GEO-SD303 Emnerapport: GEO-SD303: Model-based Analysis and Policy Design, Høst 2020

## 1. Informasjon om emnet

Emne	https://www.uib.no/en/course/GEO-SD303
Undervisningssemester:	Høst 2020
Emneansvarlig:	Pål Davidsen
Vurderingsform:	Hjemmeeksamen
Undervisningsform:	Forelesninger
Obligatoriske arbeidskrav:	Case studies

## 2. Statistikk

Eksamensmeldt: 37 Bestått:27 Ikke møtt: 10 Stryk:0 Gjennomsnittskarakter: A

Karakterfordeling:

A=19 B=3 C=2 D=3

## 3. Egenevaluering

Vurdering av undervisningsopplegget i forhold til mål og resultater (emneansvarlig)

Hva fokuserte du på i undervisningsopplegget? Gi en kort beskrivelse av undervisningsopplegget i emnet, med vekt på det som var nytt denne gangen.

Undervisningsopplegget er som alltid, - en undervisning over utvalgte emner basert på 4 Case Studies med 2 x 4 obligatoriske innleveringer. 3 x 4 timers forelesninger + 2 x 3 timers lab-øvelser i uken.

I år foregikk forelesningene på Zoom, - opptak ble gjort og forelesningene ble gjort tilgjengelige i ettertid for alle studentene.

## Det ble gjennomført en ukes hjemmeoppgave i stedet for en 4 timers eksamen. Dette ledet til et svært omfattende rette-arbeid.

Hva er din vurdering av hvor godt undervisningsopplegget fungerte? Gi en kort beskrivelse av eventuelle evalueringer som er gjort, og gi en vurdering av erfaringene med årets undervisningsopplegg.

### Opplegget ble evaluert kontinuerlig basert på 8 obligatoriske innleveringer (2 per uke).

Hvilke justeringer av undervisningsopplegget vil du anbefale for neste gang emnet skal tilbys? Gi en kort vurdering av hvilket deler av undervisningsopplegget som bør videreføres og hva som eventuelle bør endres.

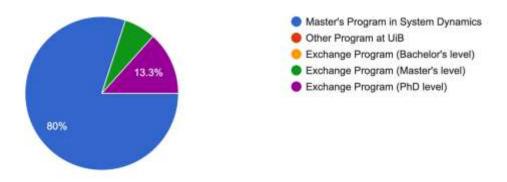
# Opplegget kan gjennomføres som nå, - men det bør settes av noe mer forelesningstid til teoretiske / matematiske emner.

Det bør videre avsettes mer ressurser til retting av eksamensoppgaver.

## 4. Resultater

## GEO SD 303 Course Evaluation Results (Fall 2020)

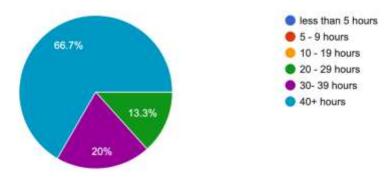
I study GEO-SD 303 as part of: 15 responses



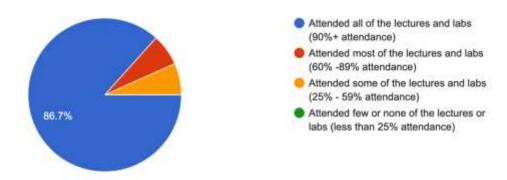
Do you plan to continue on with GEO- SD 304 after finishing with this course? 15 responses



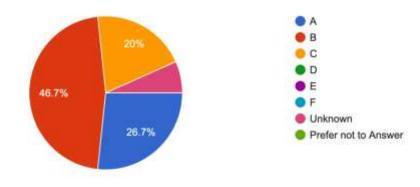
How many hours per week on average did you spend on this course? (include all time spent studying, doing homework, attending lectures and labs, etc.) 15 responses



To what extent did you participate in the lectures/labs? 15 responses

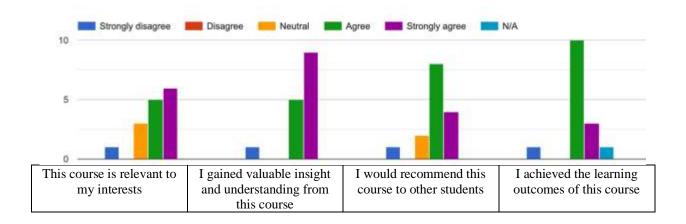


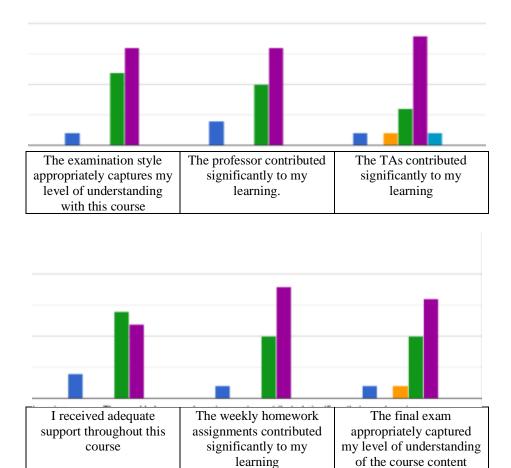
What grade do you expect to get in this course: 15 responses



NOTE: one student selected 'strongly disagree' for all of the following options, yet the rest of their review was very positive... it seems very likely that they mistakenly selected this answer instead of 'strongly agree'

Please mark how you feel about each of the statements listed below:





Fall 2020

#### Do you have any comments on your answers above? If so, please discuss here:

Overall nice course

Even through TA's gave us advises about out assignments, if we can have several good examples for one whole case study, that will help me a lot.

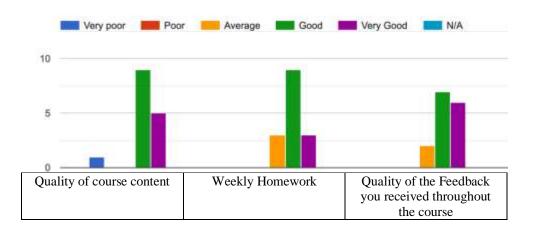
I found very useful having lessons' recordings to go back through some concepts and catching up on those lessons I couldn't attend live. Keeping pace with the case studies was extremely tough, but the whole course is designed thinking about a full-time involvement in it. So, this difficulty is more linked to a personal condition.

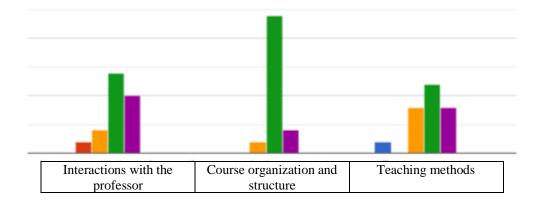
The lectures was extremely monotone and heavy. I might remember 10% of what he said. He even said that what he talk about in several of his lectures was not for us to undeerstand, a complete waste of time when having huge huge amount of homeworj to do. So, no help to get there, rather the opposite.

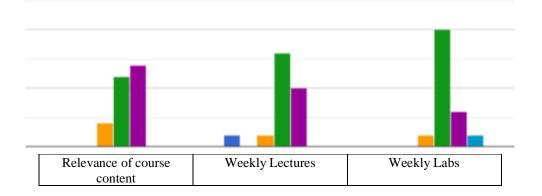
The assignments each week were really big, which caused me to work approximately 60 hours a week. Due to this, there was no space for own things, social life, sports or rest

Perhaps the course should be expended to 6 weeks. The assignments are complicated, not everyone can catch up with the speed.

How do you assess different parts of the course:







#### Do you have any additional comments on your answers above? If so, please discuss here:

The main and biggest issue for me was lack of time. Lectures and labs were close to 20 hours a week and I had always a little remaining time to do assignments. However, the contents of lectures were so large that it was perhaps unavoidable to spend less time on it.

There were no variety in teaching methods. They only "teaching method" that was used was one-way vocal lecture with wierd slides. Im not sure that can be called a "teaching method" with respect to those that take teaching seriously.

The tasks were good, but way to time consuming when the lecturer wasted 4 hours of our mornings three times a weak plus not very helpfull "labs" where individuals were prone to take over the class with their very spesific problems.

The only real help for me was talking with other students and to me it was crucial.

We organized ways of cooperating and communicating, but hadent those few students taken that initiative many students would have fallen behind.

The lectures were 4 hours straight, which makes it hard to focus. Besides it was not always clear to me why some of the content was relevant for the course, assignments or my learning process.

I understand the amount of knowledge the lecturer is trying to pass to us. But 4 hours straight class is challenging. I m very glad for the recordings. This is also another challenge to have more interactive learning approach.

The course structure was pretty hectic as we had to go back and forth with lecture topics, the case studies, and the assignments. If it weren't for the video recordings, it would have been ridiculously difficult to keep up with the course.

#### Why would you recommend or not recommend this course to other students?

It is more practical.

The course was designed to improve our abilities in modeling and also to increase our understanding of archatypes and loops interactions. My gradual improvement was obvious.

It help us to understand SD and has nice case studies to use SD method.

Pal is a great professor, he can make boring material contents a very interesting one, I believe Pal the main reason why I recommend this course to other students. also the deep content and the practical experience gained by enrolling in this course.

In general, I got extremely helpful and valuable teachings to advance in system dynamics' understanding (particularly appreciated those related to the steady-state and the transient gain components!).

I would recommend it - it gives interesting insights in the SD method

I would definitely recommend. This course takes you through the fundamental understanding of the SD and helps you connect to the real-world problems through the case studies. These are quite relevant and interactive to learn and see from different perspective.

I would only recommend this course to those who need to take it to finish their masters.

It's very interesting and the course was structured but too much assignments. In some weeks I got very little sleep.

Idk. I learnd stuff.

I would recommend the case studies that were assigned in this course as they were quite insightful for the utility of system dynamics.

Based on the workload, I would not recommend. Based on the content, I would recommend, because a lot of knowledge is passed.

I would recommend, but with a warning on the time and energy commitment of the course.

Everything we learnt in 302 was nicely put together in 304, where we got to fully understand a case, model it and analyse it. It was much needed to finally appreciate whatever I learnt in the previous course.

I would recommend it to anyone who has understanding of system dynamics and wants to go deeper. I think it would be very overwhelming to someone as their first experience. However, in the context of a 2 year master's program, I can see how it works.

#### What did you expect to learn upon starting this course?

I did not expect much. I follow each lectures, lab and assignment and finally find my way to solve everything.

Almost what I've learned now from it

Build a complicate model to analysis some cases

I expect to learn what I have learned already from this course.

Advancing in understanding how to develop a SD model to apply in my researches.

gain insights in the SD method

I expected to understand the basic tools of modelling and simulation. I wanted to learn analysis as we go through and understand deep down into SD.

Creating models based on descriptions and analysing them.

No expectations

After 302, i expected nothing.

I expected to learn more indepth modeling.

I hoped to gain more insights in building systems.

Better analysing skills.

Analysing model behaviour in order to design policy interventions.

More advanced skills in system dynamics modelling.

#### What do you feel you have learned by the end of this course? Have you met the learning objectives?

To actually understand what the content is telling and to model it, interpreting each and every behavior.. interesting.

Yes.

it is useful. I do learn a lot.

yes, I feel like I met the learning objectives, I learned how models are built, how conclude proper policies, analyze behavior depending on structure.

I had difficulties keeping pace with lectures and assignments due to other working commitments, so rushed through lectures' recordings and assignments in the course's last days. However, I think I met the main learning objectives (how to build a SFD and a CLD, and interpret simulations' results).

yes - I have gained insights in the SD method

I have learnt my ways through analysis and understanding the basic structure and the connecting loops.

I feel I now know better what is expected of a system dynamisist. I Believe I met the learning objectives to an extent, though I am far from mastering them.

Yes I learned the learning objects

I got no clue.

I learnt more how to properly analyze a model in a given context.

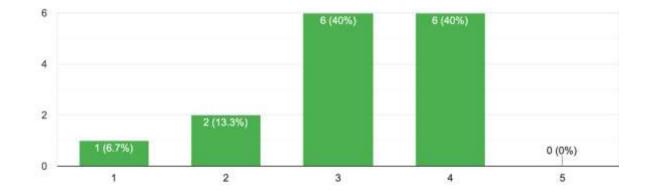
Yes and how to describe what is happening inside a system.

Yes. I did. But almost at the burn out level.

Yes, I have indeed met the objectives I believe.

More advanced skills in system dynamics modelling - objectives met.

To what extent did the 'distance learning' style of this course affect your experience with the course and your ability to achieve the learning outcomes? 15 responses



#### In what ways did the 'distance learning' style of this course make the course more difficult?

Time zone and online classes

Despite the groups we had in whatsapp and Teams, it was much harder to communicate each other for improving our understanding.

It was hard to focus 3 hours during lectures. And it is hard to communicate with classmates.

Nothing particular!

It was as good as it could get, but I prefer to ask questions in direct as i am working through my assignments.

It is more about the way the lecturer facilitated this distance learning. Distance learning in it self can bwork tremendously well, but not when there is no effor put in to create a good learning environement and not using any acknowledged learning methods.

The distance learning created slight communication issues between students and the lecturer, as many felt helpless and overwhelmed.

Concentration and interaction with the professor. He talked 4 hours straight which makes it incredibly hard to focus behind a screen.

With the amount of time i spent on assignment, i am not sure if distant matters anymore.

Tackling the assignments all by ourselves would have been a personal hell. Collaboration is very important, and it could have been richer if it were in person.

It was harder to be fully engaged in the course through distance learning and much harder to interact with fellow students.

#### In what ways did the 'distance learning' style of this course make the course easier/more convenient?

interactions with TA

The saved movies were helpful for reviewing the important or missed points.

we had recording, we can re-listen the lectures.

Lectures are recorded, that means I can keep revising and gaining knowledge from Pal all the day, 24/7

Having the possibility to watch lectures' recordings.

Major help was the recordings, I could go through it multiple times.

I could turn of the camera and catch up on sleep when the lecturer warned us that he would talk about stuff we shouldent understand.

The availability of recordings were more insightful to revise lecture material more thoroughly and for more flexible hours to collaborate and get assistance.

It was really good that the lectures were recorded and therefore it was possible to rewatch things if you don't understand something after the first explanation.

Recordings are great for learning things that cannot be understood during 4 hours classes

THE RECORDINGS! Pål throws so much content at us, we'd be lucky to have digested half of it in one sitting. Thankfully, distance learning has enabled him to record his lectures. These recordings will go a long way in helping us even in the future! Great reference points.

You can expand upon/comment on your answer above here:
I would recommend each course to record lectures.

What could the instructor have done to improve your learning experience?

More Example and assignments were clear to understand

Just stay safe from COVID-19 :)

Give us examples for case study.

I hoped that the TA sessions were also recorded. by doing that, no one will miss any information.

Nothing to report

I don't know - I think he gave inspiring lectures

I would have liked few examples being solved in our sessions before going through the assignments.

The more technical lectures often went over my head despite my best efforts. Perhaps shorter lectures of that kind, and maybe fewer of them, would have made it easier to follow.

Nothing

Stop using our time talking bs and set of time for the students to discuss and cooperate.

Some of the lecture material could be revisited to simplify them as it was quite extensive for the limited time we had.

Include more interaction, not with asking do you understand everything, but with quizes, or fun activities.

same amount of course content, but longer course length.

The lecture duration was too long! It doesn't help that he admits it's going to be complicated and that we'd have to probably rewatch the recordings a few times to get everything he is teaching. Perhaps the lecture could have been pre-recorded. We watch it and come to class to discuss our questions, flipped classroom style!

Clearer structure on what we would cover and why.

#### What could you have done to improve your learning experience?

Attend every lectures and labs

Spending more time on it.

watch recordings and read the books before lectures

Put more attention toTA's comments on my assignments.

Drop some other deadlines (?)

Spent even more time

I have always wanted to go through more of the lecture notes provided to us.

I should have reached out about my difficulties earlier, and not beat myself up over not being able to grasp everything and finish everything.

Nothing

Taken adreol to be able to focus 4 hours straight about stuff the teachers says is unrelevant.

I could have spent some spare time reading the curriculum material, if I found time after doing assignments.

Get more time in my week and not wanting to sport and have a social life

not working over 80 hours a week on assignments

Same as above.

Clearer feedback earlier on what was needed in assignments.

How would you reflect on your learning process throughout this course?

By achieving more on the other following course

It was extremely busy, but I feel I've learned a lot - steep learning curve

It was a trial by fire. I learnt that I can work for days (and nights) on end if necessary. That is useful to know.

Steep, through individual working and dicussion with class mates.

This learning process kept me engaged and forced productivity upon me during the limited period.

I am very glad for different thought-provoking assignments analysis.

I can honestly say that I've learnt a ton from the course. The only problem being the insufficient amount of hours in the day. Keeping up with the course was a struggle - there were several late nights and all nighters especially around assignment due dates.

#### What did you find very helpful or useful in this course?

The interpretation, the way how the behavior is defines and the TAs feedback

Learning through interesting models.

understand modeling and the changing of behavior

everything. especially Pal.

I got a clear understanding on how to develop a SD model and interpret its results

Feedback from TAs - Chistina Gkini especially skilled at giving fruitful feedback

I could relate different fields and bridge between them.

Pål reached out when I said I was struggling, and a quick reassuring conversation made a world of difference. I had similar experiences with TAs.

The lab sessions and the work with case studies

Nothing

I found the guidance of the TA and the daily, although lengthy, lectures really helpful to hear with the lecturer.

Learn how to describe and explain a system and its interactions

The ways to analyse behaviors.

The case studies were excellent exercises that made me finally believe that I could be a system Dynamicist - much needed after SD302!

Pal's amazing expertise and the passion of the TA's to help students.

#### What do you wish you could have learned more about in this course?

#### The 4 assignments step by step

It was more than a course. Nothing more I expected.

If I can get all his material later, I will be super satisfied. So I don't wish I could learn more.

honestly, Nothing on my mind.

Nothing particular

There was no more time.. But even more cases would be interesting

Learn more of the structure and understand the analysis.

I can't pinpoint a single thing.

Nothing

Chaos and models for political science or anthropoligy.

I wish more time was spent explaining the systems archetypes as those seems to be a generic method of recognising system dynamics issues.

How it works with data and how to collect it and integrate

more than enough

Nil.

Clearer guidance on assignments.

#### What do you feel could be improved about this course and what suggestions do you have for ways to improve it?

More Labs could be helpful to understand.

It was great. Perhaps a bit faster response from TA could make it better. However, I know they were totally under pressure.

If we have group discuss with Pal or TAs instead of long lectures, it might be more effective.

extra week for market growth assignment.

Recording also TA sessions would be very helpful

I don't know - I was happy with the course

Few examples could be solved in the live session to give the gist of the course.

I think the workload was too large. It proved to be manageable in the end, but I did not have any time for independent studying. I would have liked to have had some time to explore SD on my own in order to improve my shortcomings and look into the literature and read some in Stermans book.

Nothing

THIS IS A ONLINE COURSE SO YOU MUST MAKE WORKING HOURS A PART OF THE SCHEDULE. Make the students work together and connect through a spesific platform. Stop using Canvas... so 2000 and late!

The course was satisfactory enough without lacking in any areas. The deadlines for the case studies could be more flexible as it consumed more than expected of studying hours or revisit the tasks. Likewise for the lecture slides.

Get more time for assignments. Maybe not have a holiday week, but continue with lectures and just continue the entire course at a lower pace. I was completely exhausted after the course ended and had to take a few days of from course work to recover mentally. It was like I was set in survival mode.

course length

The case studies were really time consuming, demanding a lot from us. This is a good thing in general because it allows for a lot of learning. However the lectures not related to the case studies at times seemed like a distraction. They were important too, but it was too much for us to handle it all at one go. Perhaps recordings as suggested would have given us some breathing room.

Same as above.

#### Any other comments can be made here:

Thanks!

Since this survey is anonymous, I want you to know, that I am so grateful for the Norwegian educational system that allows students from all over the world to benefit from programs such SD at no cost, and from great professors, such Pal, Erling, and Brigit, all the TA's, Anne Kathrin, you are all representing the spirit of Norway in our minds. Viva UiB, Viva Norway.

All in all, the course was a valuable experience. It was however very difficult.

### 5. Oppfølging

Oppfølging av/kommentarer til tidligere evalueringer. Hvordan rapporten følges opp, evt. tiltak eller endringer som er gjort/planlegges gjennomført på bakgrunn av emnerapporten