# Course analysis GEON07 Quaternary Climate and Glaciation History Spring term 2020

#### General:

This year the course was followed by only 3 students, all of which answered the course evaluation (appended below). This means that the course analysis is as firmly based as it can, but the low number of respondents may still to some extent result in conclusions that are based on highly personal opinions and/or rather limited information. The course evaluation is generally very favourable. It seems that the learning outcomes have been well fulfilled in general, the structure and content of the course are appropriate, and the efforts provided by the teachers are appreciated by the students. Also, the textbook and additional reading generally seem to be appropriate for the course. However, the switch to online-based teaching due to the CoVid-19 pandemic has been challenging for student learning, which clearly suffered from the lack of direct contact and interaction between students and teachers. The most obvious drawback was the lack of field-based learning activities. Their replacements in the form of virtual excursions based on Google Earth and literature studied followed by discussions worked reasonably well, and parts of this can probably be used as a complement to real excursions in the future, but the general impression is that field-based learning is far superior. The report writing with its associated presentation session, although also entirely onlinebased, was highly appreciated as usual and not too different from normal conditions.

Two changes compared to previous years, brought about by suggestions in last year's course evaluation, are worth mentioning:

- 1. A climate modelling exercise led by Jesper Sjolte was included in the course.

  Unfortunately, I missed to add a question about this in the course evaluation, but some indications of that this activity was appreciated have reached me.
- 2. The written exam was moved to the very end of the course, after the excursion through southern Sweden. This seems to have worked well and this order will be maintained.

In the following, some specific comments and concerns brought forward by the respondents are summarised, and potential improvements during next year's course are suggested.

#### Summarised comments and potential improvements:

- 1. The course is considered as intense with lots of preparations and material to digest, which is reflected by requests for a reduced number of articles in the reading list and more time for preparation for seminars. This will be kept in mind when we update the reading list next year, although we strive to include a fair number of relevant papers in order to cover the relatively broad subject. We will also try to accommodate a little more time for preparations and individual reading in next year's schedule.
- 2. The new learning platform Canvas seems to have worked well but one student would like to see the material organised in categories instead of weeks. *This will be considered as a possibility next year*.

- 3. One student requested more explanatory text on the lecture slides, which is a recurrent comment. This will be brought up at a preparatory meeting with the teachers before next year's course.
- 4. One student requested a bit more critical and elaborate feedback on oral communication. *We will try to keep this in mind next year.*
- 5. The written exam was considered as demanding and too extensive in relation to the allocated time (but still useful) by several students. This comment has occurred repeatedly over the years, in spite of substantial reductions during recent years. The criticism will be kept in mind but I consider the extent and duration of the exam as generally appropriate.

Dan Hammarlund

Course coordinator

Henrik Langkjaer

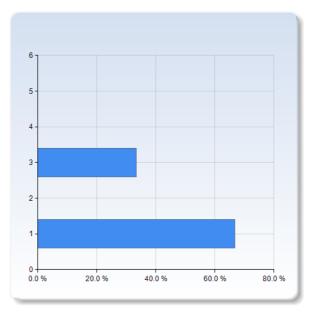
Student representative

### Course evaluation GEON07 2020

Answer Count: 3

### **GENERAL:** Did the course fulfil your expectations?

GENERAL: Did the course fulfil your expectations?	Number of Responses
	0 (0.0%)
	0 (0.0%)
	1 (33.3%)
	0 (0.0%)
	2 (66.7%)
Total	3 (100.0%)



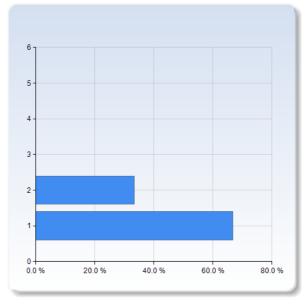
	Mean	Standard Deviation
GENERAL: Did the course fulfil your expectations?	4.3	1.2

Comment
YES! It's been amazing with the exception of covid-19.
Yes and no. It didn't fully fulfil my expectiations but that was mostly the cause of the Covid-19 pandemic.

I've learned a lot during this course.

### **GENERAL**: Did the course increase your interest in the subject?

GENERAL: Did the course increase your interest	Number of
in the subject?	Responses
	0 (0.0%)
	0 (0.0%)
	0 (0.0%)
	1 (33.3%)
	2 (66.7%)
Total	3 (100.0%)



	Mean	Standard Deviation
GENERAL: Did the course increase your interest in the subject?	4.7	0.6

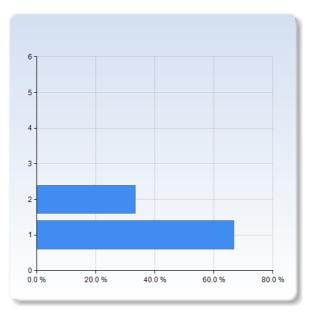
Comment

Definitely! And many smaller sub-subjects as each lecturer has their own twist on what they think is relevant.

Yes, it also made me more enlighted about the subject and started connecting dots in my head.

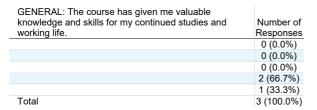
## **GENERAL**: Was the introductory information correct and satisfactory (aims, structure, content etc.)?

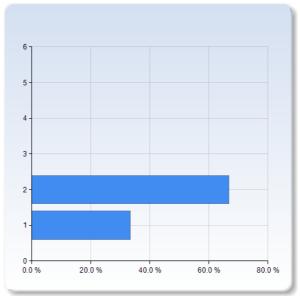
GENERAL: Was the introductory information correct	Number of
and satisfactory (aims, structure, content etc.)?	Responses
	0 (0.0%)
	0 (0.0%)
	0 (0.0%)
	1 (33.3%)
	2 (66.7%)
Total	3 (100.0%)



	Mean	Standard Deviation
GENERAL: Was the introductory information correct and satisfactory (aims, structure, content etc.)?	4.7	0.6
Comment		
Yes I would say so.		
Yes.		

### GENERAL: The course has given me valuable knowledge and skills for my continued studies and working life.





	Mean	Standard Deviation
GENERAL: The course has given me valuable knowledge and skills for my continued studies and working life.	4.3	0.6

#### Comment

Yes and no. I have really improved in reading academic texts and got a much better idea and knowledge about the history of the Quaternary period. I have also improved in writing academic texts and reports.

But depending on what my working life will lead to the knowledge in itself might not be that relevant, but the skills will always come in handy no matter what I do

Yes

The course was useful. I hope I'll use the knowledge during my working life.

### GENERAL: I have attained all the learning outcomes: Following active participation in the course, the student shall:

I be able to give an overview of the global climatic and environmental development during the Quaternary, and its major causal relations.

I possess comprehensive knowledge of the Late Quaternary stratigraphy and the glacial, environmental, and climatic development of northern Europe, and a general insight into these topics in other parts of the world.

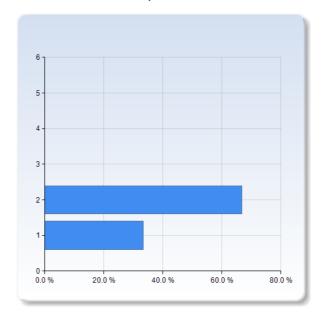
Independently and at a reflective level be able to analyse and interpret different types of proxy data obtained from terrestrial and marine stratigraphies and ice cores, and based on such interpretations and comparisons be able to reconstruct climatic and environmental changes during the Quaternary.

I be able to assess and evaluate ongoing global and regional climate changes as well as future climate scenarios in the perspective of Quaternary climate variations.

I be able to comprehend, critically assess and discuss scientific publications within the field, and based on this type of literature be able to summarize current research issues.

I be able to communicate in writing and speaking in English and in a balanced way be able to utilize scientific terminology associated with the topic.

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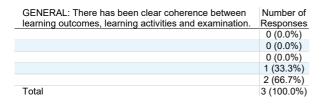


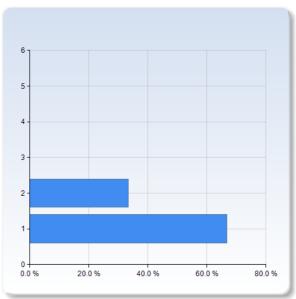
	Mean	Standard Deviation
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I possess comprehensive knowledge of the Late Quaternary stratigraphy and the glacial, environmental, and climatic development of northern Europe, and a general insight into these topics in other parts of the world.		
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I be able to assess and evaluate ongoing global and regional climate changes as well as future climate scenarios in the perspective of Quaternary climate variations.		
be able to comprehend, critically assess and discuss scientific publications within the field, and based on this type of literature be able to summarize current research issues.		
I be able to communicate in writing and speaking in English and in a balanced way be able to utilize scientific terminology associated with the topic.	4.3	0.6

#### Comment

I feel like the course have covered all of those points.

### **GENERAL**: There has been clear coherence between learning outcomes, learning activities and examination.



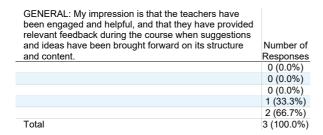


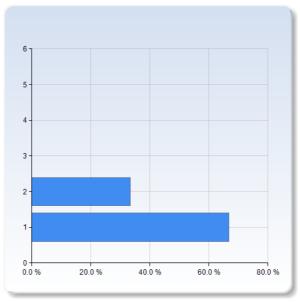
	Mean	Standard Deviation
GENERAL: There has been clear coherence between learning outcomes, learning activities and examination.	4.7	0.6

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Yes.

# GENERAL: My impression is that the teachers have been engaged and helpful, and that they have provided relevant feedback during the course when suggestions and ideas have been brought forward on its structure and content.





		Standard
	Mean	Deviation
GENERAL: My impression is that the teachers have been engaged and helpful, and that they have provided relevant		
feedback during the course when suggestions and ideas have been brought forward on its structure and content.	4.7	0.6

#### Comment

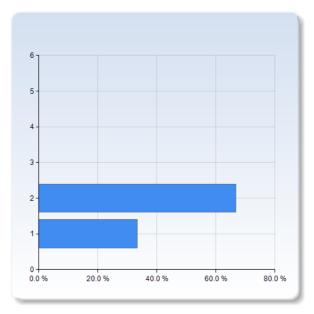
All of you have been helpful whenever questions arise, and everyone has been engaged in their teaching duties.

Yes.

Very nice teachers

#### GENERAL: Was your basic knowledge of the subject sufficient for the course?

GENERAL: Was your basic knowledge of the subject sufficient for the course?	Number of Responses
	0 (0.0%)
	0 (0.0%)
	0 (0.0%)
	2 (66.7%)
	1 (33.3%)
Total	3 (100.0%)



	Mean	Standard Deviation
GENERAL: Was your basic knowledge of the subject sufficient for the course?	4.3	0.6

#### Comment

I had the exception made for me that I didn't need to fulfill all of the prerequisite courses and had skipped the Paleo Ecology course but I feel that this was not a very large handicap.

I had also skipped the Marine Geology course which is not a prerequisite, but compared to my course mates I feel I would have benefited more from having taken that particular course. In the end it was nothing I couldn't overcome but you have to expect to work a little harder to make up for it

Yes but i think that mainly because I've taken all of the Quaternary courses. It said that GEON05 wasn't a requirement for the course but it kinds feels like it

In general, yes. All the previous master courses were very helpful.

#### **GENERAL:** Overall positive criticism:

GENERAL: Overall positive criticism:

It really is an amazing course and I'm glad I have taken it.

You learn a lot during the course and gets to use much of the knowledge you have accumulated thoughout studies.

The course covers a lot of topics. All the activities are useful.

#### **GENERAL: Overall negative criticism:**

GENERAL: Overall negative criticism:

No excursions due to covid-19, but I deem that out of your hands.

Quite stressful in the beginning with a lot of lctures, reading material and exercises/seminars to prepare for.

This course is sometimes too intense. I had a feeling that I did not have enough time to digest all the information.

#### **GENERAL: What would you suggest us to change?**

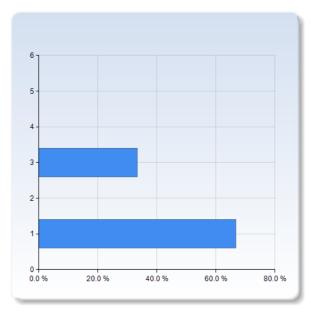
GENERAL: What would you suggest us to change?

Can't think of anything at the top of my head.

Allocate more time for induvidual reading of the reports on the litterature list.

### GENERAL: Was the information on Canvas useful? How can it be improved?

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·	0 (0.0%)
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	1 (33.3%)
	0 (0.0%)
	2 (66.7%)
Total	3 (100.0%)



	Mean	Standard Deviation
GENERAL: Was the information on Canvas useful? How can it be improved?	4.3	1.2

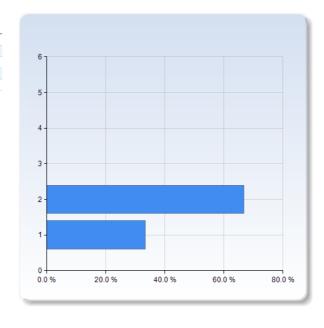
#### Comment

Good flow of information on canvas and a good structure with the PDFs for the lectures and exercise material.

Some links to the articles in the literature list didn't work but could usually be solved with googling the source and downloading it with the student login information. There was a limit few exceptions which I couldn't access despite this (can't remember which ones right now, sorry). It is quite confusing having everything seperated in week instead of categories, better orginisation of sub-folders would also be appreciated. The information on Canvas is very well-organized

### LITERATURE: Was the text book appropriate for the course?

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	0 (0.0%)
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	0 (0.0%)
	2 (66.7%)
	1 (33.3%)
Total	3 (100.0%)

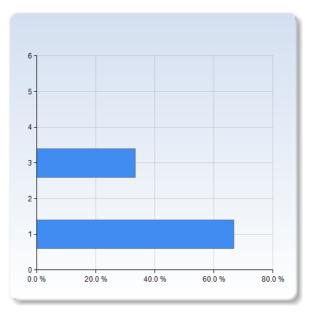


	Mean	Standard Deviation
LITERATURE: Was the text book appropriate for the course?	4.3	0.6

The text book was appropriate but mostly as a reference for certain information. Having it provided as a searchable PDF was great.

#### LITERATURE: Was the additional literature (list of articles) appropriate for the course?

LITERATURE: Was the additional literature (list of articles) appropriate for the course?	Number of Responses
	0 (0.0%)
	0 (0.0%)
	1 (33.3%)
	0 (0.0%)
	2 (66.7%)
Total	3 (100.0%)



	Mean	Standard Deviation
LITERATURE: Was the additional literature (list of articles) appropriate for the course?	4.3	1.2

#### Comment

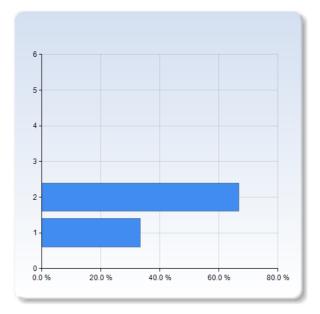
It was hefty list and I've read almost everything, most articles cover to cover and some articles abstract, conclusions and select information from the text. With the course over I realize I've gained a lot from doing this and I'm glad I read as much as I did. I deem most of it quite relevant but the workload can be quite heavy.

Yea they where, but i felt like you didn't have time to read them during work hours and had to read them on your free time.

Yes, but too many articles. I did not have time to read carefully all the papers.

#### LITERATURE: Were the lecture hand-outs useful?

LITERATURE: Were the lecture hand-outs useful?	Number of Responses
	0 (0.0%)
	0 (0.0%)
	0 (0.0%)
	2 (66.7%)
	1 (33.3%)
Total	3 (100.0%)



	Mean	Standard Deviation
LITERATURE: Were the lecture hand-outs useful?	4.3	0.6

Comment

Yes.

Yes, maybe, more text and explanations on some slides would be good.

### EXERCISES: General comments on the two sessions on "Reconstruction of climate change - examples from the literature" (Dan)

EXERCISES: General comments on the two sessions on "Reconstruction of climate change - examples from the literature" (Dan)

I thought that they were good.

They were helpful and interesting. I enjoyed them.

#### **LECTURES:** General comments on Dan's lectures

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None.

Informative and structured lectures, easy to follow

#### **LECTURES: General comments on Raimund's lectures**

LECTURES: General comments on Raimund's lectures

None.

Interesting and informative lectures

#### **LECTURES: General comments on Sven's lectures**

LECTURES: General comments on Sven's lectures

None.

Interactive and interesting

#### **LECTURES:** General comments on Helena's lectures

LECTURES: General comments on Helena's lectures

None

Nice lectures-discussions, really helped to understand better. And I enjoyed them a lot. But they required prior preparation and, given our busy schedule, it was hard to find time for this.

#### **LECTURES: General comments on Mats's lectures**

LECTURES: General comments on Mats's lectures

Mono

Good lectures with a lot of information

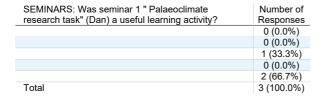
#### **LECTURES:** General comments on Jesper's lecture

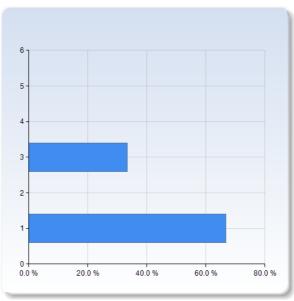
LECTURES: General comments on Jesper's lecture

None

Good, well-structured lectures

### SEMINARS: Was seminar 1 " Palaeoclimate research task" (Dan) a useful learning activity?





	Mean	Standard Deviation
SEMINARS: Was seminar 1 " Palaeoclimate research task" (Dan) a useful learning activity?	4.3	1.2

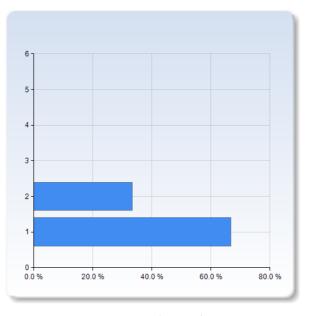
Comment

Yeah it was okay

It was interesting to combine the different proxies

## SEMINARS: Was seminar 2 " Weichselian stratigraphy research task" (Helena) a useful learning activity?

SEMINARS: Was seminar 2 " Weichselian stratigraphy research task" (Helena) a useful learning	Number of
activity?	Responses 0 (0.0%)
	0 (0.0%)
	0 (0.0%)
	1 (33.3%)
	2 (66.7%)
Total	3 (100.0%)



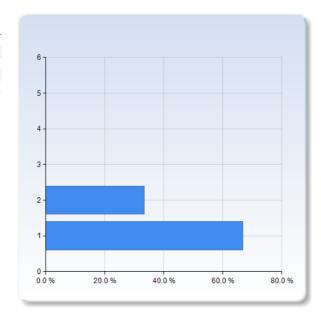
	Mean	Standard Deviation
SEMINARS: Was seminar 2 " Weichselian stratigraphy research task" (Helena) a useful learning activity?	4.7	0.6

#### Comment

Yes it made you thing al lot about how glaciers responded to the MIS changes and how complicated it can be to disentangle the information. It was very useful.

## SEMINARS: Was seminar 3 " Global change case studies" (Mats, Jesper) a useful learning activity?

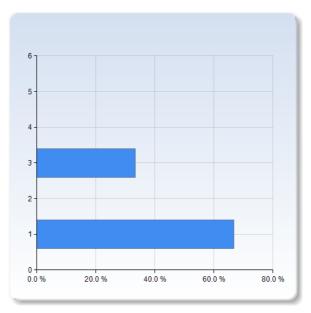
SEMINARS: Was seminar 3 " Global change case studies" (Mats, Jesper) a useful learning activity?	Number of Responses
	0 (0.0%)
	0 (0.0%)
	0 (0.0%)
	1 (33.3%)
	2 (66.7%)
Total	3 (100.0%)



	Mean	Standard Deviation
SEMINARS: Was seminar 3 " Global change case studies" (Mats, Jesper) a useful learning activity?	4.7	0.6
Comment		
Yes.		
Interesting articles. Very nice idea with a summary.		

### EXCURSIONS: Was the field trip in Skåne (or its replacement) with Helena a useful learning activity?

EXCURSIONS: Was the field trip in Skåne (or its replacement) with Helena a useful learning activity?	Number of Responses
	0 (0.0%)
	0 (0.0%)
	1 (33.3%)
	0 (0.0%)
	2 (66.7%)
Total	3 (100.0%)



	Mean	Standard Deviation
EXCURSIONS: Was the field trip in Skåne (or its replacement) with Helena a useful learning activity?	4.3	1.2

Comment

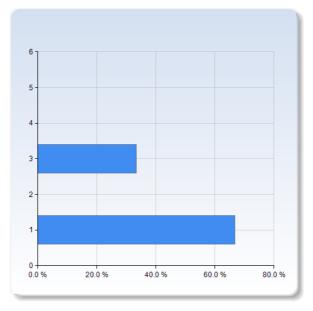
Due to the circumstances it gets a full score, but nothing can replace actually going into the field for observations.

It was okay, but due to the nature of the execise i would probably have learned more during a normal excusion, you can't really have the same dialoge, ask questions or see the nature of it as in the field.

Yes, nice excursion in Google Earth. I've learned more about glaciation history of Skåne.

## **EXCURSIONS:** Was the field trip in Denmark (or its replacement) with Helena a useful learning activity?

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	Mean	Standard Deviation
EXCURSIONS: Was the field trip in Denmark (or its replacement) with Helena a useful learning activity?	4.3	1.2

#### Comment

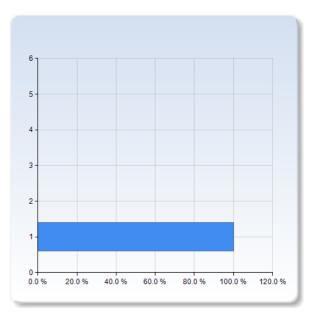
This replacement "excursion" was really good and could very well work as an independent exercise in the future.

It was okay, but due to the nature of the execise i would probably have learned more during a normal excusion, you can't really have the same dialoge, ask questions or see the nature of it as in the field.

Yes, very useful.

## EXCURSIONS: Was the field trip through Sweden (or its replacement) with Sven a useful learning activity?

EXCURSIONS: Was the field trip through Sweden (or its replacement) with Sven a useful learning activity?	Number of Responses
	0 (0.0%)
	0 (0.0%)
	0 (0.0%)
	0 (0.0%)
	2 (100.0%)
Total	2 (100.0%)



	Mean	Standard Deviation
EXCURSIONS: Was the field trip through Sweden (or its replacement) with Sven a useful learning activity?	5.0	0.0

#### Comment

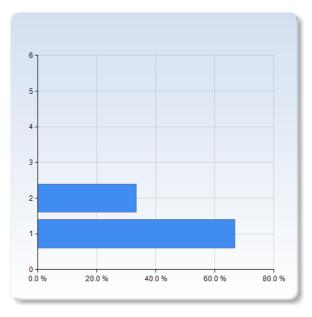
Even if a bit condensed it was an eye-opener on many levels.

It was okay, but due to the nature of the execise i would probably have learned more during a normal excusion, you can't really have the same dialoge, ask questions or see the nature of it as in the field.

Yes, interesting task and discussion after.

#### WRITTEN REPORT: Is this a useful and relevant part of the course?

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	0 (0.0%)
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Total	3 (100.0%)



	Mean	Standard Deviation
WRITTEN REPORT: Is this a useful and relevant part of the course?	4.7	0.6

#### Comment

It's useful as you get to dive into a subject that hopefully is to your liking (you get to pick it yourself after all). It really deepened my knowledge in said field.

Yes it was good.

Definitely. It was really nice to go deeply into a specific topic.

#### **EXAMINATION:** Comments on the home-based exam:

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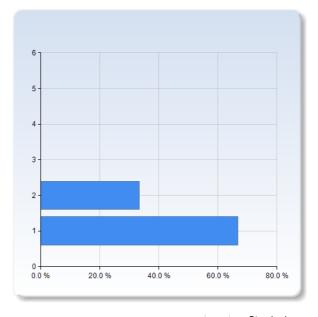
It was hard, I can tell you that. I cut back quite a lot on sleep to have the time to finish it and in the end there was still some things left hanging to my unsatisfaction. In your defense I might have said the same even if you gave me a week to finish. I probably also blabbered too much outside the relevant question, but it is hard to decide what I should consider as background information and not even need to write, or if the lack of background information makes my text look too poor.

It was hard to finish answering all of the questions within the timeframe, one more day or fewer questions would be preferred.

It was good to have a home based exam. It was quite demanding but I think that the given time was adequate.

# TRANSFERABLE SKILLS: Did the course increase your ability to critically assess, summarize, and discuss scientific articles?

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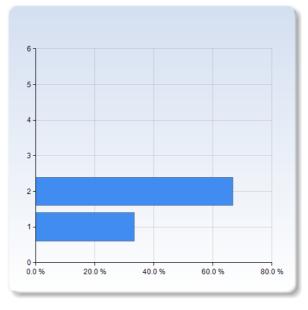


		Standard
	Mean	Deviation
TRANSFERABLE SKILLS: Did the course increase your ability to critically assess, summarize, and discuss scientific		
articles?	4.7	0.6

Comment Yes.

### TRANSFERABLE SKILLS: Did you get appropriate training in, and feedback on, written communication in English?

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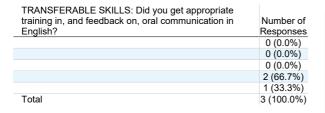


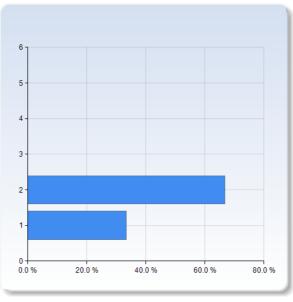
Mean Standard Deviation

TRANSFERABLE SKILLS: Did you get appropriate training in, and feedback on, written communication in English? 4.3 0.6

Comment Yes.

### TRANSFERABLE SKILLS: Did you get appropriate training in, and feedback on, oral communication in English?

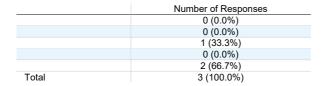


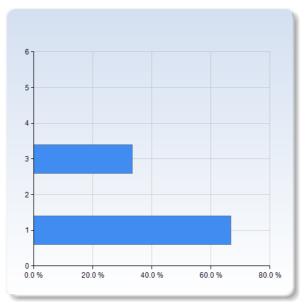


	Mean	Standard Deviation
TRANSFERABLE SKILLS: Did you get appropriate training in, and feedback on, oral communication in English?	4.3	0.6

During the presentation of the long project it was nice with some harsher feedback. This far into the Msc. it's nice to hear what can actually be improved in presentation technique instead of always hearing that you did a good job.

### How well do you think the online-based alternatives to exercises and seminars have functioned for your learning?





Mean	Standard Deviation
4.3	1.2

#### Comment

They have been good replacemnt activites but I would probably have learnt more during the standard procedures.

It worked well. The teachers did their best.

### Have any of the online-based activities worked so well that you would recommend that we keep them next year when the course is hopefully campus-based again?

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Given that I strongly believe that you should NOT fit more things into the schedule (all free time is already spent reading the large assortment of articles) I do have two suggestions.

I would recommend Helenas "excursion" to Denmark and her Seminar 2 in regards to Møn and Mors.

Svens remote sensing excursion is also something I really recommend.

Possibly lectures, but i don't know if that was due to use being so few this year.

Although the online-based activities worked well, real communication is better.

#### What have you missed the most when the course has been entirely online-based?

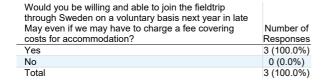
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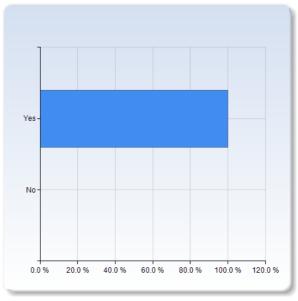
Fieldwork. And human contact. I believe me and my classmates would have collaborated more in day to day learning if we had attended physical lectures as its more natural to discuss the subjects during breaks or after class. Instead everyone turns of their cameras and mind their own business (When we had actual projects to work on together it worked just fine).

Meeting my course mates and the teachers in real life, so to say.

Field trips

# Would you be willing and able to join the fieldtrip through Sweden on a voluntary basis next year in late May even if we may have to charge a fee covering costs for accommodation?





		Standard
	Mean	Deviation
Would you be willing and able to join the fieldtrip through Sweden on a voluntary basis next year in late May even if we		
may have to charge a fee covering costs for accommodation?	1.0	0.0

#### Comment

I believe I would say even if there was a fee for accommodation, but I would be happier if the institution would pay for it;)

Yes probably if nothing else comes up and the cost isn't too high.

I'm not 100% sure but I would like to.