

Report - EQ1220 - 2022-08-23

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):

Tobias Oechering, oech@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.

Course feedback was requested at the end of the course using a standard survey with a few questions added. Students were encouraged to respond by providing a link with some hints on the upcoming exam.

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.)

Students have been met after the lectures and when students asked for a meeting.

COURSE DESIGN

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

no significant changes - minor revision of the lectures and tutorials, we added online quizzes in canvas which are not mandatory, they can be done by students to check their understanding

THE STUDENTS' WORKLOAD

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

7.5 credits = 200h; the course is seven weeks plus exam preparation; students answer on this question shows a large spread while the average fits; the large spread is due to the different levels of prior knowledge - some seem not to have the prerequisites e.g. on signal and systems

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 as usual. A large spread in the outcome. A few very good results, several students failed but most of them managed in the re-exam.

STUDENTS' ANSWERS TO OPEN QUESTIONS

What does students say in response to the open questions?

Many positive comments but also a few negative comments regarding the TAs. Here is a selection of comments

- " I really like this course(even if it was hard for me to understand), everything is done to make us understand and improve ourselves, a really good teaching. Thank you" nice to read that students appreciate the effort over the last years
- "Although there are no disabled students in the class, I believe they will take good care of the disabled ones." Glad to hear that students communicate this trust.
- "The course material was interesting, the teacher was approachable and the class size made it such that I felt comfortable asking questions to the TAs or the teacher." Glad to hear that we created a good learning environment.
- "An exam related to the tutorials or better description on the questions" which is a known critique. I understand we need to communicate better the expectations in future, but I think the exam needs to be on a different level than the tutorials to see that students understand the principle and are able to transfer the knowledge. I do not want to ask students to reproduce trained solutions.
- "The reading assignments are not aligned with the lessons" which is not good and should be improved in future.
- "In my opinion, the tutorials are not that helpful the way they are taught. It would be much easier for me as a student if the TAs explained the exercises and solved them together in the class step by step.
- Also I didn't like the fact that the reflectives and the projects were given out earlier than the respective topic was covered in the class. It would be easier and more understandable to have the lectures and after that we could spend time to revise the lectures and do the essays." This corresponds to the old style of the course and it has been shown in the past that our new style activates students better.
- "Study from the first day," "Work regularly" are recommendation which we also always communicate to future generations of students.
- "Tobias' baby is so cute." Students saw me receiving my child directly after the lecture. I taught the course being in parental leave, which seems to have worked without problems.
- "The TA where unclear most of the time," which is not good at all and requires work or change of the respective TA in future

SUMMARY OF STUDENTS' OPINIONS

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

The student responses were not surprising beside the comments regarding the TA who did not explain well (requires action). Most of the concerns mentioned are known from previous years which are often a matter of taste.

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 course round worked well besides the performance of one TA.

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?

Students replied with a low score on "I had opportunities to influence the course activities," which is correct. There is little room for bonus point essays and projects but otherwise the course has a very tight study program (on intention).

PRIORITIZED COURSE DEVELOPMENT

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

Take care that TAs are motivated and teach well.

EQ1220 - 2019-10-07

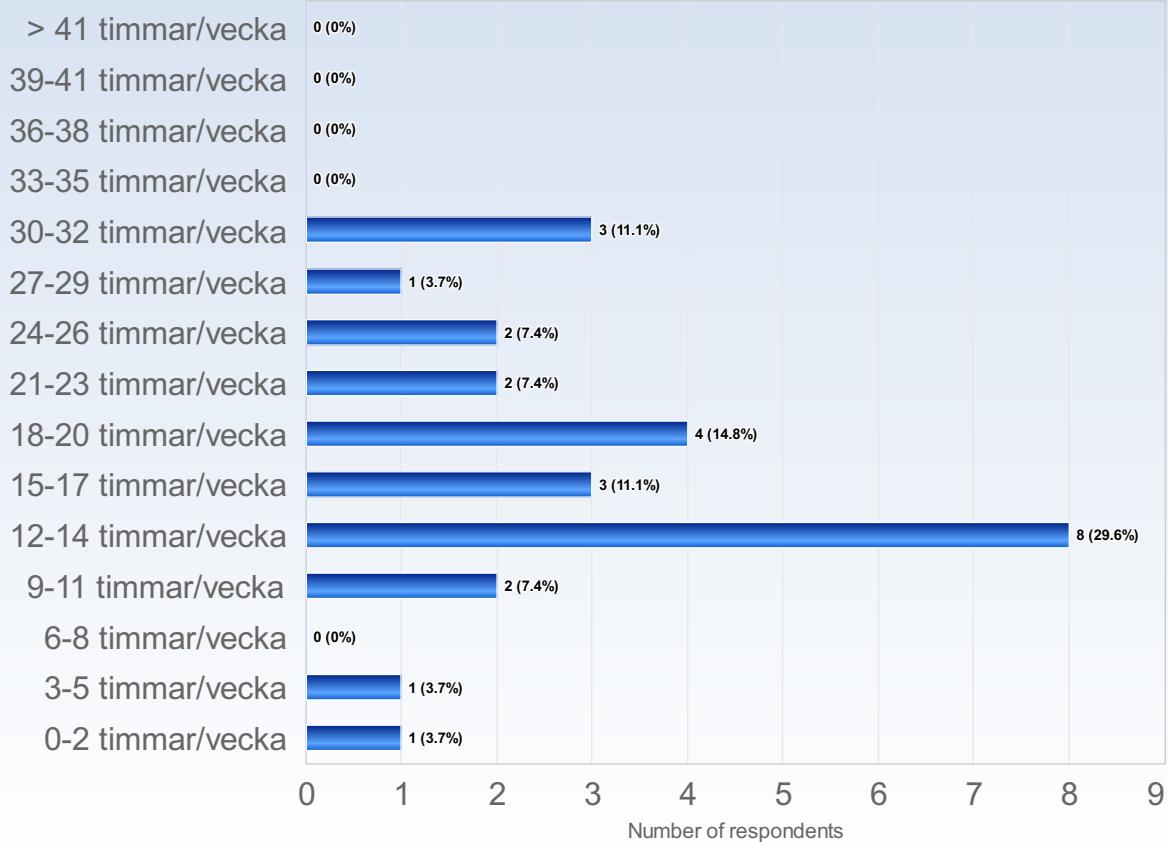
Antal responderer: 42

Antal svar: 28

Svarsfrekvens: 66,67 %

ESTIMATED WORKLOAD

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



Comments

Comments (I worked: 3-5 timmar/vecka)

I should have worked more on it but I have 3 more courses so I don't have time

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

The fact that we do the assignments relating a lecture before the lecture renders it useless

Comments (I worked: 12-14 timmar/vecka)

This course demanded a lot of time.

The projects take a lot of time

We totally have some time to do some exercises at home just like what we do on the tutorials.

Pretty good, I can easily understand the course without spending a lot of time

I would say I spent around 4-5 hours/week doing the project and around 30 minutes doing the reading assignments.

In fact, I think the time schedule is reasonable.

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

I like the set of the course structure, even though I have to do a lot of after class assignment and review.

The plan for the whole course is very reasonable. After taking the lecture, we will review the knowledge in the tutorials, which I think is very important. And we can go through the basic concepts by doing the weekly reading assignments.

Comments (I worked: 18-20 timmar/vecka)

Quite demanding.

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

Too many broad topics covered in a single course.

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

The course does not take too much time, and the two projects and the tutorials are useful, but the lecture needs to be longer or there is little knowledge useful for project and tutorial.

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

Very heavy workload.

LEARNING EXPERIENCE

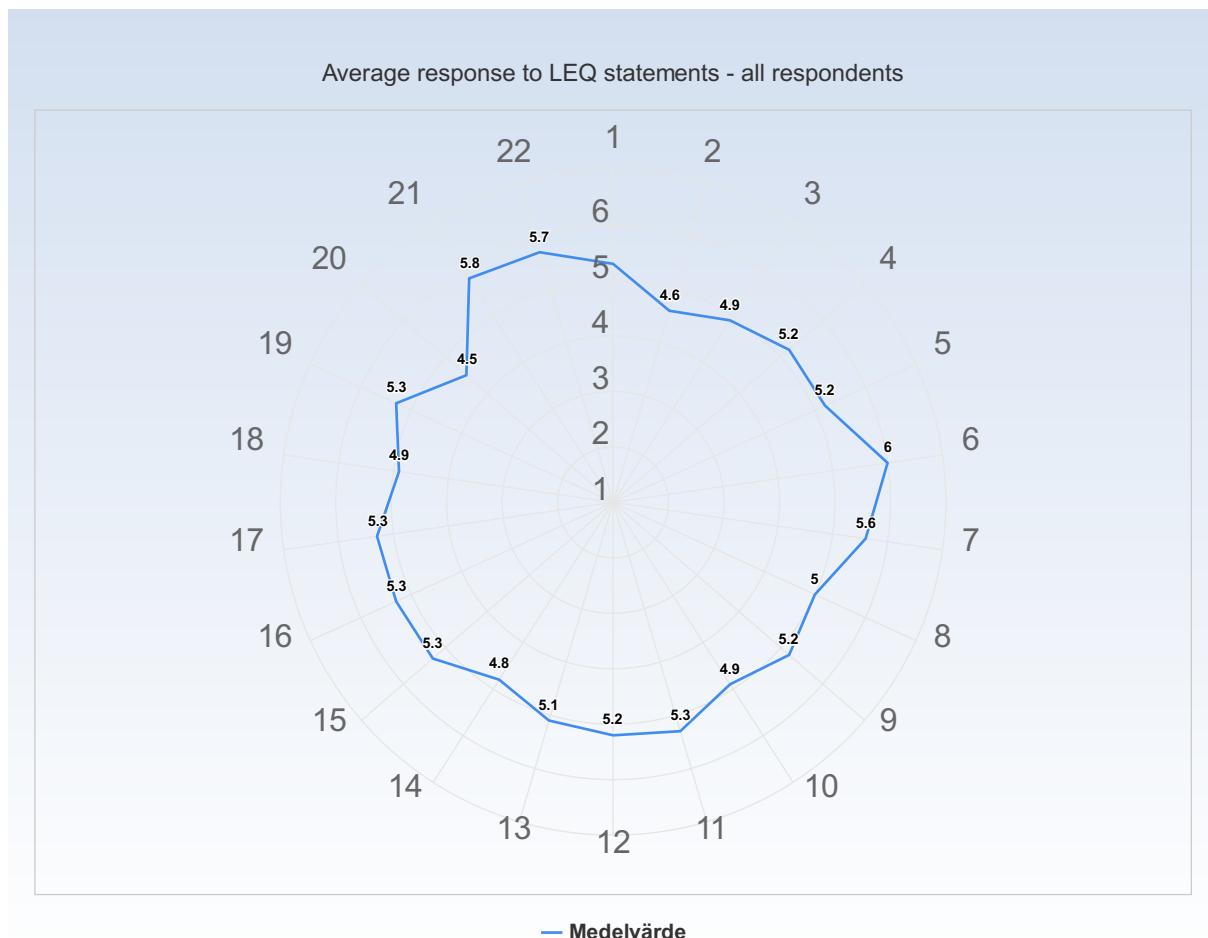
The polar diagrams below show the average response to the LEQ statements for different groups of respondents (only valid responses are included). The scale that is used in the diagrams is defined by:

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.

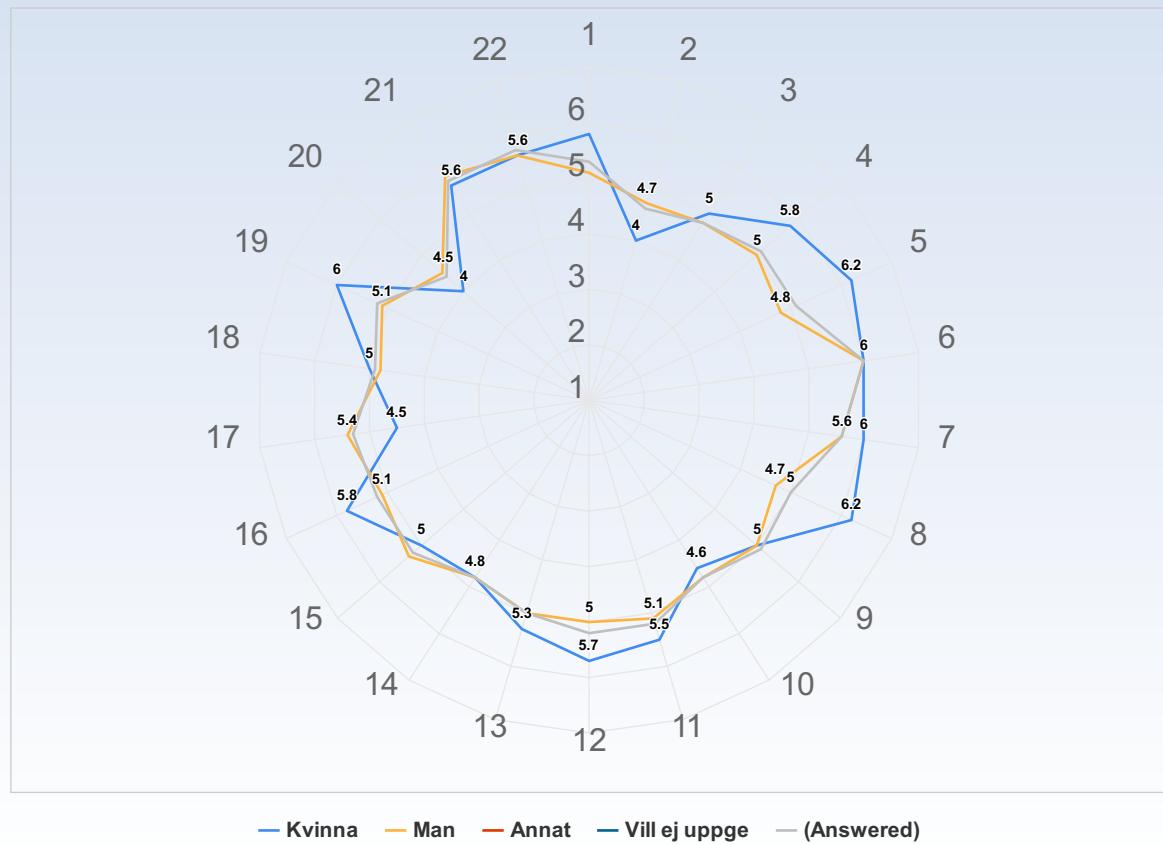
Biggs J. & Tang, C. (2011). *Teaching for Quality Learning at University*, Chapter 6, pp. 95-110. Maidenhead: McGraw Hill.

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



Comments

Comments (I am: Kvinna)

No comment

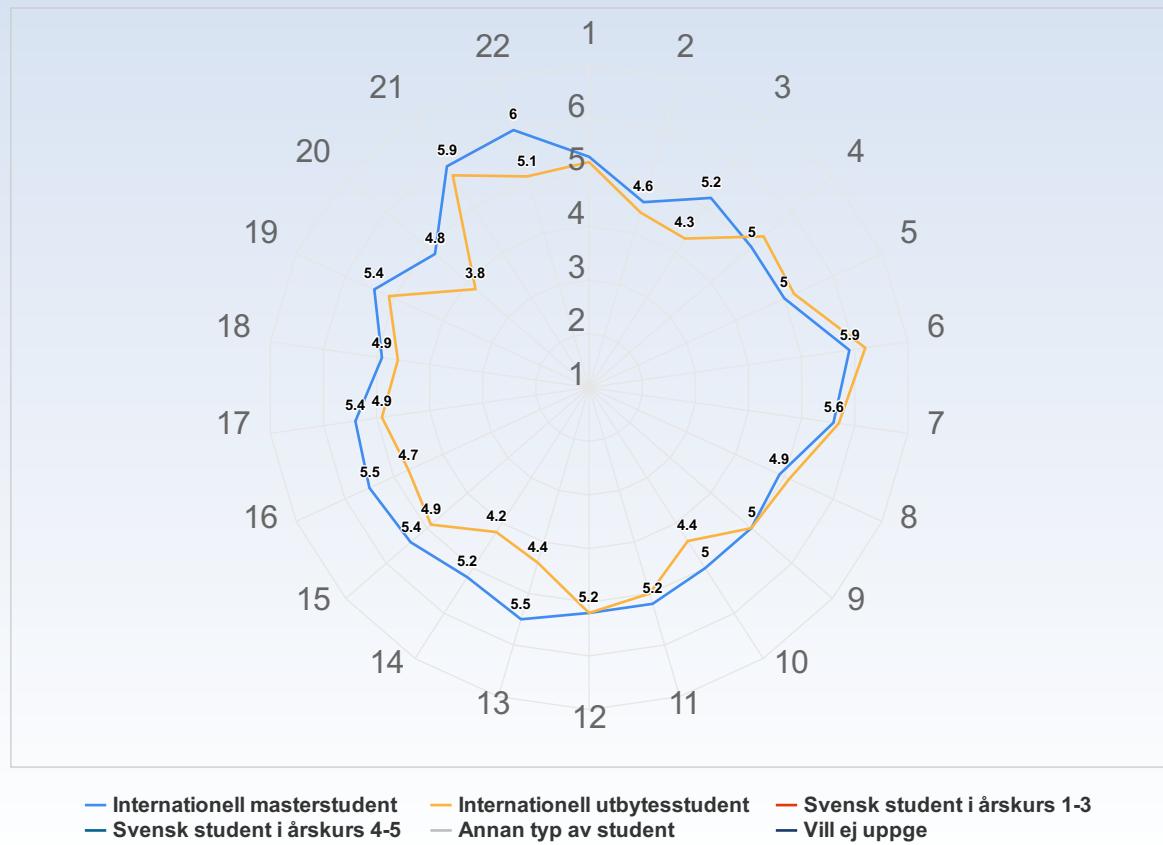
I really like this course(even if it was hard for me to understand), everything is done to make us understand and improve ourselves, a really good teaching. Thank you

Comments (I am: Man)

I like to do group work with different backgrounds student in the course.

Male and female students are equally treated in this course and free to ask questions.

Average response to LEQ statements - per type of student



Comments

Comments (I am: International masterstudent)

I already did this subject at uni but it was useful to revise it.

The structure of the course is very different from my bachelor university in a good way. I think I will benefit from it.

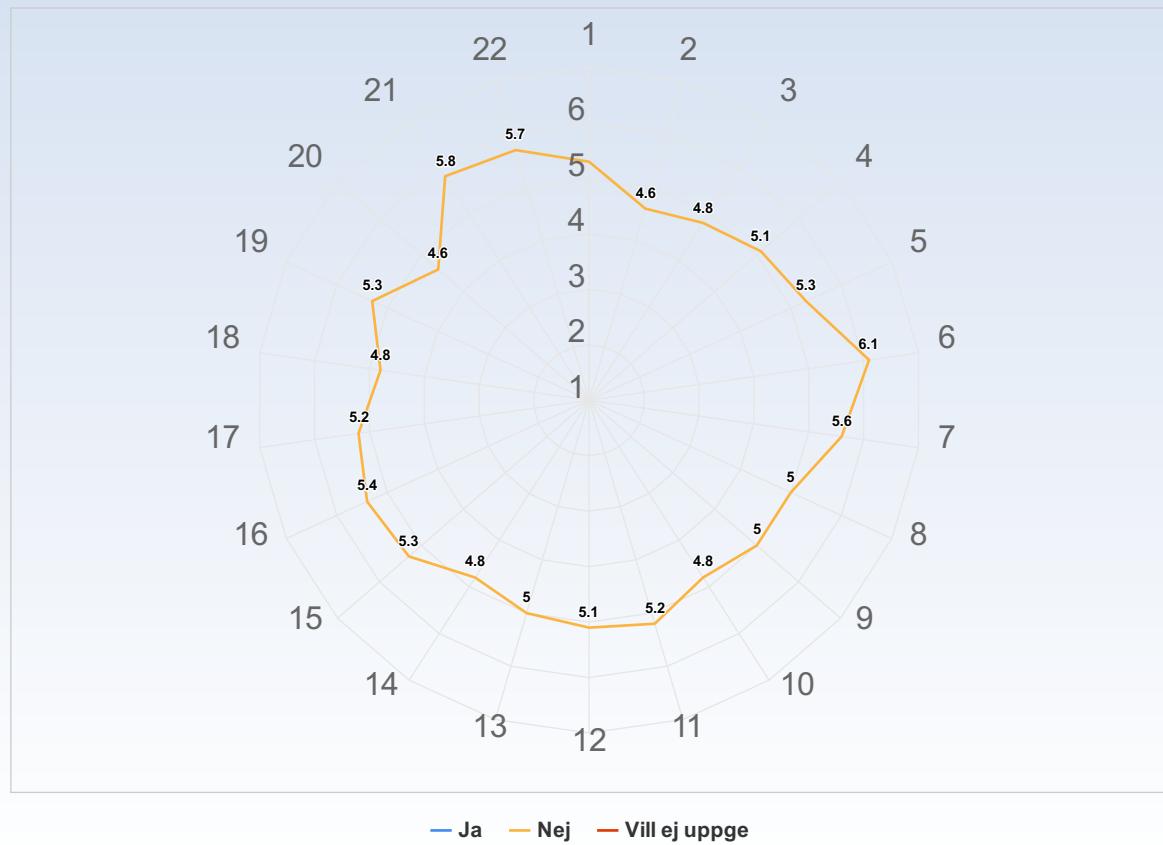
No comments on this.

I can have the chance to study with other international students and it helps understanding different culture.

Comments (I am: International exchange student)

This is a lot of work, more than expected, but hopefully well organized because without many assignments I would have been lost

Average response to LEQ statements - per disability



Comments

Comments (My response was: Nej)

KTH is very friendly to disabled people. I really like the free and nice environment.

Although there are no disabled students in the class, I believe they will take good care of the disabled ones.

GENERAL QUESTIONS

What was the best aspect of the course?

What was the best aspect of the course? (I worked: 0-2 timmar/vecka)
project 2 only

What was the best aspect of the course? (I worked: 9-11 timmar/vecka)
The projects (especially the second one) were interesting. The reading assignments were really useful.
The second project

What was the best aspect of the course? (I worked: 12-14 timmar/vecka)
Textbook
The second project was interesting as we had a goal and not generic questions
I think the two projects are very meaningful. We learned how to cooperate with others and how to deal with practical problems using the theories and principles which we have learned.
We can discuss about some questions without being graded.
I would say the projects were the most interesting part, they were not too complicated but still challenging and gave a better concrete view of the course
I know that signal theory is an important matter.

What was the best aspect of the course? (I worked: 15-17 timmar/vecka)
The course has a overall introduction on most of the important parts related to signal theory.
The Tutorials.
I thought the reading assignments and project were very useful and helped a lot to understand better. I also liked the tutorials that we did in common with new people with new ideas and new ways of solving problems.

What was the best aspect of the course? (I worked: 18-20 timmar/vecka)
Don't stop the proves!
Important theoretical foundations for latter courses are taught.
The course material was interesting, the teacher was approachable and the class size made it such that I felt comfortable asking questions to the TAs or the teacher.

What was the best aspect of the course? (I worked: 24-26 timmar/vecka)
Connection and contact between students and TAs are impressive, for exchanging ideas and efficient learning.

What was the best aspect of the course? (I worked: 27-29 timmar/vecka)
The course are well prepared especially for the lecture.

What was the best aspect of the course? (I worked: 30-32 timmar/vecka)
The derivation of equations on the lecture.

What would you suggest to improve?

What would you suggest to improve? (I worked: 0-2 timmar/vecka)

An exam related to the tutorials or better description on the questions

What would you suggest to improve? (I worked: 3-5 timmar/vecka)

Making the exam more similar to the tutorials

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

Some demonstrations could be let to read at home and spending a little more time on explaining concepts during lesson.

The reading assignments are not aligned with the lessons

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

More explanations and examples

The groups for tutorial are too big, should be 2 or 3 students

The teacher often explains simple things in detail but more complex things are a bit taken as granted

Giving more lectures to make more detailed explanations of the theories and principles and how they can be applied.

More project would be great.

I would suggest choosing less examples to show on the board, because even if its really important to have the proofs of the theorem shown to us, they often took a big amount of time which means that the course was often behind on the tutorials and the project. Another way of gaining time would be to cut some time on the "what did we do last time" section, since we (as the students) really didn't participate too much in it and it took quite a lot of time at the beginning of each lecture.

The lectures are not interesting. The proves seem a lot of the time unnecessary and take a lot of time. I would prefer a lot if the teacher spend more time on examples and explaining the theory.

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

It would be better to has some practical usage explanation on the courses.

Nothing~ Everything is perfect.

I think it may be nice to add some examples of direct applications of signals and how they and their characteristics are used, and the link with the context of the course.

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

Do some kind of presentation in groups about a current application of some methods learned.

More time should be allowed on students to reflect and digest the concepts, without constantly grading every single activity.

Better synchronization between tutorials and lectures

What would you suggest to improve? (I worked: 24-26 timmar/vecka)

Longer lecture time or more basic quizzes related to lecture.

What would you suggest to improve? (I worked: 27-29 timmar/vecka)

I think some exercises on the problem set should be assigned every week.

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

In my opinion, the tutorials are not that helpful the way they are taught. It would be much easier for me as a student if the TAs explained the exercises and solved them together in the class step by step

Also I didn't like the fact that the reflectives and the projects were given out earlier than the respective topic was covered in the class. It would be easier and more understandable to have the lectures and after that we could spend time to revise the lectures and do the essays.

No.

What advice would you like to give to future participants?

What advice would you like to give to future participants? (I worked: 0-2 timmar/vecka)
study the old exam and ask the TA where is the information in the book

What advice would you like to give to future participants? (I worked: 3-5 timmar/vecka)
Study from the first day

What advice would you like to give to future participants? (I worked: 9-11 timmar/vecka)
Spend some time on the reading assignments
Good luck, follow all tutorials

What advice would you like to give to future participants? (I worked: 12-14 timmar/vecka)
Work regularly
Making preparations before each lecture and tutorial.
Try harder, and don't give up.
I would recommend going to every single tutorial session and to often ask questions.
If you read the book thoroughly it's not really necessary to go to the lectures, but do go to the tutorials.

What advice would you like to give to future participants? (I worked: 15-17 timmar/vecka)
preview the lecture content before attending!
The course is fun. Enjoy it!
To do the reading assignments, they allow a much better understanding of the lessons

What advice would you like to give to future participants? (I worked: 18-20 timmar/vecka)
Work consistently.
Reserve time to individually study and understand the theory.
Stay up to date with the lectures and start the project early

What advice would you like to give to future participants? (I worked: 24-26 timmar/vecka)
You'd better have some basic knowledge before taking the course.

What advice would you like to give to future participants? (I worked: 27-29 timmar/vecka)
Leave enough time for this course every week.

What advice would you like to give to future participants? (I worked: 30-32 timmar/vecka)
Study hard.
Work hard and do more exercises.

Is there anything else you would like to add?

Is there anything else you would like to add? (I worked: 12-14 timmar/vecka)
No
This course seem hard for the wrong reason : i feel like I spend a lot of time understanding simple concepts on my own because the lectures were always late on the tutorials and if we saw the matter first everything would seem more clear.

Is there anything else you would like to add? (I worked: 15-17 timmar/vecka)
nothing else
Nothing~

Is there anything else you would like to add? (I worked: 18-20 timmar/vecka)
Tobias' baby is so cute

Is there anything else you would like to add? (I worked: 30-32 timmar/vecka)
No.

SPECIFIC QUESTIONS

RESPONSE DATA

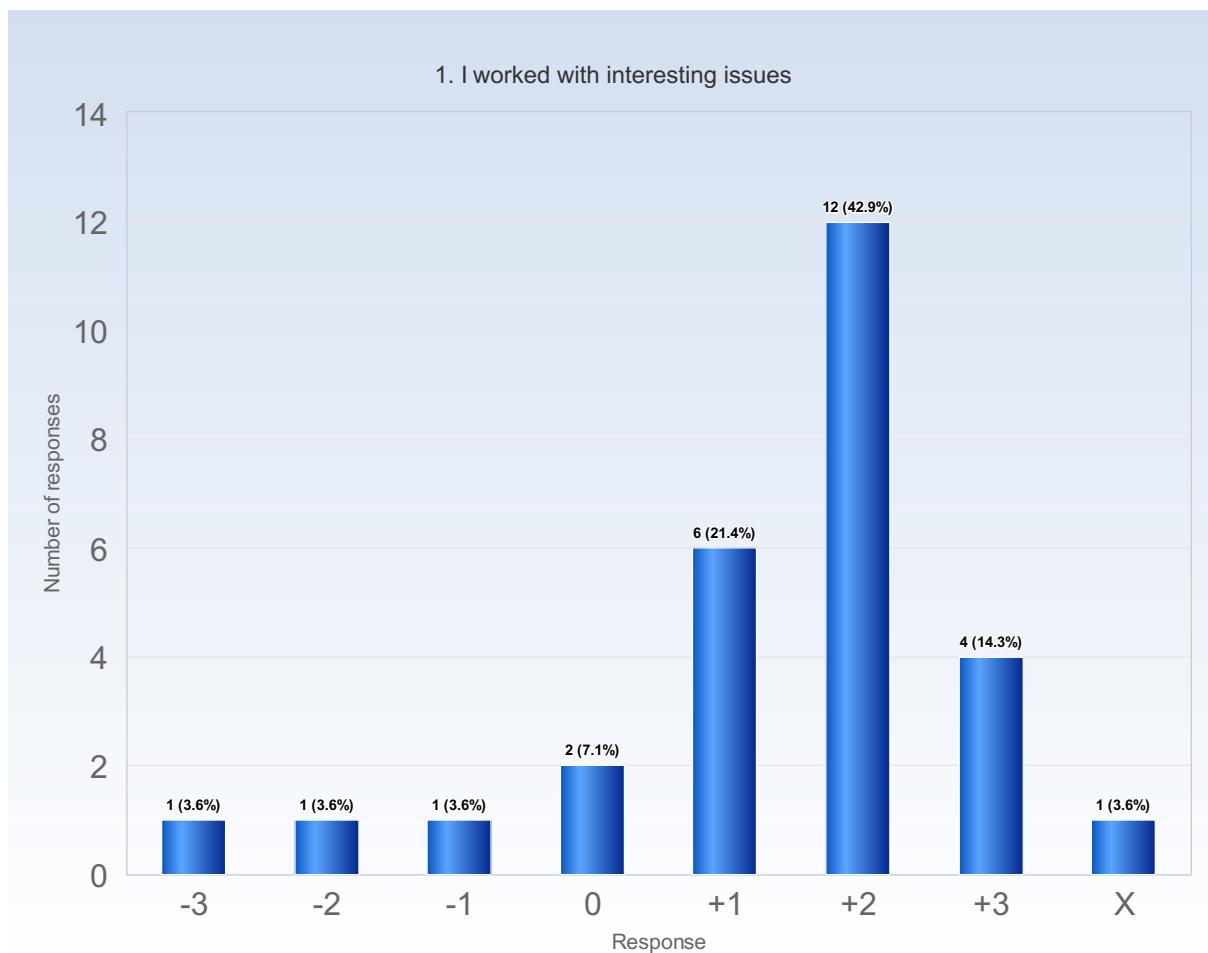
The diagrams below show the detailed response to the LEQ statements.
The response scale is defined by:

-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



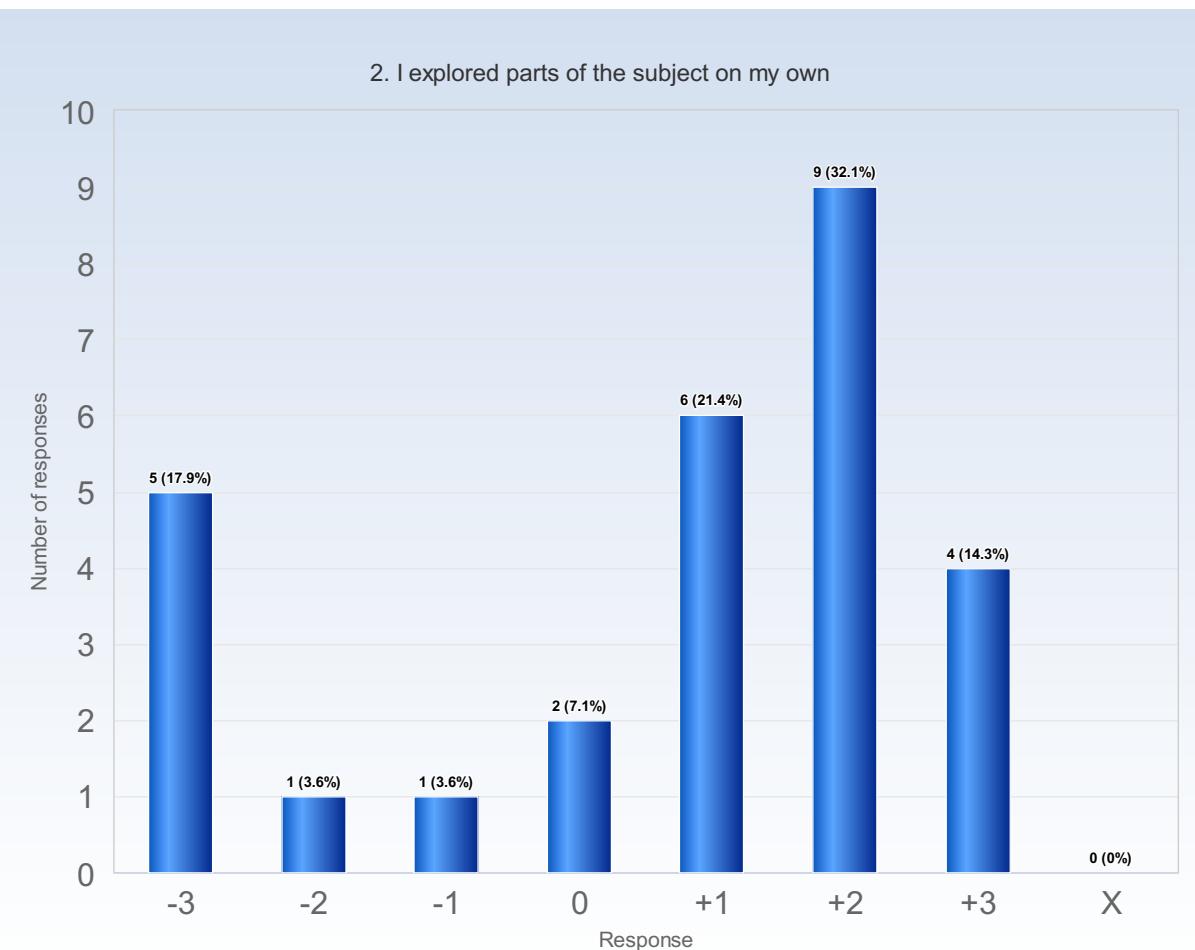
Comments

Comments (My response was: -2)

Very abstract for most of the course

Comments (My response was: +2)

I thought the subject is interesting and some it is so useful for the things we use everyday. I liked the application to "real life" problems in the second project and I thought it was nice to see a direct application of what we learned.

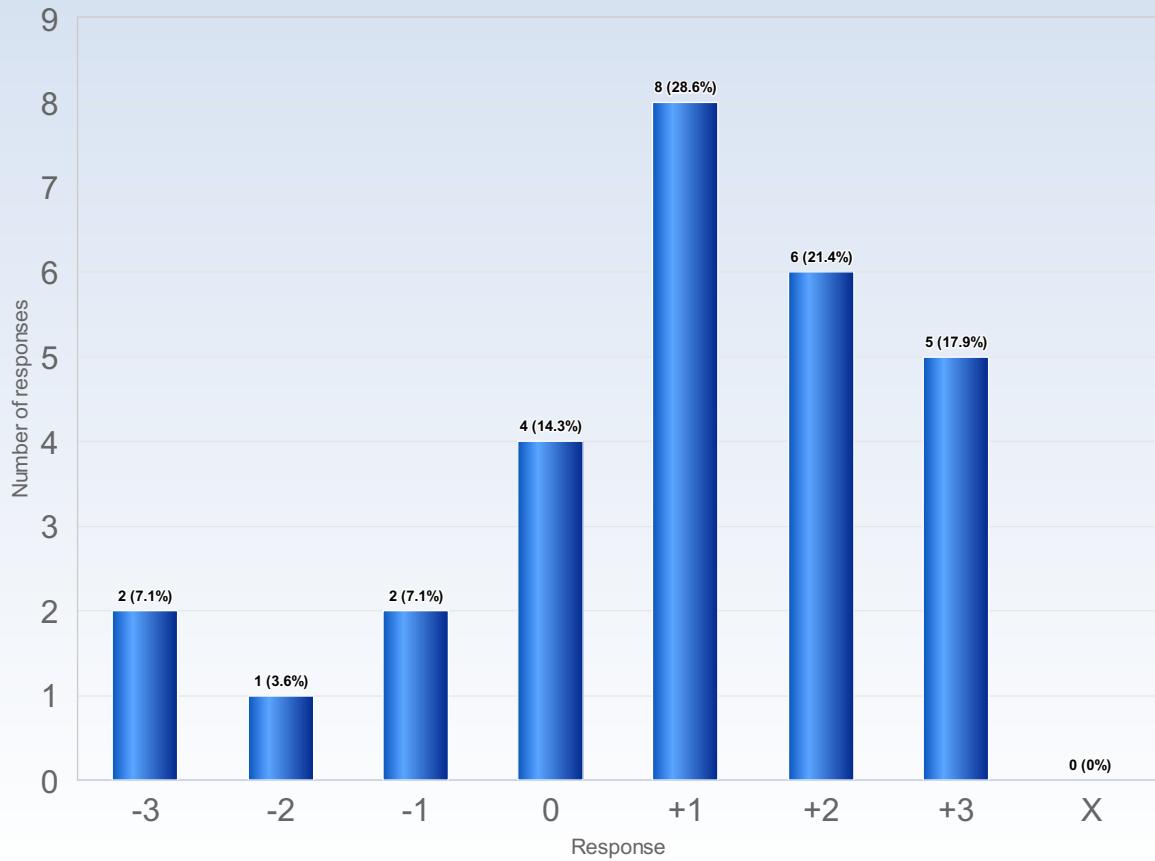


Comments

Comments (My response was: -3)

I did not as I still was trying to understand the course material and did not feel I could lead my own reflection or investigation on the subject

3. I was able to learn by trying out my own ideas

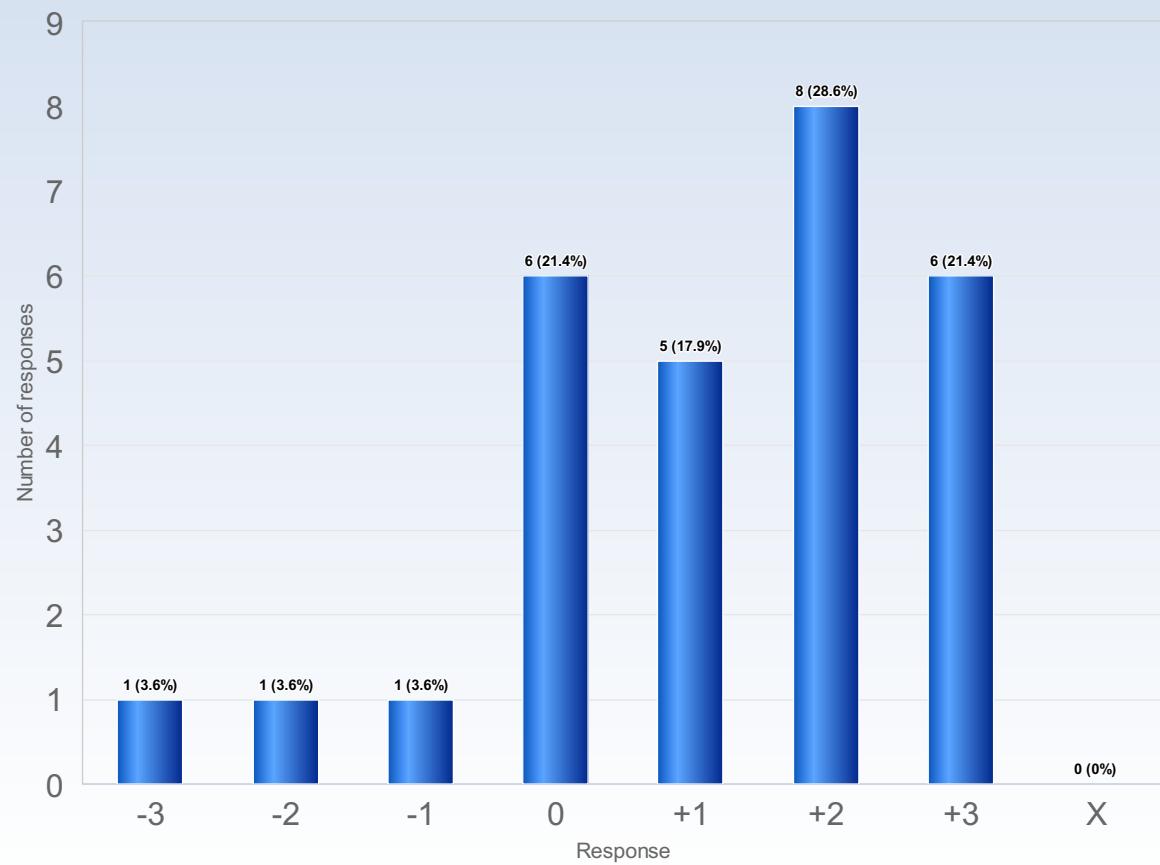


Comments

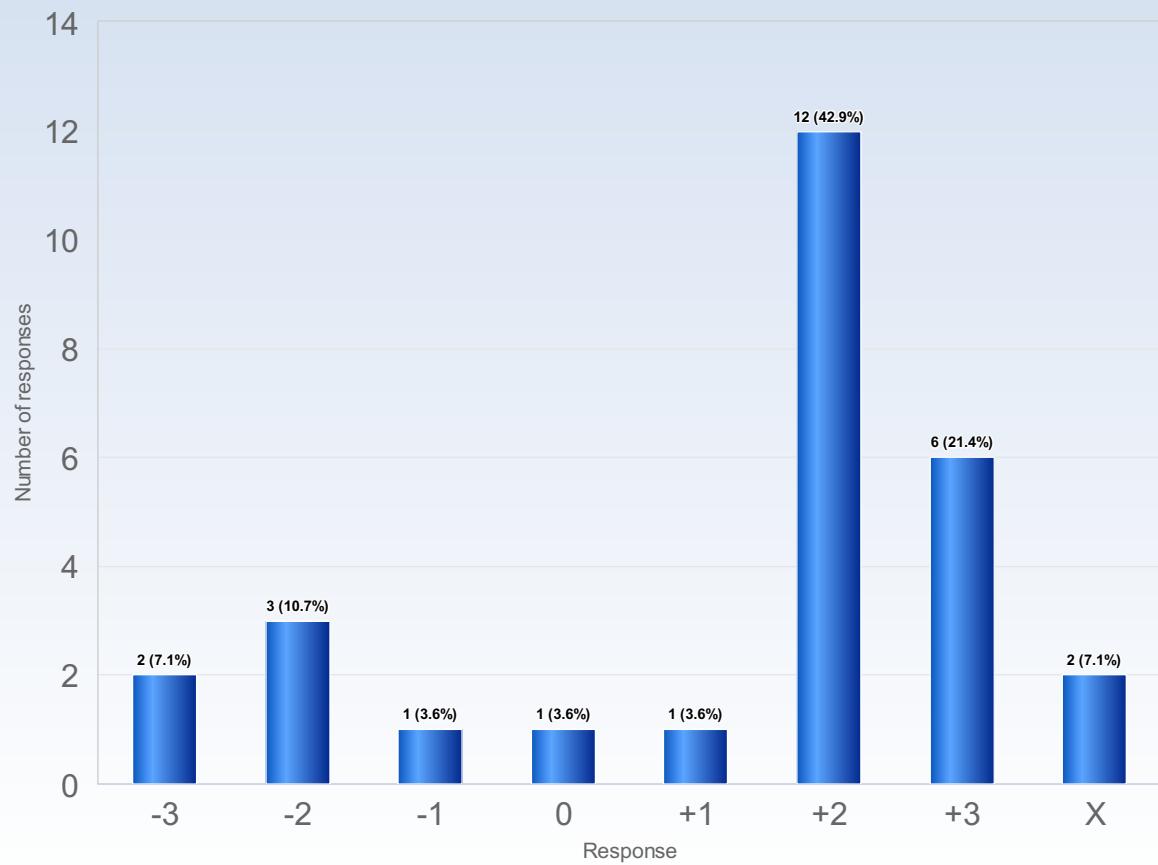
Comments (My response was: -3)

I don't think this course let a lot of space to trying out our own ideas as I didn't feel that I understood enough to do so. Also I thought I didn't have a general idea of the subject.

4. The course was challenging in a stimulating way



5. I felt togetherness with others on the course

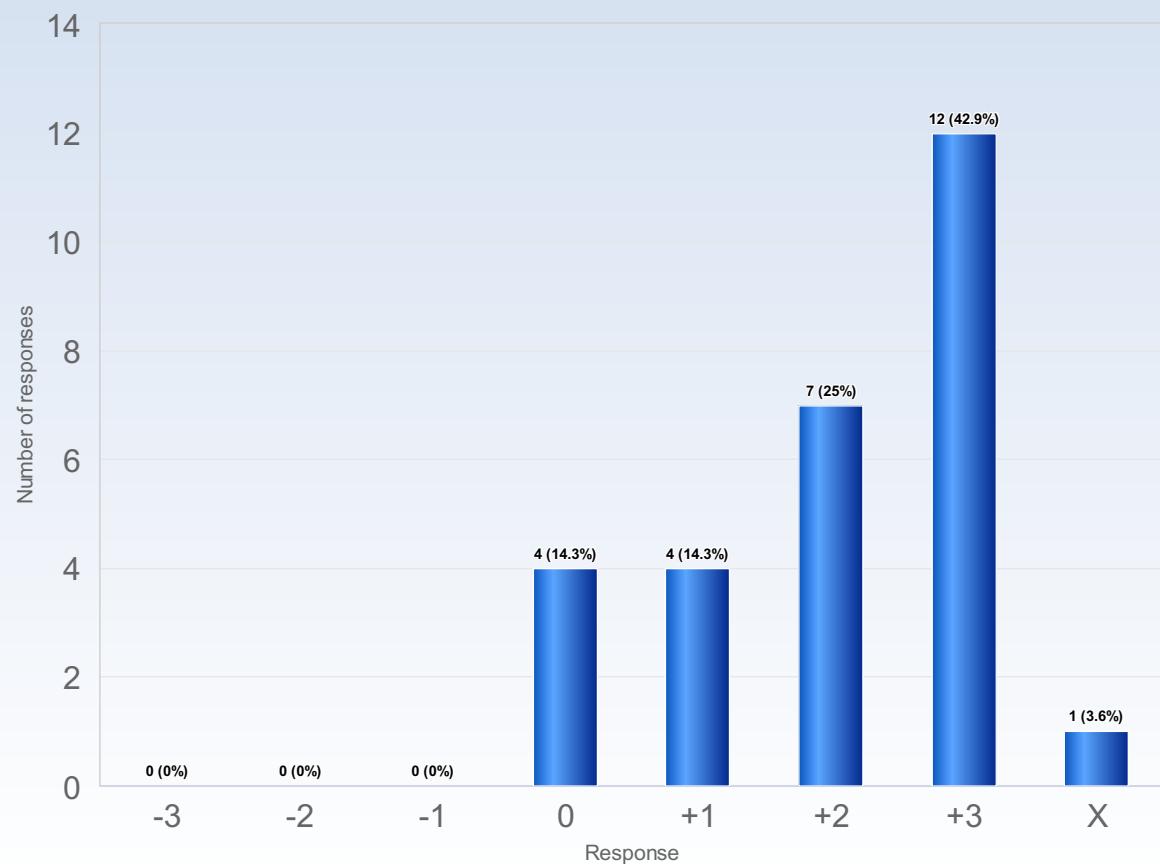


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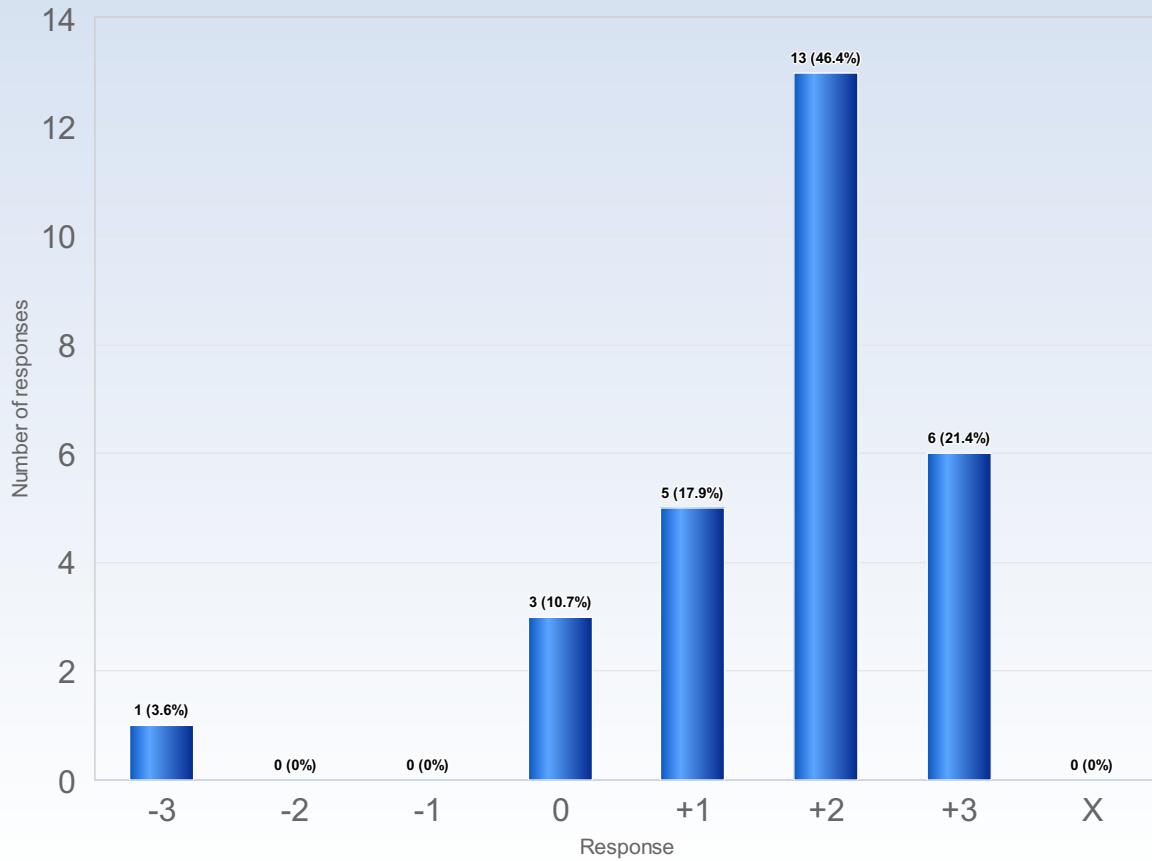
Comments (My response was: +2)

I did thanks to the random group tutorial which allow to meet and work with people and understand their way of reasoning. I think it was good!
I also liked that the group's were random.

6. The atmosphere on the course was open and inclusive



7. The intended learning outcomes helped me to understand what I was expected to achieve

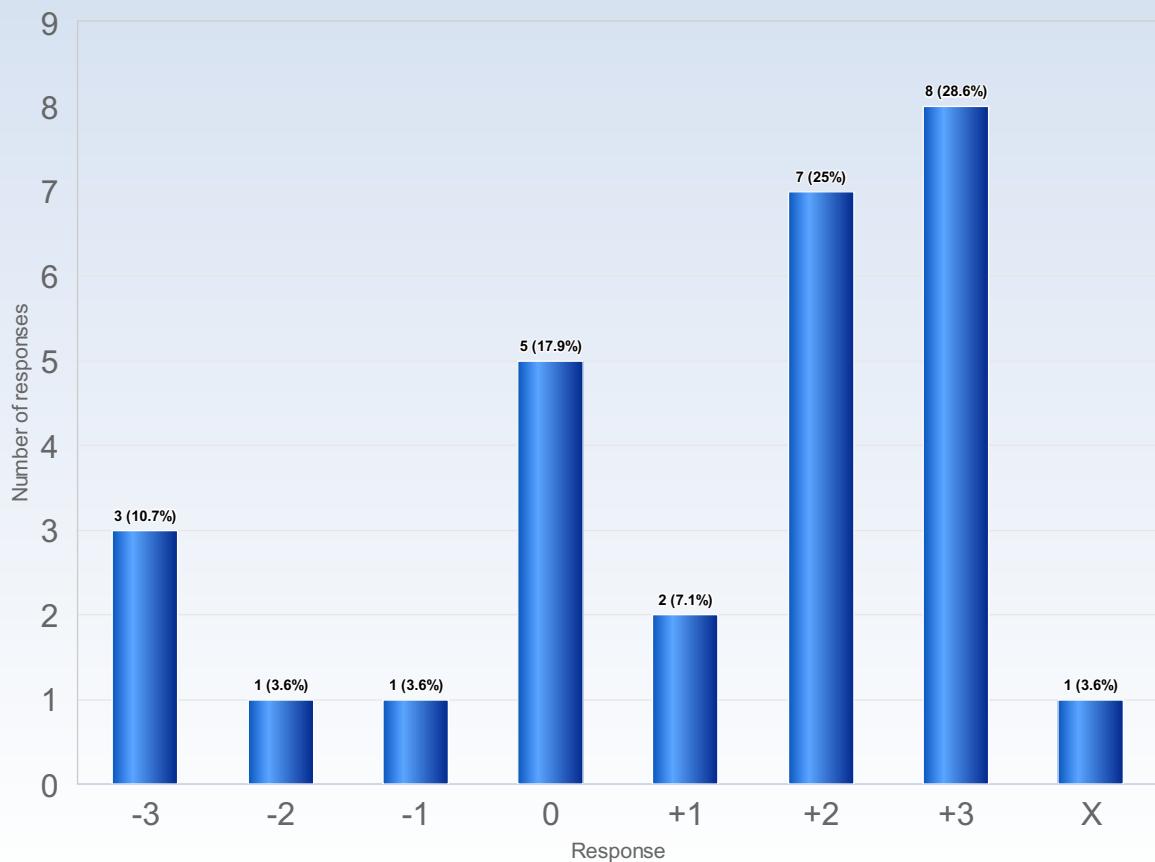


Comments

Comments (My response was: +1)

I think the learning outcomes are clear - what confused me at first was that I leaked prerequisites in the field of signal and electric circuits: it took time for me to understand what we were studying (sequences of numbers or wave functions etc.) I also needed clarification during the projects and how deep we had to investigate for every question, what we were supposed to do and what tools we were supposed to use.

8. The course was organized in a way that supported my learning

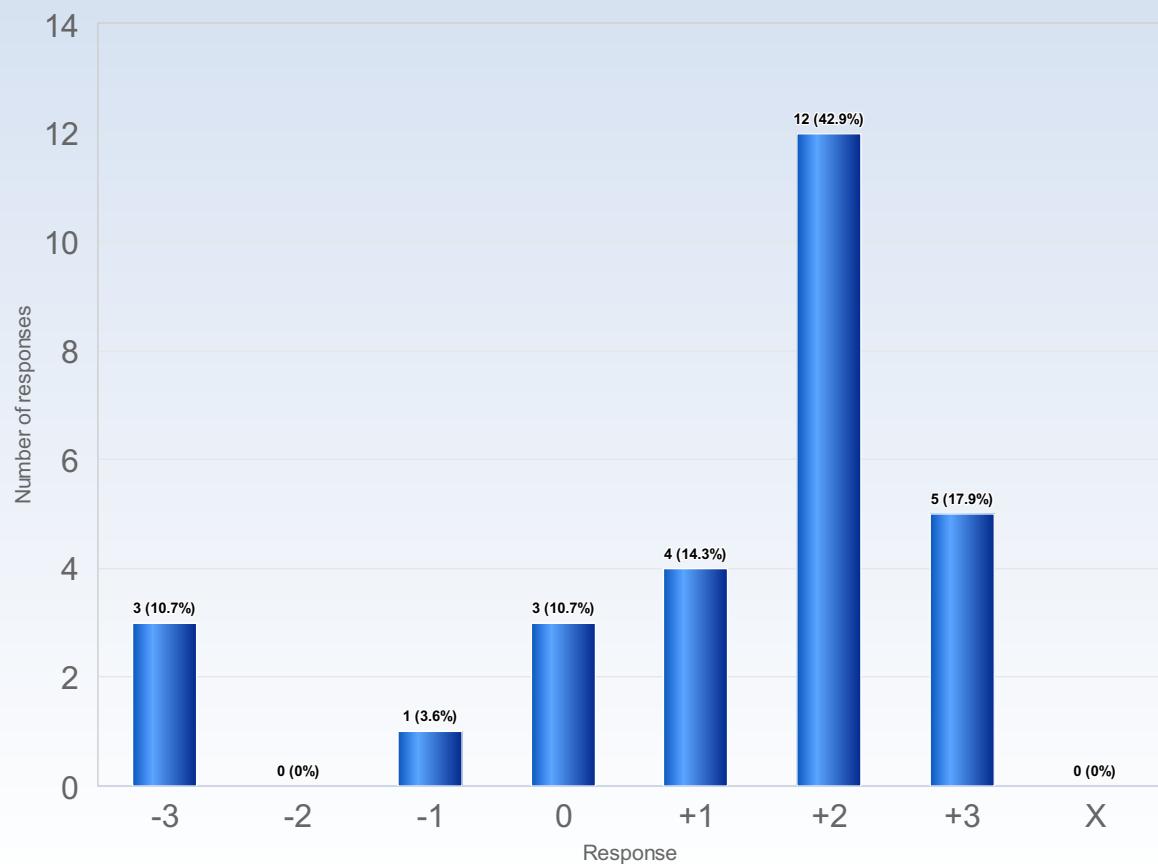


Comments

Comments (My response was: 0)

I just wished that the tutorials and lectures had been more in sync

9. I understood what the teachers were talking about

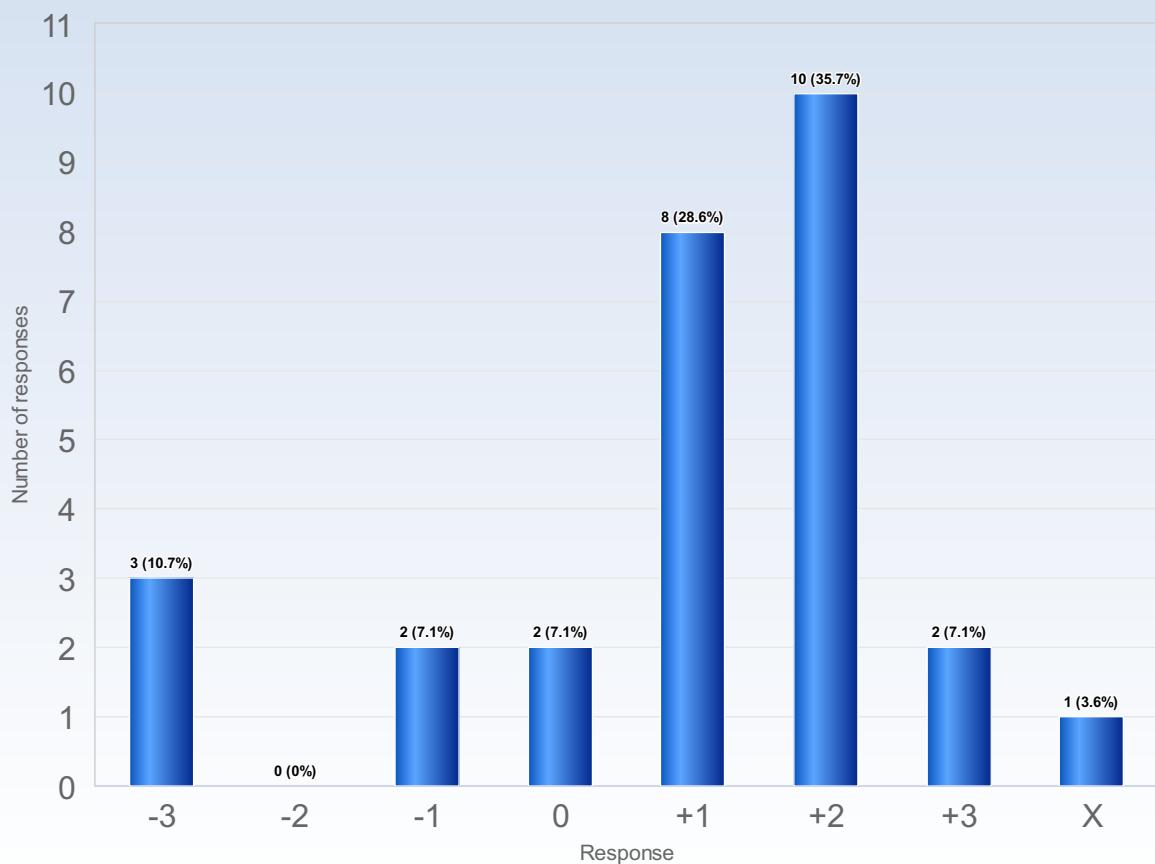


Comments

Comments (My response was: 0)

The reading assignments made the courses if the week clear. However I think the course lacked an overview of the using of signals so we can understand fully what it is how it is used and what is the link with what we do.

10. I was able to learn from concrete examples that I could relate to

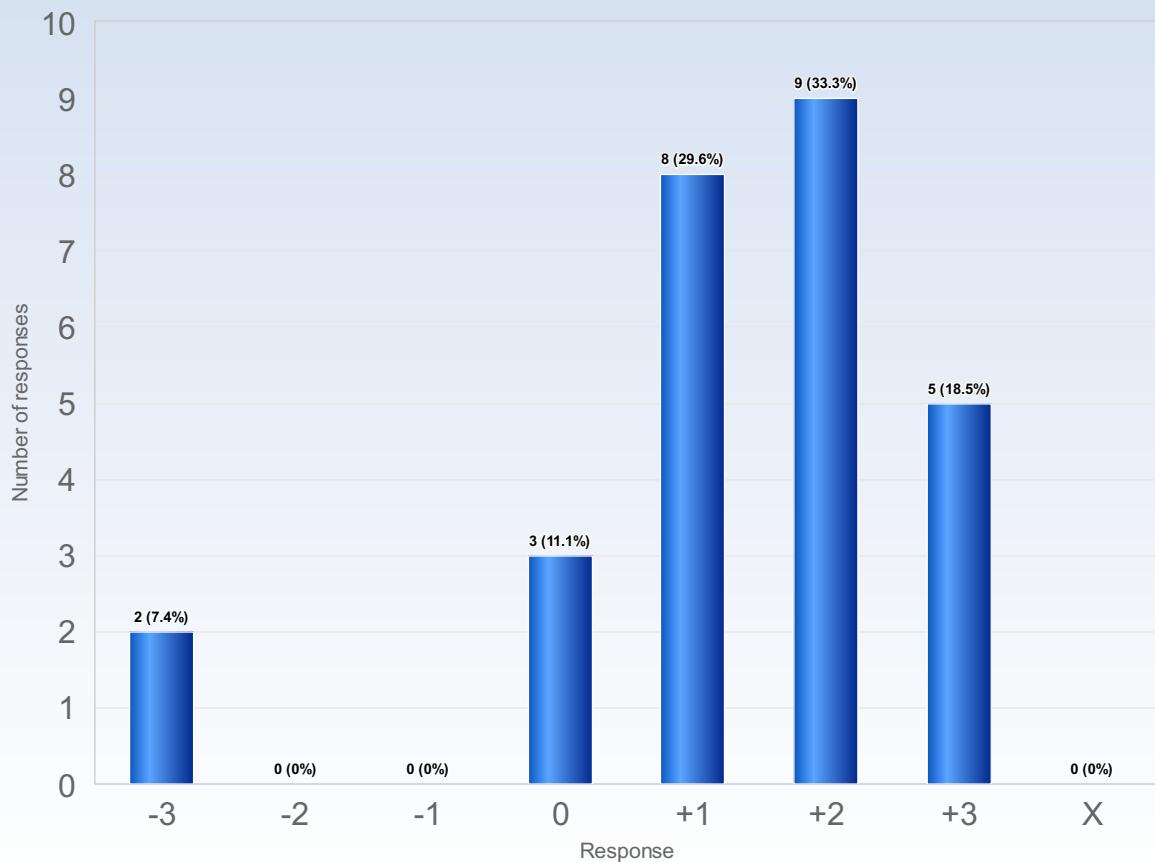


Comments

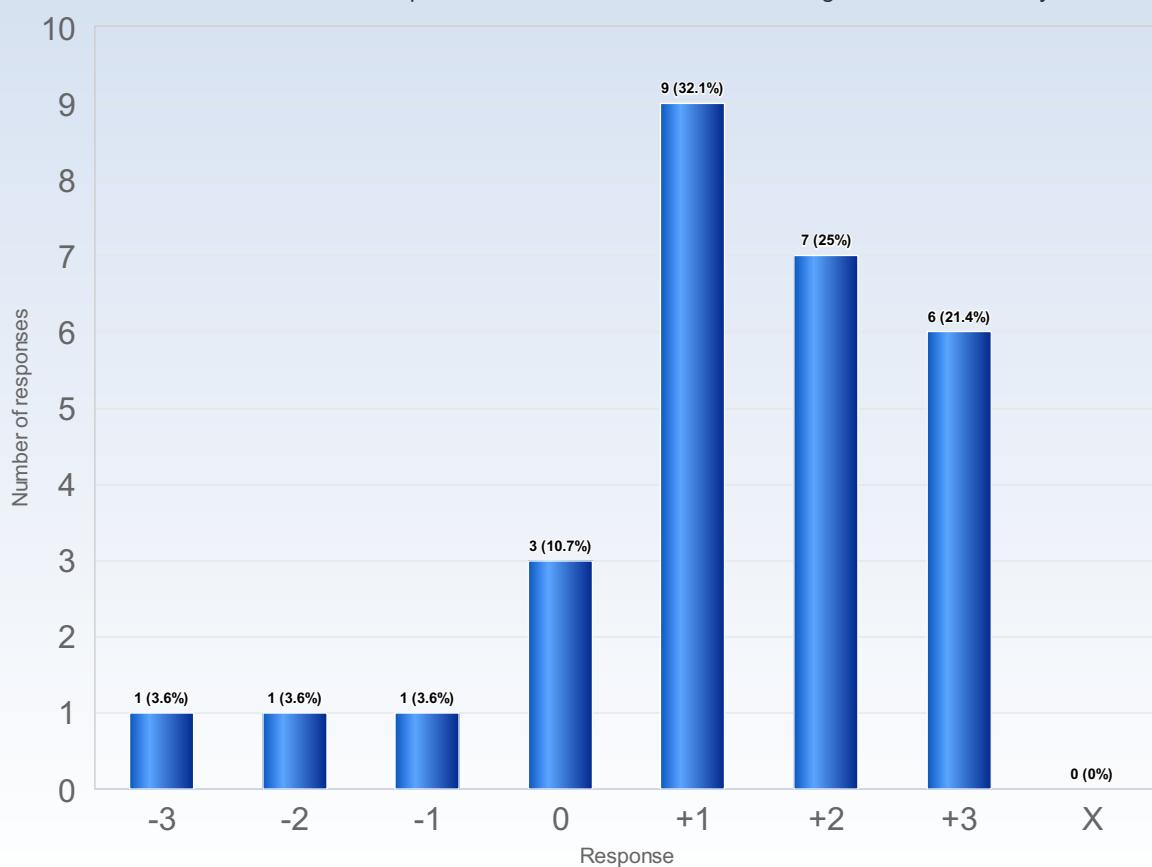
Comments (My response was: -3)

The course is too abstract there where no concrete "real world" example

11. Understanding of key concepts had high priority



12. The course activities helped me to achieve the intended learning outcomes efficiently

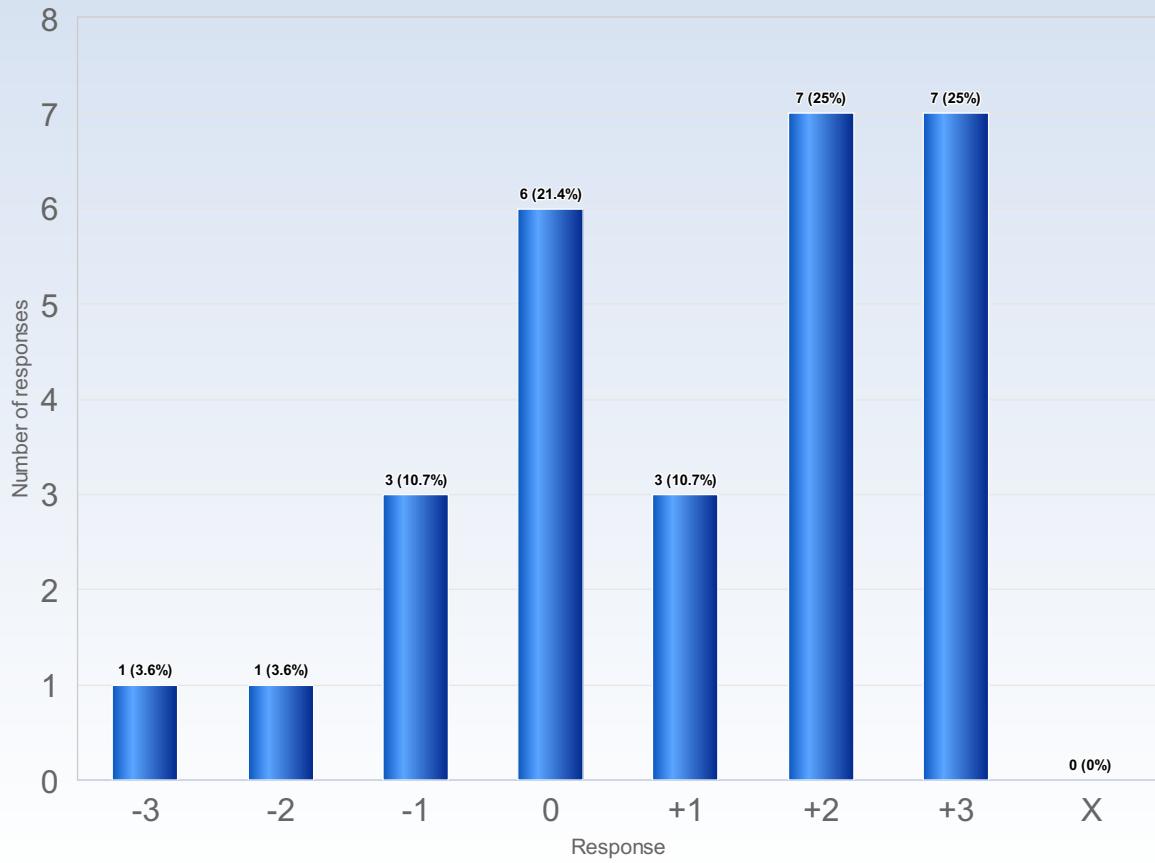


Comments

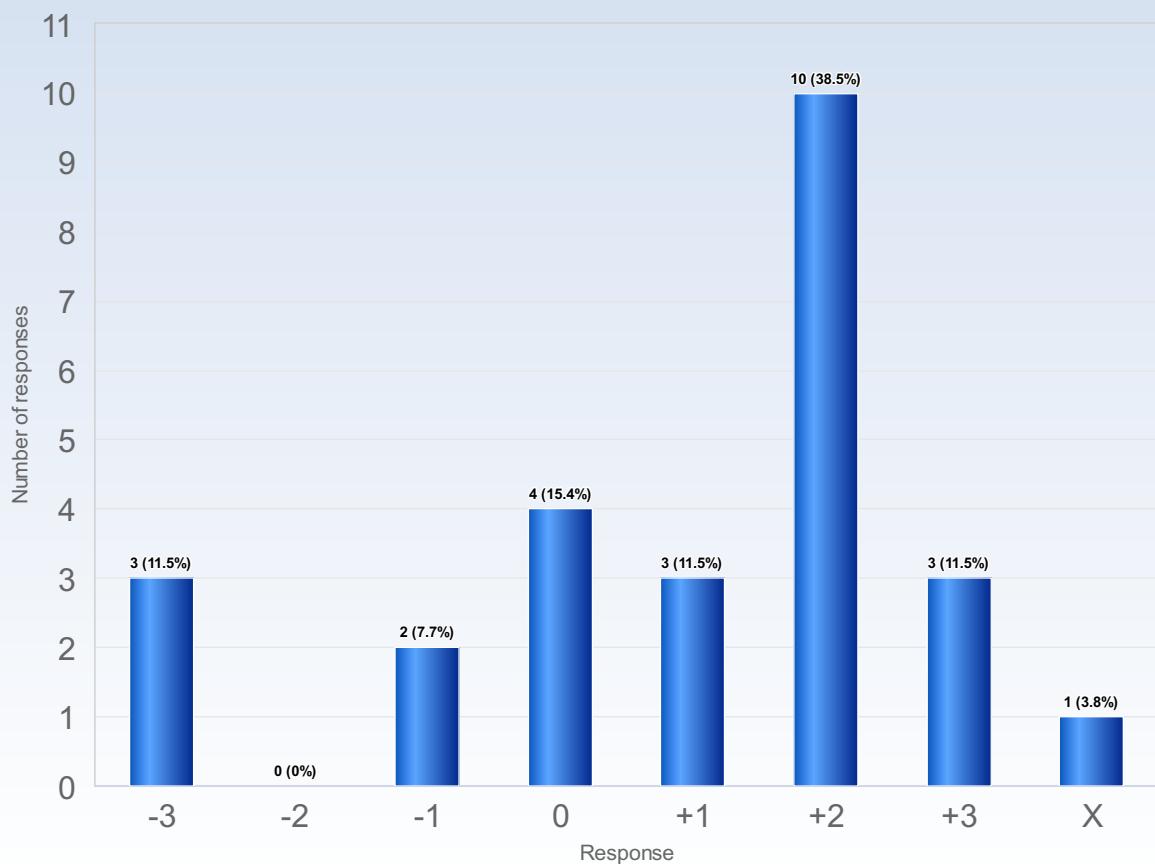
(My response was: +1)

The tutorials and projects were good at helping me understand the course material, however I wouldn't say that they did so efficiently since there was a delay what the tutorials were about and what we saw in the course

13. I understood what I was expected to learn in order to obtain a certain grade



14. I received regular feedback that helped me to see my progress

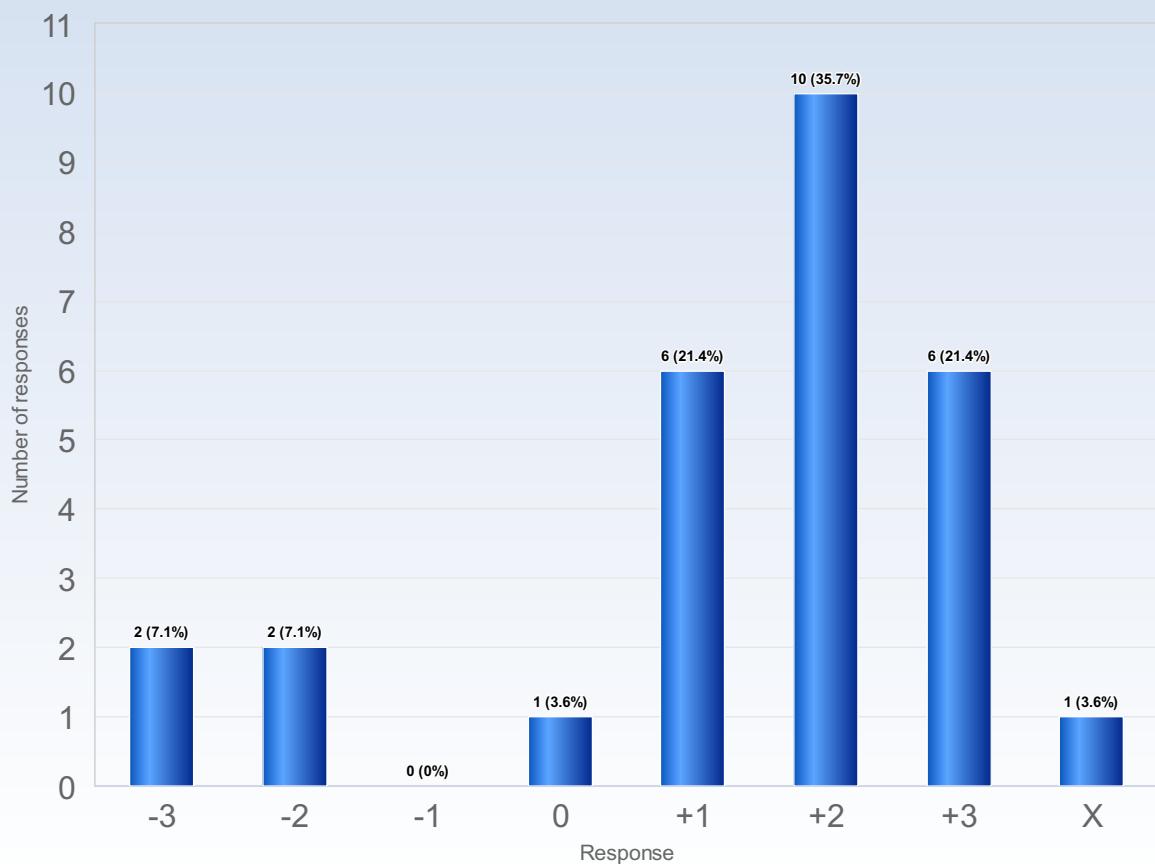


Comments

Comments (My response was: -3)

I thought the assistant were not really pedagogic during the tutorials - they explained a few things but were mostly pushing you in order to make you finish the exercises in time. I thought it was hard to ask them question.. Also we didn't receive correction of the exercises. The project correction was sometimes not very clear either.

15. I could practice and receive feedback without being graded

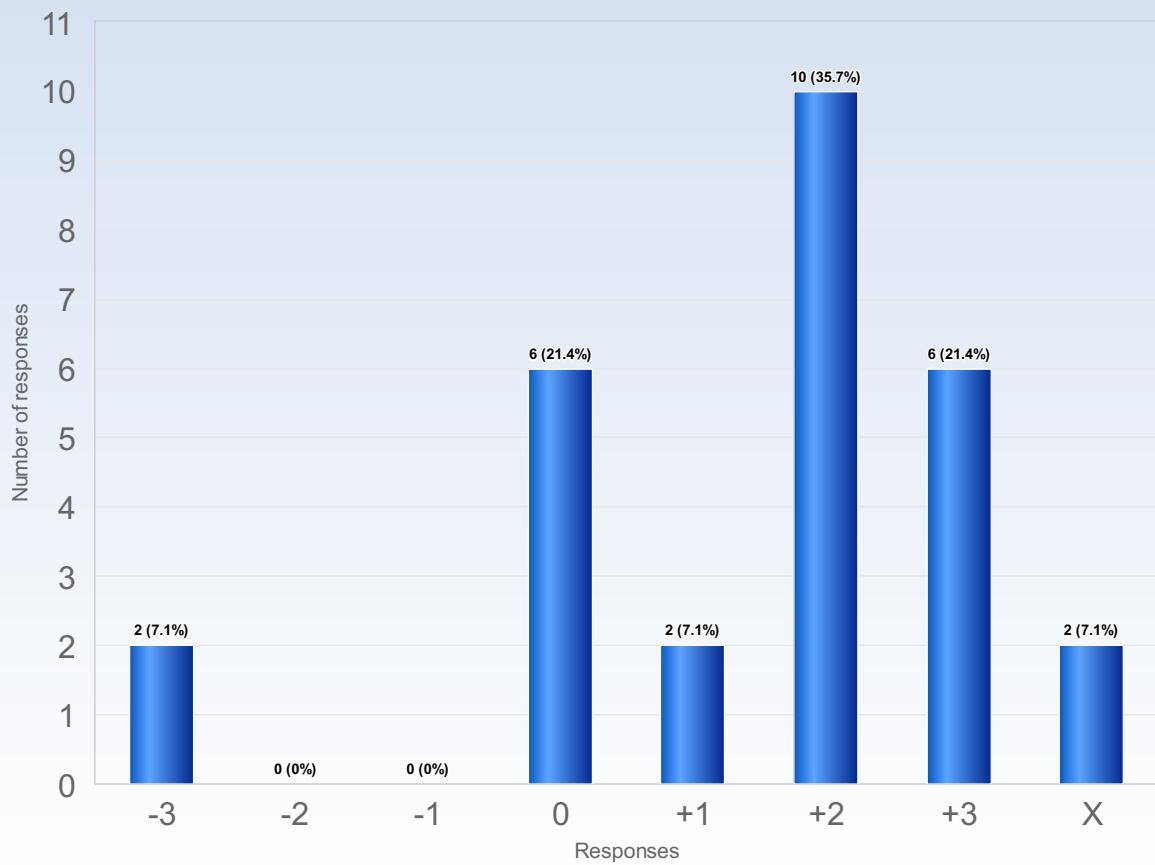


Comments

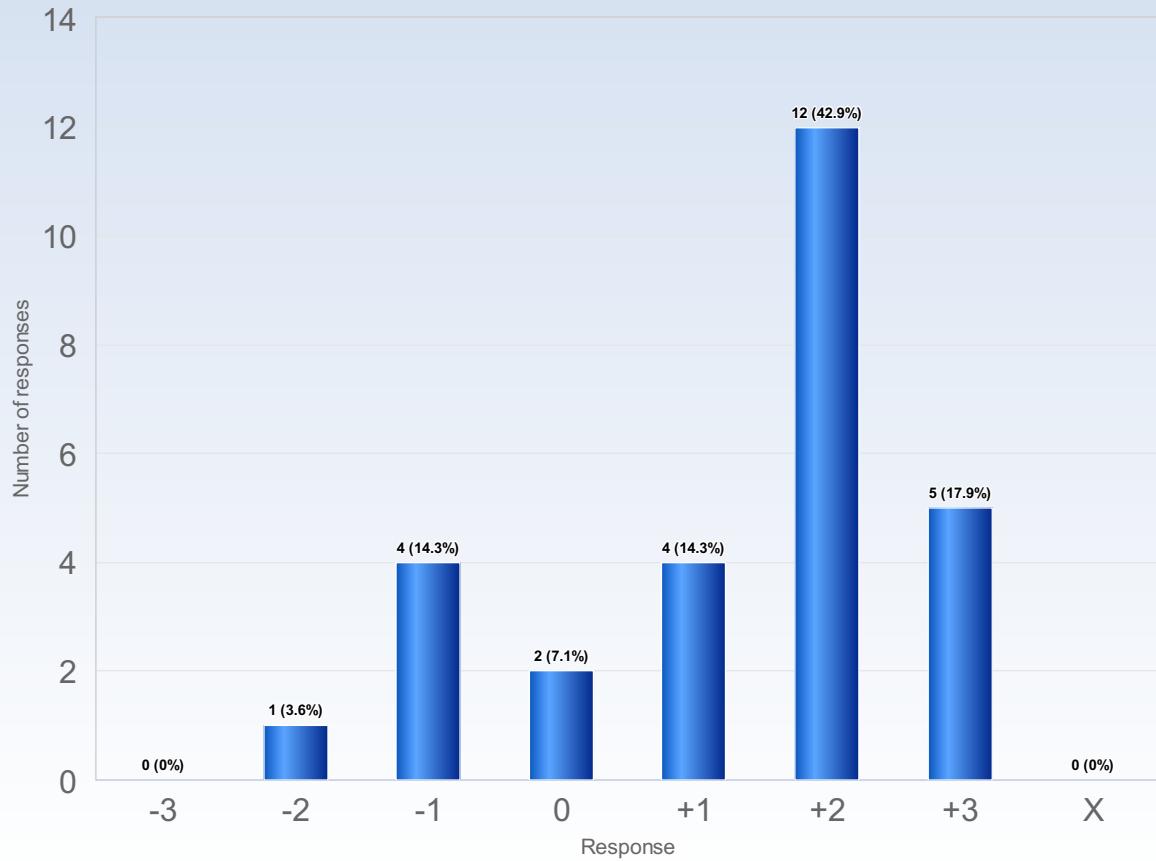
Comments (My response was: -3)

I think there should be a feedback for the redaction of exercises

16. The assessment on the course was fair and honest



17. My background knowledge was sufficient to follow the course



Comments

Comments (My response was: -1)

My background was sufficient to understand the statistical and mathematical properties but not to analyse an electrical circuit and deduce anything from it, its shape or component. Also I didn't understand what exactly was a signal as it was the first time I studied it.

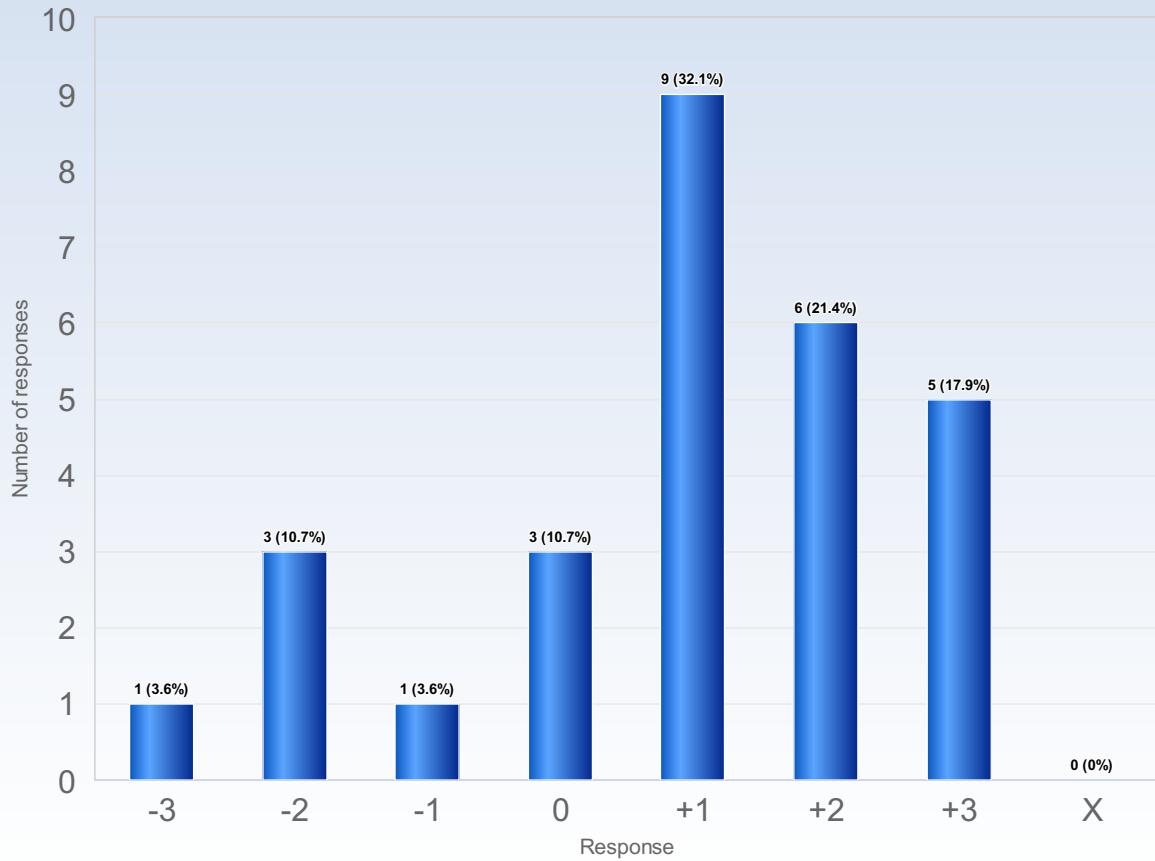
Comments (My response was: +1)

Even though i didn't had all the requirements i never felt like i was missing something

Comments (My response was: +3)

Having done a signals & systems course before and a probability course too was sufficient.

18. I regularly spent time to reflect on what I learned



Comments

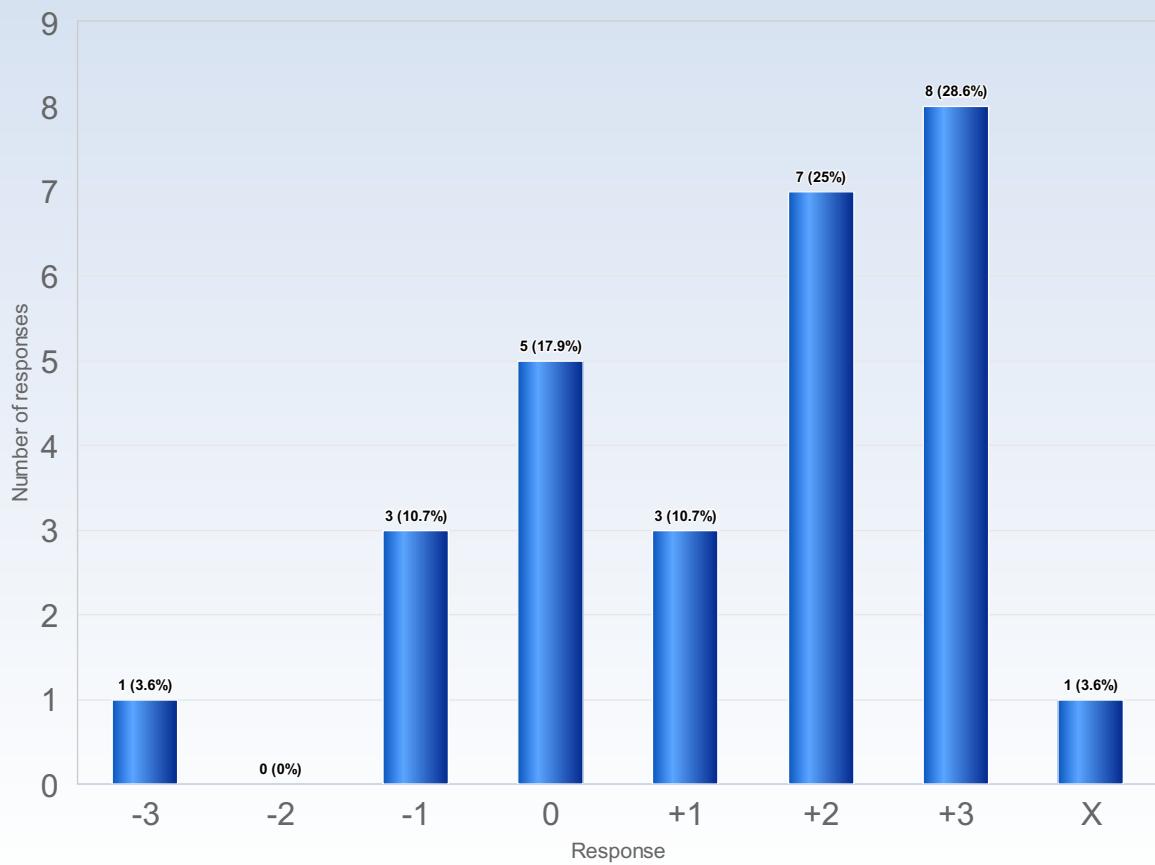
Comments (My response was: -2)

I think I could have spent time reflecting on the subject of the course but I didn't because I did not have enough knowledge and comprehension on the subject. I still don't feel that I really understand it, like I learned about a bit of the subject that is not enough to have a proper refelxiom about it.

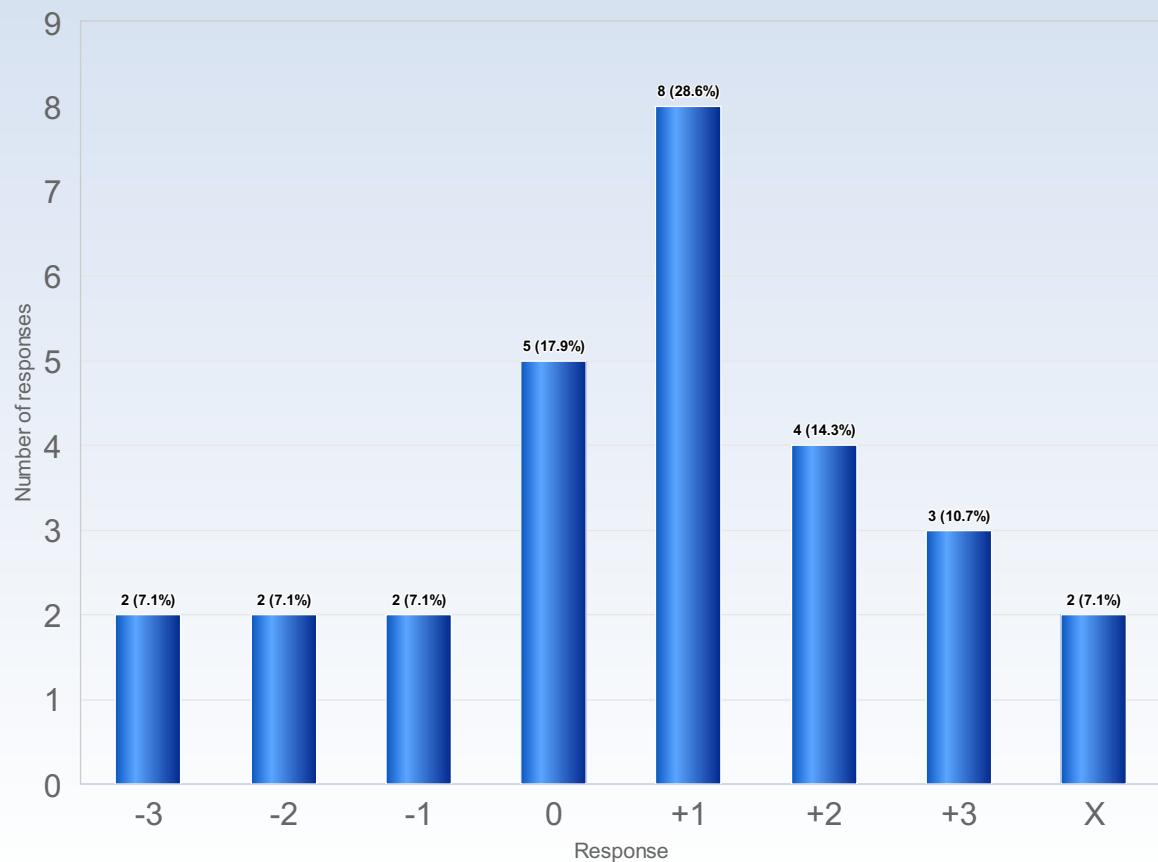
Comments (My response was: +3)

The tutorials and reading assignments worked well to motivate me to go back through the course when something was unclear to me.

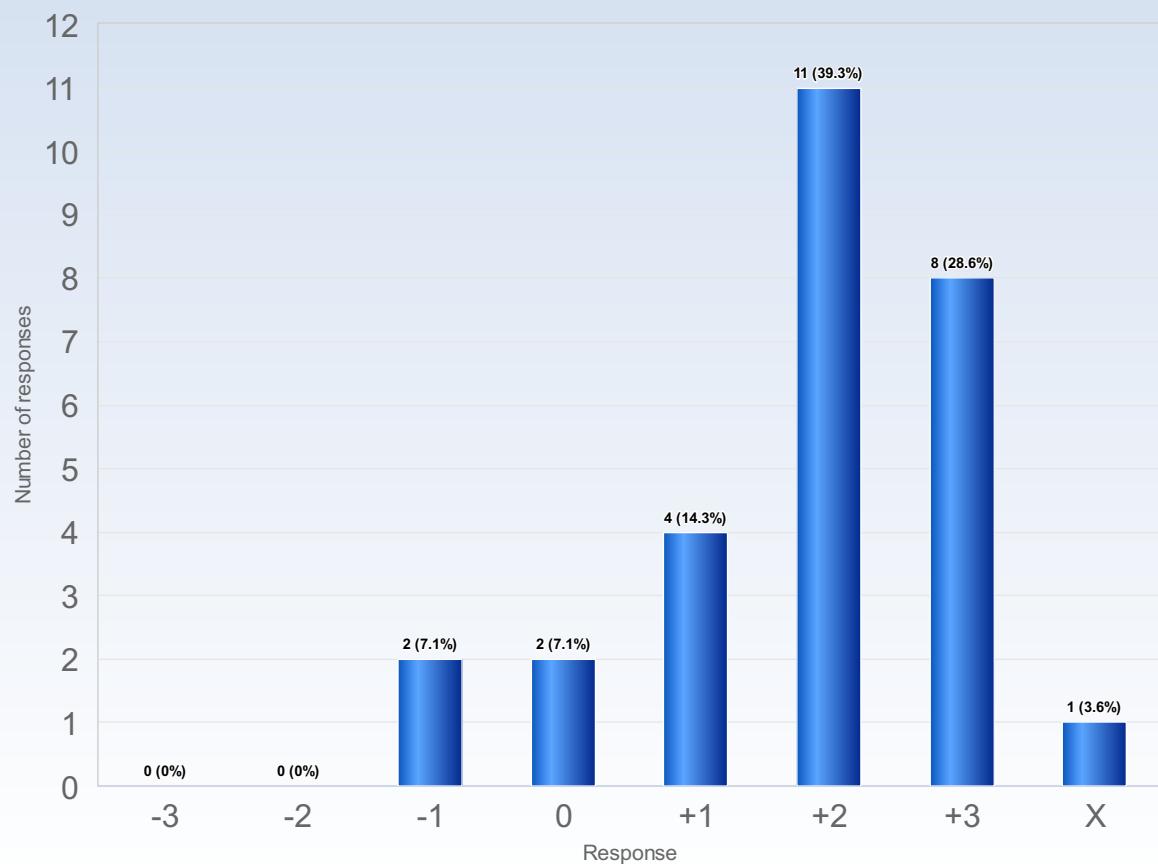
19. The course activities enabled me to learn in different ways



20. I had opportunities to influence the course activities



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



Comments

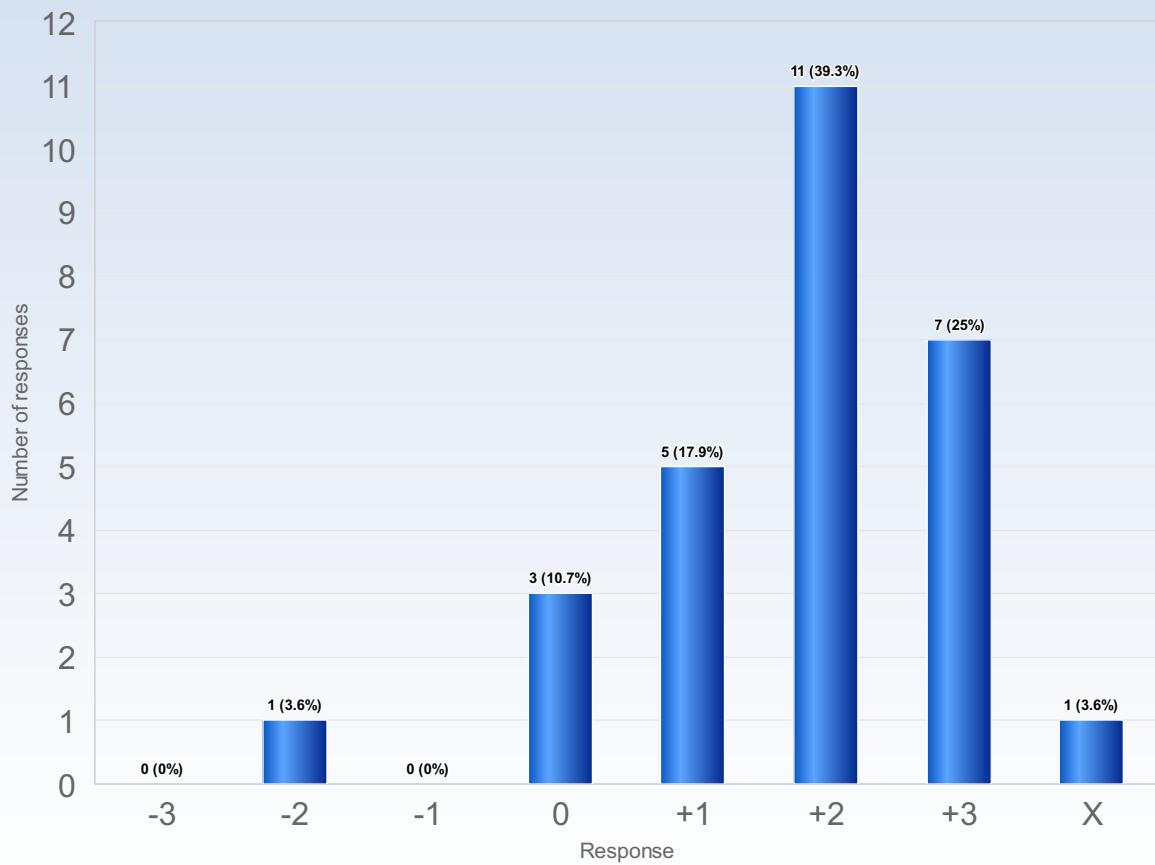
Comments (My response was: -1)

The group tutorial seems like a good idea but at the end the Chinese student work together and the other work together without always forming one united group

Comments (My response was: +3)

Some students don't get that the tutorials are meant to discuss, so maybe there's something you can do to promote that.

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



Comments

Comments (My response was: -2)
The TA were unclear most of the time