

WAT Course Feedback

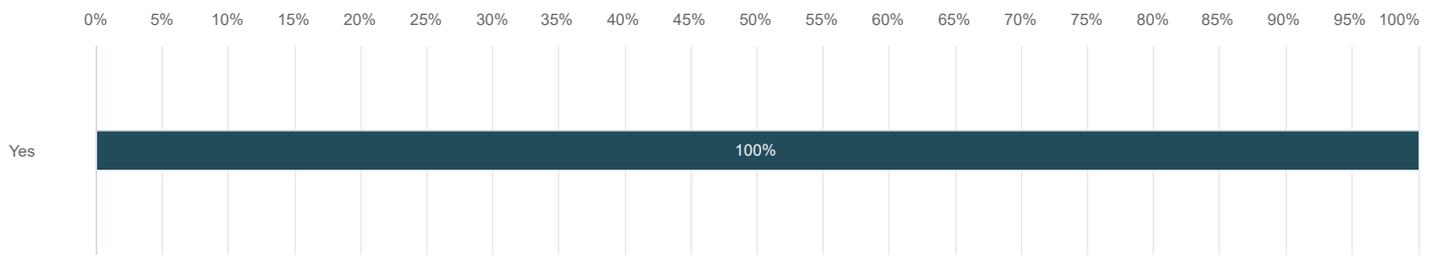
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WAT Course Feedback

Total number of respondents: 23

1. I have read the text above

Number of respondents: 23

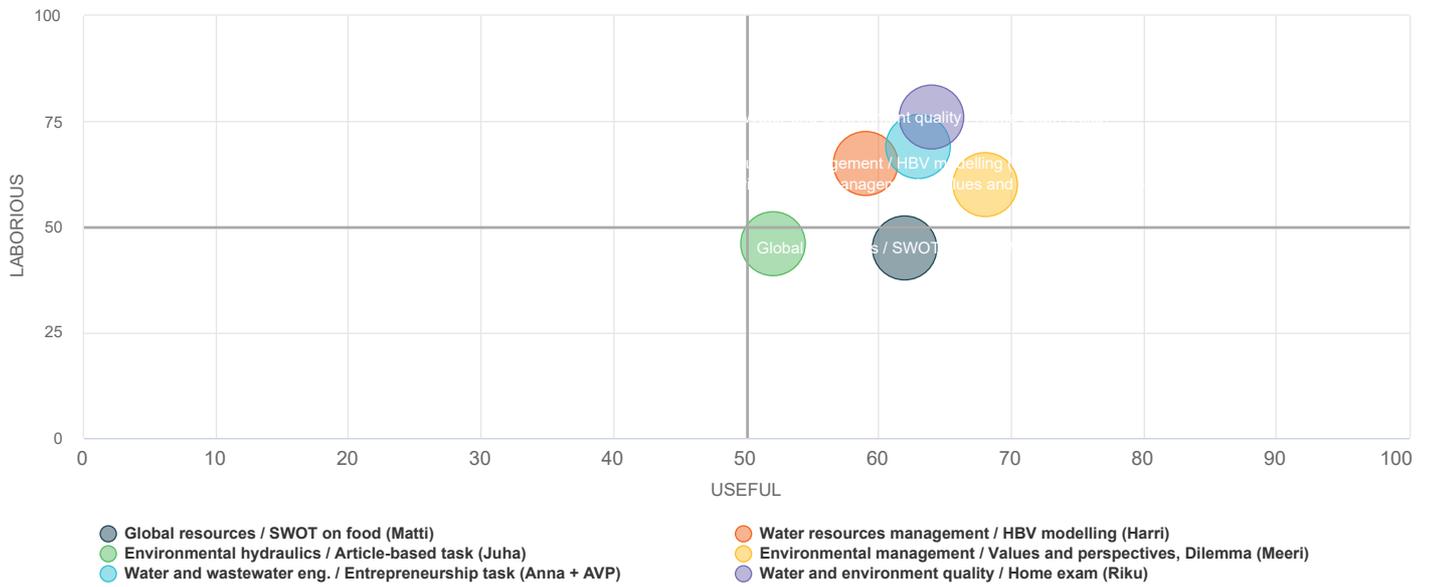


	n	Percent
Yes	23	100%

2. Assess each WEEKLY THEME AND RELATED THEMATIC TASK with the help of this matrix, where X axis stands for usefulness and Y axis laboriousness.

Feel free to use the entire scale and please note that the TWO CRITERIA DO NOT NECESSARILY CORRELATE (i.e. task can be very laborious but still not useful, or other way round). The matrix also encourages you to think COMPARATIVELY i.e. how different weekly themes and tasks differ. Please also pay attention to the time available for each theme and related task, as this differed between the weeks. HOW TO USE THE MATRIX? Start your ranking by selecting the position for first weekly theme and related task (marked with dark bar) in the matrix by simply clicking the matrix with your pointer: you will then automatically move to the next theme & task. You can edit your answer by re-selecting the theme & task and clicking again the matrix.

Number of respondents: 23



	n	USEFUL (Average)	LABORIOUS (Average)
Global resources / SWOT on food (Matti)	23	62	45
Water resources management / HBV modelling (Harri)	23	59	65
Environmental hydraulics / Article-based task (Juha)	23	52	46
Environmental management / Values and perspectives, Dilemma (Meeri)	23	68	60
Water and wastewater eng. / Entrepreneurship task (Anna + AVP)	23	63	69
Water and environment quality / Home exam (Riku)	23	64	76

3. 1st week: Global resources / SWOT on food (Matti): How did the week work? Explain shortly your selection in matrix above (useful/laborious).

Number of respondents: 23

Responses
This week's topic was quite interesting and the tasks accompanying it were ok.
Useful: Quite useful, it was good to learn about a pressing issue in global natural resources by researching ourselves and also listening to presentations by other groups (issues such as cultured meat, GMO crops, rainwater harvesting). It was also good to use R for the first time. Laborious: Probably the easiest week in terms of workload, our group finished our SWOT analysis with plenty of time to spare.
The first week was still a bit confusing, but very interesting. And we got to try how our group works together.
This week provides a general introduction to water issues. The requested work was quite quick to do and really useful for the understanding of the rest of the WAT course.
The first week didn't yet feel as laborious. The themes of the lectures and presentations were very interesting but not too hard to work with. The programming was also instructed well.
This task was easy and quite straight forward when you just used a SWOT analysis, however I learned a lot from about different sustainable issues when listening to the other group presentations
For me, I already had the opportunity to do this kind of analysis, that is the reason why I put it on the left side (because it was not new for me). However it is very useful to split the info into different categories. It was not very difficult for me to do it because I, as I said, I have already done it before.
SWOT analysis was almost completely new to me, while not being too difficult at all.
Todella mielenkiintoinen teema ja viikko oli hyvin järjestetty. Tehtävä ei ollut kovin vaikea, mutta se opetti hyvin uudesta asiasta ja oli kiva että eri ryhmillä oli eri aiheet SWOT-analysiin, niin kaikki oppivat toisiltaan.
It was not all new, but nice to refresh the information in your head the research didn't took too long. to fill a swot with your group was a good first exercise.
SWOT analysis was very interesting way to think about the problem but still I don't know if it was useful for the future so that's why I put it to the middle. The task itself was not laborious.
In my point of view SWOT analysis is completely useful because make students think outside the box and evaluate a solution from various aspects.
The uncertainty made this first week almost like a practice round. No complains.
The SWOT analysis was clear and easy to understand, plus, it was very useful and interesting to know about different aspects of problems. The topics given for discussion were pretty new and supportive for the intended learning outcomes. However, even though the task was not so hard to do, the time given was only within a day (this is the first assignment that we are given in the course).
I feel that, this was the easies task of the course. However, I still found it useful as it always cool to break down a topic and try to found different aspects to it.
The SWOT was easy to do as i have learned this before, it is good to have this lecture on the first week, to introduce us to the global problems and views on water and sustainability.
I will rate a week as laborious if it has taken 2-5 hours extra during the week (after the standard 9-16 days). Week1 fits this category. Statistics method and R were familiar for me, but I still learned new things about statistical testing. I think the exercise was well made. Lectures on global food and water issues were interesting and good reminders even if I had heard some of the topics before. I am not that satisfied with our SWOT analysis output, since I feel like we did not have time to read enough literature. Of course, it is understandable that the time for this is limited since the goal is to give an introduction to the topic.
The swot analysis was not very laborious, but it was still useful. Although there was quite general information, I still learned a lot of new things from the lectures, they were very interesting and it was a great way to start the course.
This was a good and easy way to start the WAT course. The topics were pretty introductory so there was not so much new information nor work to do.
SWOT exercise was very useful for me. Even though the concept was already quite familiar, this task helped me to really grasp the SWOT framework and how to use it. At the same time, it was a time-consuming task, because there were so much different views you could search literature for to get background information and justifications.
The SWOT analysis gave deeper understanding of our group's topic and it didn't require that much time to do it. The lectures gave a good general view about the current situation and the future challenges. However, there was not that much new information for me.
The workload for the first week wasn't too heavy. The lecture contained a lot of common knowledge but the group work was very useful and interesting. Knowing how to do a SWOT analysis will be useful for the future.
I found the information on global resources very useful and most of it was new to me. As a WAT engineer, I want to be more informed about the global situation, so this has been a good introduction. I consider that the SWOT analysis is a useful tool which I could apply in the future.

4. 2nd week: Water resources management / HBV modelling (Harri): How did the week work? Explain shortly your selection in matrix above (useful/laborious).

Number of respondents: 23

Responses
I have previously taken an introduction course on Hydrology, so the main idea of a hydrological cycle was already familiar to me. However, this week taught me about the methods that are used to measure and model elements of the cycle.
Useful: HBV modelling and simulation modelling were all new to me so I found this week helped me to understand methods in water and environmental engineering and water resources management. Laborious: As the modelling methods were a new concept, this week was more work than Week 1, however there were other weeks where the tasks took longer.
I would maybe have wanted some more lectures it felt that we didn't get very deep into the topic. The group work became a bit stressful due to time limits and maybe bad sharing of the tasks (done by me since I was the chair that week.)
This week was quite laborious because the subject matter was completely new to me and required a lot of effort of understanding to complete the exercise.
Both the groupwork and the excel assignment required technical skills that we didn't not yet have on top of the new knowledge so they felt quite hard.
The HBV modelling was very time consuming because the use of excel in that way was new for me and we didn't have time to focus as much on the analysis of the result. But I learned how to use excel for modelling and how to use the climate scenarios.
The modelling was done on Excel, but in a way I never had the opportunity to do it. So it was something quite new for me and a bit difficult as well. However, knowing Excel, it was possible for me to understand easily when I had the good information.
Learned a lot about modeling methods and computations. Also wasn't too difficult.
Mallintaminen oli välillä työstä etenkin kun autoin vielä ryhmäläistäni oman osuuteni tehtyäni. Teema oli kiinnostava ja se motivoi käyttämään aikaa, joten työläys ei ollut niin huono asia.
i learned how to run a model with excel. the information in the during the lectures weren't new, besides the modeling part.
This thematic task was hard for me because I didn't understand it during the task work (luckily after I got it) and I also think that it was laborious but our group still managed to do it. I'm not sure about how I would use the modelling in the future so that's why it is on the other side of the matrix. There were some new Excel things I didn't know but I wanted to think about the future more on this.
It was a little hard for me because I didn't have access to remote systems and my grade was not satisfactory. I want you to be ensure that all student have sufficient access to remote computers and then give them assignments for next semesters.
I think especially this week we just scratched the surface in the theme. The modelling task was still teaching.
The modelling task was new to me, so it took me quite a lot of time to understand the objectives and the background for the task. It helped me a lot to practice excel as well. This was very helpful for us to understand how modelling works and how to analyse the characteristics of catchments.
There was a lot of help to complete the model, so it didn't take a long time. The hardest part was actually to come up with the figures and illustrations. However, I always find it interesting when one has to figure out how to present data. That is how you become familiar also with the information that the data possesses.
This is my first time using Excel for HBV modelling, hence i got to learn how to calculate the climate change scenarios, generate and analyze the graphs and also to determine which graphs to present.
- I cannot remember the exact time I spent on this week so I put it to laborious. There were likely couple of extra hours work. - I hope we would use something else than excel on the analysis work. If the goal is to prepare students for working life, learning to do data analysis with other languages such as R,Python, Julia will benefit a lot more than excel. Excel is also quite slow and heavy program. - Getting familiar with basic climate model such as HBV is useful, but I feel like I do not yet know enough of its assumptions to know when I can use it.
The modelling exercises were a bit more workloaded, but useful. The reserch highlights of this week were interesting.
A lot of new information! HBV modelling was a bit time consuming but also very useful.
The calculations, computations and visualizations in Excel took a lot of time, also outside 9am-4pm. However, the results were very interesting and informative! Especially with the different climate change scenarios it was interesting to see how much they differ from each other and the current situation.
The week offered quite basic knowledge about hydrological cycle. The HBV assignment taught something about analysing the data given by the model but it also required a bit more time in the evenings to do the task.
The HBV modelling and the snow model were very time consuming. At first it was difficult to understand all the parameters. However it was very helpful to understand the pattern of the climate on a catchment.
I enjoyed learning about the hydrological cycle and the applications of rainfall hydrology. However, I consider that managing the huge Excel data sets for HBV modelling has been time-consuming and the instructions for the presentation were not entirely clear.

5. 3rd week: Environmental hydraulics / Article-based task (Juha): How did the week work? Explain shortly your selection in matrix above (useful/laborious).

Number of respondents: 23

Responses
The artificial river/flume setting was so cool. I wish we could have done the measurements and the exercise live in the flume lab, because the videos were quite blurry and we didn't get a very good idea of the flume.
Useful: I put this at the lower end of the useful scale because I had studied a similar concept in the lab before - if it was a new concept I would have rated it higher! I had also done similar tasks to the article-based task and creating summaries of technical reports. Laborious: The lab report was fairly time consuming in comparison to the previous two weeks.
The article based task was very interesting since the topic was quite new to me.
I found the theme very interesting and really useful for my professional future. However, I find that the knowledge provided was relatively weak in relation to the theme.
The hydraulics lab didn't feel as informative watching it trough zoom (ofcourse we understand it was the only option). The group work for this felt quite laborous but the article-based task was quite an easy task.
The article based task was quite clear and it was easy to start the exercise, however I learned a bit more about the nature-based solutions but not much else. It was time consuming in the sense of trying to minimize the word count without leaving out something important
I already had the occasion to write articles during my school work. However, it is always difficult to find the useful information and to summarize the data in a good way. But I think it is important to konw how to do it, to have more concise information.
I was already familiar with environmental hydraulics. Took a lot of effort to fit everything into 99 words.
Toinen artikkeli oli mielestäni vaikealukuinen, joten minulla meni "turhaan" aikaa sen lukemiseen ennen kuin vaihdoin toiseen, josta sain paremmin selkoa. Myös MyCoursesin sanamääräraja hankaloitti työtä, koska olin kirjoittanut tekstin ensin Wordiin. Muuten tehtävä oli opettavainen, artikkelien aiheet olivat uusia, joten opin paljon.
The article based task was weird, because you had to shorten your summary so much. For me, it was not useful to have only 99 words for both: One sentence about the article and a short summary. The Monday's lecture was just announcing equations, which i guess wasn't useful if you never had water hydraulics before.
Thematic task was a bit odd or I was not expecting it because previous weeks we have had tasks were we have had data tasks and now we had reading and writing task. This task was not laborious and I learned a new term nature-based solutions during this week and thematic task. But still I'm not sure if this information is useful for me in the future.
I think reading articles will broaden student views and should stay in your assignment list for sure although it is a little bit time consuming to summarize it in your words.
Teaching was a bit slow and because of the online practicalities with the flume, there was not that much of it. The task was the weirdest. The word limit made it impossible to include enough points to the answer. Also, the info was different than what the submission box expected.
The theme was kinda interesting in the context of modern world and technology advancements. The article task was mainly individual works and no significant discussion for it. It was not that easy to summarize the article in small amount of words.
It would have been nice, if the instructions said that there is a word count limit for the answer. Now many of us wrote longer answers that were allowed and then had to modify them later for the submissions. I find it useful to read academic papers, so I become used to the language and vocabulary.
The article-based task was quite easy as we just have to understand the article and summarized what it says.
- As in week1 and 2, the work took some 2-5 hours overtime if I remember correctly. - In the flume exercise, I would have hoped for references. For example, our group had a bit of unclear picture about how manometer works in the crest, and could not find anything from google. This made answering some of the questions very difficult and prevented learning. We were just guessing. - I think it is useful that now I am aware of WindADV. It seems pretty simple to use for signal processing. - the NBS article task, was interesting and good learning experience. It is difficult to summarize an article and not being too vague. I am happy to also be aware of the term NBS.
The article based task was quite interesting, and given the short word count it didn't require too much time writing, it was more about getting across the main message of the article, which meant you actually had to understand the key messages, so it was quite useful as you needed to think alot about that.
This week was kind of average. We were spending a lot of time to things that were already familiar (measuring uncertainty). The new thing of the week, flume, was pretty interesting but unfortunately we couldn't access the flume lab.
Good, interesting exercise (and the NBS topic) once again and very different from the rest. This one didn't require an excessive amount of time, but I was struggling a little bit with how to construct my submission. But, as has been mentioned multiple times, this is a very useful skill to have and the progress comes mostly with practicing.
Most of the learning was related to the article based task. It wasn't really time-consuming, reading and understanding what you had read took the most of the time, the writing itself was quite easy (however, it would have been nice to know that there is the maximum word limit for the entire task, not just for the second part of it, it took some time to shorten my 2 sentences...)
The topic on nature based solution was very interesting but I lost time because the limit of 99 words wasn't mentioned in the instructions
Having a recap of hydraulics is always helpful, even if this was a brief introduction. The article-based task was useful as it encouraged summarising a large amount of information, which I have always struggled with. It was also a less time-consuming task, which I equally enjoyed.

6. 4th week: Environmental management / Values and perspectives of sustainability, Dilemma (Meeri): How did the week work? Explain shortly your selection in matrix above (useful/laborious).

Number of respondents: 23

Responses
This was a well structured week and the dilemma boardgame task was fun and challenging.
Useful: It was really useful to learn how to properly structure an argument with evidence to back the argument up. I also liked how we had to research the UN SDGs in detail. Furthermore, the board game was an interesting teaching method and I think it resulted in me remembering a lot from this week. Laborious: I found the individual tasks took a long time to complete because there was no page/word limit given for the debates, so I was unsure how long to spend on the task.
The week was nicely divided to different topics, we had enough time for the tasks, but it also felt like we had enough time for different topics.
The theme was interesting but I found that we didn't go into enough detail. The game was fun. However, the associated tasks required a lot of work time.
Interesting themes made it easier to follow. Also remember the dilemma task and board game since it was so different from other weeks tasks. The workload wasn't too bad.
I learned a lot about debating and how to form arguments, however it was time consuming because it had so many different tasks the first task, which had no limits so you could have continue writing it forever , the second task the board game and the last task.
During this section, I learned how to find arguments and be ready to present them during a debate. I have already done that before, but in "less" important and on a smaller scale. It took me a lot of time to read articles on the 3 different subjects we had to do. And then, to find the right arguments and the explanations as well.
The preparatory task was too laborious. Why research and prepare arguments for two topics, when there's no guarantee you'll get to debate for either one? Just one would be enough. Board game was fun though.
Lautapelitehtävä oli mielenkiintoinen ja opettavainen. Se painotti arvoja, joten tällä viikolla oppiminen oli vähemmän faktoihin liittyvää (vaikka toki faktat ovat erittäin tärkeässä roolissa arvoista puhuttaessa) ja enemmän pohdiskelua.
The boardgames was probably one of the coolest thing during the course. It gave us a great opportunity to discuss.
The concept of this week was very intresting and the boardgame was something really new and different comparing to other weeks. The tasks before and after the boardgame session were a bit laborious but not overly too much. I think I learned a lot of new things about sustainability and propably deepened some things as well. This week was sort of self learning week on the theme.
Those days we had to read SDGs and investigate more about them. It was interesting experience. I want you to have longer debates in your board game.
Valuable topic. The board game was fun, but more time would have made it much better.
The task made us interact a lot with other students and speak out our opinions. It is important to understand the problems on both positions (for and against). However, it also required us to write a lot and to repeat what we have discussed in our written submissions.
This was too reflective assignment. Also I would have preferred if the "debates" were live and not on the paper. Maybe also could have linked the "dilemma" to some literature about sustainability issues (wicked problems etc). As mandatory readings I mean, because I think there were several articles presented during the week, but no time to go through them.
The board games was interesting, at least something different from the other weeks, and the snow flakes exercise did train us on how to argue logically and support with evidence.
- Again, maybe around 2-5 overtime. I selected this week to be a bit more laborious since I feel like preparing for the board game debate properly would have needed even more. I got only couple of arguments per topic. - LCA analysis was very valuable to understand even if one does not continue working with it since now it is easier to read critically news and political discussion about climate change. I can understand how emissions have been calculated. - I liked a lot of reading the literature for the debate. I struggle to motivate myself to read scientific literature in my spare time and therefore lack some of the latest information. However, I think that reading articles is one of the best ways to learn about the latest information.
The dilemma task were useful, as it gave new perspectives on sustainability. It was not too workloaded in itself, but it was a bit unclear on how much we should write for the argument, so I think many of us spent more time than required. I also didn't really see how it benefited the debate, as we debated different questions than we had prepared, and our group also only had time for one debate. Maybe if we would have been divided into groups based on what debates we had prepared for, there could have been more discussion based on facts. The board game was anyway quite a fun end to the week, and I also learned some new things from the step-by-step cards.
The balance between skills and knowledge was good! The week worked well and the workload was reasonable: a lot of work during the week but everything ready by weekend.
This week's workload was lighter, even though especially the preparatory task took some time. The theme itself was very interesting and useful to learn about, as it is kind of an important aspect/subject in whatever you do and on whichever sector you work. The Dilemma Board Game and the seminar were great! It was good to realize how important it is to know the definitions and orders of magnitudes of the sustainability basics.
The preparatory task took quite a lot of time and effort but it was also really educational. Playing Dilemma was also really educational and fun. The preparatory and follow-up tasks required quite a lot time and effort in comparison with the board game itself that was only played for an hour.
The new concepts I learned in sustainability will be very useful for the future because the sustainability aspect of a project is getting more and more important. The debate allowed me to know people from other groups and to learn more about rhetorical techniques. Searching for references required a lot of time
This week's lecture on values and perspectives has been useful for raising awareness of how I view different research papers. I learnt to think critically about their intended message. The Board Game has been slightly time-consuming because of the preparation time and the research into the topics, but it was a useful exercise to learn about sustainability issues in a fun way.

7. 5th week: Water & wastewater / Entrepreneurship (Anna + AVP): How did the week work? Explain shortly your selection in matrix above (useful/laborious).

Number of respondents: 23

Responses
There was way too little time for the entrepreneurship days so it felt very hectic. Otherwise the days were fun.
Useful: I found this week useful in terms of learning about rural wastewater treatment however it was difficult to come up with solutions to the stakeholder problems because our group felt we didn't know enough about the subject to come up with a legitimate solution. Laborious: This week was also very intensive because we had to come up with interview questions, a solution, a draft pitch and a pitch. I think it would have been better to allocate extra time for creating the pitch because on the Thursday we were expected to spend the whole day on the GIS exercise and create our draft pitch, meaning we worked into the evening.
Interesting mix of topics, a very nice week, but we did maybe not learn that much about the actual water & wastewater. There was a much higher focus on entrepreneurship.
I found it very interesting to see the theme of water treatment through entrepreneurship. The work was stimulating and fun.
It was interesting interviewing the customers and just brainstorming ideas. We learned a lot just in talking about the solutions even if it didn't feel like studying. Preparing the pitch was also fun but the spatial analysis was very time consuming even though I've used GIS on multiple courses before.
I have been in other entrepreneur courses so I didn't learn a lot new thing only the customer interviews was new to me. It was very time consuming because there were a lot of contact sessions and still homework in the evening.
I never had the chance to do a pitch. I learned a lot on how to do it, how to be persuasive and how to be concise as well. The time required was not too much and I think needed to do a correct presentation.
I have no interest in entrepreneurship personally. Still, I learned something new.
Asiakashaastattelut olivat ihan mielenkiintoisia ja opettavaisia, mutta en tiedä oinko kovinkaan paljon maaseudun jätevesijärjestelmistä, koska ainakaan meidän ryhmämme ratkaisu ei ollut mikään oikea keksintö. Yrittäjyys oli siis ehkä liiankin suuressa roolissa tällä viikolla.
This week took a lot of time for the discussions about rural toilets, what in my view could be easily shortened down, to get more time for the GIS work.
I liked this week's theme a lot, it was the theme I was excited the most. I was a bit unsure about the entrepreneurship at first because my knowledge on that was not good (not a business student overall) but now I think that it was unnecessary. I learned a lot about entrepreneurship and e.g. how to listen to the customer (during the interviews), but I think this task was a bit laborious because of the GIS task we had during the same time so eventually there was only a little time to do the pitch presentation in Thursday but luckily we had time on Friday as well.
Entrepreneurship is key point in universities because it gives feedback on industry demands. With entrepreneurship skills students could design their business plan and handle their startups. Water & wastewater part also was full of interesting information.
There were lots of teaching and contact sessions which I like. I am not the least interested in entrepreneurship and neither was any of my group members. That made the pitch work not that useful. Some work was required outside regular work hours and this was jokingly justified with entrepreneurship and how entrepreneurs don't have business hours but they work when it's needed. "D"
This task was highly interesting, even though we are engineering students but in this entrepreneurship and innovation thinking, we were encouraged to find the feasible solutions and to practice our theory to deal with real cases. Not so much hard work.
In my opinion the instructions about the organisation of the week were bad. There was no info on Mycourses, so if you missed something on the lecture, you wouldn't know what to do. I liked the interactive style of the teaching.
I like this week, I think it is quite creative to create this lecture not just solely based on theory i.e. wastewater and its treatment but make it into something where we get to have some knowledge on how the entrepreneurs come up with ideas, how to pitch, how to sell your idea so that others buy it.
- I really appreciate what I learned this week even if it was challenging and required extra work. (Around 4-5 hours extra). - I actually learned and remember a lot about customer behavior from the pre-material by Håkan (User research in a little over 1 hour). Youtube videos stick. - The lectures about sanitation were very interesting. Now I am aware of many possible pollutants. - The entrepreneurship part of this week took time away from learning more about wastewater management such as more in-depth information about the methods used in ww treatment. However, I think the entrepreneurship part made this week fun and memorable, so maybe the time for in-depth theory is later in the studies. - QGIS was slow but surprisingly easy to use. However, I would not have been able to do it without the help calls with staff members.
I learned a lot of new things about entrepreneurship and water&wastewater topics, and it felt very relevant. The entrepreneurship task was quite fun, and the workload/usefulness ratio was also quite good.
This was the most interesting week! However, some of the instructions were unclear and there was a lot of work for the late evenings.
This week was probably the most laborious, because the startup concept of the group and first version of the pitch had no space allocated to them in the weekly schedule. (+ The QGIS exercise that required a lot of time as well) I still enjoyed the sessions organized by Håkan/AVP and it was a fun and different exercise, but the lack of time was just stressful. The theme water and wastewater engineering was left a bit in the side, because there was so much other things to do, so I feel like I didn't learn much about those.
This week required a lot of work outside hours 9-16. Almost all of the analyzing of the data, creating a start-up idea and making the pitch presentation had to be done in the evenings as the lectures only gave some more general advice of how to analyse the data and how to do the presentation. In addition, the wastewater treatment part was mainly carried out by lecturing and it wasn't really educational to just try to follow to the lectures for an entire day.
The week 5 was very intense in terms of workload. During lectures there were very few breaks and there was very little time to prepare the interviews or the pitch. Nevertheless the part on entrepreneurship was very interesting and fun. The three parts of the course were well integrated and supported each other.
The information on wastewater treatment was new to me and I consider it useful to have at least an introduction to the topic. The entrepreneurship task has felt slightly rushed, but it was truly useful to gain information on the process and I really enjoyed the presentation and the feedback.

8. 6th week: Water and environmental quality / Home exam (Riku): How did the week work? Explain shortly your selection in matrix above (useful/laborious).

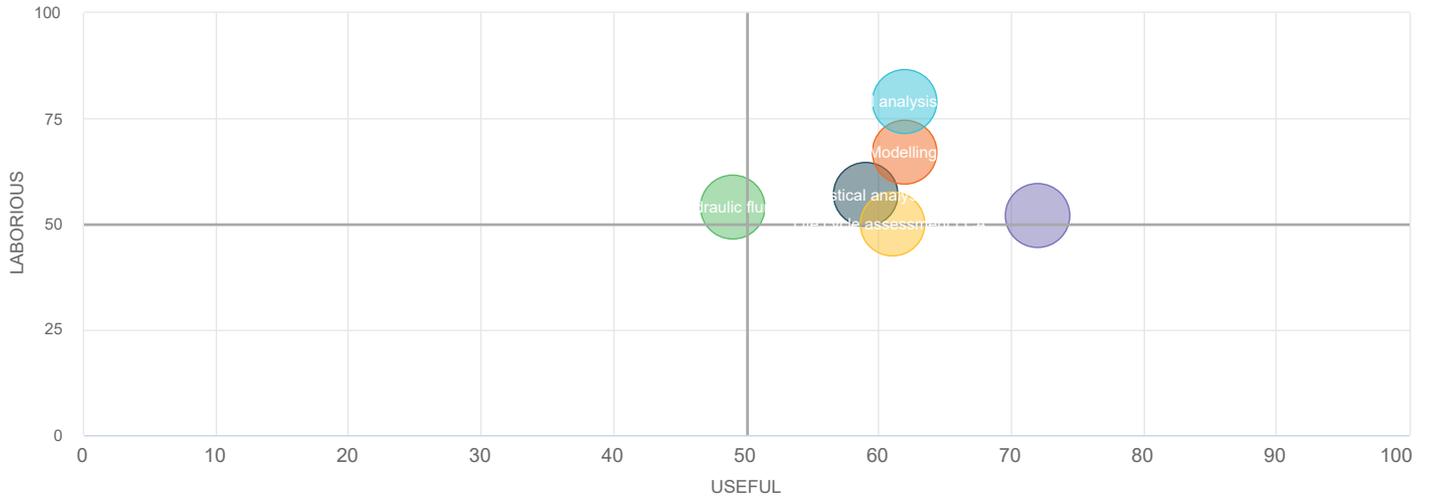
Number of respondents: 23

Responses
The laboratory day was so nice and exciting! The week was well structured. Instructions for the lab assignment and report were clear.
Useful: Going into the laboratory was a really worthwhile experience and our group gained a lot from carrying out the water tests in person. Laborious: The lab report, lab presentation and individual essay were a lot of work together, however the extension of the essay deadline has helped with this a bit.
The week was very interesting, even though very work intensive. The home exam requires a lot of times, since just reading through the material took days.
Water quality is an important theme and I enjoyed finishing with this. I had never written an essay before and the task was very complicated for me. I didn't know how to build my text at all. I contacted the teacher on Mycourses without any answer.
The week wasn't too laborious although I haven't written the essay yet. Working in the lab was fun and the freedom to solve what the water was on our own was interesting.
From the home exam I learned a lot from reading the different articles and writing the essay, it required a bit of time, due to the amount of pages to read and to write a good essay.
I think it is the task that took the most time. The free time during the week was enough for me to do it anyway. We had to read 3 articles and then to write an essay. I have already done this kind of summary before but everytime it is different because of the subject, of the data... However I found it very interesting and I learned a lot of new things reading the articles.
Quite laborious but learned a lot new.
Esseeni on vielä kesken, mutta materiaalit siihen ovat mielenkiintoisia ja ohjeita esseen kirjoittamiseen on mielestäni tarpeeksi. Uskon, että kirjoittaminen on opettavaista, koska en muista milloin ennen tätä olisin kirjoittanut yliopistourallani esseen.
The given information during the lecture could be a bit more. And to read 3 paper and write an essay during the week when there is still other work to do, is a bit too much.
I still haven't written this essay but I have read the materials. I think this task is a will be laborious because of first reading the background material and then writing an essay about topic that can be a bit unclear still. I'm a slow reader when it comes to scientific texts in English so it took already a lot of time to read the texts and I think I have to read them again to understand the text better. So I think this task will take a lot of time but I think this task will teach me the writing part, because I haven't written essays in English before so it will help me with written English and with references in English as well. Not sure about the topic but I think it could help me understand the bigger picture.
I still don't complete it but as I have a short review on them they have three different subjects and completely cover different water quality aspects.
Excellent topic and great laboratory stuff. I haven't yet done the essay but the amount of reading material and several pages of required writing... I know I'm gonna be doing it for the rest of the week. I don't know if this assignment is easier for others but it is off the charts super too much for me. Especially, when the other assignment of the week was work-loaded as well and there simply was no time to do both of them during the week.
The essay was a common type of assignments, so I got used to this learning method. The theme between this task and lab task was highly related. There are quite some literatures to view and the topic for the essay was quite broad and a little bit hard to concentrate on certain points.
I have not done this yet
As for the home exam, I think the reading and writing is quite laborious, but i know it is to train us and prepare us for our thesis later.
- again, the week took some 3-5 hours extra work. - laboratory exercise and guessing the mystery sample taught about the possible errors in the lab work and about logical reasoning. Also, a nice change for computer work. - This week's lectures were very interesting, especially information about the emerging pollutants. Now I am aware of the latest issues regarding wastewater - writing an essay is always laborious but pays off. It is an excellent way to organize one's thoughts. While writing the essay I have understood more about why some chemicals are considered pollutants and how physical attributes affect water quality. Also I have had time to think how I could make an impact.
The home exam gave very good overview of water quality parameters, the reading material was quite good. There was however a lot to read and write, so I was glad that the deadline was extended.
Not too much contact teaching during this week, which was good. However, several time consuming task and one of them was given on Friday (we had to know for sure what our water sample was to do the report) so the week basically last more than one week.
There was a good amount of time allocated to this task, but I would have hoped for a bit more detailed instruction of what the essay should be like. Also I think maybe a wrap-up session or something similar would have given a more comprehensive picture about the topic.
The home exam was really educational but also required a lot of time and effort. And there wasn't that much time for the home exam during the week 6, so part of it had to be done during the weekend and week 7. Mainly, there was time to read the materials but no time for the actual writing.
Although the articles to read were very long and didn't really bring new notions, they were really good to have a clear overview on water quality/contamination. Writing an essay is not a common exercise in my home university so it was a good exercise to develop writing skills
There was a lot of new information related to chemistry which is slightly out of my area of interest. I really enjoyed the lecture on the Baltic Sea because it included the historical context as well as details of current efforts to clean the pollution. The Home exam is a useful task, but it is not entirely clear on the questions.

9. Assess each WEEKLY METHOD AND RELATED EXERCISE with the help of this matrix, where X axis stands for usefulness and Y axis laboriousness.

Feel free to use the entire scale and please note that the TWO CRITERIA DO NOT NECESSARILY CORRELATE (i.e. method can be very laborious but still not useful, or other way round). The matrix also encourages you to think COMPARATIVELY i.e. how different weekly methods differ! Please also pay attention to the time available for each method, as this differed between the weeks. HOW TO USE THE MATRIX? Start your ranking by selecting the position for first weekly method (marked with dark bar) in the matrix by simply clicking the matrix with your pointer: you will then automatically move to the next method. You can edit your answer by re-selecting the method and clicking again the matrix.

Number of respondents: 23



● Statistical analysis
 ● Modelling
 ● Hydraulic flume
 ● Life cycle assessment LCA
 ● Spatial analysis (GIS)
 ● Laboratory analysis

	n	USEFUL (Average)	LABORIOUS (Average)
Statistical analysis	23	59	57
Modelling	23	62	67
Hydraulic flume	23	49	54
Life cycle assessment LCA	23	61	50
Spatial analysis (GIS)	23	62	79
Laboratory analysis	23	72	52

10. 1. Statistical analysis exercise: how did it work?

Number of respondents: 23

Responses
For someone ho has never used R before doing the statistics homework was a bit too hard and took a lot more time than intended.
I had never used R before so I found this useful. The instructions and walkthrough lectures were very helpful and easy to follow for someone new to the software. The goal behind using R was also clear and the time given was fine (not too long or short).
The statistical analysis was very difficult, also because I had to be absent friade because of personal reasons. It was very hard to follow the exercise demonstration and do it yourself simultaneously with just one screen. Would have been nicer with paper instructions. However using the statistical methods on an actual topic was very nice.
Quite useful for the future and simple to achieve
Good instruction so it didn't feel to hard.
It was very useful because statistical analysis is something you need in almost every research. It wasn't that laborious because you got a good start with the R- code in the DEMO session, which made it easier to work on your own after that.
I already have the chance to study on RStudio in my engineering school. But I learned new parameters and new ways of use. It is always difficult for me to use this kind of software. However, knowing the basics helped me a lot in the comprehension of the software.
Learned a lot about R and statistical methods, but wasn't too difficult.
Tilastotiede ei ole vahvuusalueeni, joten siksi minulla meni paljon aikaa tehtävään. Nyt ajateltuna minun olisi pitänyt pyytää useammin apua, jotta olisin saanut tehtyä tehtävän paremmin ja lyhyemmässä ajassa ja oppinut asiat vielä syvällisemmin. Opin sen avulla kuitenkin hyvin.
The R-programming was new and interesting to learn. The time you had to learn it was too short, because you mainly had to copy the code above without really learning what you are doing. The information about the mathematical problems you are solving was a bit weak to explain them later in the assignment.
It was nice that we had time to really go throw the exercise and not been thrown straight to the deep end. Statistics has been hard to me since high school and I think it is something I still has issues to understand, but still I managed.
Statistical analysis are useful because they give large amount of information and you can also comparing different statics for different areas and find reason of difference this makes it interesting.
Nicely built exercise to introduce a first-timer to R and statistical tests. I like the approach of giving most of the code and then asking for explanations.
This was the first time I used the RStudio software and do some statistical tests and analyses with this R language. The statistical theory part did not cover every aspect of the exercise and was introduced so fast that it took me quite a lot of time to understand and revise it. The instruction for the task was detailed but the amount of tasks to do was quite a lot (to me as a beginner). This task was one of the most challenging tasks to me, however, because of that, I learnt a lot by myself and got a good preparation of how demanding this course would be in the following weeks.
I liked that there were step-by-step instructions on how to do the programmin part of the exercise. This was one of my favourite assignments during the course, and it was well-thought.
I have zero knowledge on R-programming and hence i spent a lot of time studying the researching the functions and why people use it. I would like to thank the tutor for being really patient and efficient to answer all my doubts and questions on r-programming. It think it is super useful for a researcher to acquire this skill in order to analyze research data and i would want to learn more.
Statistics method and R were familiar for me, but I still learned new things about statistical testing. Therefore, I think the exercise was well made.
The statistics exercise had quite a good workload, using R was interesting and useful, but understanding the statistics was a bit confusing for me as I have not studied statistics before, and the lecture about it was quite rapid. I still feel like I understood the basics.
The exercise was a bit too easy. It could be more useful to do our own R scripts. For me there was nothing new.
Well organized, the R script was mostly done beforehand so we only had to fill in a few parts, which is why I feel that maybe I didn't learn so much. But the report took quite a bit of time, so it might have been too much to also focus more on the script in RStudio.
The exercise didn't teach that much about the statistics, only how to interpret the result given by the R script. In addition, it would have been nice to learn something about R programming as well, but as the script was mainly already written, it wasn't that educational either. The exercise was however guided well and therefore it didn't require that much extra time or effort.
Although I was already familiar with stats in R it reminded me some notions and allowed me to understand the statistical tests in more detail.
I believe that the weekly exercise (statistics) was time-intensive for me because I was completely new to R programming, and programming is not something I enjoy generally. In the end, the task has been rewarding because it produced actual results which I could analyse and they were telling me something concrete about the world. The instructions and the support from staff were excellent.

11. 2. Modelling exercise: how did it work?

Number of respondents: 23

Responses
It was interesting, probably useful and not too hard. Instructions could have been clearer.
Using Microsoft Excel for simulation modelling was also new to me, and I found it useful to show predicted rainfall, snowmelt etc. I ranked it slightly less useful than R because I would be unsure if I could replicate the simulation modelling by myself, I think I would probably need help again! Because I found it more difficult, I ranked it as slightly more laborious.
The modelling exercise was quite interesting, but it would have been nice to have some more information about what was expected.
Hard to achieve because not too much preliminary notion in this field. Moreover I think that it will not serve me too much for the future.
Very confused about using the excel macros so wasted a lot of time on this.
The modelling was a bit time consuming because you needed to understand both the excel and the math behind it, however I learned a lot about how models are built and how to analyse the result from the models
This exercise was on Excel and used different options and parameters I had never used before. It was quite difficult and I needed help from the teachers to reach the goal. However, it was very interesting (and also frightening) to see the evolution of diverse parameters (snow, rain...) in time.
Again learned a lot about modeling computations, and was fairly challenging, not too much work.
Tehtävä oli sopivan "helpotettu" (ei tarvinnut lähteä alusta asti tekemään omaa mallia), joten se oli hyvin motivoiva ja materiaalit olivat hyvät. Tässä vaiheessa uskalsin myös pyytää apua Teamsissa usein, joten opin paremmin.
can't really remember the workload of the task.
We were mostly thrown to the deep end in the beginning. This is one of the methods I am still a bit unsure, meaning that I understand something but the complete picture is still a bit unclear. I learned some new Excel commands I had never heard of.
As long as modeling are real problem solving , data make sense to students.
A lot of work and help required. The task is approaching the complexity level where you don't really understand what you're doing. Rather just do what is needed and ask for help. But maybe not there yet for me.
The task required a good understanding of how everything was calculated. The instruction was clear and easy to understand. A good start for a modelling beginner.
Both modelling excersices were nice.
To be honest, i come from a country where it does not snow, so, before learning how the model works, i got to understand how and what causes the forming of snow and melting of snow, etc. Again, i do not have experience in using excel for modelling, it is interesting to learn more on how to create the whole model, like the back end coding.
I hope we would use something else than excel on the analysis work. If the goal is to prepare students for working life, learning to do data analysis with other languages such as R,Python, Julia will benefit a lot more than excel. Excel is also quite slow and heavy program. Getting familiar with basic climate model such as HBV is useful, but I feel like I do not yet know enough of its assumptions to know when I can use it.
The modelling exercise went quite well, though I had some trouble understanding how to calculate the different values. I think it was useful to know how different precipitation is stored and turned into runoff ect, so it was a useful exercise.
This was a new thing! However, there was too much data for excel to handle and this was slowing the actual modelling process. This exercise could be modernized (move it to Python?).
I learned how Excel can be used for (simple) modelling and it provided a good recap of the functions in Excel and how to use them in a more complex way to get the results. Help was always provided if needed. I felt it wasn't too laborious, even though I didn't finish it during the sessions.
The exercise was well guided and it was also educational. It didn't require that much extra time as it was possible to do the model during the time that was reserved for the assignment.
It took time to understand how the excel sheet worked. The instructions were detailed and helpful. Prediction of the impact of global warming on the parameters was eye opening.
Snow modelling was a difficult task because of the large Excel data sets. They took a long time to process and it was difficult to make sure that everything was correct. But it introduced quite useful concepts and I developed my Excel skills fast.

12. 3. Hydraulic flume exercise: how did it work?

Number of respondents: 23

Responses
<p>It would have worked nicely if it was organized live. The videos were blurry and it was hard to understand the whole thing.</p>
<p>I found this task the least useful, only because I had studied something very similar before - if it was a new concept I would probably have found it more useful. I think the time given was enough and I do not think I was overly stressed completing the lab report.</p>
<p>We divided the exercise within the group, therefore we learned different things. It would maybe have been better as a personal exercise.</p>
<p>Difficult to understand the questions and what was expected. Explanations about the facilities were hard to understand from a distance.</p>
<p>It didn't feel that informative working in this remotely and there was a lot of nee information.</p>
<p>I liked the live stream which made it easier to understand, however it was time consuming because it was so hard to find answers to the questions and I felt like we needed a lecture before the assignment explaining more about flows and the machine used for measure, because it still feels unclear.</p>
<p>It was not very easy to understand how the flume works and answer the different questions on it. Maybe the main reason was that we were online and it was more difficult to see it clearly. The exercise is still vague for me...</p>
<p>I had done a similar exercise in the past. Not much new information.</p>
<p>Olin pettynyt, kun emme päässeetkään katsomaan "flumea" paikan päälle, mutta videot olivat ihan hyvin tehtyjä olosuhteet huomioon ottaen. Tässä tehtävässä erityisesti mielestäni etätoteutus haittasi oppimistuloksia, toisin kuin useassa muussa.</p>
<p>The informations provided for the flume assignment were not enough. To show each group individually the flume with out a lot of explaining and bad audio quality was a bit useless. The program use and mathematical background to fill the questions in the assignment could only be answered because of previous knowledge.</p>
<p>Interesting assignment and quite nice to do. I think there was a little throw to the deep end with WinADV because I had never even heard of a software like that. With this method I think I can now understand better the natural conditions in e.g. river basins.</p>
<p>There were a few resources on internet about it. I think you should also indicate some resources for student to prevent them to be confused by other article and websites.</p>
<p>Obviously, not the same online. Probably would have been one of the most interesting assignments in normal times. The questions were a bit odd and I wasn't sure of what it all stood for.</p>
<p>The exercise was again pretty new to me and it was a little bit vogue at the beginning where I found the instruction was not that clear and we had to attend remotely, the demonstration was held through video. There were sometimes a little bit confusing but I didn't know what to ask.</p>
<p>The problem was probably the remote access to laboratory, as it was very hard to follow what was going on in the laboratory. I would figure if this was done in contact teaching it would have been a nice assignment. How it felt out of contexts, just googling some random stuff.</p>
<p>The online condition makes the flume exercise harder i would say. The first part of the exercise to explain the relationship between manometer and water level of the weir based on Bernoulli concept was new and i got to re-study the concept to be able to explain.</p>
<p>In the flume exercise, I would have hoped for references. For example, our group had a bit of unclear picture about how manometer works in the crest, and could not find anything from google. This made answering some of the questions very difficult and prevented learning. We were just guessing.</p>
<p>The flume was interesting to see, and the exercise felt useful. It was not too workloaded, but the weir question caused some problems for our group.</p>
<p>This was also something new. It was a pity that we couldn't access the flume lab to really see what we were calculating.</p>
<p>Because it was a group exercise, it wasn't too laborious due to the workload distributed between all the group members. However, this lead to not learning about all the subjects/sub-tasks in the exercise, because everyone focused on one sub-task. (Otherwise, there wouldn't have been enough time.)</p>
<p>The video laboratory part didn't actually give that much to the exercise itself as it was a bit hard to follow online, and the things mentioned and seen there were not that much needed in the report as all the information was also in MyCourses. Answering the questions in the report and going through the right answers at the end of the week was however quite educational.</p>
<p>It didn't require much work but the instructions for the group work on the flume were a bit confusing. A visit to the flume could have been better than the video.</p>
<p>I have studied hydraulics before and the information was not completely new, but I enjoyed the flume exercise all the same because it introduced the environmental part (with simulated plants to better study the behaviour of actual water flows).</p>

13. 4. Life cycle assessment LCA exercise: how did it work?

Number of respondents: 23

Responses
It was alright, instructions were nice and clear.
I ranked this in the middle in terms of usefulness because I have studied LCA quite a bit in the past. It was good to recap concepts however I had studied a lot of the theory before. However it was good to actually carry out an input-output analysis. I felt the time allocated for this task was enough too.
The LCA exercise worked well. It was nice to have the word length, to get an idea of how much one is expected to write.
Easy to use software however I don't find it reflects all aspects of life cycle assessment. A software like Umberto would be more adequate.
The tool we used was a bit confusing. Interesting themes tho.
In this exercise I learned a lot how to do a LCA and what different kinds of problems to think about. It wasn't time consuming because the Rama-scene was easy to use.
Using RaMaScene was new for me, even if I have already done some LCA before. It is useful to compare information between countries, in different time periods. In my memory it did not take much time to do it.
I was familiar with the concept of LCA, but not the exact methods. So there was something new to learn.
Tehtävä oli pääosin mielenkiintoinen ja opettavainen, mutta minulle jäi edelleen vähän epäselväksi kysymys matkustussektorin PBA- ja CBA-päästöistä. Pääosin kuitenkin todella opettavaista.
LCAs can be really interesting, unfortunately we had only a short version of an LCA.
It was nice to do pair work as well. Exercise was interesting and maybe a little hard as well and when we asked for help the answer was a little "not answering the question". We could have used a little more time on one of the excel sheets to understand better the input-output analysis. Mostly I learned about proper LCA and how to think about the bigger picture.
It was useful and I become familiar with its special program analysis.
Not much guidance and in the end we had super low points. The feedback mentioned one miscalculation and was really vague about our shortcomings.
The instruction was clear and easy to understand. A new type of LCA had been introduced to me. After getting the feedback of the exercises, I am not sure how demanding the task was, since we only had a certain amount of words to explain our results.
The tool that was used was very cool, and it was nice that it was introduced to us. Some of the questions were pretty difficult to answer (traffic for example), so maybe some tips would have been good addition considering the learning process.
The LCA exercise was not too hard, it was interesting to learn about the production based and consumption based calculation.
I would have hoped a sub-task about the most recent data to check the current situation about emissions. Now all the data was from 2011.
The EE IO exercise was not too workloaded, but still useful. Our group spent some time on shortening our answers to 50 words, which didn't feel that useful. Overall I did learn some new things from this exercise as well.
Idea of this exercise was good and the method is useful. However, the template was very confusing and questions could have been more precise.
Nice change that the exercise was done in pairs. It wasn't too laborious either, so there was time to discuss and think about all the sub-tasks together to get a comprehensive view of the exercise and learn a lot. It was interesting to work with LCA-related exercise for the first time, because before that it had just been a subject mentioned here and there.
The LCA exercise gave deeper understanding of different types of LCA and their differences. However, the example given in the lecture was not that useful as there was not enough time to go it through there.
The exercises were well integrated into the learning. The RaMaScene tool could be helpful for other courses.
I considered this exercise very useful because I am interested in life cycle assessment and I liked having a practical tool to assess the situation. The only problem was the slight confusion in our work, between the Excel document for EE-IO and the RaMa tool which we actually used.

14. 5. Spatial analysis exercise: how did it work?

Number of respondents: 23

Responses
The GIS-exercise was waaaaay too hard. It took more than twice as much time compared to any of the other excercises. I was completely depressed because of how hard it was to do this at home. I have no previous knowledge of programs like this and it felt unfair to be expected to learn how to use it alone. I got traumatized by this excercise.
I found using GIS useful because it is always beneficial to see water and environmental concepts (such as the need for rural wastewater treatment) visualised on maps. I think we also got a lot of help with this task which was really good. I definitely spent the most time on this task because the software was new to me, and we had a lot of work already with the entrepreneurship. This was a very intensive week!
The program got very easily stuck, and some parts of the exercise were quite demanding.
I am quite disappointed in this exercise. I really expected a lot because I had never used this software before and it is important for my future professional. However it was impossible to do the exercise with only the documents. So I followed the explanations of the teachers and other students without really understanding how the software worked.
Very hard and time consuming even if you have used GIS before. I hope there wasn't that many files to download and if there was it would work as in the instructions. It took so long to actually get to the exercise that I kinda forgot the point of the whole thing.
The GIS exercise was very time-consuming because it was all new to me and it would have been good to start with the whole group together. Because it took so much time to understand how to start and how to download the files. However I felt I learned a lot and know now how to use qgis for easy projects.
For me, it was the most difficult task I have ever done during this course. I never had the opportunity to use GIS before. I had to ask for help many many times. Fortunately the teachers were very nice and available to help me. I think that now I have the base but the conclusion of this exercise is still not totally clear.
I was very familiar with GIS beforehand. Not much new information learned here.
GIS oli minulle jo parilta kurssilta tuttu, joten tehtävä oli pääosin aika helppo eikä opettanut minulle varsinaisesti kovin paljon ihan uusia asioita. Se oli kuitenkin opettavainen jätevedenpuhdistustarpeen kannalta.
i learned some new skills in GIS, but the workload was way too much. They tried to answer the questions nicely during the Q&A session, but since he instructions weren't clear in the most point, you couldn't finish it by your own. The same with the analysis part in the assignment, there were to less information given during the weeks lecture
This exercise took a lot of time and I actually had to start if from the beginning a couple of times. One exporting even took 14 hours to save and I think there was something wrong with my computer at that moment. I also think that we were thrown to the deep end again because there were no time to teach GIS together to all of the students and I think some basic things of GIS could have helped a lot of students. Luckily there were good instructions and I found a good Youtube channel with GIS tips. But this exercise was very nice after I got it working (:D) and I think I can now say that I'm able to do something with GIS.
I really got into this assignments. It was useful.
This was too much work for the time. From what I heard, no one managed to start writing the report before the help sessions ended. Fortunately teaching staff continued helping next week in Teams. The drain stuff was too complex for me to understand properly without help, which wasn't as available when I got to that point.
Since GIS was already one of my interests, so there were not much difficulties during this task. The task was very interesting to me, kinda practical and matched with the theme of week (especially to the entrepreneurship task). The used spatial analysis method was new to me, but quite easy to understand. I had a chance to know different channels for downloading geo databases on the internet.
In this assignment, I feel that I had to waste too much time on technical details. All of a sudden one layer of mine stopped working, and I couldn't fix it. Also, I'm a little familiar with the QGIS program, so I felt I actually didn't learn much, just did a punch of steps and got annoyed because most of the thing didn't work as they should have. :--D
This is my first time doing spatial analysis, i would take this opportunity to thank the tutors for being really patient and nice in answering all my questions on how to use the QGIS. I think it is a useful analyzing tool and i would also want to learn more about this.
QGIS was slow but surprisingly easy to use. However, I would not have been able to do it without the help calls with staff members.
The GIS excercise was very useful, and the workload was not too bad. I had some problems with getting the datasets into QGIS, and the program also crashed during some analyses, so that was slightly annoying. But the exercise in itself was quite nice.
Good exercise. QGIS was very slow and crashing constantly but maybe there is no better way to do these analysis?
This exercise took a lot of time, partly because of the not-so-detailed instructions and partly because the program, the connections to the data and the tools did not want to work. But I think that's reality, so it was a good "introduction" to spatial analysis in that way as well. Otherwise, quite interesting topic and great that you got to choose the municipality you wanted to. I also learned nicely about some of the tools there are in QGIS.
The exercise was guided well and there was enough time reserved for the exercise. The instructions however were sometimes hard to follow but it was easy to get help in Teams if needed. Maybe the biggest time-consuming thing was that sometimes when doing a certain analysis it took a lot of time with QGIS "not responding". The assignment also taught a lot about the basics of QGIS.
It was difficult at first to work with the data due to technical difficulties. I had already used QGIS several times but it was the first time that I had to use it to evaluate the market potential.
Using QGIS was challenging as it was a completely new program and the instructions, although clear, were not very detailed. The time required to do the research to discover why something did not work was too short. But as a tool, QGIS is very useful and I could spend more time working on it in the future. It was an intensive introduction.

15. 6. Laboratory analysis: how did it work?

Number of respondents: 23

Responses
Home exam felt a bit separate and unrelated to the week.
I really enjoyed going to the lab and the lecturers/technicians running the lab were really helpful and explained everything thoroughly. Carrying out the actual lab experiments and writing the report and presentation was not too much work, it only felt like a lot to complete with the individual essay on top.
We are still working on it, but i guess it will be time consuming.
I found it very rewarding to do some lab work. However, it's not much on a specialized water training. Water testing still takes up a lot of engineering time, so it would be nice to do more laboratory work.
It was interesting working in a lab and getting to figure out what the water sample was quite freely.
I have some experience of laboratory work so I felt that this assignment was fun and easy and didn't learn that much new things. However, I learned a lot of the different water quality of different water bodies. The laboratory report was a bit time consuming.
I already have done almost all the experiments we had to do. It was not something new for me, but I really enjoyed doing it.
Good to have something in person for once! Many new lab analyses I had never done before too.
Opin todella paljon, koska en ole ennen tehnyt kemiallisia kokeita laboratoriossa (vain fysiikkaan liittyviä kokeita kurseilla yliopistossa). Oli myös erityisen mahtavaa päästä oikeasti paikan päälle! Se motivoi ahkeroimaan tehtävän parissa.
It was nice to have laboratory work. we learned some new measurements and it was fun to guess the water origin. The work is still a bit too much to finish it during the week. The laboratory report needs mostly information which are not given in the lecture material so it is a bit time consuming to write it.
This one I liked a lot. I have been eager to come to campus and finally we were allowed to come and do something practical. Laboratory analysis is a very nice way to learn about water quality. I learned how to compare results with others and how to find the key results to determine what the mystery water sample was. I also learned to use different kind of analysis machines I had never used before. The laboratory work itself was not that laborious because we had good instructions and there were people helping us all the time. But I think some groups had a little less time comparing the results and finding out what the mystery water sample was, but it is understandable that everyone or a bigger group can not be in the laboratory at the same time in these conditions we are currently living in.
Practical experience is fantastic and mandatory for our field of study and you should manage to have more lab visits and experiments.
It was nice to get to the lab and do some concrete stuff. Reporting was a big task and really vaguely defined.
We had a chance to meet our group members in person and to visit our school campus and lab. There were quite a lot of tests to be carried out during the lab sessions, however, they were instructed in details and prepared well in advance. It was nice for us to use our available knowledge to guess the samples and to assess the quality of the water under certain directives and standards.
It was nice to be in the laboratory, and it was cool that we had to do some investigative work!
I didn't get to conduct the analysis in the laboratory. However, it is an important skill as a water engineer to know how to conduct analysis. Also, through the report writing, I got to study the different directives and compare our results to the standard in the directives, which I think is quite interesting.
The labs went surprisingly smoothly and the staff was very helpful. Good experience.
Working in the lab was useful, even though I didn't manage to join the lab physically. It was good to be able to join via zoom too! Given that I didn't do any physical lab work, the workload was not too bad, but if working in the lab the workload would probably feel like more. It was good that the lab report didn't need to be so long.
This was fun and it was nice to finally see our group members. Not too much new information though.
Not very laborious and it was great to work with your group in person in the same physical space for the first time. However, it was a little bit uncomfortable with the mask + safety glasses, as you did not see anything properly because breathing with the mask caused steam to gather on the surface of the safety glasses. But I suppose this is something none of us can help with due to the current situation... I also really liked the analyses we got to do about water quality, and there were many, so I learned a lot about the basics of analyzing water quality and how to do it in a lab.
The lab session itself was quite educational even though the methods used in the lab were quite basic. It was nice and educational to finally make some hands-on work. The analyzing of the source of the water sample and preparing the presentation didn't require that much time and effort and it taught me a lot about differences between waters from different sources. However, there wasn't that much time for the laboratory report before weekend and therefore the report required some extra time and effort.
The laboratory work was very useful to learn the important properties that define water quality. I wish there was more time to understand the experiments in more detail.
The laboratory exercise was slightly different than I had expected. It was my first time working in a lab of this kind. I appreciated all the explanations and the staff supported us, but it was still overwhelming to perform the experiments knowing I have no experience dealing with chemical substances.

16. The WAT Course was arranged this time totally online, except for the week 6 lab exercise. Which practicalities and online teaching methods facilitated your learning? Why did they work for you?(e.g. breakout room discussions, joint discussions, using whiteboard, polls, streaming, recorded lectures, Zoom chat, Teams platform & assistance, virtual connection to Aalto computers, etc.)

Number of respondents: 23

Responses
Zoom worked great and so did the breakout rooms. Teams is still a bit foreign to me: I didn't feel comfortable with it.
Breakout rooms: These were good, it is always easier to talk in smaller groups Whiteboard: I found using this useful because it can often be easier to think of ideas written down instead of saying them. Teams platform/assistance: This was used well, especially when lecturers/professors said to write in the teams channel! An easy way to get help. Jamboard: Similar to the whiteboard, this was a really good tool for virtual learning and it was good to allow multiple people to contribute at once.
It was easier to concentrate on the lectures for me than it usually is, something that I had not expected. I also think that it was nice that moving to group work worked that fast with the breakout rooms.
Group sessions are very useful. I discovered the jamboard tool that also allows you to participate without speaking in front of the class. I did not use the recorded sessions.
Some time to discuss a topic in breakout rooms helped me to stay awake during long lectures. Also the combination of different types of teaching methods (video/questionnaire/game/traditional lecture) works the best because the variety makes it more interesting. I felt like I learned the most just discussing ideas within our team because together we got more knowledge from the lectures and if somebody else could fill in if one missed something.
The breakout rooms discussion worked well when the discussion topics were clear. The whiteboard made it easier to say your answer or opinion because you can be anonymous. I like polls a lot I think is a fun way to keep the listeners active. The streaming was also good and interesting. The zoom chat worked well for questions. Teams was suitable for the exercises better than zoom.
The fact that we had every course online was quite weird at the beginning. However, it helped me a lot during the oral presentations, with less stress. It was very nice for the different group works, especially with the breakout rooms. Teachers knew how to keep our attention with whiteboards, jamboards and discussions. The way to connect on the virtual Aalto computers was appreciated as well.
It's useful to get assistance on Teams whenever you have a problem. Recorded lectures should be a standard ALWAYS, even when lectures are in person.
Breakout roomit toimivat hyvin, mutta verrattuna oikeaan luokkaan luulin että vähän huonommin. Oli kuitenkin kiva, että oli paljon pienryhmäkeskusteluja. Whiteboard, jamboard ja muut elektroniset apuvälineet toimivat oikein hyvin, ehkä jopa paremmin kuin luokkahuoneen fyysiset post-it-laput tms. Aallon vdi-yhteys toimi hyvin. Etätoteutus tarkoitti, että ryhmien muodostuminen oli (minun mielestäni) hitaampaa, kuin normaalisti, mutta kuuden viikon aikana ehti kyllä tutustua omaan ryhmäänsä Zoomissakin.
- to work in a group. it was nice to have "closer" online friends to ask questions and exchange informations - virtual connection to Aalto computers, otherwise the most computer program based assignments wouldn't be possible - breakout rooms to be obliged to talk
I think Zoom worked well for me and all of the essentials in Zoom as well. It was nice to have access to Aalto computers and the Teams channel helped a lot to get the information of some exercises. Recorded lectures were good to go back to the lectures we had and use them as sources for some exercises as well, when I eventually was able to see them. Thanks to Sara for making it work.
I would prefer practical one but due to this situation your function was wonderful and makes me amazed.
The best practicality in this course was the transparent and repeating structure and schedule. The virtual desktop interface was really nice to get to know with. I love lectures and would have liked to have more of them, but group work is good and stimulating too and probably better for most people. Breakout room discussions were important to wake up once in a while.
Breakout room discussions, whiteboard, sticky notes worked well since I was encouraged to actively discuss. Team platform worked for assignments' questions. It was a little bit tricky to connect to Aalto computers at the beginning, however, it got a little bit easier afterwards, good practices to connect with different software available at school.
Most of the time it was easy to get help for the assignments, and the teachers responded actively!
The breakout rooms - it is the only way we actually get to communicate with our group mates, to know more about them and see them as I guess everyone was quite reluctant to speak during the lecture. Teams platform & assistance - This is very useful and works very well with the lecture. I used this a lot to communicate with the tutors and lecturers on things that I do not understand/ when I need help on my exercises. Virtual connection to Aalto computers - I'm not sure how it works before, but with the virtual connection, I can actually do my exercises around the clock and do not have to be physically there at the computer lab.
- Being able to watch lectures online from home. Then I can stand during the lectures, which increases my ability to focus a lot. - Overall I think online teaching works very well. Jamboard, group discussions, polls etc. make the teaching varied and interactive.
I think the lectures were very good, and there was good knowledge on using zoom from the teachers' side, so no problems with that. The use of breakout rooms was also very good to have smaller discussions. Recording lectures was good, so it was possible to review some things afterwards. The virtual connection to Aalto computers was extremely useful, so we didn't need to install anything on our own computer. The streamed rain measurement from week 2, the flume stream and videos from week3 and the chance to join the lab via zoom were very nice!
I think the whiteboard was a very good way to visualize what kind of ideas others have. Also almost all contributed when whiteboard was used.
I think everything worked really well! The lectures, breakout rooms, asking for assistance in Teams (help was always provided, and usually you didn't even need to wait long), virtual connection, all the features provided in Zoom etc.
Breakout room discussions were good because it's easier to talk in a small group than in the main session with everyone. In online sessions it is also easier to talk when there are just a couple of people in the same room as then it's easier to know when you can talk without talking over someone else. The teams platform was really good for assistance in weekly assignments as it was more flexible than zoom and enabled personal guidance. The virtual connection to Aalto computers was also really useful because we weren't required to install any programs to our own computers.
Breakout room with teachers in the main room: it was a quick way to talk to the group but also to teachers. The white board and the jam board: we could participate without necessarily speaking. Also useful to see others' ideas
The staff seemed generally prepared and knowledgeable with Zoom and Teams, so they were quick to help us and they provided a lot of additional content to improve the experience (breakout rooms, polls, whiteboard - were my favourite). I really appreciated the use of JamBoard as well because it was a place we could all contribute to. Having recorded lectures is one of the best things because sometimes even if I attend a lecture I might not pay attention or simply forget essential information later.

17. The WAT Course was arranged this time totally online, except for the week 6 lab exercise. Which practicalities and online teaching methods hindered your learning? Why/how did they hinder your learning?(e.g. breakout room discussions, joint discussions, using whiteboard, polls, streaming, recorded lectures, Zoom chat, Teams platform & assistance, virtual connection to Aalto computers, etc.)

Number of respondents: 23

Responses
Remote connection to Aalto computers was slow. I felt lonely because we were just online.
Joint discussions: It can be difficult to want to speak in front of the whole class but this gets easier with time. I think it was more beneficial when we were split into breakout rooms and contributed our thoughts group by group after smaller discussions. Virtual connection to Aalto computers: In the GIS task, sometimes the virtual connection struggled with the big datasets.
Sometimes there was just too much discussion in groups. And some of the group work that would be best to be done together with the group was a bit difficult because of the online work, it was easier to just divide.
The online lectures on Monday were really very long and boring. In the majority of cases I couldn't follow in a concentrated way all day long. Some distance exercises were complicated (flume).
No need to ask if we have questions that often (we are listening even though toubonyl see black boxes). It is hard to come up with something to ask about a theoretical lecture for example. A more concrete question or a small task to activate people works better. On previous courses I've used the possibility to watch recorded lectures if I couldn't make it to the main lecture but on this course I felt like it was more useful to be there for the live version since there was usually quite a lot of interaction and the study pace was fast.
The joint discussion wasn't as good because it was harder to openly discuss and it is also hard to do it without speaking over someone else by mistake. I didn't use the recorded lectures ones, so I don't have any comments about that. I didn't like the virtual connections to Aalto computers it was so slow.
I think that it was more difficult to answer a question behind a computer. I know that it seems to be the opposite, but actually I noticed that we make less effort to speak out, maybe because we have less "pressure" from the teacher and that it is harder to interact "like that". It was strange not to feel the attention of the audience when we presented something orally.
I retain little information while attending lectures. So having to be present on every one of them hinders my learning, as there's little time to revise later on my own.
Mielestäni osaan keskittyä luentoon paremmin, jos kuuntelen sitä livenä, joten etäluennot olivat välillä haastavia minulle. Tallenteet ovat periaatteessa hyödyllisiä, mutta en käyttänyt niitä juurikaan luentojen jälkeen. Harjoitustilaisuuudet Teamsissa tms. olivat aluksi haastavia, koska avun kysymisen kynnyks oli suurempi kuin paikan päällä, mutta lopulta totuin siihen.
- joint discussions weren't really useful It was nothing except of the online teaching that hindered my learning. I am sure the most teachers tried their best, but it is just not possible to give the same amount of information during online sessions as during personal sessions. And it felt like this wasn't acknowledged for the assignments at all.
I think discussing with other people was hard for me because I couldn't be face to face with them without a camera in between. But when we got into smaller groups (breakout rooms) I think it was a little easier especially when we had discussion with our own group members.
I think your virtual experiment doesn't work properly at least for me. Video quality was not that much clear to know the detail in each experiment.
Some teachers wanted to share video in zoom which never worked well. Never again, I ask. Just copy the link to the chat and everyone watches the video on their own at the same time. Even though I like lectures, some lecturers can't keep their energy levels up and their voices interesting long enough or at all. I think there could be some teaching to do for the teaching staff.
The joint discussions and streaming were not so active since most of the lecture time was compacted on Monday and there were held remotely, however, I think this is the only way to carry out the lectures.
All in all, I would have fancied more interaction between teachers and students and other students than the once in your group. One think that I think would have facilitated this, is if we had been asked to turn our cameras on every once in a while (of course not everybody can do it, but probably most could have). It makes it easier to be present on the lecture and really pay attention to the content, if somebody makes sure that the students are listening. The flume laboratory didn't work very well remotely, it was extremely hard to follow what was happening.
I think all the teaching methods are there to assist us, hence i don't think any of the methods hindered my learning. Just that some methods are more useful than the others.
I actually feel that online teaching suits for me very well, especially with regards the lectures. Of course, for example having the presentation live would be nice social experience and would teach more about presenting and communication compared online presenting. But as live events are not an option, no can do. And, of course, online teaching means some bugs and slowness of the technology but that is ok. Tech is improving all the time.
Actually I think it all worked quite well. With Teams I had some problems joining the meeting one time, but that was also solved by using zoom instead.
Time for the breakout room discussions was often too long or too short. Nothing else to add here so methods were very good overall.
I don't have really anything to complain about. The recorded lectures weren't visible in the shared folders for some reason (but then the separate links fixed that). Unfortunately, it was really hard to participate in joint discussions... But this is an everlasting problem, which I don't think was caused by online teaching.
Sometimes there were days with mainly just lecturing from 9 to 16 (with lunch break and some shorter breaks of course). It is really exhausting to just look at the screen and listen to the online lectures without any interaction.
Streaming videos through Zoom wasn't very effective.
One of the things I found difficult in an online meeting was taking the first step because it sometimes felt like talking to a screen. It took some time to get used to my teammates and my course mates, and the situation improved. Having an online meeting also hinders the way I work because I know someone is watching me so I'm self-conscious, but once again, that is something I got used to. There really were not that many technical problems, so online learning was not that much of a sacrifice in terms of receiving information. It affected more interacting with other people on the course.

18. What are the most useful pieces of KNOWLEDGE you have learned during WAT Course? Why?

Number of respondents: 23

Responses
In many ways, the world is actually becoming more equal and a better place to live. Previously my view was too pessimistic, I thought everything was going worse. I learned that resources are un-evenly distributed – Some places have a lot of clean water while other places don't.
One thing I will definitely take away is how all water and environmental engineering concepts can be linked back to sustainability and sustainable development. I think it is vital to try and be more sustainable in our everyday lives and this is something I will consider more going forward.
I didn't know anything of hydraulics and hydrology which I found quite interesting and probably will take some more courses in those themes.
I have deepened my knowledge on the subject of water treatment which is for me the most useful because I want to work in this field.
We learned about multiple themes quite broadly so it is hard to name just a few. I think it was important to understand about the legislative part of wastewater networks in Finland for example and what water related problems we usually have here. There has been so much talk about problems in developing countries and sustainability in a bigger scale but I knew surprisingly little how things really work here.
What kind of advance courses there are in WAT, this is important when choosing my study path. Also a holistic overview of the different areas of water and environmental engineering, like how human impact and climate changes affect the management. I also learned how to look at water and environmental issues from different perspectives, which is useful in the future.
The most useful pieces of knowledge were all the information I learned during the articles readings. It was very interesting and it enabled me to compare with the info I could have from my previous courses.
Learned a lot about hydrological modeling, sustainability and wastewater management. I didn't have much information on them beforehand, and they seem useful.
Viikon 4 keskusteluaiheet jäivät mieleeni ja haluaisin jatkaa niistä vielä, koska ne olivat niin kiinnostavia ja monipuolisia. Monilla viikoilla oli erittäin hyvää lukumateriaalia minulle uusista aiheista, mikä jäi mieleen, esim. artikkelitehtävä viikolla 3.
The most useful knowledge was about the upcoming economic breakdown caused by the fact that we already took too much from the earth. It was a slightly new theory and gave a lot to think and discuss about
These knowledge topics are not in order: 1) Water scarcity and how to work on that, very interesting topic and this was new for me. 2) Environmental hydraulics in general, this topic was also completely new to me 3) Wastewater treatment in rural areas, I was not so familiar with the legislation and have not even thought about it in our own summer cottage. Very interesting topic and I would like to learn even more about this. 3) There are a lot of different aspects when measuring the quality of water, I haven't even thought about this before and I think this topic was also very interesting like the others above as well.
E1100 course gave me an overall view of this environmental engineering and I found out my favorite research and specialty.
Hard to name singular pieces of information. Most valuable thing this course provided was deepening my knowledge in all of the topics. And of course giving me tools for the rest of the studies.
- Sustainability in different contexts since this is an emerging topic nowadays. - Hydrology and hydraulics since these are the fields that I am most interested in. - Applying engineering methods for finding good solutions under the entrepreneurship context.
The most useful pieces of information were the connection between engineering tools and social context (e.g. hydrological climate model, and dilemma based thinking).
I would say a global view on water and sustainable development issues.
- Brief understanding of the current state and topics of water and environmental engineering (Lectures about the current research and overall everything we have learned in this course) - Importance of sustainability in engineering and critical assessment of sustainability reports (all weeks mentioned sustainability but especially week 4 and LCA)
A broad overview of what WAT is about, and basic knowledge on key themes, forming a good base for future courses.
It is hard to name just one piece of knowledge... I hope I can learn more about water and environmental quality so it was beneficial to learn the very basics of it in the WAT Course.
A general view of the WAT field, which is something I was hoping to learn during the course. It is very useful to have a general knowledge about all the sectors WAT has. This also helped to figure out which are the courses to study in the future.
I am now more aware of the current situation related to the field of water and environmental engineering, and what kind of issues are related to the field, as the course offered a good overview about many themes. I also have a better understanding of what sustainability means for different people depending on their values and perspectives, and that sustainability is a cross-cutter that is related to all the themes of the course. The concept of sustainability was present during all the weeks and there were different perspectives from which to view it.
Learnings on sustainability and entrepreneurship were the most valuable. These are two topics that are not really talked about in other courses. I am interested in innovation and start-ups so that was a good introduction to the world of entrepreneurship.
Every week there was something new, even if I had studied the subject before. I gained knowledge from each week's lectures and exercises and more importantly for me, I have identified which subjects I am interested in and which I am not really going to pursue.

19. What are the most useful pieces of SKILLS you have learned during WAT Course? Why?

Number of respondents: 23

Responses
I think the laboratory analysis skills will be most useful for me in the future. Also learning some basic R was very useful.
Some of the computational methods (R, GIS) I found very useful to learn how to use because their end result is presenting ideas and concerns (drainage, life expectancy trends) which a wider audience can understand. This is something very important for engineers to consider to get their thoughts across.
Basics of laboratory work.
I would say GIS all the same despite the fact that I am a little disappointed about the quality and quantity of the work with this software. Indeed GIS is a skill that is very much in demand by companies in the water sector.
Probably multiple ways to handle big sets of data and make the sense out of it. Also doing a group presentation fast.
The most useful skills I would say is modelling, GIS and statistical analyses, because these skills can be used in almost every part of our field. Also LCA and laboratory analyses are important when understanding the current situation.
I really enjoyed to try different software and be able to do the basics on them. However it was sometimes difficult to work alone.
Statistical analysis, laboratory analysis and modelling. Again, mostly new information to me that seems useful.
Koska kurssilla oli paljon ryhmätöitä, ryhmätöitäni karttuivat. Uskon, että se on hyödyllistä, koska niitä taitoja tarvitaan niin työelämässä kuin muissakin elämän vaiheissa. Uskon myös, että saatu laboratoriokokemus on hyödyllistä jatkoa ajatellen, koska aiemmin minulla ei ollut siitä kokemusta.
the improve of teamwork
These skill topics are not in order: 1) Some new Excel skills, this I think is going to be very important in the future to know how to use Excel efficiently. 2) I can now use GIS more and understand the result of it, this I think can be very useful in the future as well. 3) Entrepreneurship if that can be added as a skill, now I understand it better. 4) New skills from the laboratory analysis, here I learned a lot of different ways to measure and how to do work in laboratory. 5) A little skill to understand Input-Output analysis, I can now understand better how and why LCA is done.
Entrepreneurship because I didn't experience it in my former university and it was kind of fantastic.
Better GIS skills. Laboratory skills. Group work skills. These skills I expect to be needing later in my studies and work life.
GIS, statistical analysis and modelling since these are quite important skills as a WAT engineer. Communication and group working skills under the remote conditions Excel skills, calculation skills, lab skills, etc.
How to turn data into valuable information (R, spatial analysis, modelling) How I behave in a group relative to my own energy level. How to express myself friendly, even if I feel annoyed.
All the technical skills like modelling, r-programming which are useful for my future research. From zero skills to at least I know what and why these tools are being operated and how to use to analyze data. I really wish to have more time to learn and be expert in the tools.
- Some skills on the programmes used in W&E engineering such as QGIS and WinADV - some lab skills - group work skills (every week's group work)
Laboratory skills, GIS skills, overall critical analysis of information.
It was important to learn the basics of the different computational methods like QGIS and modelling in general.
Basics of various different methods. It was useful to learn what kind of methods there are and how to use them for different topics.
During the course I improved my presentation skills, as there were so many presentations done during the course. For example, I gained more confidence in giving a presentation. I am also now more aware of different tools that are used in the field, such as R studio and QGIS. I have some basic skills to use these tools myself and to improve my skills more easily. I also learned how to apply these tools and methods to the topics of the weeks.
I wasn't really used to give many presentations so this course allowed me to be more comfortable speaking in front of groups. I developed my communication skills with my group teammates. I also improved my practical skills in excel, R and QGIS.
I developed my planning skills while working in a team, as well as my time management skills as there were tight deadlines. However, computing skills have been the most difficult to acquire but the most useful for me. I had an intensive introduction to R-studio, QGIS, managing large Excel sheets, RaMa Scene. I might have complained a great deal while solving the exercises, but they were rewarding as well and they gave me the confidence to continue working with them.

20. How would you improve the WAT course?

Number of respondents: 23

Responses
I would divide the time differently. There were too many home tasks and too little time. Rather have fewer tasks, clearer instructions and more time to finish them. Maybe monitor the progress in these longer tasks by doing "check-points" or dividing these tasks under a couple of different DL's.
I think the course was very well organised, especially in terms of content, and I enjoyed how each week had a different theme. My only criticism would be that some of the tasks were difficult to complete in the allocated time (especially in Week 5 with the entrepreneurship and GIS task).
I would add a bit more lectures about the topics
I think it's great to see a theme every week because it allows you to discover a lot of things. But I also think it's a bit bad because we can't really go into each theme in depth. The knowledge remains superficial. I would have preferred to see less but more in depth.
Personally I would enjoy more readable material about the subjects since I learn find it easier to learn by reading than by listening. Or maybe just a short 2min pre-task before every lecture to make a better view what is it going to be all about (also gives the lectures information about the students' knowledge level)
I liked the format and I would keep it like it is.
Concerning the flume assiment, maybe it could be done on site ? We were online in small groups so I think it could be possible to do like for the laboratory week. For the use of software, such as GIS or RStudio, maybe it could be good to have more help at the beginning of the session. Even if the teachers are available to answer the questions, I think it could be nice to have the basics (maybe ask who would be interesting to spend 1 hour with more explanations when the others could start doing their work).
It's good to have contact sessions for those who benefit from them, but make at least some of them skippable. Days with no contact sessions were most productive for me.
Vähentäisin yrittäjyyden painotusta viikolla 5 ja painottaisin enemmän jätevedenpuhdistusta.
The WAT course felt more like advertising for upcoming master courses. It is too much surface knowledge in a short time without digging deeper. It is not really improving any knowledge or skills, it gives you more of an overview what courses you can take during the next terms. Thats sad and a bit frustrating. The workload is not balanced. You have to work a lot after 4pm or on the weekends to Finnish the assignments. That may also be, because the most assignments need background information, even if it says that you don't need some.
Strict timeline and some things went throw so quickly if I wouldn't have been so sure about my future already I would still be "kuutamolla" about what I should or want to study in the future. I was lucky that I had used most of the software before but maybe there could have been more time on how to use the them and not just be thrown to the deep end in the begining.
More field visits and experimental works and also longer discussions.
Get offline :D Maybe some attention to lecturers lecturing skills. Balancing the workload over the course.
The lectures can be spread throughout the week so it will be not so compacted on Monday mornings. Maybe certain ways should be implemented so that we can be more active during the discussion and feel more engaged with the lectures remotely.
I think it is pretty good course at it is atm. Online teaching obviously causes some challenges that probably could not have been predicted, but I think you managed just fine. As there are so many different themes on the course, it is probably impossible that one person enjoys all of the weeks, but because the deadlines were tight it was easy to keep the work going even without internal motivation.
I like how the course is designed where we get to have a general views and knowledge on each topic/ speciality each week and then we can decide on what advance course to choose.
The proposed smaller improvements of mine are said in the textboxes above when weekly feedback have been asked. Overall, the course has taught a lot in a short time, and with regard to this challenge of fitting a lot of topics into one period, you have managed very well. Of course, after this kind of introductory course, I feel like I have a lot of gaps in my knowledge about the topics, but that is normal.
On some weeks it might have been nice to have more lectures, because when there was only 1-2 lectures on one day, and just exercises the rest of the week, I felt like I was lacking some knowledge on the topic.
Overall this was a very good course to learn something about myself and I think the methods used in the course worked very well. Maybe it would be beneficial to hear some more specific descriptions of the advanced courses but probably there is no time for that.
I think the synthesis week's main learning points could have been started already at the beginning (at the end of each week)? Would have maybe been more useful when all the thoughts about the subjects were fresh in your mind.
Teams channel for just the assistance queue would be useful as if there are questions related to other things about the week they might not be noticed when there are so many "I need help" messages.
I wish the discussions on Teams were open to everyone. I assume many people ask similar questions so we could save some time by sharing the discussions.
There would only be minor issues to be improved in my opinion. Considering the deadlines better so that we would have more time to work on certain exercises (QGIS, for example); adding a word count for the debate part of the preparatory task; having better instructions for HBV modelling presentation.

21. The concept of WAT Course builds heavily on group work: your views on this?

Number of respondents: 23

Responses
It was kinda demanding because I'm not used to this amount of group work. However, since the course was now fully online and many of us are kind of isolated from social interactions it was actually quite nice to work with other people. If this was arranged normally, in-person and without corona, I would have thought there were too much group work. But it worked well this time.
I really enjoyed the group work, I felt I got to know my group well (even over Zoom). In engineering, group and project work is very common so it is good to experience it at university.
Yes, i totally agree.
The group work is very much appreciated however I find it a bit long and boring to be with the same group all the time and not discovering the rest of the class.
Gave the course a social aspect even though the group work was through zoom. Works if the groups are divided somehow evenly based on peoples backgrounds.
I think group work are important because we need it in our everyday life as well. I also felt less stress when working in a group because if you didn't understand something someones maybe did and could explain it. However, it would maybe be fun to change the groups a bit more often so you get to know everyone in the class.
I really enjoyed working with a group. It enables to share ideas together, discuss them and find a way to present them. At the end it was more easy when we knew each other and knew how the others used to work. The breakout rooms for discussions during lectures enabled to keep attention (because it is easier to lose attention behind a computer).
It worked fine. Our group had no real conflict. But in groups where there is conflict it might not work that well, and could ruin the course for them.
Tykkäsin siitä, että ryhmään ehti muodostua hyvä ryhmähenki jopa etätoteutuksena, mitä ei varmasti kaikilla kursseilla olis tapahtunut, joten kiitos breakout room -keskusteluista ja vahvasta painotuksesta ryhmätööhön! Olin kuitenkin myös iloinen, että ihan kaikki tehtävät eivät olleen ryhmässä tehtäviä, jotta välillä sai myös tehdä itsenäistä työtä.
At least during the online classes, it is nice to have a group to exchange informations and to ask if you missed something
I like doing group works beacuse the work load is being shared and you don't have to stress doing everything alone and also if you have questions you can ask and you can also ask help from your group member. Our group connected nicely which was very helpful. I learned to make real "rules of work", because usually it was just discussing that "yes everything is okay". Communication was better in this group than in previous ones -> connected to the rules of work. I think my main learning point on group work could be the importance of the rules and communication.
Group work and discussion is definitely the best method for teaching and specially WAT courses.
Important and good!
This was a great concept since this is an introduction course and we need to cover lots of stuff within a short amount of time, dividing these tasks within group members would be much easier for us to understand the overall theme and have less pressure from the amount of workload. This is also a good chance for us to discuss and express our opinions and to understand the problems from different points of view.
I like that there is a lot of group work. However, I think it would have been nice to alter the groups during the course. Especially on a times like this, it is hard to get to know the other students of the program because I barely had any contact with them.
I like to work in group as it is how it works in real life where we have to work together to complete most of the projects. It gives us the opportunity to divide jobs and learn how to negotiate, communicate and discuss on certain works. I would say i am very lucky to have my group members who get to work together very well and complement each other very well.
Group working and communication is an important skill with regards to working life. Very good approach. The combination of individual and group work was good.
I think it is good to do group work with these kinds of topics, but it is also nice to have individual exercises. It would be nice to not have so heavy groupwork every week. I think it worked quite well in this course, even through zoom. I for example went on an excursion with a student organization a couple of days, so it was lucky that there was little group work then. If it would have been heavy groupwork that week, I think it would have been difficult to find time to work on it together. Individual tasks are more flexible to find time for.
Because of the online teaching it was a bit overwhelming. It was hard and strange to do all the group work with people you have never actually met. There was no possibility to really get to know your group members so sometimes it was very hard to share your thoughts. In addition, we had to schedule every meeting so there was no time for 'relaxed conversation' related the themes of the course for instance during lunch breaks.
Very good that we learn how to work efficiently in a group, great for the future as well. It was after the beginning really easy to work together remotely as well. Sometimes maybe even easier than face to face, because you could just open a meeting for a few minutes. A downside of this was that we really didn't get to know the other students much.
It was nice to get to know your own group really well but it would have been nice to get to know other people more as well. Now that we don't actually see them as all the sessions are online, I don't feel that I know anyone else than my own group members that well. Even though in online environment group work might sometimes be more challenging than in real classroom, group work is really important and especially now that we only have limited contacts with other people it's good to work in groups during the lectures as well. It was also quite easy to find time for group work even outside the hours 9-16 as this was the only course that we had.
I think working in groups took advantage of our diverse background and experiences by filling the weaknesses of each other. Especially in engineering we always work in multidisciplinary teams so that was a very good training. Also, I felt like it was a good way to know the people from this master program.
I have always considered team-work an essential part of solving problems because people often have different perspectives and their input is necessary for better solutions. And I have worked in teams a great deal, but it has not always been useful or enjoyable. But what I really appreciated about this course is that there was allocated time to define good teamwork. Group discussions and work were also very well organised and planned so that we were never in doubt of what we need to do. This course made me like working in a team again.

22. Any other comments, ideas or suggestions? Thank you for your answers!

Number of respondents: 15

Responses
Not really, but it was a very enjoyable seven weeks!
It would be nice to have some example answers to the exercises to see what would have been correct. E.g. for snow modelling.
Some instructions that are "clear and simple" for the teachers won't necessary be that for the students even if the exercise itself would be easy. Video instruction helped a lot so maybe more of those.
Thank you for an interesting course! :)
Thank you for this course. I really enjoyed having general information on plenty of different subjects.
Kiitos kurssin koko henkilökunnalle mahtavasta etätoteutuksesta, toivottavasti nähdään liveäkin pian tulevilla kursseilla!
Maybe mention at the beginning of the course, that exchange students have to write a summary of the course. I already forgot quite a lot about the first weeks and it is a lot of work as well to do it during the 2nd term, were you get new assignments from other courses.
:)
Overall, although we are facing such a difficult time due to the virus and many of the learning methods had to be changed in order to fit the distance learning, I think this course was carried out quite well and I am very satisfied with what I have learnt in this course and looking forward to the future study periods.
Thank you!
Thank you for providing a glimpse of many things possible in the water and environmental engineering :) From here it is good to move on to the advanced courses. This course has been one of the most carefully thought course I have been. You have used many new methods and materials (jamboard, youtube etc..) to teach and are aware of the latest issues in the field.
Thanks for the course, it was well done especially considering the online environment!
This was a good course to really understand what advanced courses should be taken. I'm more confident with my course choices and that is very calming! Thanks a lot!
I really want to thank for a well-organized course! Even though it was quite a bit of work, there were many interesting topics and exercises we got to do both in groups and individually.
Thank you for a great introduction to the WAT programme and courses. I have really enjoyed going through the different tasks and themes and I am glad I had a chance to meet so many of the teachers.