

Report - SG2212 - 2022-05-05

Respondents: 1
Answer Count: 1
Answer Frequency: 100.00%

Please note that there is only one respondent to this form: the person that performs the course analysis.

Course analysis carried out by (name, e-mail):

Philipp Schlatter (pschlatt@mech.kth.se)

DESCRIPTION OF THE COURSE EVALUATION PROCESS

Describe the course evaluation process. Describe how all students have been given the possibility to give their opinions on the course. Describe how aspects regarding gender, and disabled students are investigated.

The LEQ form was opened a few days before the exam and closed 2 weeks after the exam. During the course, we always were open for suggestions from the students. However, given the online nature of the course in the beginning of January 22 we did not schedule any direct meeting with student representatives, however, some students had some input on the course design.

DESCRIPTION OF MEETINGS WITH STUDENTS

Describe which meetings that has been arranged with students during the course and after its completion. (The outcomes of these meetings should be reported under 7, below.)

Meetings with students happened during the breaks of the lectures, interactions regarding homeworks and projects. Specific feedback was also obtained via Canvas and email.

COURSE DESIGN

Briefly describe the course design (learning activities, examinations) and any changes that have been implemented since the last course offering.

The course consists of lectures sessions (25x2 h total, approximately 3x2 to 4x2 hours per week), one exercise session (1h per week), 6 homeworks, and a project (approx. 10 h) at the end. Learning questions are given to the students which cover the topics that are tested at the oral exam (focusing on theory), whereas the practical skills are trained via the homeworks and the project. The homeworks and the project give bonus points for the exam (max. 10 out of 60), and a certain minimum is required for getting the credits for the LAB1 part of the course.

The course is based on classical lectures and exercises, with graded homeworks that give feedback on student learning. Changes compared to previous years (nearly) the whole course was completely online, with online lectures and homeworks (due to Corona). We have now a complete set of recorded lectures and lecture notes. A number of computer demonstrations were included in the lectures which were developed because of the online teaching. However, given the feedback we will use these in future editions as well.

THE STUDENTS' WORKLOAD

Does the students' workload correspond to the expected level (40 hours/1.5 credits)? If there is a significant deviation from the expected, what can be the reason?

The students say that they use quite a significant amount of time for the course, up to 20-25 h per week. Subtracting on average 6 hours for the actual lectures give around 15 hours of self-study and homeworks. A course at 7.5 credits would require 200 hours of work. The course is about 8 weeks long, which gives an average required work of 25 hours per week. The averaged work load reported by the students is slightly below that. However, the students feel that the load work is high, mostly due to the work required for the assignments. Despite this, the students seem to appreciate the assignments and their variety, reflecting different subjects taught during the course.

Some statements are: The homeworks were difficult but interesting.
I learned a lot and I am really happy about that.

However, students mention that they had to use weekends to keep up with the homeworks.

THE STUDENTS' RESULTS

How well have the students succeeded on the course? If there are significant differences compared to previous course offerings, what can be the reason?

The results are similar to those from previous years and are reasonable. The oral (in-person) exam did not change the course outcome, and had a similar spread in grades. However, given the personal contact during the exam made the students to be much more aware of what they understand and what parts not. We expect that the new form of the exam will actually improve the performance in future years.

STUDENTS' ANSWERS TO OPEN QUESTIONS

What does students say in response to the open questions?

- quite hard course, focus on mathematics and numerical theory
- structure and lectures were good and useful.
- positive view on lecture recordings.
- interesting and useful homeworks.
- some negative comments regarding time requirements.
- possibility to apply the material directly in Matlab/Python
- positive that we allow and encourage team work.

SUMMARY OF STUDENTS' OPINIONS

Summarize the outcome of the questionnaire, as well as opinions emerging at meetings with students.

The main outcome is that the course is demanding, but worthwhile spending the time. As mentioned above, most students work a lot, but they seem to enjoy it and see the benefits. They think that the background (communicated prior requirements) usually are sufficient.

As in previous years, the time consumption is mentioned, and it is suggested to extend the course over two periods. We will initiate a discussion with the programme whether this is possible.

Most students attended all lectures and exercises.

OVERALL IMPRESSION

Summarize the teachers' overall impressions of the course offering in relation to students' results and their evaluation of the course, as well as in relation to the changes implemented since last course offering.

The answers are quite consistent. They were in general positive to the lectures, the lecturers, the structure and the content. As previous years, students found the course demanding and time consuming, which is correct. However, despite the fact that the assignments have been time-consuming they are appreciated and found by students to be meaningful.

The students also realise the need for continuous study during the course, which is reflected in their advices to the future students. The students have quite different opinion about the pace of the course, from normal to very fast. This different experience can be due to their different background.

Regarding content, all material is deemed relevant, with perhaps some derivations that could be shortened.

General, the online format was considered positive, however a real course is judged more positively.

ANALYSIS

Is it possible to identify stronger and weaker areas in the learning environment based on the information you have gathered during the evaluation and analysis process? What can the reason for these be? Are there significant difference in experience between:

- students identifying as female and male?

- international and national students?

- students with or without disabilities?

There were no real differences regarding gender or disabilities. Most course participants are male (due to the programme's nature) which may of course make such a statement difficult to support given the data.

Most students come from the international master's programme, and have thus had undergraduate education at other universities. Therefore, we chose to use the first weeks for an introduction to both fluids mechanics and numerics, which is generally appreciated.

PRIORITIZED COURSE DEVELOPMENT

What aspects of the course should be developed primarily? How can these aspects be developed in short and long term?

There are no books that covers all part of the course. Therefore, we have been using a compendium which we have continuously improved it, this work will continue and material can be modified.

The online setting of this course showed the importance of computer animations/demonstrations, which we have extended for this year. It was generally commented on that this is a useful way of conveying some concepts, as using Jupyter directly allows the possibility to try out different parameters etc.

OTHER INFORMATION

Is there anything else you would like to add?

Approximately 40% of the students answered, which is quite good compare to other courses. In the most of cases the feedback is consistent providing a good picture of students experience.

It should be mentioned that about 12 hours in the beginning of the course are dedicated to introductory fluid mechanics and numerical analysis.

This has been necessary to make sure that all students which have different backgrounds learn the basic knowledge required for the course.

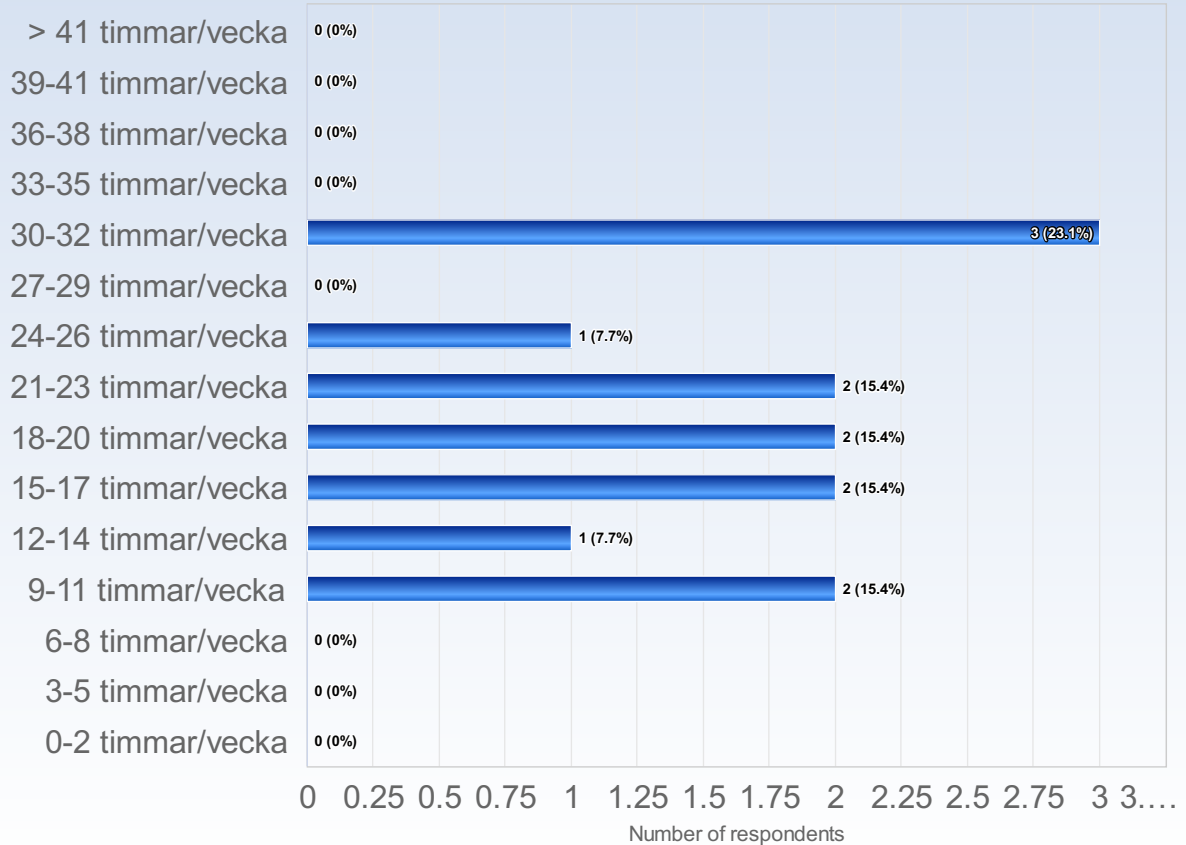
This year, the course lectures were completely online, and the last few exercise sessions were in person, as was the last lecture of the course.

SG2212 - 2022-03-16

Antal responder: 37
Antal svar: 15
Svarsfrekvens: 40,54 %

ESTIMATED WORKLOAD

On average, how many hours/week did you work with the course (including scheduled hours)?



Comments

Comments (I worked: 9-11 timmar/vecka)

The homeworks were sometimes difficult but very interesting. Maybe they should be more related to the ongoing lectures to make it better. Indeed it has happened that a notion was mentioned during the lecture after the deadline for a homework.

I felt the workload was reasonable for the most part, but I personally had trouble keeping up with the weekly assignments as my schedule for the period was quite packed already.

Comments (I worked: 15-17 timmar/vecka)

This was mostly due to the homeworks.

The reason for that was that the later homeworks with the code templates sometimes required more time finding out what the code does, instead of completing the exercise itself.

Im not sure whether I think this is good or bad, just wanted to let you know.

Also, I used Python, where I wasted hours to produce plots that looked somewhat like the ones from Matlab.

The time spent on this course was ok even if I found that the distribution of work was not very good, exam and project in the same month which drastically increased my work time and the homeworks are not rewarded enough for the amount of work required in my opinion.

Comments (I worked: 21-23 timmar/vecka)

The homework problems took more time than i was expecting.

To be honest it was quite a lot of content and the home works were not easy either. I was new to numerical methods so it felt like a lot at once. Nonetheless I learned a lot and I am really happy about that.

Comments (I worked: 24-26 timmar/vecka)

definitely too much stuff to do, homeworks are too much time consuming

Comments (I worked: 30-32 timmar/vecka)

I always have to spent my whole weekends working on homework

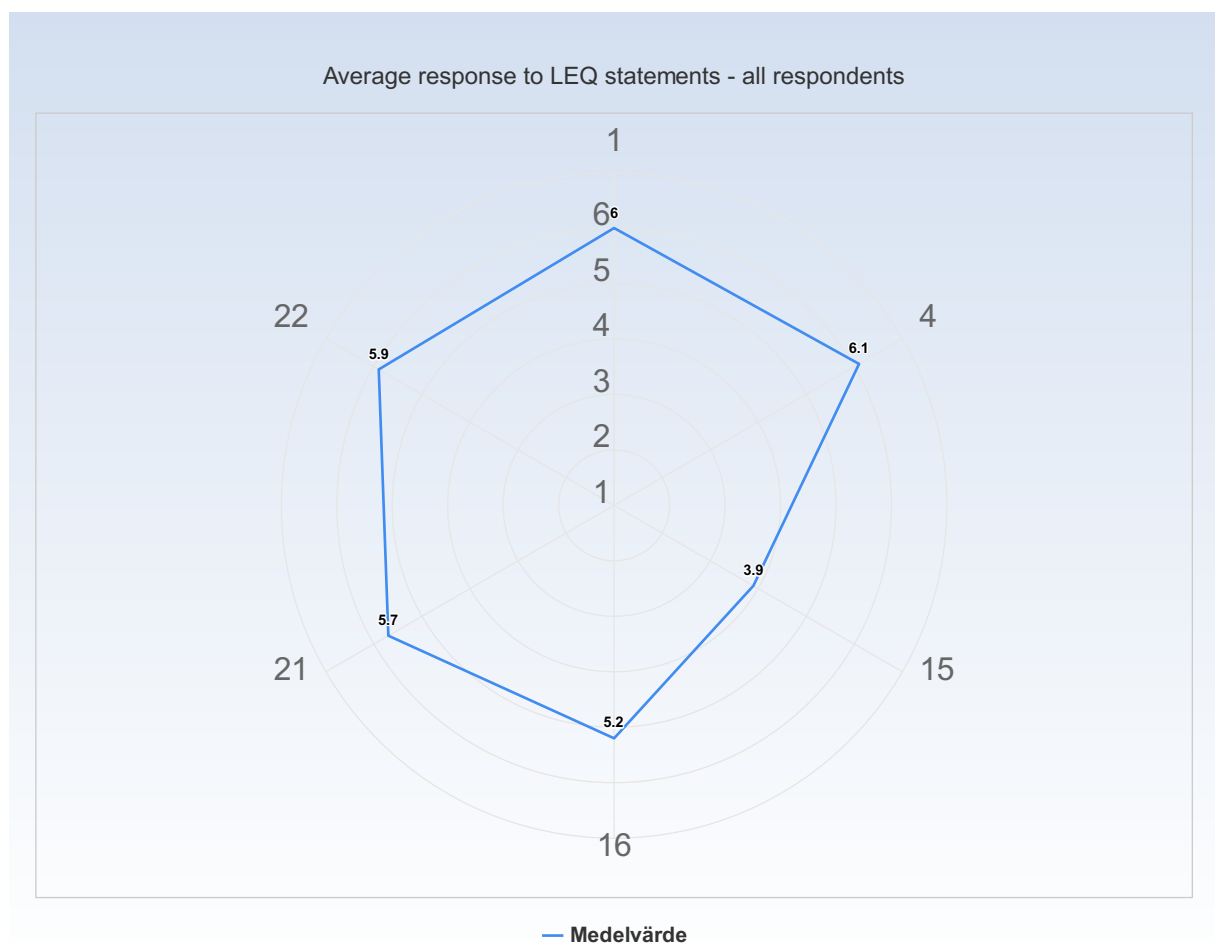
There was a lot of work with the home assignments every week so therefore I put in a lot of hours each week.

LEARNING EXPERIENCE

The polar diagrams below show the average response to the LEQ statements for different groups of respondents (only valid responses are included). The scale that is used in the diagrams is defined by:

- 1 = No, I strongly disagree with the statement
- 4 = I am neutral to the statement
- 7 = Yes, I strongly agree with the statement

Note! A group has to include at least 3 respondents in order to appear in a diagram.



KTH Learning Experience Questionnaire v3.1.4

Meaningfulness - emotional level

Stimulating tasks

1. I worked with interesting issues (a)

Exploration and own experience

2. I explored parts of the subject on my own (a)
3. I was able to learn by trying out my own ideas (b)

Challenge

4. The course was challenging in a stimulating way (c)

Belonging

5. I felt togetherness with others on the course (d)
6. The atmosphere on the course was open and inclusive (d)

Comprehensibility - cognitive level

Clear goals and organization

7. The intended learning outcomes helped me to understand what I was expected to achieve (e)
8. The course was organized in a way that supported my learning (e)

Understanding of subject matter

- 9. I understood what the teachers were talking about (f)
- 10. I was able to learn from concrete examples that I could relate to (g)
- 11. Understanding of key concepts had high priority (h)

Constructive alignment

- 12. The course activities helped me to achieve the intended learning outcomes efficiently (i)
- 13. I understood what I was expected to learn in order to obtain a certain grade (i)

Feedback and security

- 14. I received regular feedback that helped me to see my progress (j)
- 15. I could practice and receive feedback without being graded (j)
- 16. The assessment on the course was fair and honest (k)

Manageability - instrumental level

Sufficient background knowledge

- 17. My background knowledge was sufficient to follow the course (f)

Time to reflect

- 18. I regularly spent time to reflect on what I learned (l)

Variation and participation

- 19. The course activities enabled me to learn in different ways (m)
- 20. I had opportunities to influence the course activities (m)

Collaboration

- 21. I was able to learn by collaborating and discussing with others (n)

Support

22. I was able to get support if I needed it (c)

Learning factors from the literature that LEQ intends to examine

We tend to learn most effectively (in ways that make a sustained, substantial, and positive influence on the way we think, reflect, act or feel) when:

a) We are trying to answer questions, solve problems or acquire skills that we find interesting, exciting or important

b) We are able to speculate, test ideas (intellectually or practically) and learn from experience, even before we know much about the subject

c) We are able to do so in a challenging and at the same time supportive environment

d) We feel that we are part of a community and believe that other people have confidence in our ability to learn

e) We understand the meaning of the intended learning outcomes, how the environment is organized, and what is expected of us

f) We have adequate prior knowledge to deal with the current learning situation

g) We are able to learn inductively by moving from concrete examples and experiences to general principles, rather than the reverse

h) We are challenged to develop a true understanding of key concepts and gradually create a coherent whole from the content

i) We believe that the work we are expected to do will help us to achieve the intended learning outcomes

j) We are able to try, fail, and receive feedback before, and separate from, each summative assessment of our efforts

k) We believe that our work will be considered in an honest and fair way

l) We have sufficient time for learning and devote the time needed to do so

m) We believe that we have control over our own learning, and not that we are being manipulated

n) We are able to collaborate with other learners struggling with the same problems

Literature

Bain, K. (2004). *What the Best College Teachers Do*, Chapter 5, pp. 98-134. Cambridge: Harvard University Press.

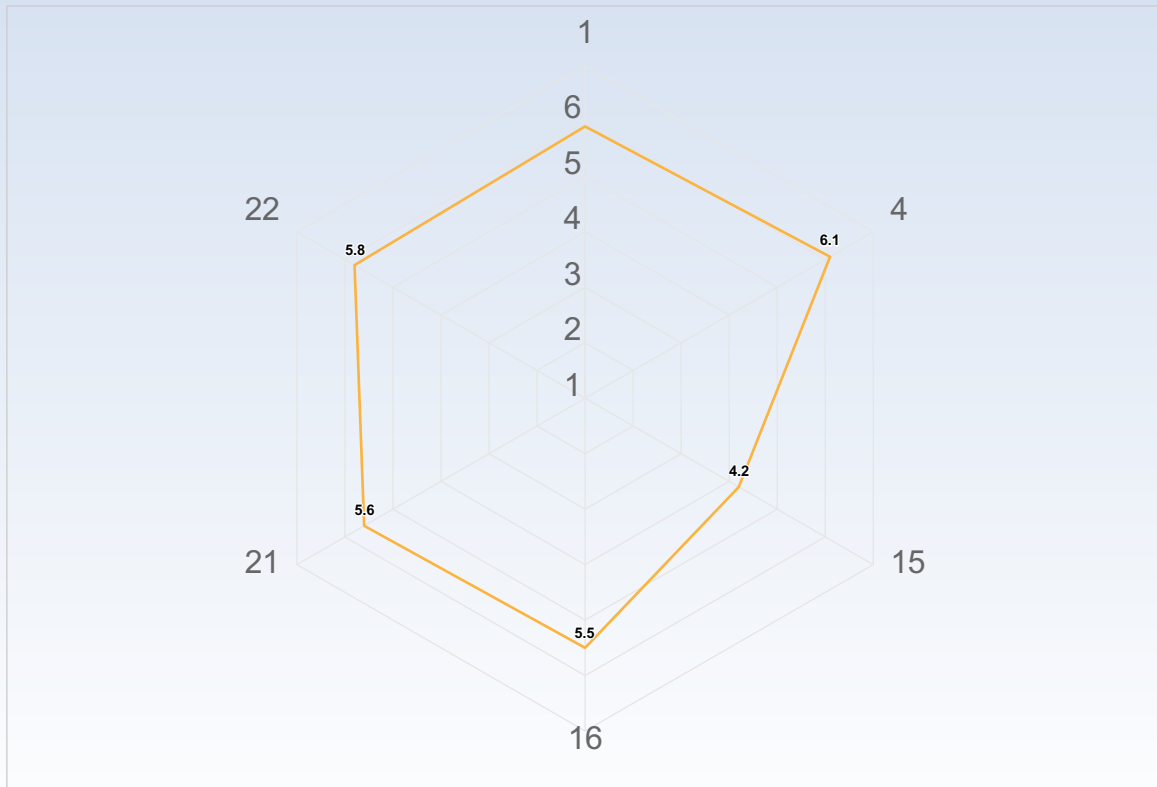
Biggs J. & Tang, C. (2011). *Teaching for Quality Learning at University*, Chapter 6, pp. 95-110. Maidenhead: McGraw Hill.

Elmgren, M. & Henriksson, A-S. (2014). *Academic Teaching*, Chapter 3, pp. 57-72. Lund: Studentlitteratur.

Kember, K. & McNaught, C. (2007). *Enhancing University Teaching: Lessons from Research into Award-Winning Teachers*, Chapter 5, pp. 31-40. Abingdon: Routledge.

Ramsden, P. (2003). *Learning to Teach in Higher Education*, Chapter 6, pp. 84-105. New York: RoutledgeFalmer.

Average response to LEQ statements - per gender



— Kvinna — Man — Annat — Vill ej uppge

Comments

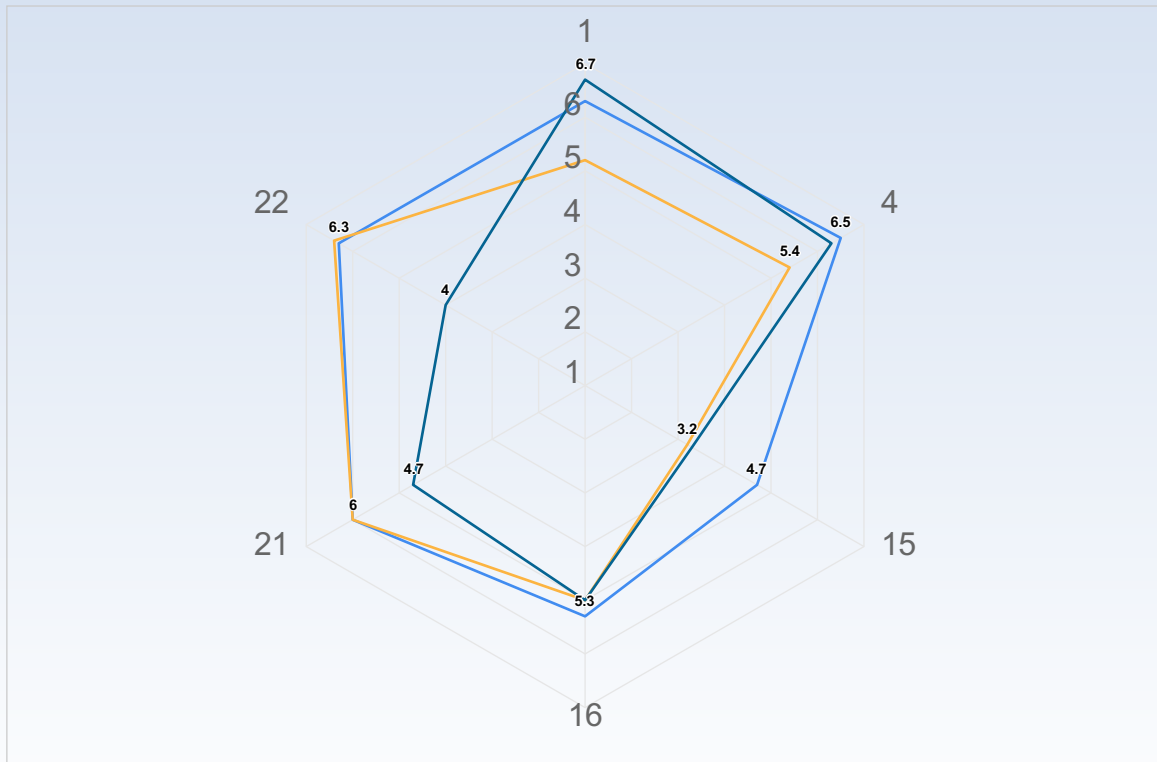
Comments (I am: Man)

Nice

?

I don't feel like this played any major role for me.

Average response to LEQ statements - per type of student



— Internationell masterstudent
 — Internationell utbytesstudent
 — Svensk student i årskurs 1-3
— Svensk student i årskurs 4-5
 — Annan typ av student
 — Vill ej uppge

Comments

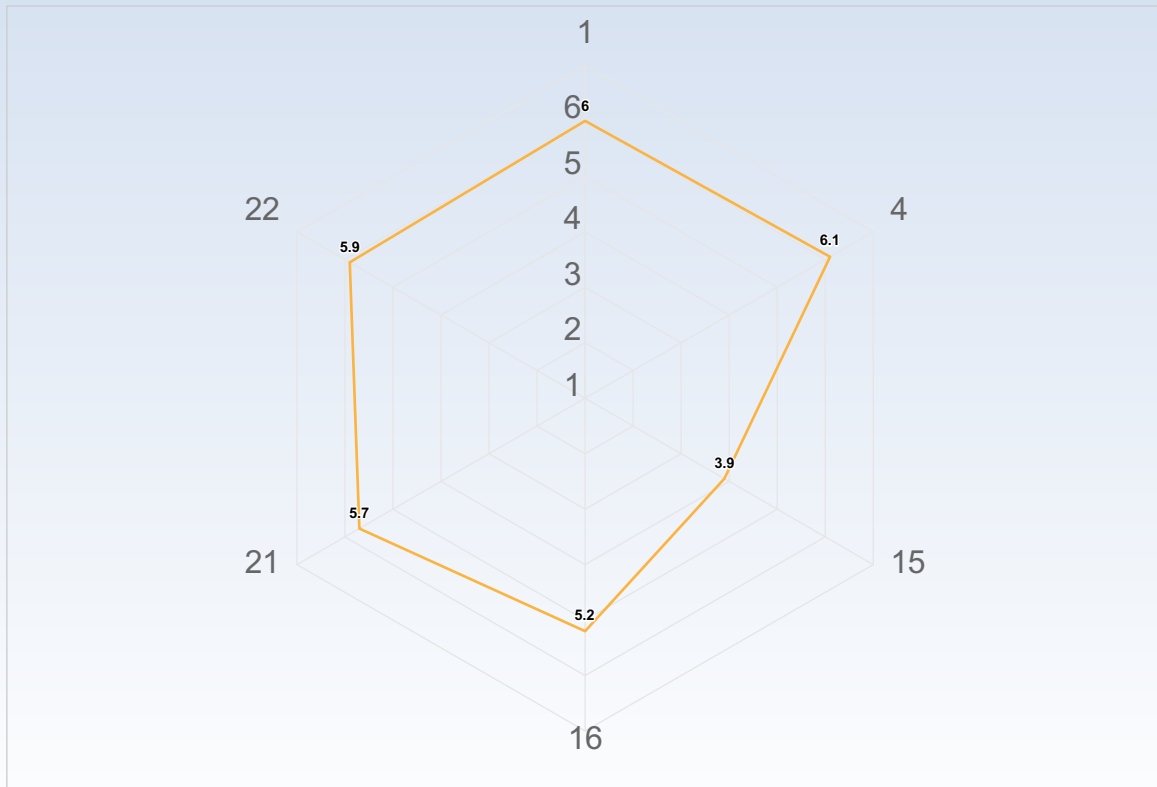
Comments (I am: Internationell masterstudent)

Once again, I did not see any impact of this on me.

Comments (I am: Internationell utbytesstudent)

From my point of view a lot of numerical theory.

Average response to LEQ statements - per disability



— Ja — Nej — Vill ej uppge

Comments

Comments (My response was: Nej)

I don't really have any disability so I can't comment on this.

GENERAL QUESTIONS

What was the best aspect of the course?

What was the best aspect of the course? (I worked: 9-11 timmar/vecka)

The application of the courses content on matlab

I liked the topics that were covered and the depth to which they were taught.

What was the best aspect of the course? (I worked: 12-14 timmar/vecka)

The useful home assignments (HA 2, 5 + project).

What was the best aspect of the course? (I worked: 15-17 timmar/vecka)

I liked that we also discussed fluid theory (although potential flow theory would also have been interesting. this was mentioned once, but not really discussed) and not only numerics.

We covered lots of topics, i liked the course!

Having already done a bit of CFD I find the course complete and allows you to have a correct scientific background

What was the best aspect of the course? (I worked: 18-20 timmar/vecka)

The structure of the course, with homework, projects and oral exam.

What was the best aspect of the course? (I worked: 21-23 timmar/vecka)

For me it was an opportunity to use Python for scientific programming which i highly valued. Many of the homeworks would have been easier and faster for me in matlab but trying out python made it a more fun challenge.

Philipp had a really nice and fun way to explain things, the lectures were really stimulating and I felt like through each and every lecture I learned new concepts

What was the best aspect of the course? (I worked: 30-32 timmar/vecka)

It brings me into a new field and gives out knowledge in width and depth

The best aspect was Philipps lectures. They where very good from a number of perspectives. There was a good amount of information on each lecture, he held a good temp, everything that he did was clear. I really enjoyed his lecture. Also Luca and Fermin was very helpful and very quick to reply to emails etc.

What would you suggest to improve?

What would you suggest to improve? (I worked: 9-11 timmar/vecka)

As important as they were, I wish the assignments weren't on a weekly basis as it was a bit stressful for me.

What would you suggest to improve? (I worked: 12-14 timmar/vecka)

Give less assignments, some of them weren't necessary. We could see them together in class for instance.

What would you suggest to improve? (I worked: 15-17 timmar/vecka)

The lecture notes from Mr Hanifi could be improved very easily.

Maybe create 1 file, with a smaller font size, clear chapters and subchapters and most importantly a table of contents would be super helpful!

After i complete courses, I usually use my lecture notes as a reference book in the future. This is almost impossible with that many files and no table of contents.

For some of the later chapters, it would have been helpful to state the assumptions that go into each equation more explicitly. For instance: we want to find a finite volume formulation of the incompressible NS equations. Here maybe state how we come to the incompressible formulation from the full NS equation. This would also help later, when using the lecture notes without the immediate knowledge of all previous chapters.

In the chapter about the Helmholtz projection, a long night of studying and discussion with my colleague resulted in the insight, that probably the variable u_i from the projection theorem is actually not u_i in the following chapter on the application for NS equations. In this latter chapter, u_i should be actually set to du_i/dt , correct?

Otherwise, the expression for w_i does not make any sense i think. (We are not 100% sure that this is true though).

For Mr Schlatter's lecture notes:

It was quite easy to find different topics, although some of them were mentioned twice? E.g. the method of the modified diff.eq.

Also some definitions on A-stability and absolute stability where a little bit unclear.

Still, i could understand most topics from both lecturer's notes

Perhaps change or improve the system of 1 homework assignment per week as I find that it takes a lot of time and therefore takes away from learning or revising the course

What would you suggest to improve? (I worked: 18-20 timmar/vecka)

Maybe cut out one homework, or start earlier with them, so the project will be done on time. Offer some workshop sessions (instead of calling it office hours?) for homework and mainly project. Ardeshir's lectures felt a bit hard to keep up with, it was just a lot of equations and too little explanation (and get a proper software for note taking!). You might say "but if something is unclear you have to ask!" - yes, but it is hard to ask good questions when approached with something you are new to.

What would you suggest to improve? (I worked: 21-23 timmar/vecka)

I would have preferred some sort of template for each Homework. Some latex/word document with placeholder figures and section for each task so you didn't need to put time into formatting. Would probably also make it easier for the assistants to grade each assignment.

Also i dont really like the way the Oral examination was performed. there was too much to memorize for it to feel achievable for me.

I feel like there were a lot of derivations to know as well as for the exam. I thought the important part was to understand concepts and not all the derivations and details about how some methods are derived.

What would you suggest to improve? (I worked: 30-32 timmar/vecka)

Exam was too short. It wasn't enough for me to get an understanding of what I need to work on.

I suppose to improve the template code for homework 4 and 5 since there are some mistakes in grammar.

And for the unstructured grid part it can be described more clearly and detailed in the lecture notes.

Ardeshir's lectures were not as good as Philipps, I found them very hard to follow. I should say that I did not have time to prepare for his lectures since there was a lot of work with the home works. Probably it would be easier to follow if I would have had more time to prepare. Also I guess that his part of the course is a bit harder to mediate than Philipps. Also the notes corresponding to Ardeshir's lecture were not good. They were very unclear and hard to follow. It would be great if he could expand them a bit or suggest sources where one can find more information regarding the subjects.

Another thing that would improve the learning experience is to have help sessions for the homework at least one for each home work. It is very hard to describe programming problems via emails it would be much easier to be able to show your computer and ask for help. Also I think this would be good for Luca and Fermin since they probably wouldn't get as much questions via emails.

What advice would you like to give to future participants?

What advice would you like to give to future participants? (I worked: 9-11 timmar/vecka)

I would advise future participants to do whatever they can to stay on top of assignments as they are usually good learning experiences.

What advice would you like to give to future participants? (I worked: 12-14 timmar/vecka)

Prepare the study questions progressively.

What advice would you like to give to future participants? (I worked: 15-17 timmar/vecka)

Work in teams

Do not do homework/projects at the last moment and try to work well on the course to be able to apply it correctly in the homeworks

What advice would you like to give to future participants? (I worked: 18-20 timmar/vecka)

Make sure you understand what you do in the homework assignments, it will help a lot.

What advice would you like to give to future participants? (I worked: 21-23 timmar/vecka)

Do derivations at home

This is a quite research focused course, if you want to learn stuff about CFD in general it might not be the right course

What advice would you like to give to future participants? (I worked: 30-32 timmar/vecka)

Follow the study problems with the lecture instead of reviewing all of them before oral exam. This will help you in both homework and final exam.

Start early on the homeworks and if you have extra time work on the exam questions because they take a lot of time to do and you don't want to sit the whole exam period working on the questions.

Is there anything else you would like to add?

Is there anything else you would like to add? (I worked: 9-11 timmar/vecka)

Not really.

Is there anything else you would like to add? (I worked: 12-14 timmar/vecka)

No

Is there anything else you would like to add? (I worked: 15-17 timmar/vecka)

No

Is there anything else you would like to add? (I worked: 30-32 timmar/vecka)

I really want to appreciate all the teachers and TAs, you really gave me a lot of help! Thank you all.

SPECIFIC QUESTIONS

RESPONSE DATA

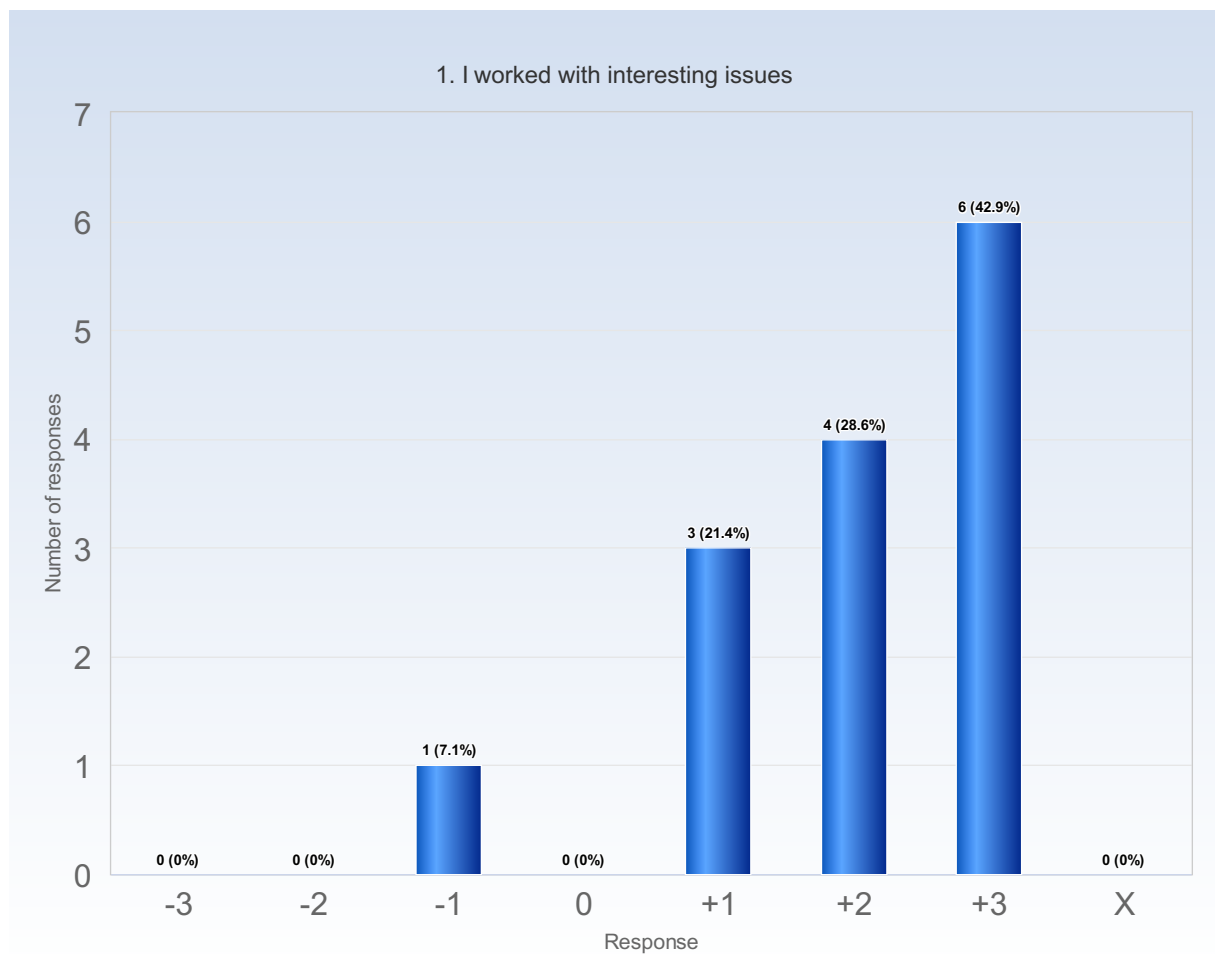
The diagrams below show the detailed response to the LEQ statements. The response scale is defined by:

-3 = No, I strongly disagree with the statement

0 = I am neutral to the statement

+3 = Yes, I strongly agree with the statement

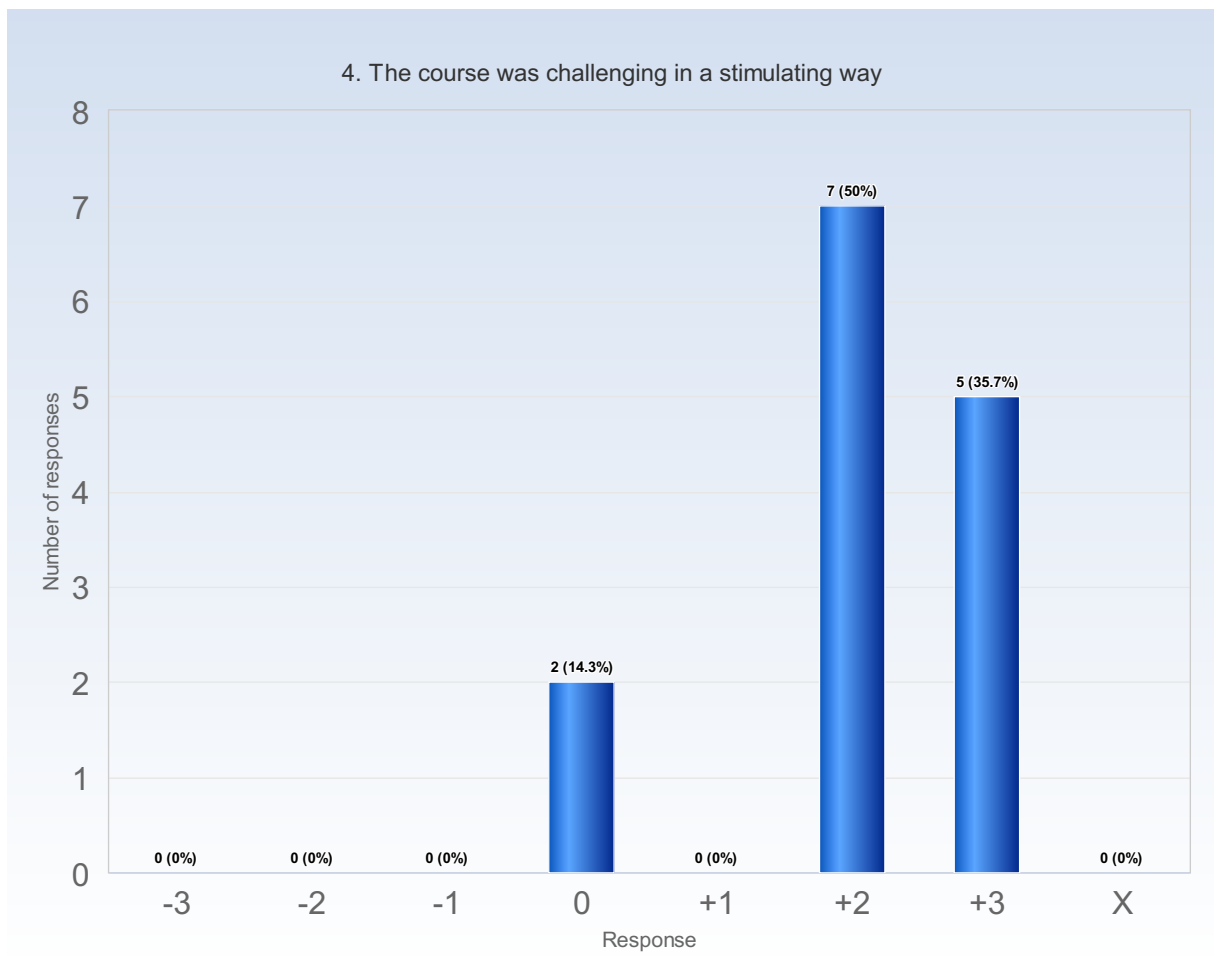
X = I decline to take a position on the statement



Comments

Comments (My response was: +1)

It felt like a lot of theory with not many relations to physical problems

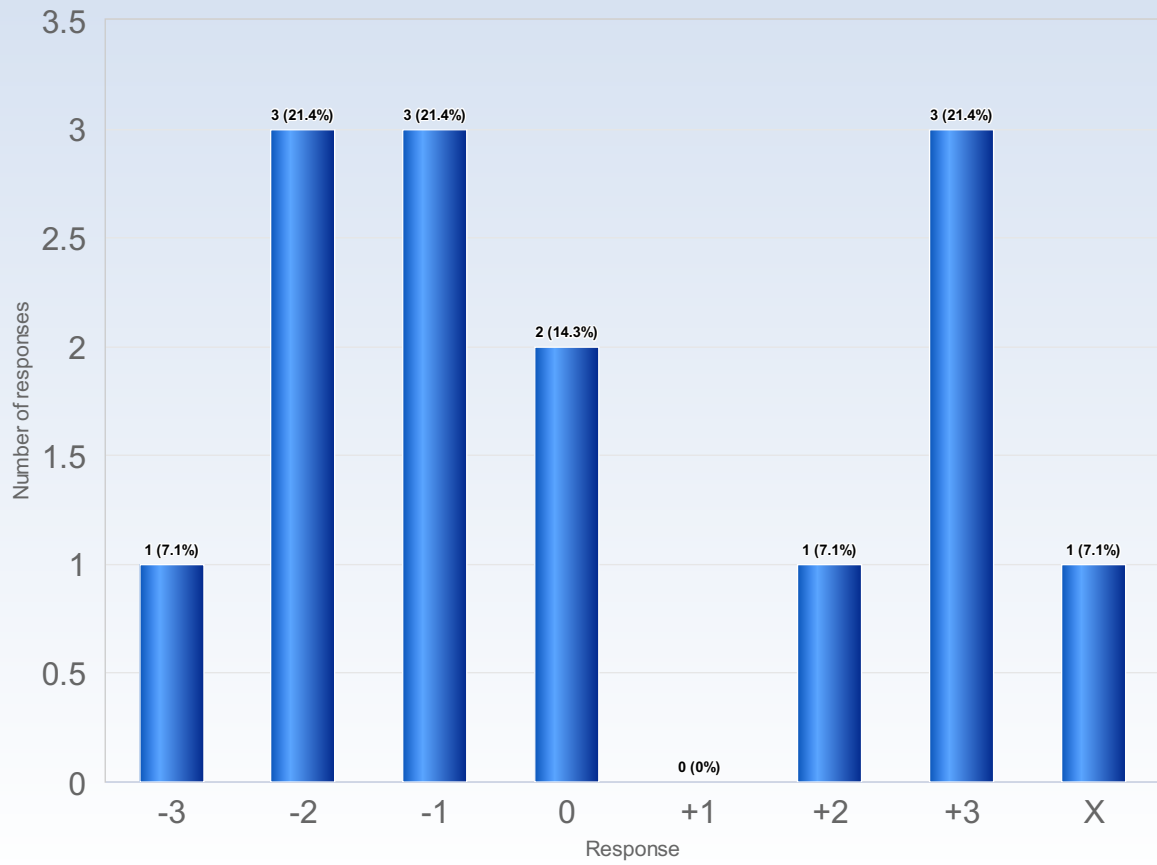


Comments

Comments (My response was: +2)

Sometimes to hard

15. I was able to practice and receive feedback without being graded

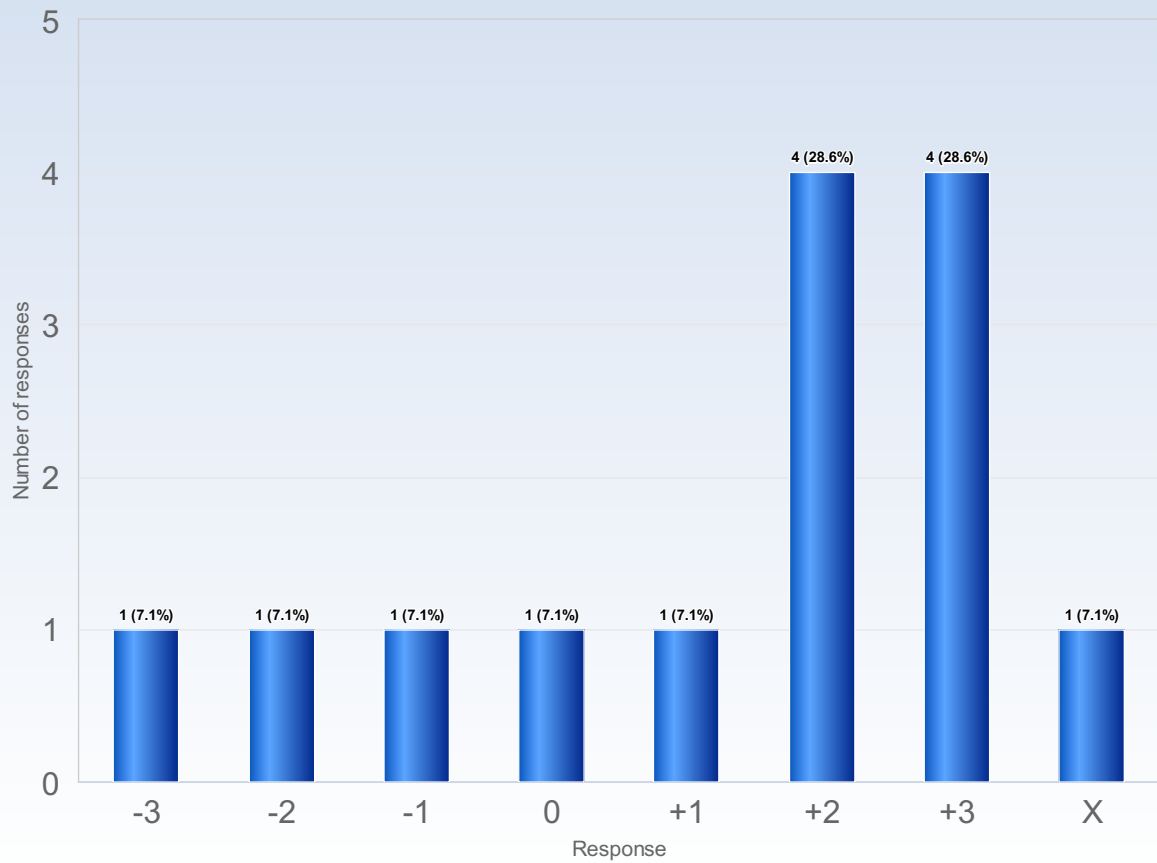


Comments

Comments (My response was: -2)

The homework had to be passed for bonus points but I felt like the feedback on it wasn't always accurate

16. The assessment on the course was fair and honest



Comments

Comments (My response was: -2)

I did not like the way the final assesment is made from an Oral exam.

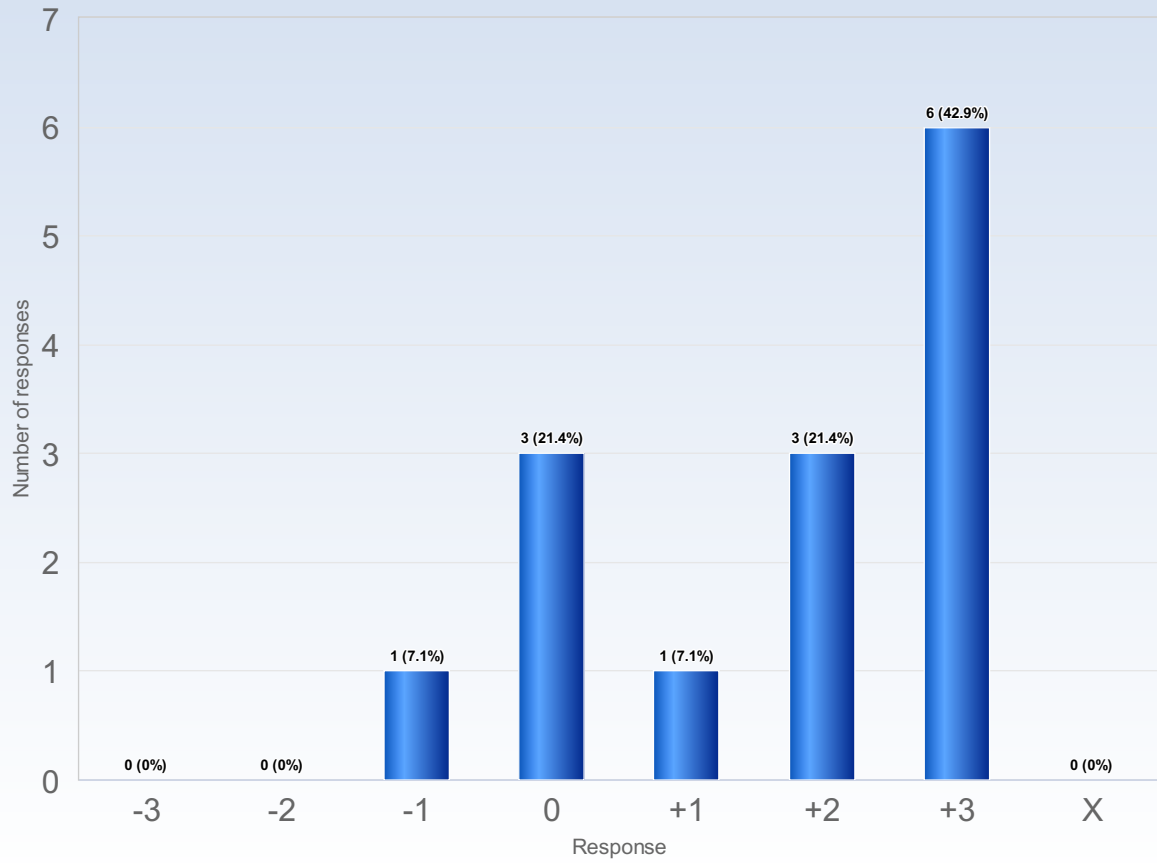
Comments (My response was: -1)

It was the first time I had an oral exam, furthermore it is quite a lot of pressure knowing that PHD students get asked the same questions as you. As a master student this was quite frightening.

Comments (My response was: 0)

Haven't received the grade

21. I was able to learn by collaborating and discussing with others

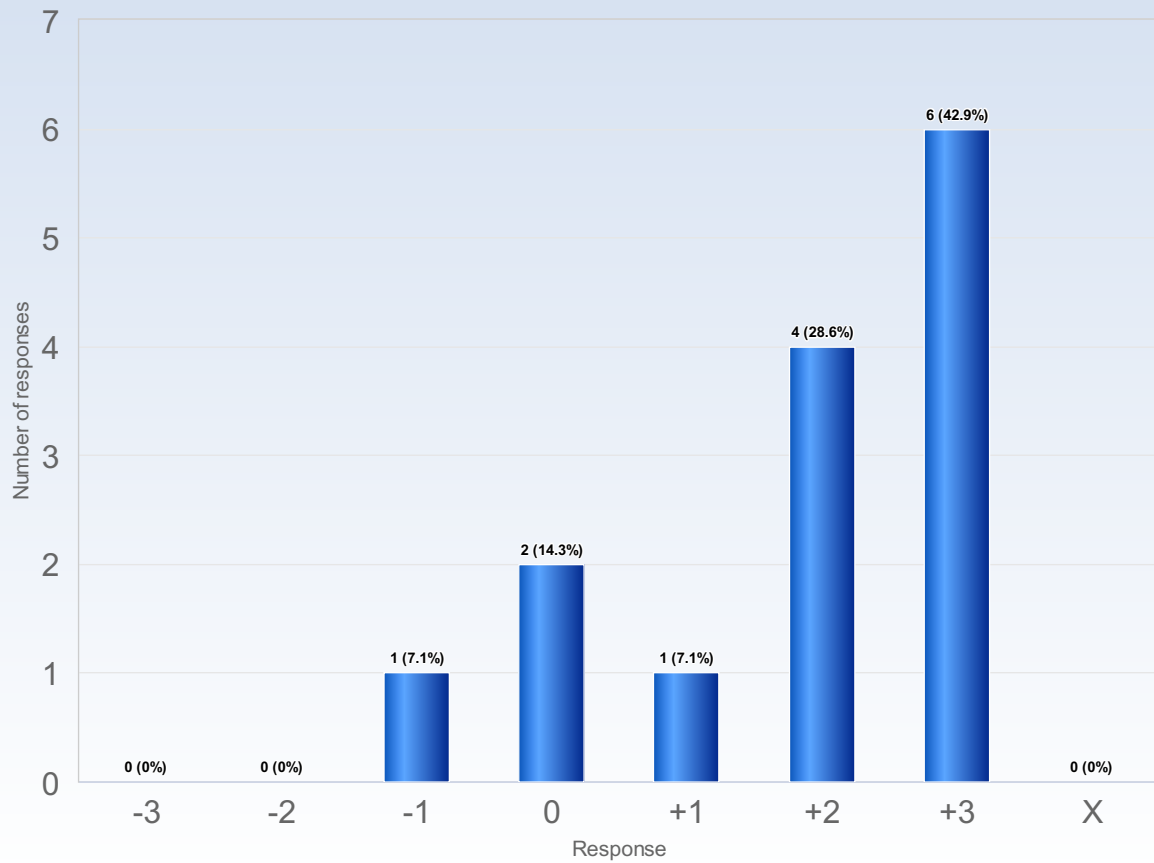


Comments

Comments (My response was: 0)

Distance learning always hinders collaboration in some ways.

22. I was able to get support if I needed it



SPECIFIKA FRÅGOR

How many of the lectures and exercises did you attend (in %)?

SPECIFIKA FRÅGOR

How many of the lectures and exercises did you attend (in %)?

100%
100%
70%
100%
100
100%
100 %, but not all in real time.
Less than 25%. This was due to schedule clashes, but I watched most of the recorded lectures in my own time. So in that sense, my attendance percentage is closer to 90%.
90%
90%
75%
All Philips and halv of Ardeshirs so around 75 %
100%

Was your background adequate for this course (mathematics, programming, physics)?

Was your background adequate for this course (mathematics, programming, physics)?

yes
85% adequate
yes (my math knowledge comes from physics undergraduate, programming from my master lectures and my fluid dynamics knowledge from an introductory undergraduate engineering course)
Yes (I am an exchange student)
Yes
No especially the fluid mechanics and mathematics
Using a ubuntu terminal for programming wasn't anything I had done before, it was a bit hard. Otherwise, I feel that pretty much was expected in terms of basic fluid dynamics knowledge.
Yes, my background was adequate for this course. I struggled at times to keep up with the mathematics side, but the physics and programming sides were manageable.
Yes, but the math had hardly been used for ~4 years...
Yes, basic fluid mechanics.
Yes
Yes.
aerospace engineering student. As I am from another university where the focus lays on applying concepts to physical things this was quite different as it was so theoretical

What did you think about the difficulty/speed of the course in general?

What did you think about the difficulty/speed of the course in general?

the speed was unbelievable
nice
Good speed. Some assignments were too easy.
Form the methods of incompressible flow, the pace was a little bit faster. But in general it's ok.
Very good. Though some parts was a bit too fast (incompressible flow, complex grids).
I felt that the course was quite high-paced. I had two other courses running at the same time, so I sometimes struggled to keep up. Maybe the course would be better spread out across two periods.
it is a hard course,
Hard to follow Ardeshir's part.
Correct difficulty even if the last chapters are more difficult, but a bit fast, especially when you have to combine learning, lessons and homeworks
Difficult course and high speed.
The difficulty was quite important but manageable

What did you think about the lectures (teachers, organisation, explanations, course handouts)?

What did you think about the lectures (teachers, organisation, explanations, course handouts)?

Course handouts are really useful
Philipp's lectures were very good. Ardeshir's lectures were a little boring. An effort can be made to make it more interesting. Material provided was adequate.
All of them are quite good.
Philipp's were very good. Professional and well explained. To have recorded lectures are good, but the canvas page was terrible. Slow, and crashing all the time. I'm not the only one to have experienced this. Maybe sort the videos in folders?
I liked how the lectures were laid out and felt the course handouts were quite useful. Pretty much all the information I needed was available online to look at in my own time.
I would have liked to see a bit more real life applications, like setting up a more simplified real world problem if possible with connection to why this method or that is used etc.
It was hard to understand the structure of Ardeshir's part.
Well, the distance learning may have made the course a little more difficult to follow
See above.
Make sure to record every lecture please

What did you think about the homework sessions and the project (organisation, explanations, literature)?

What did you think about the homework sessions and the project (organisation, explanations, literature)?

explanation sometimes is quite bad. If every single year people have problems solving the same two homework (according to the T.A.) maybe it is sign that not everything is clear
The correction of homework was maybe too fast
Fun to work with, but the level of difficulty can be increased.
Sometimes I can't figure out which part in the homework should be contained to get points, that why I failed in the 1st homework since I just gave the right answer. I suppose clarifying to what extent students should give out in their report can make the organisation better.
The explanations of homework can be more clear, for example discuss some detailed solutions
See above.
The homework sessions were good, but I wish the last few were also recorded, as due to schedule clashes I had to miss them.
i would have preferred to have access to all homeworks earlier.
.
I found the project and the homeworks rather complicated, maybe the project should start a bit earlier because it's complicated to get organised with exam revisions
See above.
Really good to do, they were challenging but really depend the understanding of the course

What did you think of the OpenFOAM and Matlab/Python parts, and should that be extended/shortened?

What did you think of the OpenFOAM and Matlab/Python parts, and should that be extended/shortened?

shortened, too much time consuming for a 7.5 credit course

The OpenFOAM section could be longer and at a slower pace.

openfoam seems to be uncomfortable to use

Should be extended. At times it was too easy and did not seem like a Master's level course.

the OpenFOAM parts spent me a lot of time for installing the virtual boxes and systems. The Matlab part is very nice which improved my understand of operators.

OpenFOAM should be extended. Otherwise no opinion.

Considering that we are only just looking at OpenFOAM at the end of the course, I feel there is room for more practice. This ties into my previous point on how maybe the course would be better split across two periods.

A bit more OpenFOAM would be fun i think, now it just seemed lika a bit of an afterthought.

It was good to discover OpenFOAM. That's just what we needed I guess.

These parts were good, maybe a little more explanation of Matlab would have been good at the beginning (maybe adding an exercise session on Matlab in the computer room could help the novices)

See above.

Make sure to have some workstations available for the students. Also the OpenFoam was such a small part it felt more like a point on a checklist than an actual learning point.

Would you prefer to switch completely to Python instead of Matlab for the course?

Would you prefer to switch completely to Python instead of Matlab for the course?

no

Both are okay. But maybe Matlab is still more popular.

yes (just a personal thought)

If Python is faster, then yes. It is a language that we learned in my home university

Used MATLAB

No , I prefer using Matlab. But if the guidance of Python will be more detailed maybe I will choose Python.

I don't know. I have only used Matlab previously.

No, I prefer to use MATLAB.

Since i am so familiar with Matlab, it is fun to see that one can do the same things in python and other Opensource software which i am a big fan of.

No, MATLAB is way better when it comes to matrixes.

No, although I generally prefer Python, I find Matlab perfect for the number of graphs to plot in assignments/projects

I think it will be very hard for the people with Matlab bakground. Off course it can be done but then there must be a lot of help sessions so people can ask code related questions.

NO, I didn't use much python yet, if I had to learn python on top of the content of the course I would just no be able to do it

Do you have any comments regarding the online version of the course (Zoom lectures etc.)?

Do you have any comments regarding the online version of the course (Zoom lectures etc.)?

Would have preferred to attend on campus. The preference to keep it online even though Covid wasn't a factor was a bad decision. Affects the learning experience.

The recorded video sometimes had bugs when playing like muted or stuck suddenly.

I don't understand why it needed to be online in the later part of the course.

I think the Zoom lectures were handled very well, and the fact that they were recorded was very useful to me since I could not be there during the lectures.

If Ardeshir used the same software as philipp it would have been perfect. with his journals it was harder to follow long derivations which he did a lot of.

No

Hard to stay focused

No

Did you find the Jupyter notebooks useful?

Did you find the Jupyter notebooks useful?

Yes.

yes!

Yes

yes

Did not use them.

I personally did not look at them outside of the classes but I do see the value.

As a way to present code and results it seems usefull but im not sure why the code templates for python where in jupyter when it is easier to code and debug in other software.

I have never used it.

Not really

Very nice!

I didn't really used it except for some homeworks as there were more comments on the templates