures, but hard to get when preparing for the tests at home. During these moments of self study their is missing a book or hand-out explaining the lecture slides. During the module Erik send a copy of one chapter out of a study book to all students. This chapter was very helpful when learning for the tests. Maybe the University can buy this chapter for the students next year?

The teacher was very helpful during the lectures/tutorials.

Circuits & Electronics

The course has a good structure. The study assistants were helpful during the tutorials. A suggestion for next year: on forehand of the practicals a small lecture, which include a lesson on "how to debug a build set-up on a breadboard?". Also, it could be useful to get everyone using the same colors cables for the same functions within a set-up on a breadboard (black should be negative/ground, red should be positive etc.).

Sensors

Some students had a little trouble with remembering how they had to control/program an Arduino at the start of the course. A **'catch-up' lecture/tutorial** on this subject (given by study assistants) right before the first lecture may be a good idea for the next year.

Other students (especially the students which are convenient with programming) experienced some assignments as less challenging as they would like to get them. They expected mostly a higher level of programming. An the other hand, there were enough students who already got enough challenge with the existing assignments.

The readers within this course were really helpful: they consisted a lot of background information on the subjects, which was useful. However, it would be nice to have the **readers updated** next year (links weren't working anymore etc.).

The **feedback on their report was a bit minimal**. Comments were general (things were only reviewed as 'good' or 'not good', without explaining why). A suggestion for this problem would be, letting student assistants check the reports or having small feedback talks with the students (at which they can ask their questions about the report).

Telecommunication

The teacher had very much knowledge about the subjects around telecommunication and was very enthusiastic during the lectures. This motivated the students a lot. However, there was still some uncertainty about what the students had to learn for the test. A suggestion would be, marking in the slides which of them are important to learn and which of them are less important or would be having a **practice exam** before the test.

The sheet of paper, at which the students could write some formulas and which they could keep during the test ("spiekbriefje"), is experienced as very useful by the students.

Control Systems

The teacher Peter Breedveld knew a lot about the subjects he was explaining to the students. However, for most students **the explanation during the lectures went to quick**. This cause of this could be the use of jargon/terminology by the teacher. Fortunately, most students had no troubles with learning the subjects using the learning material after the lectures.

The explanation about matrixes was also experienced as quite difficult, while this subject was not necessary to learn for the test. This was also discussed in the previous evaluation, what resulted in an extra tutorial at which the students got more explanation about the subject. Unfortunately there weren't so much students.

Most students experienced the **bond graphs as a difficult** subject. Maybe it would be a good addition if the students would use these graphs in a practical way, somewhere in the module.

A suggestion from the students: maybe the different subjects within this course would become more clear if every subject would be **explained along the same example** (this could be a Segway or temperature controller). Then the students will get which lectures are about which part of such a system and there will be more of a line between the different lectures/subjects.

Why isn't the first lecture about "Why are control systems necessary?" and "Where do we use them for?". The students got the feeling that this was made clear somewhere halfway the module.

Some students said that the lecture about PID-controllers, given by Edwin Dertien, could take place much earlier within the module. Others said that this isn't true, because first some math has to be given to really understand this lecture.

Project

The planning and the idea of the project at first was good. However, the **shifting of the deadlines** and the **uncertainty at the experts/coaches** of the project groups, caused the most problems. Some of these experts had too little time or didn't know what they had to do.

The project included the subject "How to write a paper?". A nice addition would be, having a optional LaTeX course.

There was a lot of **uncertainty around the poster-sessions**. On forehand there was no explanation on how a poster had to be made. Also, the tutors had to examine the posters during these sessions, but the students had the feeling that these tutors gave their rates along different guidelines.

The students experienced the **lectures about Google Scholar and Google Scopus as not necessary and not interesting**. It may be a better idea to have a lecture on how to make a poster for the poster session or a lecture on how to do a good research.

Closing of the meeting at 13:45

Recommendations from final Evaluations Module 5a – Smart Technology

On January 21st, 2015, most Smart Tech lecturers gathers for the final evaluation of the Smart Technology module.

Most likely Edwin Dertien will be next year's module coordinator. The recommendations provided here are based on the summary of the 6 evaluations performed in this module. These are provided at the end of this document.

First impressions of all teachers about the Smart Tech module:

Joke Oosterhuis: a pity that many students didn't like the research project, although there was also a substantial group who liked it. It is better for next year to appoint a project coordinator who has knowledge about the content in the project (and who serves not only as a process coach). Advise to couple student earlier to an expert. Cora states that actually expertise is not the bottle-neck and we can also randomly assign students to teachers. All the ST teachers can handle the depth required for all possible topics within this module.

Mark: really liked to give this course for CreaTe. CreaTe students are very interactive and ask completely different questions as compared to EE students. Very pleased with the course of the module.

Cora: students worked really hard and are really motivated. Room for improvement in the combitutorial sessions.

Paolo: First time he taught at BSc level students. He liked it. The schedule is in the way it is set up now very sensitive towards illness of student or teacher. It is too critical. Three opportunities for testing the same material within the module is too much.

Geert: seeking to optimize/fit his role as coordinator of the Control Systems part. All the lecturers teaching within this part have completely different styles and topics and it is challenging to find the right balance between level, amount and pace in each part and the coherence between the parts. Apart from that it went fine.

Erik: Challenging to be module coordinator. Constant alertness is at higher level as compared to being a "mere" teacher of a topic in the module. It was very nice to work in a group of enthusiastic colleagues and to teach for a group of motivated students. For a first time it was a very good module.

Recommendations for next year:

- Alternatives for the test load for both teachers and students. The test protocol consisted of 6 tests (regular test – peer review session – resit) + a final resit. This was for students and teachers a heavy schedule. For next year:
    - Take out the final resit
    - Take out the resits within the module
    - At the end of the module reserve a whole day for resits. Students can choose to take resit there for any of the tests.

    - Keep the peer review sessions. Add an extra session 1 or 2 days before the resit day.
- Do one or two diagnostic tests in week 1 and 2 to find out for the teachers and students if everybody is at the right place. If there are students who are not fitted for Smart Tech they can still move to the New Media module without a delay in study programme.
- Combined tutorial sessions: idea was good, practical implementation not. In practice they contributing courses turned out to function as two separate pieces. To be successful, next year new combined assignments should be made in which the two respective courses in the combitutorial are worked on simultaneously.
- The level of integration was appreciated by both students and teachers. The draw side is the vulnerability it poses when students or teachers are ill or who miss one or two days. The way the schedule has been set up (following the flow of the theory and not as in the "old days" a course at a fixed day in the week) is fitting to such level of integration. For next year, it is advised to use this year's schedule as a basis and optimize it.
- The work load is very high. Some of the teachers doubted if the actual amount of content is 10.5 EC of Smart Tech materials or that it is more than this. A critical look should be taken at: Circuits and Electronics (what is necessary), Control Systems (now a scattered course with all kinds of modelling tools and mathematical techniques taught by 4 different teachers), Systems & Signals (what is necessary).
- Control Systems: the recommendation is to focus on a few modelling techniques which are applied to one are two cases to get some in depth experience. Right now, students are busy for more than half of the course to learn new techniques and mathematical tools before applying these in context (no time for embedment of the materials). It simply takes time to learn all these tools so better focus on a selected few of them and use these in all situations.
- Create more breathing space in the module:
    - Removal of all 6 resists throughout the module should reduce pressure for both students and teachers and give more space throughout the module.
    - The amount of material will be critically looked at.
    - Move the project more to the earlier phases of the module to create more space at the end of the module (where Control Systems is the heaviest topic).
- Systems and Signals: solve the returning issue of lack of study material (only slides). A book is proposed (Engineering Mathematics, by Croft et al., 4th edition, 2013). This book is most relevant for both Systems and signals and Control Systems. All teachers agree on using this book next year. It is recommended to incorporate this book also in Year 1 (modules 2 and 3) instead of the Thomas' Calculus book.
- Lab versus theory. Teachers agreed that ratio theory versus labwork is ok. Possible new lab session that can integrate different topics: active (OpAmp) filters.
- Project:
    - The project is considered very useful by the teachers and they recommend to keep this in with the focus on literature research. The start of the project was ok (introduction + describing fascination).
    - Role of information specialist was not clear.
    - Final responsible person was not clear (module coordinator or project coordinator). Make sure the division of tasks and roles is more clear. Make sure that enough supervisors are available for all students (more are needed next year!!!).
    - Have a project coordinator who is also expert on (more confident with) content level

- Assign students earlier to a project coach. All ST teachers have sufficient fundamental knowledge to supervise all kinds of ST topics. This creates more flexibility in assigning coaches to students and it can then be done in an earlier phase of the module.
- Peer review session can work very well (for instance have students explain their research question to their peers in their group and discuss this).

Recommendations by students (randomly ordered). These are also below.

- Session on structured working with breadboards and how to debug errors in breadboard
- Refresher tutorial on Arduino and Processing prior to the start of Sensors?
- Incorporation of one big complicated project where you work on part by part throughout the module
- More space to put in creative ideas in the module?
- Have one or two build-in “breathing” moments in the module
- Make some parts of the module optional to relieve high work load
- For some of the assignments: state what the level is (minimum required, very hard level etcetera) to better estimate the level at which exam is tested
- Formula sheets at all tests (not only Telecom)?
- As an assignment: have students make their own formula sheets per topic
- For students good at programming: create extra challenging assignments for them in Sensors
- Take one example as a red threat throughout the control systems topic
- Last lecture of Control Systems (practorial on PID controlling with Arduino) would have helped in the beginning to gather insight in this material.

Summary all Evaluations

Time period: Q1 of academic year 2014 – 2015 (September 1st – November 7th, 2014)

The following evaluations were used:

- The standard UT evaluation (EvaSys) at the end of the Module
- 4 CREEC (CREate Evaluation Committee) evaluations dated: 17 september (intermediate panel discussion), 7 October (intermediate panel discussion), 31 October (whole group including teachers panel discussion), 12 november (after the module panel discussion)
- Mid-term digital evaluation by the ST teaching staff via SurveyMonkey (October 2nd)

Findings of most important (returning) GENERAL items:

Positive

- This module was judged with the highest grade of all UT module 5 this quartile.
- Teachers and teaching assistants were highly rewarded (energy, enthousiasm, willingness to spent time in the students and clear in explanations)
- Study materials were rewarded as good (a.o.: C&E book, Sensors reader, reader Gjerrit, book Dynamical Systems)
- Module was challenging and instructive (leerzaam)
- Module was coherent and well integrated (which was at the same time a risk)
- Testing on Monday morning (although starting at 10.45 was preferred)
- Peer review sessions were highly rewarded
- Lab and practical sessions highly appreciated in their support of theory
- Module was to large extent in accordance with student expectations
- No deadlines for the components (as compared to modules 1-4)
-

Negative

- Time table not always optimal (too critical scheduling → 2 days of illness and important topic may be missed). Disadvantage of high level of integration
- Study load was very high (numbers from final and mid-term questionnaires):
    - < 40 hrs/week: 46.2% and 45.8%
    - 40 – 50 hrs/week: 23.1% and 12.5%
    - > 50hrs/week: 30.8% and 41.7%
- Module doesn't fit well for all learning styles (too few different learning styles?)
- Little time to prepare for tests (pace was very high and once in resit trajectory then hard to get out)
- Weekly tests is too heavy, too many tests (6 in total)
- Too many lectures on one day (especially in the beginning of module), more variation on a day needed
- Smart XP is very noisy as a tutorial room
- Too few training (tutorial) sessions
- Combined tutorial sessions didn't work out as hoped (not enough integrated and not enough time per topic)
- Too few student assistants on lab sessions and Sensor labs (solving little problems sometimes took way too much time)
- Too little settling time in module, no breathing moments, one continuous train
- Above item becomes especially a problem if one test was missed/failed
- Not always clear what to learn for a test
- Test 1 was directly after the Gogbot weekend → try to avoid this next year
- In some of the tests many questions went beyond the level practiced during lessons (true for test 1)
- Context of some of the lectures within the course or module was not always clear

Findings of most important items per TOPIC:

Positive:

- Systems & Signals was explained very well
- Sensors was a very practical and insightful course
- Telecom teacher very enthousiastic and motivating
- Integrating character of Circuits and Electronics (applies the math learned and is foundation for other courses)
- Control Systems was a challenging and high potential part

Negative:

- Sensors: reader was very good but outdated
- Sensors: not always clear how assignments were graded and tutorial questions were regarded as vague
- Sensors: too few student assistance for physically sign off assignments
- Book needed for Systems and Signals! Learning math from slides is not very doable
- Sensors test was unexpectedly theoretical as compared to materials worked on
- Telecom contains a lot of material; not always clear what is important or not
- Sensors: SA not always knowing what to do in case deviation from the right track (especially programming related items)
- Laplace part of math: not well integrated or needed for other parts?
- Control Systems: why matrices?
- Bond graphs in Control Systems were hard to grasp and were not practiced / placed in the bigger picture
- Prior knowledge expected in Control Systems that students didn't have (e.g. partial derivatives)
- Control Systems was experienced as bits and pieces; too many new subjects / theory
- Reader of Gjerrit for Control was very helpful but unfortunately group of students didn't know of its existence
- Project was experienced as an outlier
- Project was ill organized (also for NM); lectures were not supportive for project
- Tutoring was very differently implemented

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Smart Technology MidTerm Questionnaire

1. What is your name? (not mandatory)

Answer Options	Response Count
	13
answered question	13
skipped question	9

Number	Response Date	Response Text	Categories
1	okt 2, 2014 5:57 PM	Freek	
2	okt 2, 2014 12:51 PM	Abel	
3	okt 2, 2014 12:39 PM	Peter Verzijl	
4	okt 2, 2014 12:35 PM	Max Ligtenberg	
5	okt 2, 2014 12:30 PM	Claudia Westerveld	
6	okt 2, 2014 12:24 PM	Carmen Burghardt	
7	okt 2, 2014 12:21 PM	Tijmen	
8	okt 2, 2014 12:20 PM	Tamara	
9	okt 2, 2014 12:17 PM	Margot	
10	okt 2, 2014 12:13 PM	Carlijn	
11	okt 2, 2014 12:12 PM	Bouke Regnerus	
12	okt 2, 2014 12:10 PM	Sven Santema	
13	okt 2, 2014 12:06 PM	Ruben Smit	

2. What grade do you give this module?

Answer Options	1	2	3
Grade:	0	0	0

3. How many hours do you spent on average per week in this module (total)?

Answer Options	Response Percent	Response Count
0-10	0,0%	0
10-20	0,0%	0
20-30	0,0%	0
30-40	50,0%	11
40-50	13,6%	3
50-60	40,9%	9
60+	4,5%	1
answered question		22
skipped question		0

4. How are your hours mentioned in the previous question (call this 100%) divided over the different activiti

Answer Options	0%	5%	10%
Project (includes all activities)	4	14	4
Tutoring	12	10	0
Lectures (preparing and attending)	0	0	2
Tutorials (active participation)	0	4	4
Home work (questions)	1	3	6
Lab related activies (preparing and attending)	0	3	6
Tests (preparing)	0	1	5
Resits (preparing)	5	2	6
Others (please explain)			

Number	Response Date	Others (please explain)	Categories
1	okt 2, 2014 12:30 PM	I've been sick, so I haven't really attended lectures a	

5. Can you tell us your experiences with the tutorial sessions

Answer Options	Yes	No	Response Count
I make use of the tutorial session (and participate	14	8	22
There are enough tutorial sessions	17	5	22
I would like more guided training sessions	6	15	21
The combined tutorial sessions work out fine for me	16	5	21
The tutorial questions prepare me for the tests.	19	3	22
What to do in a tutorial session and the answers are	13	8	21
There are enough student assistants	17	4	21
The student assistants are of great help at the tutorials	18	3	21
Other things?			4
		answered question	22
		skipped question	0

Number	Response Date	Other things?	Categories
1	okt 2, 2014 12:39 PM	Updating portfolio.	
2	okt 2, 2014 12:30 PM	What's a guided training session? Again, I've been s	
3	okt 2, 2014 12:17 PM	I have not done the tutorial questions yet, so I would	
4	okt 2, 2014 12:10 PM	Do not attend all the tutorial sessions because I usu	

6. Any other remarks (positive points, negative points, improvement points) about the tutorial sessions?

Answer Options	Response Count
	6
answered question	6
skipped question	16

Number	Response Date	Response Text	Categories
1	okt 2, 2014 12:39 PM	There were not enough exercises for the second tes	

2	okt 2, 2014 12:30 PM	For students it would be better to have a lecture, tut
3	okt 2, 2014 12:24 PM	More tutorial sessions!!
4	okt 2, 2014 12:20 PM	I think the combined sessions are.confusing, theres
5	okt 2, 2014 12:17 PM	Questions in a tutorial question can not be made if y
6	okt 2, 2014 12:14 PM	I like Youp a lot!

7. Lab sessions (Sensors, Circuits and Electronics)

Answer Options	Yes	No	Response Count
There is enough time at the lab session to finish them at	16	6	22
I prepare lab sessions very well	15	6	21
It is clear what the lab session is about	22	0	22
There is enough time to prepare the lab sessions	14	8	22
Grading of the lab session is clear	10	12	22
There are enough assistants at the lab session	12	10	22
The student assistants and other teachers have enough	16	6	22
I learn a lot from the labs and they are a benefecial part	21	1	22
Other things?			3
		answered question	22
		skipped question	0

Number	Response Date	Other things?	Categories
1	okt 2, 2014 12:39 PM	They're awesome.	
2	okt 2, 2014 12:17 PM	Grading? I so far had 1 lab session back, the resisti	
3	okt 2, 2014 12:15 PM	There are enough assistants at the lab session = no	

8. Any other remarks (positive points, negative points, improvement points) about the lab sessions?

Answer Options	Response Count
	8
answered question	8
skipped question	14

Number	Response Date	Response Text	Categories
1	okt 2, 2014 12:51 PM	More messing around should be encouraged, just p	
2	okt 2, 2014 12:35 PM	Grading take some time	
3	okt 2, 2014 12:30 PM	A lot of general equipment like oscilloscopes and th	
4	okt 2, 2014 12:24 PM	Make them an little bit smaller	
5	okt 2, 2014 12:21 PM	Little mistakes can get you stuck during a lab sessio	
6	okt 2, 2014 12:20 PM	Difficult.to finish in time. If all goes well no problem	
7	okt 2, 2014 12:17 PM	For the first time the lab sessions are quite easy to f	
8	okt 2, 2014 12:01 PM	I find it good that the lab sessions are easy to prepa	

9. Can you provide us your experiences with the Tests?

Answer Options	Yes	No	Response Count
It is clear what to learn for the tests	18	4	22

The tests are a good representative of the exercises and	15	5	20
The tests are too easy	0	22	22
The tests are too hard	5	17	22
There is enough time to prepare for a test (first try)	13	9	22
There is enough time to prepare for a resit	15	6	21
The peer review sessions are helpful in preparing for a	19	2	21
The weekly rhythm of testing works out positively for me	9	13	22
All these tests.... please give me one big test in the end	8	14	22
Other things?			4
		answered question	22
		skipped question	0

Number	Response Date	Other things?	Categories
1	okt 2, 2014 5:57 PM	The peer review sessions are VERY helpful. I woul	
2	okt 2, 2014 12:24 PM	It is the combination of the resits and two later an ot	
3	okt 2, 2014 12:17 PM	I do like the tests on monday, except that I in the firs	
4	okt 2, 2014 12:13 PM	The problem is that technically seen, there is enoug	

10. Any other remarks (positive points, negative points, improvement points) about the Tests?

Answer Options	Response Count
	9
answered question	9
skipped question	13

Number	Response Date	Response Text	Categories
1	okt 2, 2014 5:57 PM	The peer review sessions are VERY helpful. I woul	
2	okt 2, 2014 12:51 PM	Just old school tests are better	
3	okt 2, 2014 12:39 PM	Please do give me one massive test (or two, maybe	
4	okt 2, 2014 12:35 PM	The peer review sessions are very helpful but the w	
5	okt 2, 2014 12:30 PM	I do like a weekly test, but please do it on another d	
6	okt 2, 2014 12:20 PM	These are a lot of tests... and every week. That mea	
7	okt 2, 2014 12:17 PM	Nice to have lots of tests, but if you fail one test and	
8	okt 2, 2014 12:15 PM	Monday morning is not a great time to have a test. I	
9	okt 2, 2014 12:01 PM	I need the time to learn for the resit which means th	

11. What is your opinion about Circuits and Electronics

Answer Options	1	2	3
Lectures	0	0	0
Tutorial sessions	0	0	0
Lab sessions	0	0	0
Material (book + hand-outs)	0	0	0
Exercises	0	0	0
Topics (interesting: 1 = boring, 10 = just what I wanted to	0	0	0
Topics (difficulty level: 1= easy, 10 = difficult)	0	0	1
Assistance (by student assistants)	1	0	0
Assistance (by teachers)	0	0	0
Other things?			

Number	Response Date	Other things?	Categories
1	okt 2, 2014 12:39 PM	As said before, exercises are good, but to few in so	
2	okt 2, 2014 12:17 PM	I do not need much assistance so therefore those to	
3	okt 2, 2014 12:14 PM	1=bad, 10=good?	

12. What is your opinion about Sensors?

Answer Options	1	2	3
Lectures	0	0	0
Tutorial sessions	1	0	1
Lab sessions	0	0	1
Materials	0	0	2
Exercises	1	0	0
Topics (interesting: 1 = boring, 10 = just what I wanted to	0	0	0
Topics (difficulty level: 1= easy, 10 = difficult)	0	0	1
Assistance (by student assistants)	1	0	1
Assistance (by teachers)	0	0	0
Other things?			

Number	Response Date	Other things?	Categories
1	okt 2, 2014 12:39 PM	Tutorial sessions & exercises NVT	
2	okt 2, 2014 12:35 PM	Answers of the excersizes would be helpful	
3	okt 2, 2014 12:30 PM	The reader is outdated, so please update it. For exa	
4	okt 2, 2014 12:24 PM	What is the difference between lab and tutorial here	
5	okt 2, 2014 12:21 PM	not possible for me to finish sensors lab session in	
6	okt 2, 2014 12:20 PM	I think the sensors assignments are a lot of work an	
7	okt 2, 2014 12:17 PM	The reader and lab sessions are hard to follow if yo	

13. What is your opinion about Intro to Telecommunications?

Answer Options	1	2	3
Lectures	0	0	0
Tutorial sessions	1	0	0
Lab sessions	2	0	0
Materials	1	1	2
Exercises	0	1	0
Topics (interesting: 1 = boring, 10 = just what I wanted to	0	0	0
Topics (difficulty level: 1= easy, 10 = difficult)	0	0	1
Assistance (by student assistants)	1	0	0
Assistance (by teachers)	0	0	0
Other things?			

Number	Response Date	Other things?	Categories
1	okt 2, 2014 12:39 PM	Telecom has no lab sessions so far. Difficult but ma	
2	okt 2, 2014 12:35 PM	No lab sessions yet for Telecom	
3	okt 2, 2014 12:20 PM	I haven't seen the teacher at a tutorial session	
4	okt 2, 2014 12:17 PM	No labsessions yet.	
5	okt 2, 2014 12:17 PM	We did not have any lab sessions yet	
6	okt 2, 2014 12:01 PM	answers are usefull to have	

14. What is your opinion about Systems and Signals?

Answer Options	1	2	3
Lectures	0	0	1
Tutorial sessions	0	0	0
Materials	2	0	0
Exercises	0	0	0
Topics (interesting: 1 = boring, 10 = just what I wanted to	0	0	3
Topics (difficulty level: 1= easy, 10 = difficult)	0	0	0
Assistance (by student assistants)	0	1	0
Assistance (by teachers)	0	0	0
Other things?			

Number	Response Date	Other things?	Categories
1	okt 2, 2014 12:30 PM	Please don't give us powerpoints as learning materi	
2	okt 2, 2014 12:21 PM	to much exercises, some are way to easy. (just mak	
3	okt 2, 2014 12:20 PM	I like the math being so integrated with other subjec	
4	okt 2, 2014 12:17 PM	Should be a book available or at least links to clear	
5	okt 2, 2014 12:17 PM	The subjects (as is stated in the test schedule) do n	

15. What is your opinion about the Project?

Answer Options	1	2	3
Lectures	5	3	3
Tutorial sessions	6	1	3
Materials	5	3	1
Exercises	6	2	2
It is clear what to do	5	1	2
Guidance by the expert	5	0	3
Doing academic literature research	1	2	0
Other things?			

Number	Response Date	Other things?	Categories
1	okt 2, 2014 12:51 PM	badly organized, boring, not interesting lectures, bo	
2	okt 2, 2014 12:39 PM	Guidance is awesome, best feedback on any writte	
3	okt 2, 2014 12:35 PM	No tutorial sessions yet	

4	okt 2, 2014 12:30 PM	My expert Mark Bentum had some personal probler
5	okt 2, 2014 12:21 PM	still no feedback from expert....
6	okt 2, 2014 12:20 PM	Good that this is a bit smaller individual project
7	okt 2, 2014 12:17 PM	I get why this project exists, however I still do not lik
8	okt 2, 2014 12:14 PM	unclear..
9	okt 2, 2014 12:12 PM	We still have no response from the experts yet, Nev

16. What is your opinion about tutoring?

Answer Options	1	2	3
I see my tutor regularly (1=NOT, 10 = just perfect)	8	1	0
How do you rate the tutor group meetings (1=no group	9	0	2
How do you rate the individual tutor meetings	8	0	1
How do you rate the challenges offered? (1=whatever...,	5	0	2
Other things?			

Number	Response Date	Other things?	Categories
1	okt 2, 2014 5:57 PM	Haven't had any group tutoring yet	
2	okt 2, 2014 12:51 PM	I hardly see him so thats good.	
3	okt 2, 2014 12:39 PM	I can talk to my tutor with all my personal issues an	
4	okt 2, 2014 12:35 PM	Had no tutoring session yet so ignore	
5	okt 2, 2014 12:30 PM	I have Eddy as a tutor and I think the personal meet	
6	okt 2, 2014 12:21 PM	Tutor meetings are not helpfull at all; we already kn	
7	okt 2, 2014 12:20 PM	I think the tutoring feels like a bit of a joke. My tutor	
8	okt 2, 2014 12:17 PM	Haven't heard from tutor (H. Scholten) yet.	
9	okt 2, 2014 12:17 PM	I did not have any meeting with my tutor yet	
10	okt 2, 2014 12:14 PM	i do not see my tutor at all most of the time, but i am	
11	okt 2, 2014 12:14 PM	Tutoring is not benificial in any way, it just wastes m	
12	okt 2, 2014 12:12 PM	I like the challenges offered but they were full when	

17. Does the module correspond with your expectations?

Answer Options	Response Count
	17
answered question	17
skipped question	5

Number	Response Date	Response Text	Categories
1	okt 2, 2014 5:57 PM	Ehm, sort of. I guess different kind of teachers woul	
2	okt 2, 2014 5:43 PM	No	
3	okt 2, 2014 12:51 PM	yes	
4	okt 2, 2014 12:39 PM	In the beginning I was worried that this module was	
5	okt 2, 2014 12:35 PM	Fairly. Though I expected a bit more programming,	
6	okt 2, 2014 12:30 PM	Yes, in most aspects.	
7	okt 2, 2014 12:24 PM	Yes, even beyond. Verry technical and hard, but ve	
8	okt 2, 2014 12:21 PM	Yes, as theoretical as i expected	
9	okt 2, 2014 12:20 PM	It is heavier then expected because of multiple large	

10	okt 2, 2014 12:17 PM	Yes.
11	okt 2, 2014 12:17 PM	It is quite exactly as I was expected, although I forg
12	okt 2, 2014 12:15 PM	we do learn stuff about electronics which is good.
13	okt 2, 2014 12:14 PM	yes
14	okt 2, 2014 12:14 PM	Yes
15	okt 2, 2014 12:13 PM	Yes. Sort of.
16	okt 2, 2014 12:10 PM	Yes
17	okt 2, 2014 12:01 PM	yes

18. What are the strongest points of this module?

Answer Options	Response Count
	20
answered question	20
skipped question	2

Number	Response Date	Response Text	Categories
1	okt 2, 2014 5:57 PM	The electronics book and lectures	
2	okt 2, 2014 5:43 PM	none	
3	okt 2, 2014 12:51 PM	The interwovenness makes the module pleasant to	
4	okt 2, 2014 12:39 PM	The difficulty and the interwoven courses are definit	
5	okt 2, 2014 12:35 PM	All subjects are related to each other. Circ & Elec re	
6	okt 2, 2014 12:30 PM	Lab sessions and doing everything instead of just o	
7	okt 2, 2014 12:24 PM	It gives a very nice technical fundament, what can b	
8	okt 2, 2014 12:21 PM	-	
9	okt 2, 2014 12:20 PM	Combined tests with review sessions.	
10	okt 2, 2014 12:20 PM	The module is difficult, but the weekly tests and res	
11	okt 2, 2014 12:20 PM	I like the practical aspect about the module and I fin	
12	okt 2, 2014 12:17 PM	Really good, helpful teachers for all subjects, there'	
13	okt 2, 2014 12:17 PM	It offers a lot of information and (almost) all the infor	
14	okt 2, 2014 12:15 PM	after this module you are confident to working with e	
15	okt 2, 2014 12:14 PM	it is the technical module the knowledge lasts long	
16	okt 2, 2014 12:14 PM	Sensor and Telecom and Circuits and Electronics	
17	okt 2, 2014 12:13 PM	I really have the feeling that I am learning useful thi	
18	okt 2, 2014 12:12 PM	I have the feeling that I really learn something usefu	
19	okt 2, 2014 12:10 PM	Good execution of tom model	
20	okt 2, 2014 12:01 PM	It has good connections between the courses	

19. What are the weakest points of this module?

Answer Options	Response Count
	19
answered question	19
skipped question	3

Number	Response Date	Response Text	Categories
1	okt 2, 2014 5:57 PM	Maths	
2	okt 2, 2014 5:43 PM	test system	
3	okt 2, 2014 12:51 PM	project The interwovennessmakes it crap to follow p	

4	okt 2, 2014 12:39 PM	I have no clue.
5	okt 2, 2014 12:35 PM	The weekly test. If you're sick or having a bad week
6	okt 2, 2014 12:30 PM	All the lectures which makes you lose your focus.
7	okt 2, 2014 12:24 PM	WAY TO MUCH SUBJECT IN ONE MODULE, i thir
8	okt 2, 2014 12:21 PM	-
9	okt 2, 2014 12:20 PM	The sensors assignments that are a real challange
10	okt 2, 2014 12:20 PM	Although the material of the module is interesting, I
11	okt 2, 2014 12:17 PM	It's a lot of pretty difficult theory in one module. I thir
12	okt 2, 2014 12:17 PM	It is a lot of the same thing.
13	okt 2, 2014 12:15 PM	the project is very unclear.
14	okt 2, 2014 12:14 PM	the research project is a nice idea, but i feel a little b
15	okt 2, 2014 12:14 PM	Tutoring, Project
16	okt 2, 2014 12:13 PM	A LOT of lectures which take a lot of energy and if y
17	okt 2, 2014 12:12 PM	It is REALLY unclear what we have to do for the pro
18	okt 2, 2014 12:10 PM	Project doesn't really fit in.
19	okt 2, 2014 12:01 PM	to much tests and to less time

20. Do you have any additional suggestions for this module?

Answer Options	Response Count
	9
answered question	9
skipped question	13

Number	Response Date	Response Text	Categories
1	okt 2, 2014 5:57 PM	Yes, one big complicated project divided in chunks	
2	okt 2, 2014 5:43 PM	few big tests instead of more smaller ones, less ass	
3	okt 2, 2014 12:51 PM	More playroom. More real word show of how stuff w	
4	okt 2, 2014 12:39 PM	Not that I can think of now.	
5	okt 2, 2014 12:24 PM	See 19	
6	okt 2, 2014 12:21 PM	-	
7	okt 2, 2014 12:20 PM	It would be nice to have the results of the sensors a	
8	okt 2, 2014 12:13 PM	Everything is going really fast so it would be great if	
9	okt 2, 2014 12:10 PM	nope	

21. What grade do you give this module after filling in the other questions

Answer Options	1	2	3
Grade:	0	0	0

4	**5**	**6**	**7**	**8**	**9**
0	1	4	9	6	1

es within this module?

15%	20%	25%	30%	35%	40%
0	0	0	0	0	0
0	0	0	0	0	0
0	6	4	4	3	0
4	3	4	2	0	0
6	2	3	0	0	0
7	3	0	1	1	0
5	6	3	1	0	0
4	2	3	0	0	0

and or tutorials that much, but I think there are too many lectures at the beginning which drains you so m

sick so I haven't been using the tutorial sessions, but I would like to.
d not know whether they actually are helpful in preperation of the test
ually have other NM lectures at the same time.

st and especially the second order differential equation. I looked online for more, but had no solutions to

:orial and a lecture again in one day. This module we had lectures on one day and tutorials on the other

; too much to do for multiple subjects. I usually end up doing only 1 subject.
you missed a lecture for a subject that has no book available - slides alone won't do!Furthermore, studer

ve sensing of sensors. Still awaiting the rest of the results
ɔ for C&E

ılay and see the response but not in mandatory question/restricted guided form

ıe program to make screenshots of the oscilloscope didn't work and caused us to have weird results. We

ɔn, especially when assistants do not know whats going on.
but as soon as something goes wrong there is not enough time and the student assistants are always bı
finish in time. But if there's a problem, often related to the wrong settings of an oscilloscope, it takes a lo
ıre and if you do it at home beforehand the labsession is much doable

d like more pre-tests to see what kind of questions to expect in the real one. Practicetests please!
ther exam, what give not enough preparation time. You have now a combination of a big test and small te
st module have some camps I really want to go to. But that is my problem.
gh time for studying, but after a LONG day of lectures and trying to keep up with what the teacher is sayi

d like more pre-tests to see what kind of questions to expect in the real one. Practicetests please!

e one diagnostic), this keeps stress during the week down and gives me a lot more room to breathe. We
veekly test are too much. Though I don't want one giant test per se
ay. We students have a lot of camps in the first module, so this means we can't really learn in the weeke
ans the stress is continuous. 1 big test is also not nice but this is also a lot, find a solution halfway of botl
l need to prepare for the resits, you lose most of the time you otherwise have for studying for the next tes
have a busy weekend, always.
at you only have saturday and sunday for the real test.. not enough time

4	**5**	**6**	**7**	**8**	**9**
0	0	3	4	10	4
0	2	5	10	5	0
0	0	6	6	7	2
2	3	4	2	2	7
0	4	4	7	6	1
0	1	1	7	8	3
0	5	1	4	8	3
2	0	2	8	5	3
0	0	2	4	7	7

me places. The story book is well made and fits perfectly, the Hambley book is confusing and doesn't fit
›pics have lower notes (same for other subjects)

4	5	6	7	8	9
1	0	3	7	4	4
1	3	3	5	4	2
1	4	6	1	4	2
1	1	7	5	4	2
4	2	9	6	0	0
0	0	1	4	8	8
1	3	4	6	3	3
2	1	6	6	2	3
1	0	5	8	6	2

ample, some of the links in the reader have expired. Secondly, some of the topics are really easy and so
e? Question are really vague and there is no direct feedback or awnsers for the questions
class....
d difficult. It is a lot to figure out on your own.
u've been away from the Arduino for a while.

4	5	6	7	8	9
1	0	3	4	6	5
2	4	2	8	3	0
1	5	2	2	2	0
0	3	5	7	2	1
3	2	3	8	4	0
0	2	6	4	5	4
0	5	2	6	5	1
0	4	4	6	4	1
2	1	6	4	2	3

anageable and, YEAAAAAH finally some difficult topics I can sink my teeth in!

4	5	6	7	8	9
1	2	5	8	4	1
0	4	2	10	4	1
1	4	7	5	2	0
0	2	6	9	5	0
5	3	5	1	3	1
0	3	4	5	7	3
1	5	4	2	6	1
0	5	4	4	3	4

ial, It just doesn't work. Furthermore, math is math. It stays boring, but we do need to learn it.
ke a list of exercises you definately should do..)
cts and being tested together.
explanations on the web.
not have any further materials as the slides. I do not know whether this is incorrect in the schedule or the

4	5	6	7	8	9
1	4	5	1	0	0
1	4	1	2	0	0
3	5	3	1	0	0
0	4	3	2	0	0
2	3	5	4	0	0
1	3	3	1	2	1
1	4	4	4	3	0

ring activities, not useful activities.AND REALLY GOOGLE LESSONS AND LESSONS ON TO REFINE
n text I have had so far in this module and maybe the course. Academic research is, not really that fun, I

ns which caused me to miss a deadline. I know he couldn't help it, so I haven't really formed an opinion

ce it. That is why the doing academic research has got a 10, because it is really good to learn. I am not a

v Media doesn't even have an expert.

4	5	6	7	8	9
2	0	2	1	3	0
1	4	1	0	0	2
0	4	2	0	1	3
0	3	2	1	1	5

d questions.

tings are way more useful than group meetings, because we can discuss my problems/difficulties instea
ow anything he tells us. (it doesn't add anything)I really enjoy the painting course offered.
does not have the needed skills. We do meet up regularly but it is not of any help. It feels like an empty

n fine with this
ny time completely!
I signed up.

d be cool. I really don't like the lectures for systems and signals (maths) because of Paolo, I just don't u

to easy but now I see that it is super exciting and challenging. However, I have an issue with the weekly
interfacing sensors and calculating eg filters were some of my expectations

ry informational.

e subjects.

ot the research question was this module.

follow since all subjects are explained from several angles
tely plus points.
elates to Sys & Sig and all subjects relate to the overlapping theme
nly learning the theory behind it.
be very handy in my later career.

its, help me in understanding and learning the topics. The topics in each course are similar and seem w
nd the material very interesting.
s lots of guidance available.
rmation we get is transferred over multiple subjects without too much of recap.
electronics

ngs.
ul especially compared with the New Media module. I also really like the combined tests and integration c

arts of the module, if you miss one thing the rest is harder it kills the personal development thingy that U

: you'll get a delay which is pretty hard to fix with this way

ık the older system where you split up the subject over the year would be much nicer. More time focus

plus a lot of contact hours.
have problems to learn it properly (due to time problems). The high frequency of tests, resits and lab se
ık it's easier to do spread over the year.

ɔit lost

ou miss 1 thing in the beginning of the lecture then you have no clue what the entire lecture is about.
ɔject many deadlines have passed but we still have no feedback from the experts.

for Sensors. Let's make an amplifier ourselves with a lot of extra stuff and combine all the knwoledge; m
signments
orks.

ssignments some time before the test about the material so that there is time to assess your own knowl
f things could slow down a little bit and we would have more time during the day to do exercises. (yes we

4	5	6	7	8	9
0	0	5	10	5	2

10	Rating Average	Response Count
1	7,23	22
	answered question	22
	skipped question	0

45%	50%	55%	60%	60+%	Response Count
0	0	0	0	0	22
0	0	0	0	0	22
0	2	0	1	0	22
0	0	0	0	0	21
0	0	0	0	0	21
0	0	0	0	0	21
0	0	0	1	0	22
0	0	0	0	0	22
					1
				answered question	22
				skipped question	0

nuch that you can't really do any homework or prepare for tests when you go home.

check them. Also, the tutorial sessions are way too noisy for me personally to concentrate. I however, g

which just doesn't work out, because you will lose the students their attention.

nt assistants are doing great and if they don't know something, they can often direct you to another stud

e had to wait a long time for the student assistants and they all didn't know what was wrong with our osci

usy
t of time to wait for assistants and if the assistants are there, it takes a long time for even them to fix the

est.

ng, your brain is just tired and then it is VERY difficult to study at home.

have exam weeks for this. Where we can study for one whole 'white' week straight. This worked for me

end (I know, it's not the best excuse, but it's true) Secondly, having a test on monday causes some peop
h ends. I really like the peer review test sessions, 1 more student assistant might be helpful.
st. Peer review sessions are very helpful.

10	Rating Average	Response Count
1	7,82	22
0	6,82	22
0	7,24	21
2	7,27	22
0	6,82	22
2	7,77	22
0	6,95	22
1	7,00	22
2	8,14	22
		3

answered question	22
skipped question	0

: with the formulas and practices in the story book.

10	Rating Average	Response Count
3	7,68	22
0	6,30	20
1	6,50	20
0	6,45	22
0	5,59	22
1	8,18	22
1	6,77	22
0	6,27	22
0	7,09	22
		7
	answered question	22
	skipped question	0

ome are really difficult, so maybe stabilise it. Finally, the exercises are good, but they are very weirdly fo

10	Rating Average	Response Count
3	7,86	22
0	6,05	20
0	5,21	14
0	5,82	22
0	6,19	21
1	7,27	22
1	6,71	21
0	6,40	20
0	6,67	18
		6
	answered question	22
	skipped question	0

10	Rating Average	Response Count
0	6,55	22
0	6,81	21
0	5,67	21
0	6,77	22
1	5,64	22
0	7,14	22
0	6,30	20
0	6,85	20
		5
	answered question	22
	skipped question	0

materials are actually not there.

10	Rating Average	Response Count
0	3,68	22
0	3,39	18
0	3,62	21
0	3,58	19
0	4,27	22
1	4,65	20
1	5,75	20
		9
	answered question	22
	skipped question	0

SEARCHES, I MEAN REALLY.
but I see it is necessary. No exercises but the assignments and no tutorial sessions also. The lectures a

yet about his guidance.

aware of any tutorial sessions. The guidance by the expert also took really long until it finally started, I w

10	Rating Average	Response Count
5	5,05	22
2	3,95	21
3	4,91	22
3	5,82	22
		12
	answered question	22
	skipped question	0

d of sitting in a group, bored out of my mind, because I want to do something useful. I did like the guest

course.

nderstand him and I really need some help with it. The telecommunications teacher is really cool and en

y tests. But I stated that before.

ell planned and coordinated.

of the subjects.

Jni's are so proud of. It makes is a mass machine school like setup. *kuch* TOM *kuch*

on it and way more doable. Little packages to learn and more time to let it sink, what will contribute on t

ssions are exhausting and I would prefere the to have one big test at the end.

nore freedom!

edge.
e can do them in the evening but my brain is completely done at the end of the day)

10	Rating Average	Response Count
0	7,18	22
	answered question	22
	skipped question	0

go to the UB during these hours to study on my own. The assistance are sometimes to sparse, but most

ent assistant that knows more on the subject.

illoscope, so maybe more SA's and general knowledge about the equipment there? Please upload the la

se issues.

in the past and I have no clue why it wouldn't in the future. Better one big stress moment ten several sm

ple, including me, to stress out the whole weekend and learn. This means that I don't really feel rested a

rmulated which causes me to wonder what I should answer.

re not that interesting. By now I hope people know how to use search engines. Also, two lectures had ex

as told the feedback would be at least half a week earlier as it actually was.

lecture Eddy and Severine organised from a 3D animator, that was very interesting to me.

ıthusiastic and Eric and Edwin are the best teachers from CreaTe. It is really more difficult than I expecte

the technical inside.

of the time sufficient.

absession pdf a little earlier. If you have already made an important appointment a week before on that c

all ones *kuch* TOM *kuch*

fter the weekend.

‹actly the same topic?! Why?

ed, but I see it as a challenge.

day you can't really prepare the lab session as well as you would've liked too. Furthermore, I think the la

bsessions are very benificial to understanding the works of electronics.

Smart Technology MidTerm Questionnaire

1. What is your name? (not mandatory)	
Answer Options	Response Count
	13
answered question	13
skipped question	9

2. What grade do you give this module?			
Answer Options	1	2	3
Grade:	0	0	0

3. How many hours do you spent on average per week in this module (total)?		
Answer Options	Response Percent	Response Count
0-10	0,0%	0
10-20	0,0%	0
20-30	0,0%	0
30-40	50,0%	11
40-50	13,6%	3
50-60	40,9%	9
60+	4,5%	1
answered question		22
skipped question		0

4. How are your hours mentioned in the previous question (call this 100%) divided over the different activiti			
Answer Options	0%	5%	10%
Project (includes all activities)	4	14	4
Tutoring	12	10	0
Lectures (preparing and attending)	0	0	2
Tutorials (active participation)	0	4	4
Home work (questions)	1	3	6
Lab related activies (preparing and attending)	0	3	6
Tests (preparing)	0	1	5
Resits (preparing)	5	2	6
Others (please explain)			

Number	Response Date	Others (please explain)	Categories
1	okt 2, 2014 12:30 PM	I've been sick, so I haven't really attended lectures a	

5. Can you tell us your experiences with the tutorial sessions

Answer Options	Yes	No	Response Count
I make use of the tutorial session (and participate	14	8	22
There are enough tutorial sessions	17	5	22
I would like more guided training sessions	6	15	21
The combined tutorial sessions work out fine for me	16	5	21
The tutorial questions prepare me for the tests.	19	3	22
What to do in a tutorial session and the answers are	13	8	21
There are enough student assistants	17	4	21
The student assistants are of great help at the tutorials	18	3	21
Other things?			4
		answered question	22
		skipped question	0

Number	Response Date	Other things?	Categories
1	okt 2, 2014 12:39 PM	Updating portfolio.	
2	okt 2, 2014 12:30 PM	What's a guided training session? Again, I've been s	
3	okt 2, 2014 12:17 PM	I have not done the tutorial questions yet, so I would	
4	okt 2, 2014 12:10 PM	Do not attend all the tutorial sessions because I usu	

6. Any other remarks (positive points, negative points, improvement points) about the tutorial sessions?

Answer Options	Response Count
	6
answered question	6
skipped question	16

Number	Response Date	Response Text	Categories
1	okt 2, 2014 12:39 PM	There were not enough exercises for the second tes	
2	okt 2, 2014 12:30 PM	For students it would be better to have a lecture, tut	
3	okt 2, 2014 12:24 PM	More tutorial sessions!!	
4	okt 2, 2014 12:20 PM	I think the combined sessions are.confusing, theres	
5	okt 2, 2014 12:17 PM	Questions in a tutorial question can not be made if y	
6	okt 2, 2014 12:14 PM	I like Youp a lot!	

7. Lab sessions (Sensors, Circuits and Electronics)

Answer Options	Yes	No	Response Count
There is enough time at the lab session to finish them at	16	6	22
I prepare lab sessions very well	15	6	21
It is clear what the lab session is about	22	0	22

There is enough time to prepare the lab sessions	14	8	22
Grading of the lab session is clear	10	12	22
There are enough assistants at the lab session	12	10	22
The student assistants and other teachers have enough	16	6	22
I learn a lot from the labs and they are a benefecial part	21	1	22
Other things?			3
		answered question	22
		skipped question	0

Number	Response Date	Other things?	Categories
1	okt 2, 2014 12:39 PM	They're awesome.	
2	okt 2, 2014 12:17 PM	Grading? I so far had 1 lab session back, the resisti	
3	okt 2, 2014 12:15 PM	There are enough assistants at the lab session = no	

8. Any other remarks (positive points, negative points, improvement points) about the lab sessions?

Answer Options	Response Count
	8
answered question	8
skipped question	14

Number	Response Date	Response Text	Categories
1	okt 2, 2014 12:51 PM	More messing around should be encouraged, just p	
2	okt 2, 2014 12:35 PM	Grading take some time	
3	okt 2, 2014 12:30 PM	A lot of general equipment like oscilloscopes and th	
4	okt 2, 2014 12:24 PM	Make them an little bit smaller	
5	okt 2, 2014 12:21 PM	Little mistakes can get you stuck during a lab sessio	
6	okt 2, 2014 12:20 PM	Difficult.to finish in time. If all goes well no problem	
7	okt 2, 2014 12:17 PM	For the first time the lab sessions are quite easy to f	
8	okt 2, 2014 12:01 PM	I find it good that the lab sessions are easy to prepa	

9. Can you provide us your experiences with the Tests?

Answer Options	Yes	No	Response Count
It is clear what to learn for the tests	18	4	22
The tests are a good representative of the exercises and	15	5	20
The tests are too easy	0	22	22
The tests are too hard	5	17	22
There is enough time to prepare for a test (first try)	13	9	22
There is enough time to prepare for a resit	15	6	21
The peer review sessions are helpful in preparing for a	19	2	21
The weekly rhythm of testing works out positively for me	9	13	22
All these tests.... please give me one big test in the end	8	14	22
Other things?			4
		answered question	22
		skipped question	0

Number	Response Date	Other things?	Categories

1	okt 2, 2014 5:57 PM	The peer review sessions are VERY helpful. I woul
2	okt 2, 2014 12:24 PM	It is the combination of the resits and two later an ot
3	okt 2, 2014 12:17 PM	I do like the tests on monday, except that I in the firs
4	okt 2, 2014 12:13 PM	The problem is that technically seen, there is enoug

10. Any other remarks (positive points, negative points, improvement points) about the Tests?

Answer Options	Response Count
	9
answered question	9
skipped question	13

Number	Response Date	Response Text	Categories
1	okt 2, 2014 5:57 PM	The peer review sessions are VERY helpful. I woul	
2	okt 2, 2014 12:51 PM	Just old school tests are better	
3	okt 2, 2014 12:39 PM	Please do give me one massive test (or two, maybe	
4	okt 2, 2014 12:35 PM	The peer review sessions are very helpful but the w	
5	okt 2, 2014 12:30 PM	I do like a weekly test, but please do it on another d	
6	okt 2, 2014 12:20 PM	These are a lot of tests... and every week. That mea	
7	okt 2, 2014 12:17 PM	Nice to have lots of tests, but if you fail one test and	
8	okt 2, 2014 12:15 PM	Monday morning is not a great time to have a test. I	
9	okt 2, 2014 12:01 PM	I need the time to learn for the resit which means th	

11. What is your opinion about Circuits and Electronics

Answer Options	1	2	3
Lectures	0	0	0
Tutorial sessions	0	0	0
Lab sessions	0	0	0
Material (book + hand-outs)	0	0	0
Exercises	0	0	0
Topics (interesting: 1 = boring, 10 = just what I wanted to	0	0	0
Topics (difficulty level: 1= easy, 10 = difficult)	0	0	1
Assistance (by student assistants)	1	0	0
Assistance (by teachers)	0	0	0
Other things?			

Number	Response Date	Other things?	Categories
1	okt 2, 2014 12:39 PM	As said before, exercises are good, but to few in so	
2	okt 2, 2014 12:17 PM	I do not need much assistance so therefore those to	
3	okt 2, 2014 12:14 PM	1=bad, 10=good?	

12. What is your opinion about Sensors?

Answer Options	1	2	3

Lectures	0	0	0
Tutorial sessions	1	0	1
Lab sessions	0	0	1
Materials	0	0	2
Exercises	1	0	0
Topics (interesting: 1 = boring, 10 = just what I wanted to	0	0	0
Topics (difficulty level: 1= easy, 10 = difficult)	0	0	1
Assistance (by student assistants)	1	0	1
Assistance (by teachers)	0	0	0
Other things?			

Number	Response Date	Other things?	Categories
1	okt 2, 2014 12:39 PM	Tutorial sessions & exercises NVT	
2	okt 2, 2014 12:35 PM	Answers of the excersizes would be helpful	
3	okt 2, 2014 12:30 PM	The reader is outdated, so please update it. For exa	
4	okt 2, 2014 12:24 PM	What is the difference between lab and tutorial here	
5	okt 2, 2014 12:21 PM	not possible for me to finish sensors lab session in	
6	okt 2, 2014 12:20 PM	I think the sensors assignments are a lot of work an	
7	okt 2, 2014 12:17 PM	The reader and lab sessions are hard to follow if yo	

13. What is your opinion about Intro to Telecommunications?

Answer Options	1	2	3
Lectures	0	0	0
Tutorial sessions	1	0	0
Lab sessions	2	0	0
Materials	1	1	2
Exercises	0	1	0
Topics (interesting: 1 = boring, 10 = just what I wanted to	0	0	0
Topics (difficulty level: 1= easy, 10 = difficult)	0	0	1
Assistance (by student assistants)	1	0	0
Assistance (by teachers)	0	0	0
Other things?			

Number	Response Date	Other things?	Categories
1	okt 2, 2014 12:39 PM	Telecom has no lab sessions so far. Difficult but ma	
2	okt 2, 2014 12:35 PM	No lab sessions yet for Telecom	
3	okt 2, 2014 12:20 PM	I haven't seen the teacher at a tutorial session	
4	okt 2, 2014 12:17 PM	No labsessions yet.	
5	okt 2, 2014 12:17 PM	We did not have any lab sessions yet	
6	okt 2, 2014 12:01 PM	answers are usefull to have	

14. What is your opinion about Systems and Signals?

Answer Options	1	2	3

Lectures	0	0	1
Tutorial sessions	0	0	0
Materials	2	0	0
Exercises	0	0	0
Topics (interesting: 1 = boring, 10 = just what I wanted to	0	0	3
Topics (difficulty level: 1= easy, 10 = difficult)	0	0	0
Assistance (by student assistants)	0	1	0
Assistance (by teachers)	0	0	0
Other things?			

Number	Response Date	Other things?	Categories
1	okt 2, 2014 12:30 PM	Please don't give us powerpoints as learning materi	
2	okt 2, 2014 12:21 PM	to much exercises, some are way to easy. (just mak	
3	okt 2, 2014 12:20 PM	I like the math being so integrated with other subjec	
4	okt 2, 2014 12:17 PM	Should be a book available or at least links to clear	
5	okt 2, 2014 12:17 PM	The subjects (as is stated in the test schedule) do n	

15. What is your opinion about the Project?

Answer Options	1	2	3
Lectures	5	3	3
Tutorial sessions	6	1	3
Materials	5	3	1
Exercises	6	2	2
It is clear what to do	5	1	2
Guidance by the expert	5	0	3
Doing academic literature research	1	2	0
Other things?			

Number	Response Date	Other things?	Categories
1	okt 2, 2014 12:51 PM	badly organized, boring, not interesting lectures, bo	
2	okt 2, 2014 12:39 PM	Guidance is awesome, best feedback on any writte	
3	okt 2, 2014 12:35 PM	No tutorial sessions yet	
4	okt 2, 2014 12:30 PM	My expert Mark Bentum had some personal probler	
5	okt 2, 2014 12:21 PM	still no feedback from expert....	
6	okt 2, 2014 12:20 PM	Good that this is a bit smaller individual project	
7	okt 2, 2014 12:17 PM	I get why this project exists, however I still do not lik	
8	okt 2, 2014 12:14 PM	unclear..	
9	okt 2, 2014 12:12 PM	We still have no response from the experts yet, Nev	

16. What is your opinion about tutoring?

Answer Options	1	2	3
I see my tutor regularly (1=NOT, 10 = just perfect)	8	1	0
How do you rate the tutor group meetings (1=no group	9	0	2

How do you rate the individual tutor meetings	8	0	1
How do you rate the challenges offered? (1=whatever...,	5	0	2
Other things?			

Number	Response Date	Other things?	Categories
1	okt 2, 2014 5:57 PM	Haven't had any group tutoring yet	
2	okt 2, 2014 12:51 PM	I hardly see him so thats good.	
3	okt 2, 2014 12:39 PM	I can talk to my tutor with all my personal issues an	
4	okt 2, 2014 12:35 PM	Had no tutoring session yet so ignore	
5	okt 2, 2014 12:30 PM	I have Eddy as a tutor and I think the personal meet	
6	okt 2, 2014 12:21 PM	Tutor meetings are not helpfull at all; we already kn	
7	okt 2, 2014 12:20 PM	I think the tutoring feels like a bit of a joke. My tutor	
8	okt 2, 2014 12:17 PM	Haven't heard from tutor (H. Scholten) yet.	
9	okt 2, 2014 12:17 PM	I did not have any meeting with my tutor yet	
10	okt 2, 2014 12:14 PM	i do not see my tutor at all most of the time, but i am	
11	okt 2, 2014 12:14 PM	Tutoring is not benificial in any way, it just wastes m	
12	okt 2, 2014 12:12 PM	I like the challenges offered but they were full when	

17. Does the module correspond with your expectations?

Answer Options	Response Count
	17
answered question	17
skipped question	5

Number	Response Date	Response Text	Categories
1	okt 2, 2014 5:57 PM	Ehm, sort of. I guess different kind of teachers woul	
2	okt 2, 2014 5:43 PM	No	
3	okt 2, 2014 12:51 PM	yes	
4	okt 2, 2014 12:39 PM	In the beginning I was worried that this module was	
5	okt 2, 2014 12:35 PM	Fairly. Though I expected a bit more programming,	
6	okt 2, 2014 12:30 PM	Yes, in most aspects.	
7	okt 2, 2014 12:24 PM	Yes, even beyond. Verry technical and hard, but ve	
8	okt 2, 2014 12:21 PM	Yes, as theoretical as i expected	
9	okt 2, 2014 12:20 PM	It is heavier then expected because of multiple larg	
10	okt 2, 2014 12:17 PM	Yes.	
11	okt 2, 2014 12:17 PM	It is quite exactly as I was expected, although I forg	
12	okt 2, 2014 12:15 PM	we do learn stuff about electronics which is good.	
13	okt 2, 2014 12:14 PM	yes	
14	okt 2, 2014 12:14 PM	Yes	
15	okt 2, 2014 12:13 PM	Yes. Sort of.	
16	okt 2, 2014 12:10 PM	Yes	
17	okt 2, 2014 12:01 PM	yes	

18. What are the strongest points of this module?

Answer Options	Response Count

	20
answered question	20
skipped question	2

Number	Response Date	Response Text	Categories
1	okt 2, 2014 5:57 PM	The electronics book and lectures	
2	okt 2, 2014 5:43 PM	none	
3	okt 2, 2014 12:51 PM	The interwovenness makes the module pleasant to	
4	okt 2, 2014 12:39 PM	The difficulty and the interwoven courses are definit	
5	okt 2, 2014 12:35 PM	All subjects are related to each other. Circ & Elec re	
6	okt 2, 2014 12:30 PM	Lab sessions and doing everything instead of just o	
7	okt 2, 2014 12:24 PM	It gives a very nice technical fundament, what can b	
8	okt 2, 2014 12:21 PM	-	
9	okt 2, 2014 12:20 PM	Combined tests with review sessions.	
10	okt 2, 2014 12:20 PM	The module is difficult, but the weekly tests and res	
11	okt 2, 2014 12:20 PM	I like the practical aspect about the module and I fin	
12	okt 2, 2014 12:17 PM	Really good, helpful teachers for all subjects, there'	
13	okt 2, 2014 12:17 PM	It offers a lot of information and (almost) all the infor	
14	okt 2, 2014 12:15 PM	after this module you are confident to working with e	
15	okt 2, 2014 12:14 PM	it is the technical module the knowledge lasts long	
16	okt 2, 2014 12:14 PM	Sensor and Telecom and Circuits and Electronics	
17	okt 2, 2014 12:13 PM	I really have the feeling that I am learning useful thi	
18	okt 2, 2014 12:12 PM	I have the feeling that I really learn something usefu	
19	okt 2, 2014 12:10 PM	Good execution of tom model	
20	okt 2, 2014 12:01 PM	It has good connections between the courses	

19. What are the weakest points of this module?

Answer Options	Response Count
	19
answered question	19
skipped question	3

Number	Response Date	Response Text	Categories
1	okt 2, 2014 5:57 PM	Maths	
2	okt 2, 2014 5:43 PM	test system	
3	okt 2, 2014 12:51 PM	project The interwovennessmakes it crap to follow p	
4	okt 2, 2014 12:39 PM	I have no clue.	
5	okt 2, 2014 12:35 PM	The weekly test. If you're sick or having a bad week	
6	okt 2, 2014 12:30 PM	All the lectures which makes you lose your focus.	
7	okt 2, 2014 12:24 PM	WAY TO MUCH SUBJECT IN ONE MODULE, i thir	
8	okt 2, 2014 12:21 PM	-	
9	okt 2, 2014 12:20 PM	The sensors assignments that are a real challange	
10	okt 2, 2014 12:20 PM	Although the material of the module is interesting, I	
11	okt 2, 2014 12:17 PM	It's a lot of pretty difficult theory in one module. I thir	
12	okt 2, 2014 12:17 PM	It is a lot of the same thing.	
13	okt 2, 2014 12:15 PM	the project is very unclear.	
14	okt 2, 2014 12:14 PM	the research project is a nice idea, but i feel a little b	
15	okt 2, 2014 12:14 PM	Tutoring, Project	
16	okt 2, 2014 12:13 PM	A LOT of lectures which take a lot of energy and if y	
17	okt 2, 2014 12:12 PM	It is REALLY unclear what we have to do for the pro	
18	okt 2, 2014 12:10 PM	Project doesn't really fit in.	

19	okt 2, 2014 12:01 PM	to much tests and to less time

20. Do you have any additional suggestions for this module?	
Answer Options	Response Count
	9
answered question	9
skipped question	13

Number	Response Date	Response Text	Categories
1	okt 2, 2014 5:57 PM	Yes, one big complicated project divided in chunks	
2	okt 2, 2014 5:43 PM	few big tests instead of more smaller ones, less ass	
3	okt 2, 2014 12:51 PM	More playroom. More real word show of how stuff w	
4	okt 2, 2014 12:39 PM	Not that I can think of now.	
5	okt 2, 2014 12:24 PM	See 19	
6	okt 2, 2014 12:21 PM	-	
7	okt 2, 2014 12:20 PM	It would be nice to have the results of the sensors a	
8	okt 2, 2014 12:13 PM	Everything is going really fast so it would be great if	
9	okt 2, 2014 12:10 PM	nope	

21. What grade do you give this module after filling in the other questions			
Answer Options	1	2	3
Grade:	0	0	0

4	5	6	7	8	9
0	1	4	9	6	1

es within this module?

15%	20%	25%	30%	35%	40%
0	0	0	0	0	0
0	0	0	0	0	0
0	6	4	4	3	0
4	3	4	2	0	0
6	2	3	0	0	0
7	3	0	1	1	0
5	6	3	1	0	0
4	2	3	0	0	0

and or tutorials that much, but I think there are too many lectures at the beginning which drains you so m

sick so I haven't been using the tutorial sessions, but I would like to.
d not know whether they actually are helpful in preperation of the test
ually have other NM lectures at the same time.

st and especially the second order differential equation. I looked online for more, but had no solutions to
torial and a lecture again in one day. This module we had lectures on one day and tutorials on the other

too much to do for multiple subjects. I usually end up doing only 1 subject.
you missed a lecture for a subject that has no book available - slides alone won't do! Furthermore, studer

ve sensing of sensors. Still awaiting the rest of the results
ɔ for C&E

ɩlay and see the response but not in mandatory question/restricted guided form

ıe program to make screenshots of the oscilloscope didn't work and caused us to have weird results. We

ɔn, especially when assistants do not know whats going on.
but as soon as something goes wrong there is not enough time and the student assistants are always bu
finish in time. But if there's a problem, often related to the wrong settings of an oscilloscope, it takes a lo
ıre and if you do it at home beforehand the labsession is much doable

d like more pre-tests to see what kind of questions to expect in the real one. Practicetests please!
ther exam, what give not enough preparation time. You have now a combination of a big test and small te
st module have some camps I really want to go to. But that is my problem.
gh time for studying, but after a LONG day of lectures and trying to keep up with what the teacher is sayi

d like more pre-tests to see what kind of questions to expect in the real one. Practicetests please!

e one diagnostic), this keeps stress during the week down and gives me a lot more room to breathe. We
eekly test are too much. Though I don't want one giant test per se
ay. We students have a lot of camps in the first module, so this means we can't really learn in the weeke
ans the stress is continuous. 1 big test is also not nice but this is also a lot, find a solution halfway of botl
l need to prepare for the resits, you lose most of the time you otherwise have for studying for the next tes
have a busy weekend, always.
at you only have saturday and sunday for the real test.. not enough time

4	5	6	7	8	9
0	0	3	4	10	4
0	2	5	10	5	0
0	0	6	6	7	2
2	3	4	2	2	7
0	4	4	7	6	1
0	1	1	7	8	3
0	5	1	4	8	3
2	0	2	8	5	3
0	0	2	4	7	7

me places. The story book is well made and fits perfectly, the Hambley book is confusing and doesn't fit
opics have lower notes (same for other subjects)

4	5	6	7	8	9

1	0	3	7	4	4
1	3	3	5	4	2
1	4	6	1	4	2
1	1	7	5	4	2
4	2	9	6	0	0
0	0	1	4	8	8
1	3	4	6	3	3
2	1	6	6	2	3
1	0	5	8	6	2

ample, some of the links in the reader have expired. Secondly, some of the topics are really easy and so
e? Question are really vague and there is no direct feedback or awnsers for the questions
class....
d difficult. It is a lot to figure out on your own.
u've been away from the Arduino for a while.

4	5	6	7	8	9
1	0	3	4	6	5
2	4	2	8	3	0
1	5	2	2	2	0
0	3	5	7	2	1
3	2	3	8	4	0
0	2	6	4	5	4
0	5	2	6	5	1
0	4	4	6	4	1
2	1	6	4	2	3

anageable and, YEAAAAAH finally some difficult topics I can sink my teeth in!

4	5	6	7	8	9

1	2	5	8	4	1
0	4	2	10	4	1
1	4	7	5	2	0
0	2	6	9	5	0
5	3	5	1	3	1
0	3	4	5	7	3
1	5	4	2	6	1
0	5	4	4	3	4

ial, It just doesn't work. Furthermore, math is math. It stays boring, but we do need to learn it.
ke a list of exercises you definately should do..)
:ts and being tested together.
explanations on the web.
ıot have any further materials as the slides. I do not know whether this is incorrect in the schedule or the

4	5	6	7	8	9
1	4	5	1	0	0
1	4	1	2	0	0
3	5	3	1	0	0
0	4	3	2	0	0
2	3	5	4	0	0
1	3	3	1	2	1
1	4	4	4	3	0

ring activities, not useful activities.AND REALLY GOOGLE LESSONS AND LESSONS ON TO REFINE
n text I have had so far in this module and maybe the course. Academic research is, not really that fun, I

ms which caused me to miss a deadline. I know he couldn't help it, so I haven't really formed an opinion

ke it. That is why the doing academic research has got a 10, because it is really good to learn. I am not a

v Media doesn't even have an expert.

4	5	6	7	8	9
2	0	2	1	3	0
1	4	1	0	0	2

0	4	2	0	1	3
0	3	2	1	1	5

d questions.

tings are way more useful than group meetings, because we can discuss my problems/difficulties instea
ow anything he tells us. (it doesn't add anything)I really enjoy the painting course offered.
does not have the needed skills. We do meet up regularly but it is not of any help. It feels like an empty

ı fine with this
ıy time completely!
I signed up.

d be cool. I really don't like the lectures for systems and signals (maths) because of Paolo, I just don't u

to easy but now I see that it is super exciting and challenging. However, I have an issue with the weekl
interfacing sensors and calculating eg filters were some of my expectations

ry informational.

e subjects.

ot the research question was this module.

follow since all subjects are explained from several angles
tely plus points.
elates to Sys & Sig and all subjects relate to the overlapping theme
nly learning the theory behind it.
be very handy in my later career.

its, help me in understanding and learning the topics. The topics in each course are similar and seem w
nd the material very interesting.
s lots of guidance available.
rmation we get is transferred over multiple subjects without too much of recap.
electronics

ngs.
ul especially compared with the New Media module. I also really like the combined tests and integration c

arts of the module, if you miss one thing the rest is harder it kills the personal development thingy that U

: you'll get a delay which is pretty hard to fix with this way

nk the older system where you split up the subject over the year would be much nicer. More time focus

plus a lot of contact hours.
have problems to learn it properly (due to time problems). The high frequency of tests, resits and lab se
nk it's easier to do spread over the year.

bit lost

you miss 1 thing in the beginning of the lecture then you have no clue what the entire lecture is about.
bject many deadlines have passed but we still have no feedback from the experts.

for Sensors. Let's make an amplifier ourselves with a lot of extra stuff and combine all the knwoledge; m
signments
orks.

ssignments some time before the test about the material so that there is time to assess your own knowl
f things could slow down a little bit and we would have more time during the day to do exercises. (yes we

4	**5**	**6**	**7**	**8**	**9**
0	0	5	10	5	2

10	Rating Average	Response Count
1	7,23	22
	answered question	22
	skipped question	0

45%	50%	55%	60%	60+%	Response Count
0	0	0	0	0	22
0	0	0	0	0	22
0	2	0	1	0	22
0	0	0	0	0	21
0	0	0	0	0	21
0	0	0	0	0	21
0	0	0	1	0	22
0	0	0	0	0	22
					1
				answered question	22
				skipped question	0

nuch that you can't really do any homework or prepare for tests when you go home.

check them. Also, the tutorial sessions are way too noisy for me personally to concentrate. I however, g
which just doesn't work out, because you will lose the students their attention.

nt assistants are doing great and if they don't know something, they can often direct you to another stud

e had to wait a long time for the student assistants and they all didn't know what was wrong with our osci

usy
ıt of time to wait for assistants and if the assistants are there, it takes a long time for even them to fix the

est.

ng, your brain is just tired and then it is VERY difficult to study at home.

have exam weeks for this. Where we can study for one whole 'white' week straight. This worked for me

end (I know, it's not the best excuse, but it's true) Secondly, having a test on monday causes some peop
h ends. I really like the peer review test sessions, 1 more student assistant might be helpful.
st. Peer review sessions are very helpful.

10	Rating Average	Response Count
1	7,82	22
0	6,82	22
0	7,24	21
2	7,27	22
0	6,82	22
2	7,77	22
0	6,95	22
1	7,00	22
2	8,14	22
		3
	answered question	22
	skipped question	0

with the formulas and practices in the story book.

10	Rating Average	Response Count

3	7,68	22
0	6,30	20
1	6,50	20
0	6,45	22
0	5,59	22
1	8,18	22
1	6,77	22
0	6,27	22
0	7,09	22
		7
	answered question	22
	skipped question	0

me are really difficult, so maybe stabilise it. Finally, the exercises are good, but they are very weirdly fo

10	Rating Average	Response Count
3	7,86	22
0	6,05	20
0	5,21	14
0	5,82	22
0	6,19	21
1	7,27	22
1	6,71	21
0	6,40	20
0	6,67	18
		6
	answered question	22
	skipped question	0

10	Rating Average	Response Count

0	6,55	22
0	6,81	21
0	5,67	21
0	6,77	22
1	5,64	22
0	7,14	22
0	6,30	20
0	6,85	20
		5
	answered question	22
	skipped question	0

materials are actually not there.

10	Rating Average	Response Count
0	3,68	22
0	3,39	18
0	3,62	21
0	3,58	19
0	4,27	22
1	4,65	20
1	5,75	20
		9
	answered question	22
	skipped question	0

SEARCHES, I MEAN REALLY.
out I see it is necessary. No exercises but the assignments and no tutorial sessions also. The lectures a

yet about his guidance.

aware of any tutorial sessions. The guidance by the expert also took really long until it finally started, I w

10	Rating Average	Response Count
5	5,05	22
2	3,95	21

3	4,91	22	
3	5,82	22	
		12	
	answered question		22
	skipped question		0

d of sitting in a group, bored out of my mind, because I want to do something useful. I did like the guest course.

nderstand him and I really need some help with it. The telecommunications teacher is really cool and en

y tests. But I stated that before.

ell planned and coordinated.

of the subjects.

Jni's are so proud of. It makes is a mass machine school like setup. *kuch* TOM *kuch*

on it and way more doable. Little packages to learn and more time to let it sink, what will contribute on t

ssions are exhausting and I would prefere the to have one big test at the end.

ıore freedom!

edge.
e can do them in the evening but my brain is completely done at the end of the day)

10	Rating Average	Response Count
0	7,18	22
	answered question	22
	skipped question	0

go to the UB during these hours to study on my own. The assistance are sometimes to sparse, but most

ent assistant that knows more on the subject.

illoscope, so maybe more SA's and general knowledge about the equipment there? Please upload the la

se issues.

in the past and I have no clue why it wouldn't in the future. Better one big stress moment ten several sm

ple, including me, to stress out the whole weekend and learn. This means that I don't really feel rested a

rmulated which causes me to wonder what I should answer.

re not that interesting. By now I hope people know how to use search engines. Also, two lectures had ex

as told the feedback would be at least half a week earlier as it actually was.

lecture Eddy and Severine organised from a 3D animator, that was very interesting to me.

ıthusiastic and Eric and Edwin are the best teachers from CreaTe. It is really more difficult than I expecte

the technical inside.

of the time sufficient.

absession pdf a little earlier. If you have already made an important appointment a week before on that c

all ones *kuch* TOM *kuch*

fter the weekend.

‹actly the same topic?! Why?

ed, but I see it as a challenge.

day you can't really prepare the lab session as well as you would've liked too. Furthermore, I think the la

bsessions are very benificial to understanding the works of electronics.

B-CREA
2014-201400243-1A; Smart Technology
No. of responses =13; Response rate =50%

UNIVERSITEIT TWENTE.

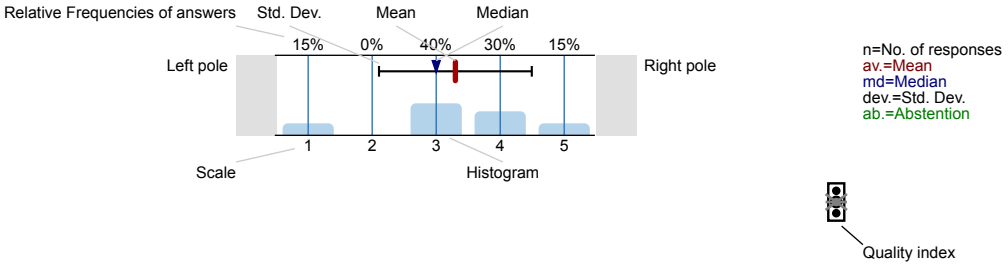
Overall indicators

ALGEMEEN (Scale width: 5)		av.=4,3 dev.=0,8
MODULE (Scale width: 5)		av.=4,1 dev.=0,8
LEREN (Scale width: 5)		av.=3,7 dev.=0,9
PROJECT (Scale width: 5)		av.=2,5 dev.=1,2
TOETSING (Scale width: 5)		av.=3,7 dev.=1,1
INZET VOOR STUDEREN (Scale width: 5)		av.=3,3 dev.=1,2
WAARDERING (Scale width: 5)		av.=3,6 dev.=1,1

Survey Results

Legend

Question text



Description of quality symbol

- Mean value is below the quality guideline.
- Mean is within the range of tolerance for the quality guideline.
- Mean value is within the quality guideline.

1. GENERAL

1.1) I am a student in ...

		n=13
Create	100%	

1.2) Based on my start date in this programme I am now a ... year student

		n=13
1st year student	0%	
2nd year student	100%	
3rd year student	0%	
4th year student	0%	
5th and higher year student	0%	

1.3) I could have studied the full number of hours. Consider for instance: medical limitations, top sport arrangements.

		n=13
Yes	92.3%	
No	7.7%	

1.4) I am a motivated student.

Very limited motivation — Very motivated

1	2	3	4	5
0%	0%	15,4%	38,5%	46,2%

n=13
av.=4,3
md=4
dev.=0,8

2. MODULE

2.1) As a whole, I found the module challenging.

Far too little — Far too much

1	2	3	4	5
0%	0%	0%	30,8%	69,2%

n=13
av.=4,7
md=5
dev.=0,5

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

Far too little — Far too much

1	2	3	4	5
0%	0%	23,1%	53,8%	23,1%

n=13
av.=4
md=4
dev.=0,7

2.3) During the module I continuously knew what was expected of me. Consider for instance: participating in lectures and tutorials, active and collaborative role in project, self-study.

Strongly disagree — Strongly agree

1	2	3	4	5
7,7%	7,7%	30,8%	38,5%	15,4%

n=13
av.=3,5
md=4
dev.=1,1

2.4) As a whole, I learned a lot in the module.

Strongly disagree — Strongly agree

1	2	3	4	5
0%	0%	0%	38,5%	61,5%

n=13
av.=4,6
md=5
dev.=0,5

2.5) The module was logically put together. Consider for instance: parts of the module were connected well, good sequence of module part, learning pathways (in Dutch: leerlijnen).

Strongly disagree — Strongly agree

1	2	3	4	5
0%	0%	7,7%	38,5%	53,8%

n=13
av.=4,5
md=5
dev.=0,7

2.6) The content of the module fulfils my expectations well. Consider the objectives of the module.

Strongly disagree — Strongly agree

1	2	3	4	5
0%	7,7%	0%	76,9%	15,4%

n=13
av.=4
md=4
dev.=0,7

2.7) The module was well organised. Consider for instance: clear assignments, clear rules for assessment.

Strongly disagree — Strongly agree

1	2	3	4	5
7,7%	0%	23,1%	30,8%	38,5%

n=13
av.=3,9
md=4
dev.=1,2

2.8) I was satisfied with the time-table. Consider changes and timely information.

Strongly disagree — Strongly agree

1	2	3	4	5
7,7%	7,7%	38,5%	23,1%	23,1%

n=13
av.=3,5
md=3
dev.=1,2

2.9) The digital learning environment, including information provision, was good. Consider: Blackboard, Orisis, web site(s).

Strongly disagree — Strongly agree

1	2	3	4	5
0%	7,7%	23,1%	46,2%	23,1%

n=13
av.=3,8
md=4
dev.=0,9

3. LEARNING

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

Strongly disagree — Strongly agre

1	2	3	4	5
0%	0%	0%	61,5%	38,5%

n=13
av.=4,4
md=4
dev.=0,5

3.2) The study material had a good fit with the subject. Consider for instance: books, lecture notes, guidelines, articles.

Strongly disagree — Strongly agree

1	2	3	4	5
0%	0%	23,1%	69,2%	7,7%

n=13
av.=3,8
md=4
dev.=0,6

3.3) In general, the teaching and learning in the module had a good fit with how I learn. Consider for instance: to think first than do, learning in cooperation, applying in reality.

Strongly disagree — 7,7% 15,4% 30,8% 23,1% 23,1% — Strongly agree

n=13
av.=3,4
md=3
dev.=1,3

3.4) I have learned much from collaborating with my fellow students.

Strongly disagree — 7,7% 23,1% 0% 69,2% 0% — Strongly agree

n=13
av.=3,3
md=4
dev.=1,1

4. PROJECT

4.1) Was there a project in the module?

Yes 63.6%
No 36.4%

n=11

4.2) The project taught me collaboration with other students.

Strongly disagree — 71,4% 14,3% 14,3% 0% 0% — Strongly agre

n=7
av.=1,4
md=1
dev.=0,8
ab.=4

4.3) The project taught me doing a project (including time management).

Strongly disagree — 25% 62,5% 0% 12,5% 0% — Strongly agree

n=8
av.=2
md=2
dev.=0,9
ab.=3

4.4) The project taught me to develop a solution to a problem.

Strongly disagree — 25% 12,5% 25% 25% 12,5% — Strongly agree

n=8
av.=2,9
md=3
dev.=1,5
ab.=3

4.5) The project taught me to test a solution to a problem.

Strongly disagree — 57,1% 14,3% 0% 14,3% 14,3% — Strongly agree

n=7
av.=2,1
md=1
dev.=1,7
ab.=4

4.6) The project taught me applying knowledge learned.

Strongly disagree — 12,5% 37,5% 0% 50% 0% — Strongly agree

n=8
av.=2,9
md=3
dev.=1,2
ab.=2

4.7) The project taught me to integrate different topics I've learned in the module.

Strongly disagree — 50% 12,5% 12,5% 25% 0% — Strongly agree

n=8
av.=2,1
md=1,5
dev.=1,4
ab.=3

4.8) The project taught me to develop knowledge and new insights.

Strongly disagree — 11,1% 0% 33,3% 33,3% 22,2% — Strongly agree

n=9
av.=3,6
md=4
dev.=1,2
ab.=2

5. ASSESSMENT

5.1) Throughout the module I knew ahead of time how I was assessed. Consider form and content (f.i. written and verbal exams, presentations, assignments.

Strongly disagree — 0% 15,4% 15,4% 38,5% 30,8% — Strongly agree

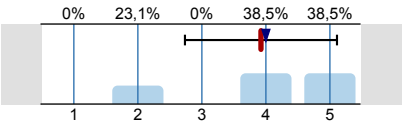
n=13
av.=3,8
md=4
dev.=1,1

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

Strongly disagree — 0% 15,4% 7,7% 38,5% 38,5% — Strongly agree

n=13
av.=4
md=4
dev.=1,1

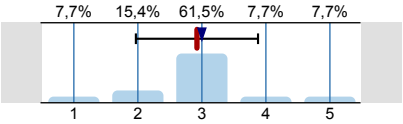
5.3) The assessment (including possible intermediate assessments) have stimulated me to learn.

Strongly disagree 

Strongly agre

n=13
av.=3,9
md=4
dev.=1,2

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

Strongly disasgree 

Strongly agree

n=13
av.=2,9
md=3
dev.=1

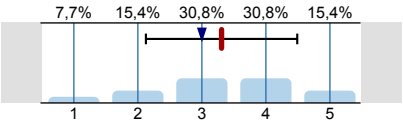
6. EFFORT TO PUT INTO STUDY

6.1) On average, during the entire module, I studied per week: This is about all types of teaching and learning, so: lectures and tutorals, self-study, assignments, project, etc.

n=13

0-10 hours per week	0%
10-20 hours per week	0%
20-30 hours per week	30.8%
30-40 hours per week	15.4%
40-50 hours per week	23.1%
More than 50 hours per week	30.8%

6.2) 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.

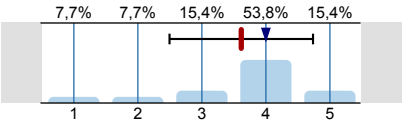
Not doable 

Perfectly doable

n=13
av.=3,3
md=3
dev.=1,2

7. APPRECIATION

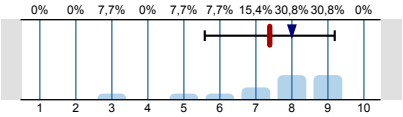
7.1) Based on the module, I would recommend this UT study programme to others.

Strongly disagree 

Strongly agree

n=13
av.=3,6
md=4
dev.=1,1

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

Very Poor 

Excellent

n=13
av.=7,4
md=8
dev.=1,8

Profile

Subunit: TOM
Name of the instructor: B-CREA
Name of the course: (Name of the survey) Smart Technology

Comparative line: Comp SEQ* B2 modules 2014 1A

Values used in the profile line: Mean

1. GENERAL

1.4)	I am a motivated student.	Very limited motivation	Very motivated	n=13 av.=4,3 md=4,0 dev.=0,8 n=597 av.=4,1 md=4,0 dev.=0,8

2. MODULE

2.1)	As a whole, I found the module challenging.	Far too little	Far too much	n=13 av.=4,7 md=5,0 dev.=0,5 n=599 av.=3,6 md=4,0 dev.=1,0
2.2)	In general, I had enough prior knowledge to succesfully do the module.	Far too little	Far too much	n=13 av.=4,0 md=4,0 dev.=0,7 n=597 av.=3,6 md=4,0 dev.=1,0
2.3)	During the module I continuously knew what was expected of me. Consider for instance: participating in lectures and tutorials, active	Strongly disagree	Strongly agree	n=13 av.=3,5 md=4,0 dev.=1,1 n=599 av.=2,8 md=3,0 dev.=1,2
2.4)	As a whole, I learned a lot in the module.	Strongly disagree	Strongly agree	n=13 av.=4,6 md=5,0 dev.=0,5 n=599 av.=3,6 md=4,0 dev.=1,0
2.5)	The module was logically put together. Consider for instance: parts of the module were connected well, good sequence of	Strongly disagree	Strongly agree	n=13 av.=4,5 md=5,0 dev.=0,7 n=597 av.=3,0 md=3,0 dev.=1,3
2.6)	The content of the module fulfils my expectations well. Consider the objectives of the module.	Strongly disagree	Strongly agree	n=13 av.=4,0 md=4,0 dev.=0,7 n=577 av.=3,1 md=3,0 dev.=1,1
2.7)	The module was well organised. Consider for instance: clear assignments, clear rules for assessment.	Strongly disagree	Strongly agree	n=13 av.=3,9 md=4,0 dev.=1,2 n=596 av.=2,5 md=2,0 dev.=1,2
2.8)	I was satisfied with the time-table. Consider changes and timely information.	Strongly disagree	Strongly agree	n=13 av.=3,5 md=3,0 dev.=1,2 n=594 av.=3,4 md=4,0 dev.=1,2
2.9)	The digital learning environment, including information provision, was good. Consider: Blackboard, Orisis, web site(s).	Strongly disagree	Strongly agree	n=13 av.=3,8 md=4,0 dev.=0,9 n=590 av.=3,5 md=4,0 dev.=1,1

3. LEARNING

3.1)	I have learned a lot thanks to the teachers, tutors, teaching assistants, etc.	Strongly disagree	Strongly agre	n=13 av.=4,4 md=4,0 dev.=0,5 n=593 av.=3,3 md=4,0 dev.=1,1
3.2)	The study material had a good fit with the subject. Consider for instance: books, lecture notes, guidelines, articles.	Strongly disagree	Strongly agree	n=13 av.=3,8 md=4,0 dev.=0,6 n=588 av.=3,6 md=4,0 dev.=1,0
3.3)	In general, the teaching and learning in the module had a good fit with how I learn. Consider for instance: to think first than do,	Strongly disagree	Strongly agree	n=13 av.=3,4 md=3,0 dev.=1,3 n=586 av.=3,2 md=3,0 dev.=1,1
3.4)	I have learned much from collaborating with my fellow students.	Strongly disagree	Strongly agree	n=13 av.=3,3 md=4,0 dev.=1,1 n=593 av.=3,5 md=4,0 dev.=1,1

4. PROJECT

4.2)	The project taught me collaboration with other students.	Strongly disagree	Strongly agre	n=7 av.=1,4 md=1,0 dev.=0,8 n=582 av.=3,5 md=4,0 dev.=1,1
4.3)	The project taught me doing a project (including time management).	Strongly disagree	Strongly agree	n=8 av.=2,0 md=2,0 dev.=0,9 n=584 av.=3,4 md=4,0 dev.=1,1

4.4)	The project taught me to develop a solution to a problem.	Strongly disagree	Strongly agree	n=8 av.=2,9 md=3,0 dev.=1,5 n=583 av.=3,4 md=4,0 dev.=1,1
4.5)	The project taught me to test a solution to a problem.	Strongly disagree	Strongly agree	n=7 av.=2,1 md=1,0 dev.=1,7 n=570 av.=2,9 md=3,0 dev.=1,3
4.6)	The project taught me applying knowledge learned.	Strongly disagree	Strongly agree	n=8 av.=2,9 md=3,0 dev.=1,2 n=588 av.=3,5 md=4,0 dev.=1,1
4.7)	The project taught me to integrate different topics I've learned in the module.	Strongly disagree	Strongly agree	n=8 av.=2,1 md=1,5 dev.=1,4 n=585 av.=3,3 md=3,0 dev.=1,1
4.8)	The project taught me to develop knowledge and new insights.	Strongly disagree	Strongly agree	n=9 av.=3,6 md=4,0 dev.=1,2 n=585 av.=3,5 md=4,0 dev.=1,0

5. ASSESSMENT

5.1)	Throughout the module I knew ahead of time how I was assessed. Consider form and content (f.i. written and verbal exams,	Strongly disagree	Strongly agree	n=13 av.=3,8 md=4,0 dev.=1,1 n=595 av.=3,4 md=4,0 dev.=1,3
5.2)	The tests were suitable to determine whether I'd learned sufficiently.	Strongly disagree	Strongly agree	n=13 av.=4,0 md=4,0 dev.=1,1 n=590 av.=3,0 md=3,0 dev.=1,2
5.3)	The assessment (including possible intermediate assessments) have stimulated me to learn.	Strongly disagree	Strongly agre	n=13 av.=3,9 md=4,0 dev.=1,2 n=590 av.=3,4 md=4,0 dev.=1,1
5.4)	Throughout the module I had enough time to prepare for each assessment.	Strongly disasgree	Strongly agree	n=13 av.=2,9 md=3,0 dev.=1,0 n=595 av.=3,0 md=3,0 dev.=1,3

6. EFFORT TO PUT INTO STUDY

6.2)	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.	Not doable	Perfectly doable	n=13 av.=3,3 md=3,0 dev.=1,2 n=592 av.=3,3 md=3,0 dev.=1,2

7. APPRECIATION

7.1)	Based on the module, I would recommend this UT study programme to others.	Strongly disagree	Strongly agree	n=13 av.=3,6 md=4,0 dev.=1,1 n=584 av.=2,9 md=3,0 dev.=1,2
7.2)	In summary, I give the module the following grade. 1 very poor, 10 excellent	Very Poor	Excellent	n=13 av.=7,4 md=8,0 dev.=1,8 n=598 av.=5,7 md=6,0 dev.=1,9

Comments Report

7. APPRECIATION

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

- - Goede samenhang van de vakken.
  - Goede gepassioneerde docenten.
  - Genoeg uitdaging
  - Relevante stof voor de opleiding
- Alle vakken sloten goed op elkaar aan, de boel was goed geregeld, de docenten waren ontzettend goed, enthousiast en wilden iedereen helpen. Ook de student assistants wisten wat ze deden.
- Alles goed geïntegreerd met elkaar, de stof was opbouwend.
  Je leerde dingen in het ene vak die je daarna in het andere vak moest gebruiken.
  Goede enthousiaste leraren
- Alles sloot goed op elkaar aan en het was constant uitdagend.
  Toetsen op maandag!
- Circuits and Electronics!!
- De labsessies waren leerzaam en de peer-review sessies na toetsen hielpen echt.
- Goede en gemotiveerde docenten, academisch niveau, goed georganiseerd.
- Lab sessies waren goed, op telecommunication na. Maar die werd duidelijker bij de herkansing ervan.
  Goede samenhang van vakken
- Leuke onberwerpen, goeie docenten
- integratie, inhoudelijke content, leuke practica en lessen

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

- - Toetsen elke week werkte niet voor mij, liever een tentamenweek met daarin alle stof.
  - De docent Peter Breedveld was niet altijd goed te volgen. Onbegrijpelijke vak lingo/terminologie en concepten als gegeven nemen die nog niet waren behandeld.
  - Een college over hoe je breadboards in practica 'debugd' zou fijn zijn geweest, standard practices was ook handig geweest om te weten. Dit zou ook het studentenassistentschap een stuk gemakkelijker voor hun maken.
- Als je ergens in de module een toets niet haalde, kwam je in een soort vicieuze cirkel terecht waardoor je niet genoeg tijd had om te leren voor de toetsen en herkansingen.
- Een enkele toets minder.
- Het was erg demotiverend dat ik één toets niet heb gehaald en dan meteen een eindtoets moet maken waar de hele module van af hangt. Ik had geen motivatie meer om te leren hierdoor.
- Lessen en Toetsen voorbereiden beter overeen laten komen met waar we op worden getentamineerd. ofwel meer oefen tentamens
- Meer praktische info
- Minder toetsmomenten zou de constante stroom aan stress wat verminderen.
  Een andere beoordeling voor de sensors opdrachten, er is teveel onduidelijkheid over de beoordeling hiervoor.
- Waarom het research project? Iedereen stelde het uit tot het laatste moment en dan is er ook nog Joke, iemand die ingehuurd is van buiten de UT, die geen flauw benul heeft van wat we aan het doen zijn, en overduidelijk allerlei psychologische trucjes probeert om ons enthousiast te houden (dit werkt overigens averechts). Het zou beter zijn om het research project gewoon uit de module te gooien.
- Zorg dat het onderzoeksproject beter georganiseerd wordt. Het was ook onbekend wat er precies van de poster verwacht werd.
- het project werd zeeer onduidelijk gecoordineerd.