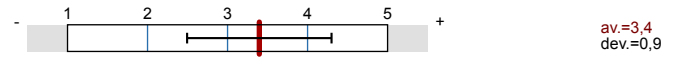


201500313 B-WB, Production Systems Engineering (201500313) B-WB
 2A 16/17
 No. of responses = 46; Response rate = 38%

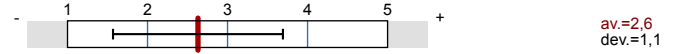
UNIVERSITEIT TWENTE.

Overall indicators

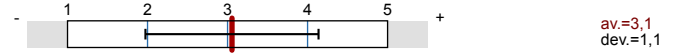
3. Learning



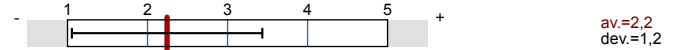
4. Project



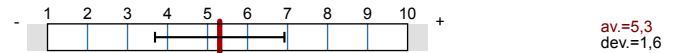
5. Assessment



6. Effort to put into study



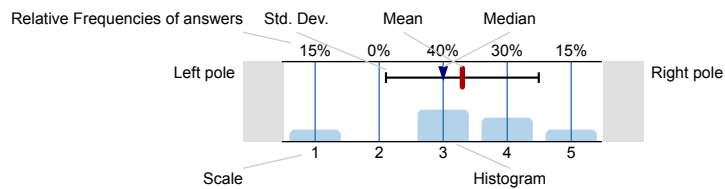
7. Appreciation



Survey Results

Legend

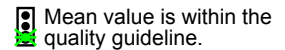
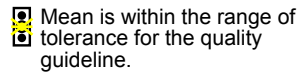
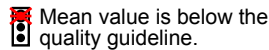
Question text



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



Description of quality symbol

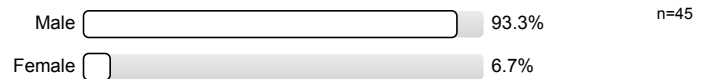


1. Production Systems Engineering (201500313-SEQ (B3)) - General

1.1) I am a student in...



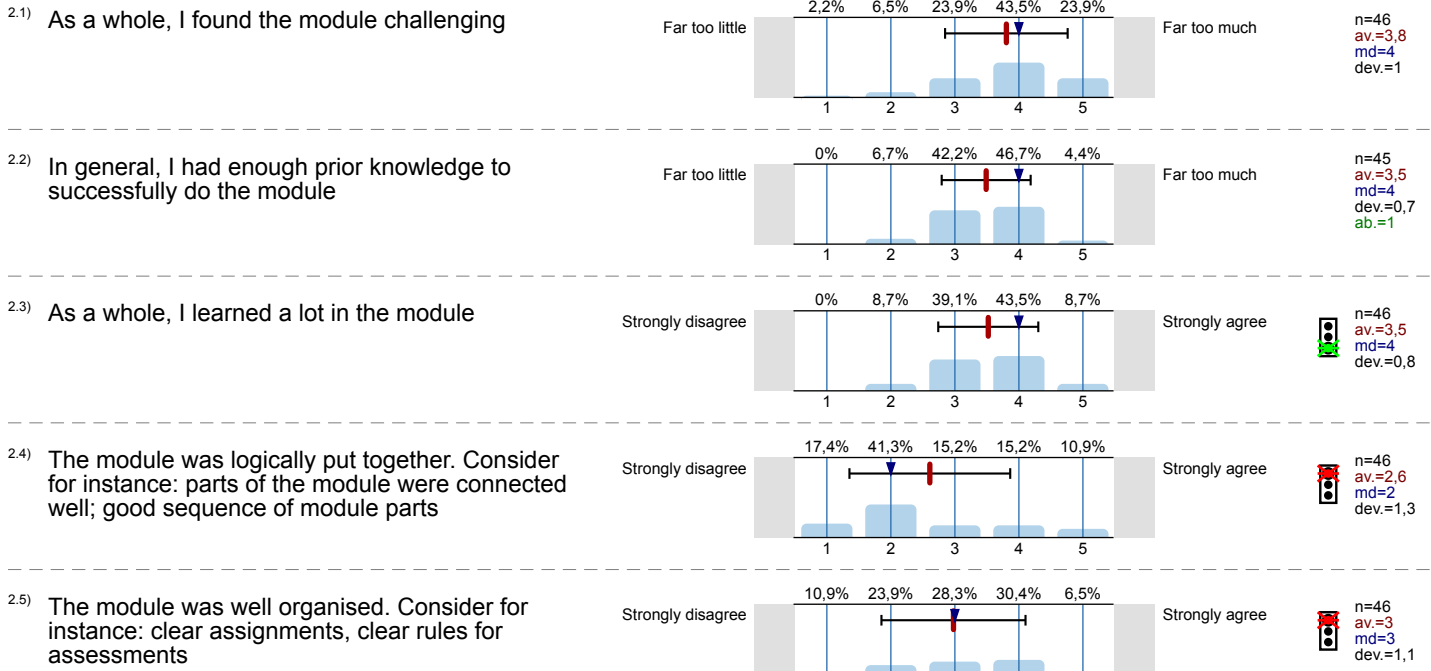
1.2) I am...



1.3) I come from...



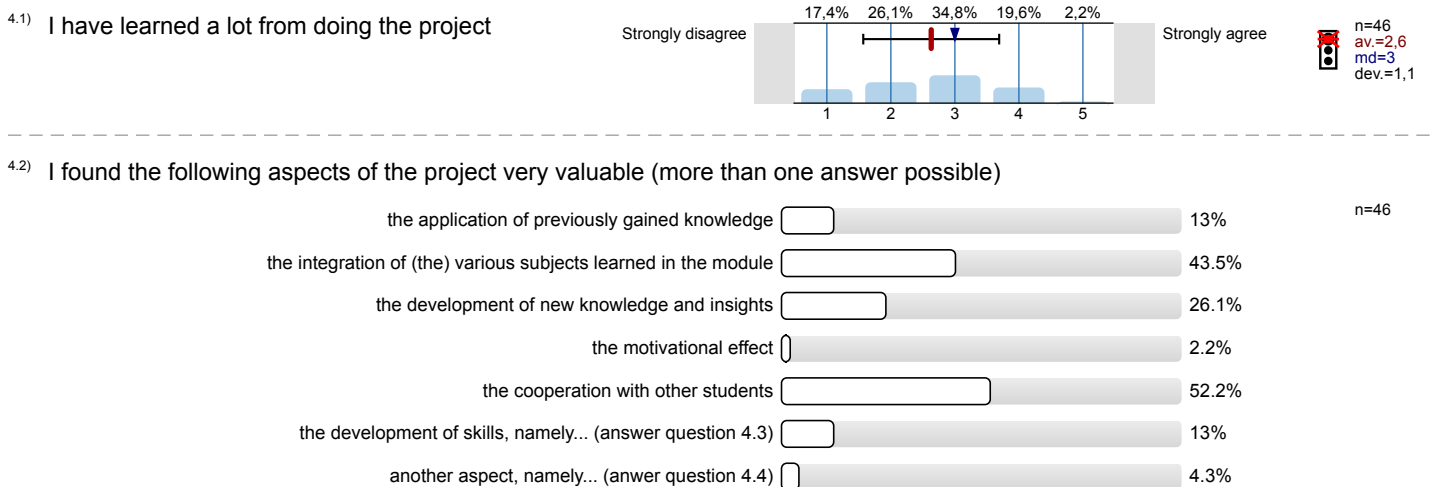
2. Module



3. Learning

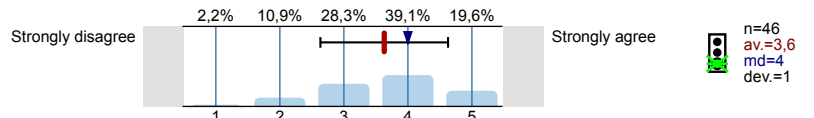


4. Project

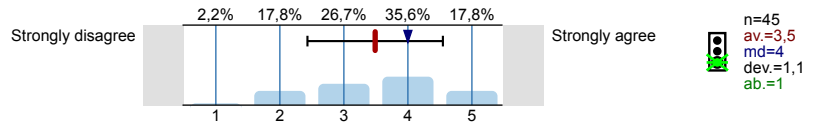


5. Assessment

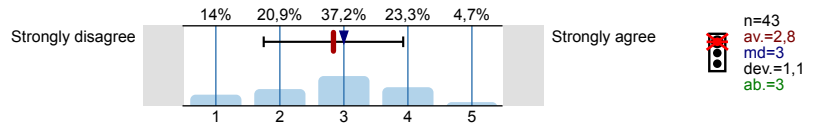
5.1) Throughout the module I knew on time how I would be assessed. Consider form and content (e.g. written/verbal exams, presentations, assignments)



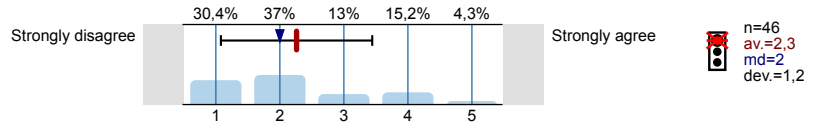
5.2) The tests were suitable to determine whether I'd learned sufficiently



5.3) I got useful feedback throughout the module (including possible intermediate assessments)

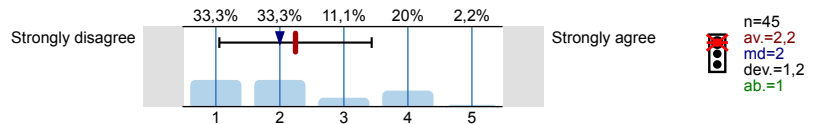


5.4) Throughout the module I had enough time to prepare for each assessment



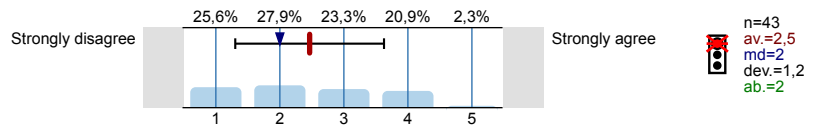
6. Effort to put into study

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

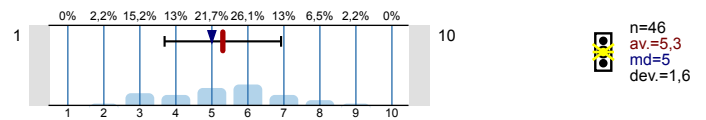


7. Appreciation

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



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



Comments Report

4. Project

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

- A little more clarity on how to apply the knowledge from the subjects by some more practical examples during lectures
- Aparte toets voor Systems Engineering. Zo'n essay schrijven voelt een beetje raar. Hoewel het misschien ook wel een goede manier is, om te testen. Geen verstand van, maar het voelt wat knullig.
Mensen meer persoonlijk beoordelen. Ik heb heel erg het gevoel alsof ik alles gedaan heb en mijn groepsgenoot voor het tweede deel meegelift heeft.
- Base the project on something other than Hankamp. Give better (more consistent, explain what each number means) production data and more actively include statistics as basis for handling the data.
- Better data
- Duidelijkere informatie aanleveren.
We waren gewoon zoveel tijd bezig met de bullshit te scheiden van wat echt nuttige info was.
En de data die van Hankamp kwam had wel een keer door gekeken mogen worden op consistentie.
- Een project wat weer meer gericht is op het ontwerpen van een productielijn zoals een jaar eerder het geval was. Geen halve data set in combinatie met een bedrijf waaruit een probleem getrokken moet worden wat een masterstudent niet eens kon vinden over het verloop van een hele scriptie.
- Give the information of the project earlier to the system engineers, so they can make a start earlier to be able to manage the project more smoothly.
- Het project waarin je nauwelijks gegevens hebt, heeft helemaal geen zin. Ik heb echt het idee dat ik wel uren erin heb gestopt, maar geen resultaat heb geboekt. Daarnaast heb ik ook het gevoel dat we een FEM opdracht in het project moesten doen, omdat FEM ook een vak was. En niet omdat het goed paste.
- I didn't think I learned a lot from the project. While a lot of lectures were given this module. Most of the information was not really applicable to the project. I mostly used my logical reasoning. Which is not really a good thing because you want students to try to apply the new gained knowledge.
- I think that the project was well organized, but the documentation given by the client was not entirely clear. In the end it also turned out that the documentation was not entirely correct. If the documentation would have been correct from the beginning, there would have been fewer problems during the project. Besides, it was not entirely clear how the group had to be divided into subgroups. Making the division into smaller groups was part of the project, but it would have been better if there were some guidelines about which subgroups have to be made.
- It is very unclear what you need to do in the project.
The data set that must be used was useless and full of errors.
- Just skip the project. The only thing this project was good for is to learn to work in such a big group, however, this was of too little value compared to the time the project consumed. Personally, I haven't learned much during this project, despite my tries
- Make it (way) clearer what is expected of us
- Make sure the data you give us is correct
- Maybe address the importance of the cooperation between subsystems more.
- Misschien iets duidelijker vertellen wat er wordt verwacht op de poster. Dit is vooral het geval bij de tweede poster. We hadden daar uiteindelijk dingen uitgewerkt die niet direct nodig waren, terwijl we andere dingen die verwacht werden niet hadden gedaan. Wanneer we de dingen van tevoren wisten konden we deze dingen uitwerken in plaats van de verkeerde dingen.
- Project data was complete chaos and stood in the way of applying the subject matter learned in the lectures
- Smaller groups
- The Excel sheets provided by Hankamp Gears were not user-friendly at all.
- The subject for the project this year was too broad. A more tangible situation might be better to apply the knowledge gained during the lectures. Especially the integration of Systems Engineering in the project was difficult.
- Was a good project
- We got a bunch of information in excel sheets, which were very unclear and not at all representative of the production of the company we had to work for. This did not work well.
- duidelijker, over projectleider en system engineering. want die taak word nu heel snel in het midden gelaten. Waardoor of het ene of het andere niet lekker loopt.
- nvt

7. Appreciation

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

- Goede colleges van zowel FEM, production management als Statistics.
- Good and motivated teachers
- Good courses, good project.
- Het leren samenwerken in subgroepen als onderdeel van een grote groep in het project.
- I found the lectures about the several subjects pretty clear and they helped me by studying the subjects.
- IFEM, PM, Statistics.
- In the beginning the module was really hard but in the end it went better
- Interesting Courses
- Introduction to the finite element method, was an interesting subject and the lecturers were very good.
- Learning how a system engineer functions in a company
- Learning to work in a large project group.
- Leuke vakken, zoals statistics en FEM, maar...
- New disciplines learned and new skills.
- Only motivation is that it is the last module before the BSc assignment.
- Production management was prima.
Statistiek was ook prima.
- Statistics and Introduction to the FEM were high-level courses that were taught rather well.
- Statistics was a very good subject, and taught very well. Also the test and the exercises were a good representation of the subject.
FEM was also very interesting, although the test didn't reflect the exercises made during the module.
- Statistics was very well organised. Enough tutorials.
Production management was also good.
- The courses FEM and Statistics.
- The practica on production management were fun and really helped to gain insight in the theory provided in the lectures.
- The production, FEM and Statistics courses were useful
- The required communication between students.
- Veel werk, nieuwe soort vakken, nieuw soort project, interessante vakken.
- Very interesting subjects, a project from which a lot can be learned.
- nvt
- working in a project group as big as this one really taught me about a new level of cooperation required to make a group as big as this one work together.
- zorgen dat de sub assessments voor het project ook meer groepswork word ipv 1 of 2 mensen het gaan doen.

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

- - Because of the research proposal and other deadlines within the module, the time left to do exercises was overall too little to prepare for the exams
- Add supervised study hours (werkcolleges) to the schedule. We had NO scheduled time for fem and only 3 college hours for statistics, which is far too less, as they are both assessed with exercises.

The FEM assignment in the project felt forced. As if there was no connection between that and the rest of the project. Please make it logical or remove it.
- Better organize with the project/bachelor assignment. The planning is a little off.
- Change the project. Make the theory more applicable in the project.

- De bachelor opdracht en de reflective education paper namen zoveel tijd in beslag op het laatst (en dat was niet omdat ik veel te laat begon, ik had het ding inhoudelijk al ruim voor de inlever datum af). Aan het eind was je echt van deadline naar deadline aan het gaan wat echt niet prettig werkt. Daarom was het ook lastig om statistiek te maken, je moest nog wat sommen van het laatste werkcollege wat een aantal weken voor de toets was maar omdat de laatste weken zo vol met andere deadlines zat had je daar geen tijd voor een was je twee dagen voor de toets die sommen nog aan het maken.

FEM MOET werkcolleges krijgen. Het is echt achtelijk dat er verwacht wordt dat je die sommen maar even maakt zonder dat je kans krijgt om in werkcollege vragen te stellen. Voor de rest zou het ook de helft korter kunnen als al die afleidingen er niet in zitten want laten we even wel wezen, wie leert die nou. Voor de rest werd er bij dat vak gezegd dat ze geen formule blad gingen geven maar dat ze je niet dingen uit het hoofd gaan laten leren. Vervolgens kun je door de oefentoets vraag 1 en 3 uit je hoofd te leren de helft van de punten binnen halen (wat trouwens afleidingen zijn, dus daar heb je de rest van je leven ook geen ruk aan).

Reflective education.... niemand neemt dit serieus (zie opkomst colleges, ik ben een keer geweest 20 mensen voor de pauze en 3 na). Het was echt van "Oh moeten we daar ook wat voor doen. Ohh het is maar pass of fail, even beunen en dat is dat ook wel goed." Ik snap dat jullie willen wat we niet als autisten allemaal shit gaan zitten ontwikkelen waar niemand iets aan heeft. Ik denk dat zo'n heel vak om die boodschap over te brengen een beetje overdreven is, laat ik het zo zeggen. Zeker in zo'n drukke module vond ik het een beetje zonde van mijn tijd dat ik twee figuren zat te maken waar ik bij god het nut niet van in zag.

System engineering... Dat vak kan ook wel in twee colleges. Het zit zo vol met voorbeelden en allemaal van die volkomen logische dingen, dat je echt zoiets hebt van waarom zit ik hier nog.

- De tijdsdruk vond ik veel te hoog, je had niet genoeg tijd om alles goed bij te houden, zoals opdrachten maken van FEM en het boek van Production Management door te nemen. Je moest keuzes maken, wat het maken van de tentamens negatief beïnvloedt. De module was al goed gevuld met het project EN de vakken, EN kwam daar nog de bachelor opdracht EN reflective paper bij. Dit is veel te veel; andere studies hebben alleen de bachelor opdracht!
- During the module a lot of things must be done. In my opinion the research proposal for the bachelor assignment, was more work than planned now.
- FEM and Statistics must weigh heavier than the project. The project does not contribute to the FEM and Statistics courses and vice versa. Preparation BSc assignment was very ad-hoc and much more time consuming than accounted for. Overall work that had to be done during the module was far too much. Most stressful module of the entire bachelor, not because the courses are hard but simply because it is too much as a whole. For sure my grades have suffered because of a lack of time, as did my overall understanding of the courses. This module feels as a 'let's put everything that is left into 1 module' module. Also, I could not attend all the master's information lectures that I wanted.

Suggestions:

This module needs to be reconstructed from scratch, scrap it.

- Geef ons meer tijd! We gingen van deadline tot deadline zonder pauze. Het bijhouden van vakken was ontzettend moeilijk omdat er altijd deadlines waren waar op gefocust moest worden. Dit bracht een heleboel stress met zich mee.
- I would advise to reduce the workload of this module and increase the workload of, for example, module 6. Statistics could be moved to that module.
- Ik begon wegens omstandigheden 3 weken later aan de module, maar ik ben vanaf toen aan het werk geweest en heb het echt smerig druk gehad. Eerst beunen voor bachelor proposal, toen project dat werd al lastig en toen de laatste week tentamens nog er meteen achteraan was echt hoofd boven water proberen te houden. Het was wel heel erg druk.
- Ik vond vooral dat alles bij elkaar in de module veel werk was. Dit kwam vooral doordat het research proposal gemaakt moest worden, waardoor de andere vakken bij mij een beetje op de achtergrond raakten. Misschien is het handig om de module zo in te delen, zodat dit minder een probleem wordt.
- Make smaller project groups
- Make the case for the project more concrete, to encourage applying knowledge gained from the lectures. Furthermore, it would be really useful if there would be some "werkcolleges" (practical sessions) for IFEM. It was really hard to fully understand the theory from the lectures alone.
- Maybe a bit too much writing of proposals and such. Could be less
- Maybe not add FEM and Statistics case to the project as the module is already busy due to having to write a 2 research proposals. Also the cases are not really integrated in the project. AR&S it would be nice to have a single organised task description file for the research proposals, rather than having to extract everything from the slides.
- Not so much cohesion between some of the subjects. The workload wasn't divided very well, very busy periods around the research proposal deadline and with 3 exams in the week after the easter weekend.
- Project (clearer assignment), and way of grading the project, because it depends on 5 separate grades or something.
- Proper project data and goal, instead of a companies datadump
- Societal impact (part of AR&S) was totally unclear what to do and in the last presentation we heard for the first time, a research proposal was needed. Good luck, you have four days to write a detailed proposal to another research you are going to do next module.
- Systems engineering and the project were useless, and the workload was way too high
- The colleges van systems engineering zijn erg vaag, dat heeft met het vak te maken, maar ik denk dat hier wel ruimte voor

verbetering zit. Daarnaast is het werkpakket van de module veel te hoog. Ondanks 50 uur in de week was de stof niet bij te houden. De eerste 3 weken lukte dat wel, maar daarna had ik gewoon niet de tijd om mijn "huiswerk" af te krijgen. Aangezien het project niet veel toevoegt, zou deze kunnen worden weggelaten, dit zou het probleem al grotendeels oplossen. Daarnaast is er een piek als de research proposal moet worden ingeleverd. Wat meer begeleiding juist aan het begin van de module zou helpen om de werklust te spreiden. Datzelfde geldt voor production management, deze kan ook naar voren worden geschoven om tijd aan het einde van de module te creëren, wel moet dat het tentamen worden meegeschoven, anders ben je alles weer kwijt tegen de tijd dat het tentamen komt.

- The module was far too busy, especially because of the preparation which had to be done for the 12th module, and all of the Master information hours. Together with the project and all of the subjects, it put far too much strain on everything, which resulted in the fact that one couldn't spend sufficient time for the various subjects. For example, I would like to have spend more time on FEM and Statistics in order to understand it better (since these are very relevant and interesting subjects), but there simply wasn't the time for. My suggestion would be to skip the project and FEM and PM. This way, you will have enough time to focus on the relevant subjects and the Bachelor Proposal.
- The project and the courses in the module were already quite time consuming, like any other module, but then there was also the preparation for the bachelor assignment. This was in total too much time consuming and too much work. The project and the courses suffered from this.
- The time to choose for the bachelor assignment should be way more than 24 hours. FEM should have a lot of tutorials. Reflective education doesn't add anything and still costs a lot of time that you don't have in this module.

- There was no clear relationship between the different subjects within the module, it seemed very incoherent.

The combination of subjects, practical hours, preparation of the bachelor graduation assignment, the project, skills lectures, and the master information markets resulted in an enormous study load. We were presented an overview of how the 15 study points could represent the study load during this module, but it was very unrealistic.

The data sheets as provided within the project course were very user unfriendly and flawed, which took away from the project itself. I would recommend to use a different topic next year, because the project on Hankamp was not enjoyable for anyone.

To be honest, the lectures on societal embedding of the research were horrible. The teacher was very unclear on deadlines and what had to be handed in. Furthermore, the page minimum was of no added value for the quality of the report.

Overall, the study load during this course was much higher than any mechanical engineering course that I have had so far. I would recommend to make major changes to the course for next year, in order to keep the module doable.

- To me the only thing that was not entirely clear, is how the essay of systems engineering will be assessed. There have been some lectures about how to write an essay, but still it was difficult to me to judge whether the essay that I wrote was good or not. Maybe a checklist that denotes what is needed in an essay could be helpful.
- Too much stuff in one module for example the research proposal
- Workload was quite high in my opinion. Having one or two less subjects would drastically improve this. Having to follow the lectures of four subjects, doing a project and preparing for the bachelor assignment is just too much. Barely time left over to carefully study all of the subjects.
- de tentamens niet allemaal in dezelfde week te geven. Merkte dat veel mede studenten dat vervelend vonden.
- i have experienced a lot of big fluctuations in workload during the module. in the beginning of the module, one doesn't really have enough knowledge to really start working on the project yet, but he can't work on the bachelor assignment either, because it is not known what one will be his. Later on, you suddenly get a lot of deadlines and assignments and this could be improved upon. I would do this by leaving ARS out of the first 8 weeks of the module and increase the speed of the rest of the courses in these weeks, so that they can be completed within these weeks. The last two weeks can than fully be spent on ARS and preparation for the bachelor assignment.
- nvt
- studie last was te hoog, helemaal in combinatie met bachelor opdracht. Module zonder bachelor opdracht zou normale studiedruk hebben. De vakken hadden weinig overeenkomst. Het was een module met alle vakken die nog in de bachelor gegeven moeten worden in één module gepropt. Daardoor hadden sommige vakken weinig raakvlak met het project. Dit werd opgelost door een opdracht (bijvoorbeeld fem opdracht) in het project die verder niets met het project te maken had en weinig toegevoegde waarde had.
- total amount of work by preparing for the bachelor assignment made the pressure too high. Without the bachelor proposal i think this module is already worth 15 EC.