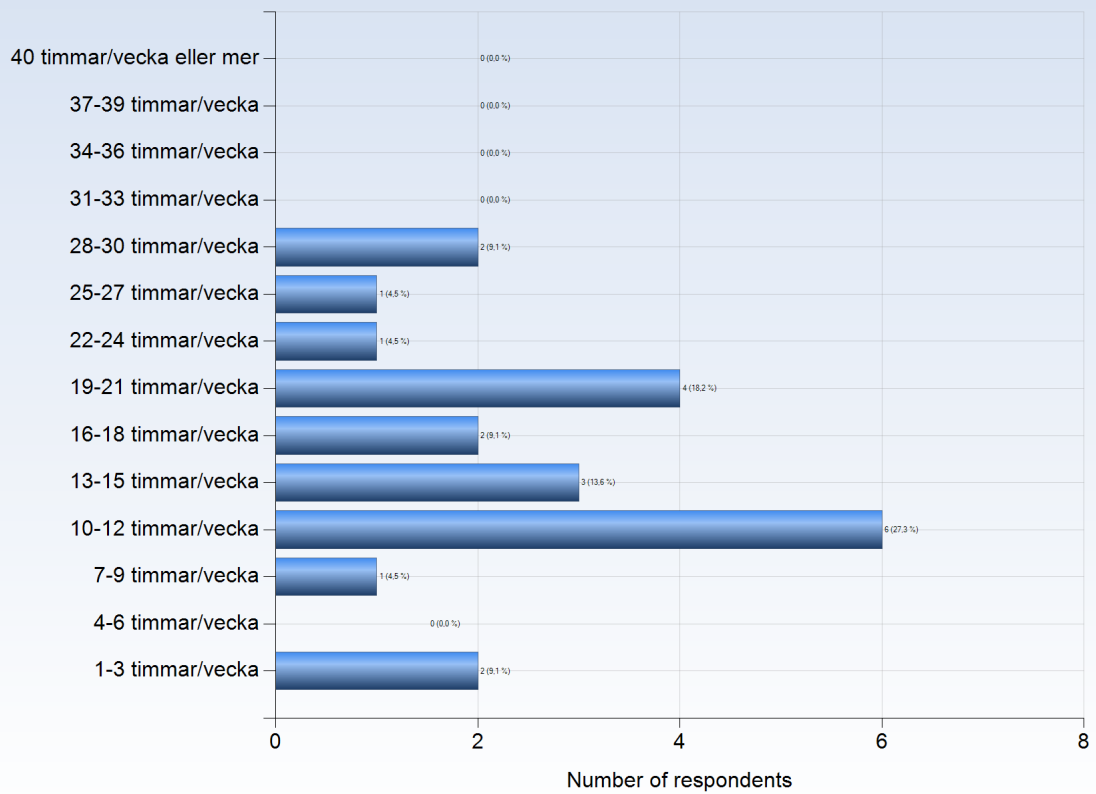Antal respondenter: 32
Antal svar: 22
Svarsfrekvens: 68,75 %

ESTIMATED WORKLOAD

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

Kategori	Antal respondenter
40 timmar/vecka eller mer	0 (0,0 %)
37-39 timmar/vecka	0 (0,0 %)
34-36 timmar/vecka	0 (0,0 %)
31-33 timmar/vecka	0 (0,0 %)
28-30 timmar/vecka	2 (9,1 %)
25-27 timmar/vecka	1 (4,5 %)
22-24 timmar/vecka	1 (4,5 %)
19-21 timmar/vecka	4 (18,2 %)
16-18 timmar/vecka	2 (9,1 %)
13-15 timmar/vecka	3 (13,6 %)
10-12 timmar/vecka	6 (27,3 %)
7-9 timmar/vecka	1 (4,5 %)
4-6 timmar/vecka	0 (0,0 %)
1-3 timmar/vecka	2 (9,1 %)

Number of respondents

Comments

Comments (I worked: 10-12 timmar/vecka)
Definitely put more hours in during P1.

Comments (I worked: 13-15 timmar/vecka)
Extremt svårt att uppskatta, men en stor del av min studietid lades på denna kurs.
Varierande mellan 2-5 timmar de sista veckorna till kanske 25-30 timmar de tyngsta veckorna.

Comments (I worked: 19-21 timmar/vecka)
It varies very much from week to week.

Comments (I worked: 22-24 timmar/vecka)
Very uncertain number, and varying greatly depending on workloads in other courses.

Comments (I worked: 28-30 timmar/vecka)
More work than the credits are worth but I understand that is the point of this course.

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 three respondents in order to appear in a diagram.

Average response to LEQ statements - all respondents
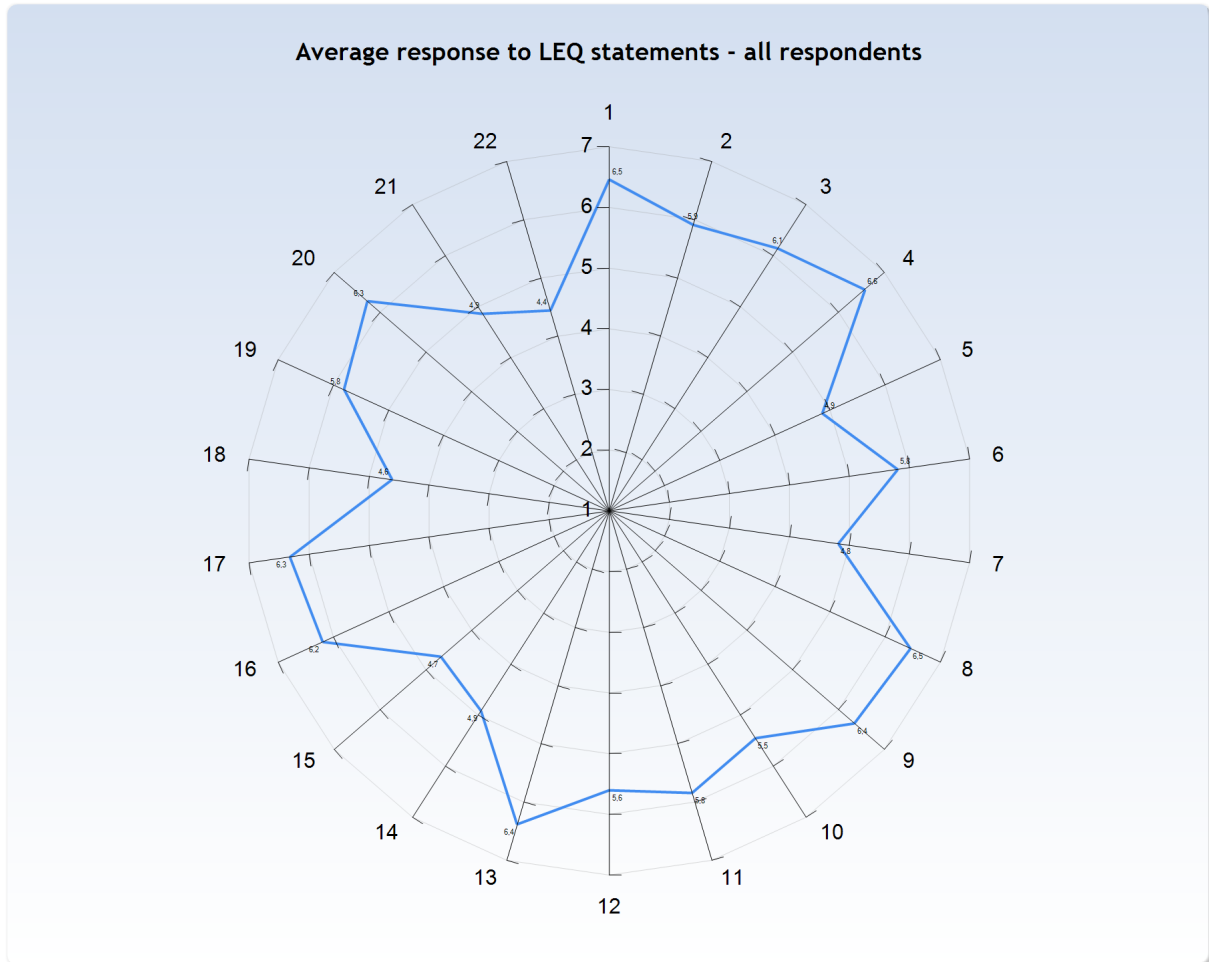
KTH Learning Experience Questionnaire v3.1.1

Meaningfulness - emotional level

Stimulating tasks
1. I worked with interesting issues

Exploration and own experience
2. I explored parts of the subject on my own
3. I could learn by trying out my own ideas

Challenge
4. The course was challenging in a stimulating way

Belonging
5. I felt togetherness with other course participants
6. The atmosphere in the course was open and inclusive

Comprehensibility - cognitive level

Clear goals and organization
7. The learning objectives helped me understand what I was expected to achieve
8. I understood how the course was organized and what I was expected to do

Understanding of subject matter
9. I understood what the teachers were talking about
10. I could learn from concrete examples that I was able to relate to
11. Understanding of key concepts was given high priority

Constructive alignment
12. The course activities helped me to reach the learning objectives efficiently
13. I understood what I was expected to learn in order to get a particular grade

Feedback and security
14. I regularly received feedback that helped me see my progress
15. I could practice and receive feedback without any grading being done
16. The assessment on the course was fair and honest

Manageability - instrumental level

Sufficient background knowledge
17. My background knowledge was sufficient to follow the course

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

Variation and choices
19. I could learn in a way that suited me
20. I had opportunities to choose what I was going to do

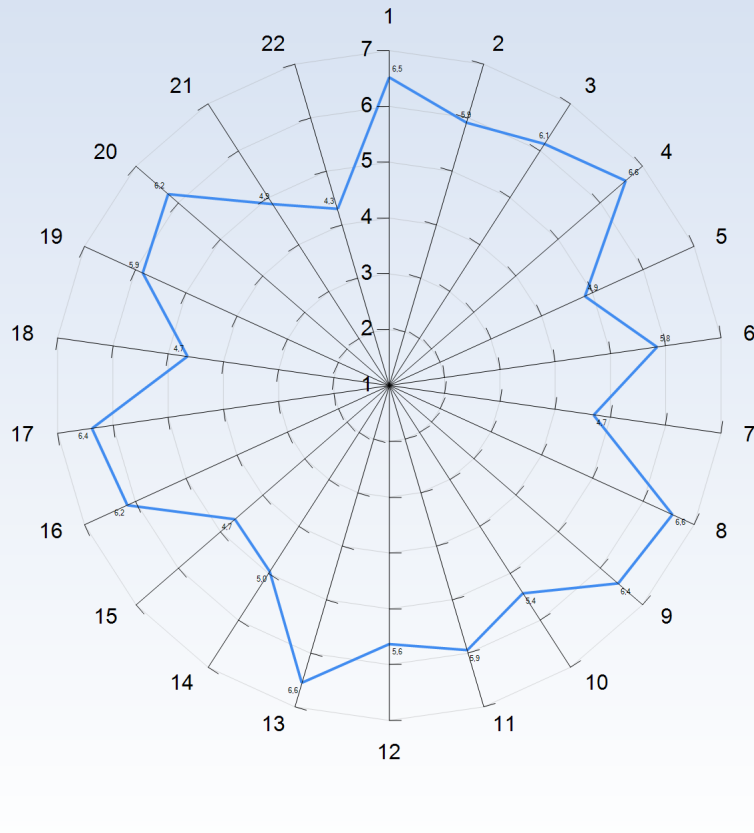*Collaboration*
21. I could learn by collaborating and discussing with others

Support
22. I could get support if I needed it
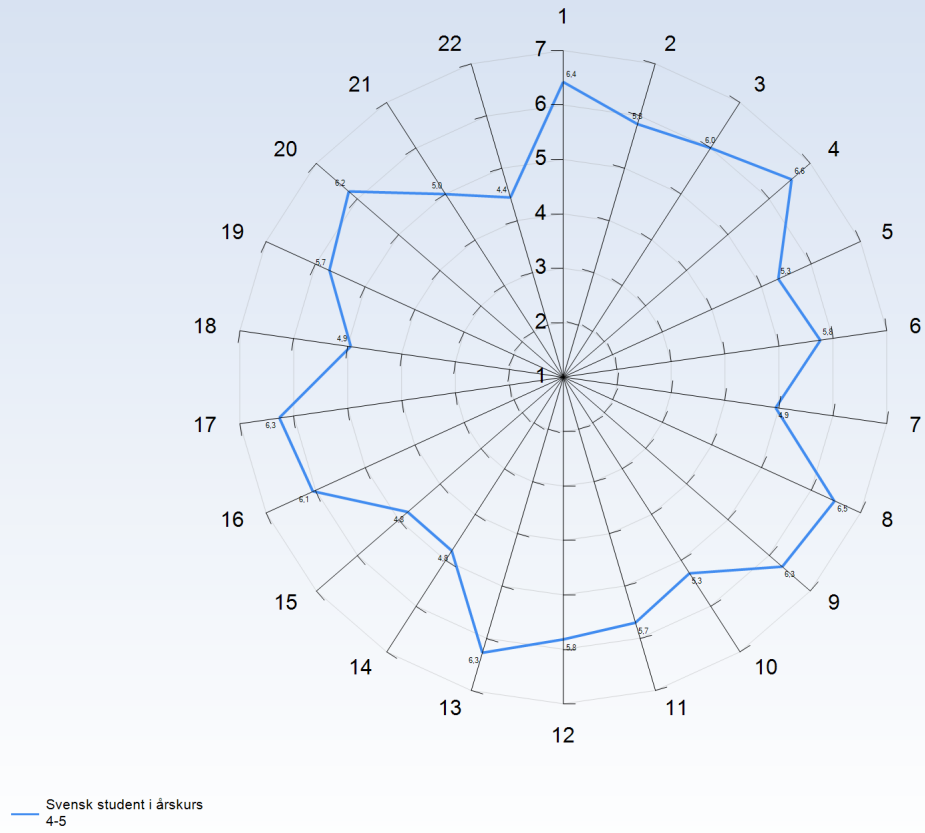
Average response to LEQ statements - per gender

Man

Comments

Average response to LEQ statements - per type of student

Svensk student i årskurs 4-5

Comments

Comments (I am: Svensk student i årskurs 4-5)

Great Course!

GENERAL QUESTIONS

What was the best aspect of the course?

What was the best aspect of the course? (I worked: 7-9 timmar/vecka)

Probably the homework. It was challenging and made me work with the course material on a regular basis.

What was the best aspect of the course? (I worked: 10-12 timmar/vecka)

Fun problems mostly

I think the problem solving in the home problems was quite stimulating and interesting, and the topics brought up were interesting as well. But really, all of the moments in the course were fun and interesting.

The regular schedule was really nice as well.

The freedom to choose what to do (and how much to do) based on your own ambitions and time

What was the best aspect of the course? (I worked: 13-15 timmar/vecka)

Upplägget och den stora variationen på problemen som skulle lösas. Särskilt med tanke på hur olik kursen är övriga programmeringskurser vid KTH.

Opportunity for lots of programming experience.

100% teknisk problemlösning kursen igenom, väldigt roligt.

What was the best aspect of the course? (I worked: 16-18 timmar/vecka)

The variety of problems. The ability to choose what kind of problems one wants to solve. The lectures were great. Very clear explanations. The fact that such a course exists is amazing, more of it!

Välstrukturerad kurs med nytt ämne varje vecka där man fick lära sig teorin och sedan applicera det i praktiken. Mycket lärorikt tack vare detta upplägg och alla uppgifter. Även bra att man ibland behövde använda sig av algoritmlabbarna för olika problem.

What was the best aspect of the course? (I worked: 19-21 timmar/vecka)

That it was well organized and you always knew what was expected of you.

The different subjects explored during the course was really interesting.
The lectures were very good.

Free to pick the assignments I wanted.

What was the best aspect of the course? (I worked: 22-24 timmar/vecka)

It was nice that the course made us write so many small and diverse programs, instead of assigning a huge long-term project like many other courses do. I feel much more well-versed in programming now than I did before.

What was the best aspect of the course? (I worked: 25-27 timmar/vecka)

To be given a smorgasbord of different problems to solve.

What was the best aspect of the course? (I worked: 28-30 timmar/vecka)

The problem sessions were great!

What would you suggest to improve?

What would you suggest to improve? (I worked: 7-9 timmar/vecka)

Not much. A few of the homework problems weren't very good (one which should have been difficult to solve with proper test data, but became trivial because the test data was bad, and one with an almost incomprehensible problem statement), but I think the teacher is already aware of this and will avoid those problems in the future. However, most of the 76 homework problems were good.

What would you suggest to improve? (I worked: 10-12 timmar/vecka)

The course does not have a fair time/hp distribution. If you want a high grade you will have to spend a lot more than 9hp, if you are fine with a low grade it's way to easy. Raise the requiremtents for E and lower them for A! You could have like 12 hard assignments for a, 9 for B 6 for C 3 for D, and then lower total instead.

I think it's rather good as is. Maybe the pseudocode in the (old) lecture notes could be looked over and corrected, since some of it seemed to be rather broken (e.g. referring to variables that haven't been defined), but the lecture notes are kinda provided in an "as is" fashion either way.

If you are to get an A in this course you probably have to spend a lot more than 9hp worth of your time and if you aim for an E, its much less than 9 hp. Maybe split the course into 2 courses where one course is the "base course" for E-D and one is an extension course for higher grades.

What would you suggest to improve? (I worked: 13-15 timmar/vecka)

Har inget förslag på någon konkret förbättring vad gäller innehåll eller struktur.

Use modern teaching. Holding a lecture a week and letting everyone do whatever is unnecessarily inefficient. Seriously, read any empirical study on learning/memory/expertise/whatever and incorporate it little by little. There are some good ones in science magazine, such as "Improved Learning in a Large-Enrollment Physics Class" and "Retrieval Practice Produces More Learning than Elaborative Studying with Concept Mapping"

Något enklare uppgifter på problemsessionerna möjligtvis. Som det var nu lyckades kanske 3 personer lösa alla uppgifter, sen hade resten löst samma 2-3 stycken. Nivån på den näst sista problemsessionen tyckte jag var bra dock, gick aldrig på den sista.

What would you suggest to improve? (I worked: 16-18 timmar/vecka)

More interactions with other students. In the current setup it felt a lot like everyone was on his or her own. It was clear that some students had a very tight grasp on these types of problems. It would have been nice to learn from them too. Course material in English (again, sorry, if I could only name one thing that could be improved it would be that).

Vet inte. Mer individuell återkoppling om det vore möjligt? Har inget konkret förslag. Annars är allt väldigt bra.

What would you suggest to improve? (I worked: 19-21 timmar/vecka)

There is a huge difference between Java and C++, maybe it can be fixed by adjusting the time limits or coach people to learn and practice C++?

Relate more to real world problems. Kattis problems are what they are, many times they are so strange and weird that I never see any real world application.

What would you suggest to improve? (I worked: 22-24 timmar/vecka)

Please rearrange the timing between lectures and lab deadlines! As it was now, most deadlines were the very day after the lectures had mentioned the concepts in question, meaning that we had to look up things on our own and then hear it again in the lecture, instead of receiving the basics in a lecture with enough time to spare to then explore further on our own and implement the necessary algorithms. And if this 'lecture on subject last day before deadline' was an intentional way of achieving the 'under pressure' part, please reconsider.

So, please adjust so that lectures happen one week earlier compared to lab deadlines next time!

What would you suggest to improve? (I worked: 25-27 timmar/vecka)

Make this course mandatory for computer science students.

What advice would you like to give to future course participants?

What advice would you like to give to future course participants? (I worked: 7-9 timmar/vecka)

Do the homework, it's fun.

What advice would you like to give to future course participants? (I worked: 10-12 timmar/vecka)

Don't aim for a high grade, you will disappoint yourself

Start early, keep going all the way through. Go to bed in time on Tuesdays so that you don't accidentally sleep through the presentation & lecture. Those 'x'es are important if you want to go for a high grade.

Do as many homeworks as you can at the start of the course. This will offer you more freedom later.

What advice would you like to give to future course participants? (I worked: 13-15 timmar/vecka)

Försök att göra labbuppgifterna innan motsvarande hemtal för att kunna återanvända algoritmerna. Undvik att ta tre andra tunga kurser samtidigt.

The course is just getting credits for competitive programming. Nothing more. Nothing less. Oh, and you need about 1-2 full days a week to get E if you have no background in competitive programming.

Kolla på statistiken i Kattis över submission ratio och user ratio för de olika problemen, det ger en väldigt bra hint om problemens svårighetsgrad. Varje vecka brukar det finnas en uppgift som är betydligt enklare än de andra.

What advice would you like to give to future course participants? (I worked: 16-18 timmar/vecka)

Everyone from last years evaluation was 100% right and I should've listened. To summarize: Decide on what grade you want as early as possible! This course takes a significant amount of time & work! Do the labs, they will come in handy! And the most important piece of advice: don't take robotics at the same time, trust me on this! This will prepare your for programming interview questions like no other course at KTH. Have fun!

Bestäm dig tidigt vad du strävar efter för betyg och se till att planera utefter detta. Ju mer tid du lägger ner på kursen desto mer lär du dig. Även de uppgifter du inte löser får du ut mycket av om du sätter dig in i dem och försöker lösa dem före presentationerna. Slutligen är det även betydligt enklare de första veckorna.

What advice would you like to give to future course participants? (I worked: 19-21 timmar/vecka)

Work with the course continuously during the whole course and try to plan ahead

If you're like me, and after 4 years at KTH still start with tasks at the last minute, then this course is great. You will definitely learn not to do that any more.

This course takes time!

The course starts "slow", I advise you to do as many assignments you can the first two weeks and "sign up" for showing the solution. The assignments gets harder for each week.

What advice would you like to give to future course participants? (I worked: 22-24 timmar/vecka)

It is very helpful to implement as many lab assignments as possible, since they cover much of the functionality needed in both homework assignments and live programming sessions. So don't think of them as separate point-awarding work, rather think of them as getting twice the points for the same work only because you started early.

What advice would you like to give to future course participants? (I worked: 25-27 timmar/vecka)

Only read other "hard" courses in parallel if you know that you can manage. Use c++ in order to get reasonable running times.

What advice would you like to give to future course participants? (I worked: 28-30 timmar/vecka)

Decide the first week what grade you would like and aim for that grade from the start. It is hard to later on decide that you would like a higher grade.

Try to take advantage of the weeks where there are easier problems and build yourself a buffer for later.

Is there anything else you would like to add?

Is there anything else you would like to add? (I worked: 7-9 timmar/vecka)
No.

Is there anything else you would like to add? (I worked: 10-12 timmar/vecka)
I had a lot of fun! I also think it's practically useful because it gives a more problem-solving focus than other programming courses do: "here's a problem--it's up to you to twist it to fit an algorithm you know. We won't even spell out what algorithm to use (though it's probably one of the ones mentioned last lecture)". This unlike the problems in e.g. ADK, which were either "implement X" (laborations) or "devise your own algorithm for X" ('mästarprov').

Is there anything else you would like to add? (I worked: 13-15 timmar/vecka)
Välstrukturerad kurs med bra innehåll som skiljer sig markant från andra programmeringskurser vid KTH. Tyvärr läste jag för många andra tunga kurser parallellt, vilket gjorde att jag inte kunde satsa så hårt på denna kurs som jag velat.

En av de bästa och roligaste kurserna jag gått på KTH!

Is there anything else you would like to add? (I worked: 16-18 timmar/vecka)
Overall great course. I'm glad I took it.

Är personligen väldigt nöjd att jag valde kursen och tycker att det är en av de bästa kurserna på CSC och KTH även om den kräver mycket tid för få poäng.

Is there anything else you would like to add? (I worked: 19-21 timmar/vecka)
Fun course overall. Perhaps I am suffering from imposter syndrome but I thought everyone else was way more skilled than me and that did not really help my confidence in my abilities. I wanted to do more in this course but I had so much stuff in other courses to do also.

Is there anything else you would like to add? (I worked: 22-24 timmar/vecka)
It was somewhat weird that no-one was ever judged 'too bad' at presenting their solutions to not receive the points. Actually, some presentations were not good at all, and I believe that the minimum requirement for an acceptable presentation should be set a fair bit higher. At the least, the presentation should provide an outline for how to implement a solution yourself - and stating that "this is standard" is NOT very helpful or explanatory. The amount of knowledge and experience each course participant has varies a lot, so the quality of the presentations should make sure that they're worthwhile for everyone, not just people who already know what to do.

Is there anything else you would like to add? (I worked: 25-27 timmar/vecka)
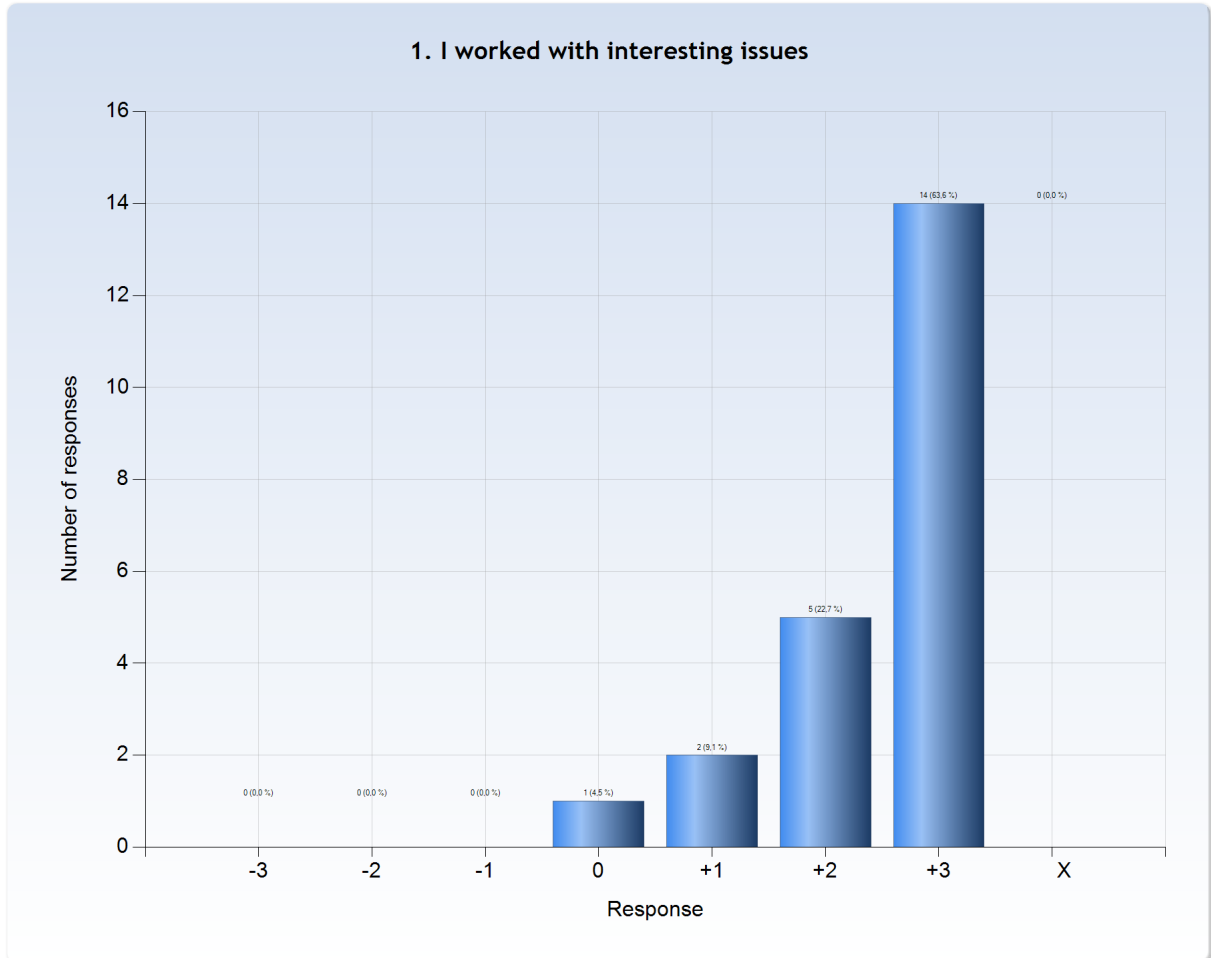Great course!

SPECIFIC QUESTIONS

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
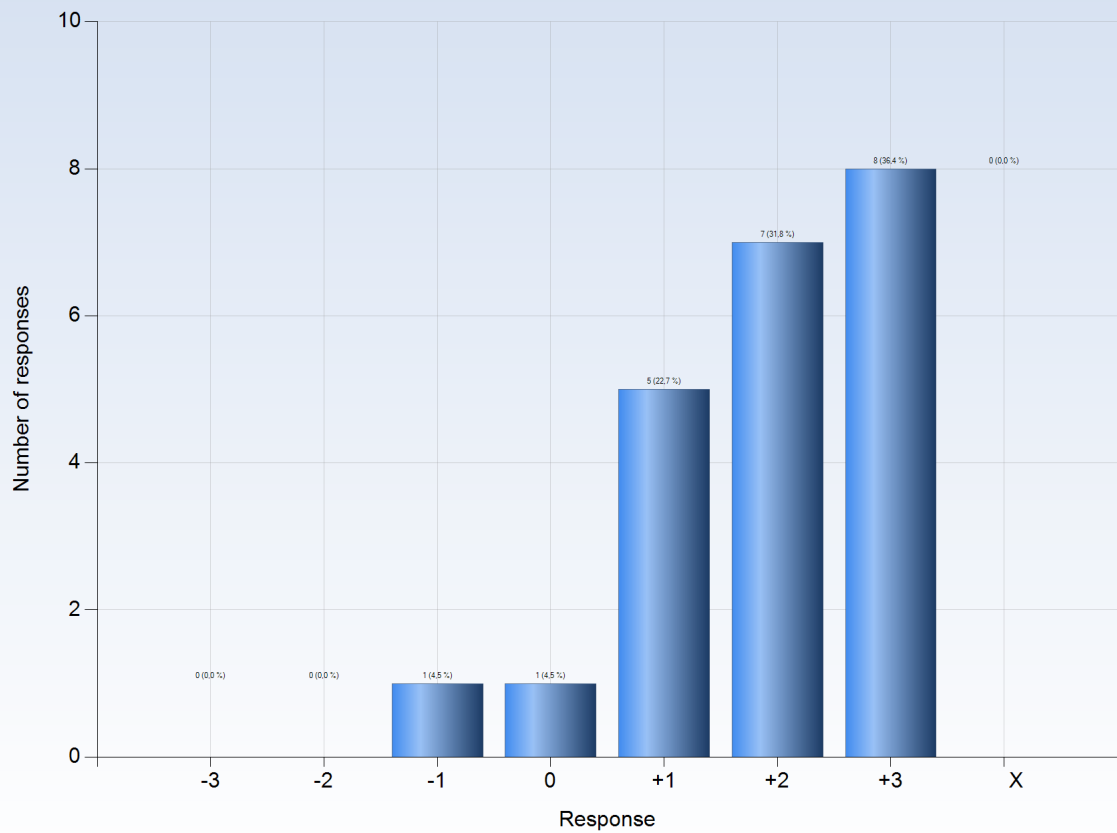
X = I decline to take a position on the statement

1. I worked with interesting issues

Comments

Comments (My response was: +3)

Taking "issues" to mean "problems".
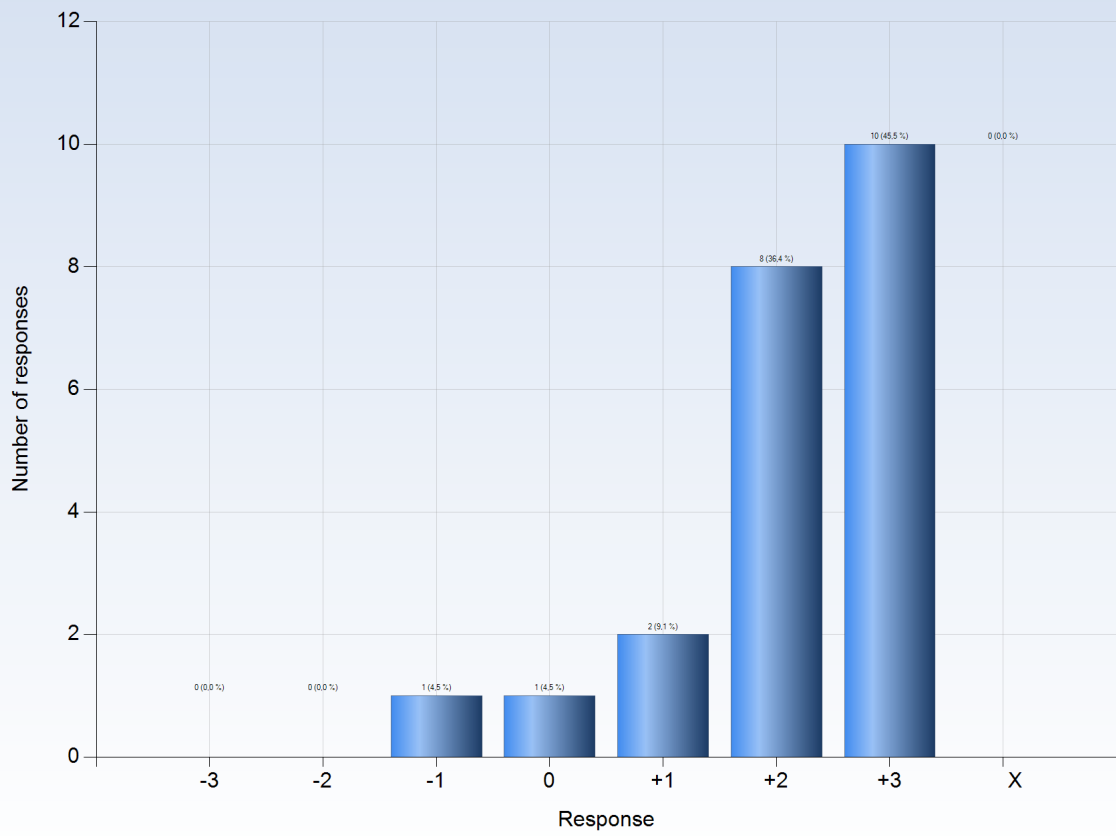
2. I explored parts of the subject on my own

Number of responses

Response	Count
-3	0 (0,0 %)
-2	0 (0,0 %)
-1	1 (4,5 %)
0	1 (4,5 %)
+1	5 (22,7 %)
+2	7 (31,8 %)
+3	8 (36,4 %)
X	0 (0,0 %)

Comments

Comments (My response was: +3)

Of course, no one can explore it for me. What is this, the matrix?

3. I could learn by trying out my own ideas

Number of responses

Response	Value
-3	0 (0,0 %)
-2	0 (0,0 %)
-1	1 (4,5 %)
0	1 (4,5 %)
+1	2 (9,1 %)
+2	8 (36,4 %)
+3	10 (45,5 %)
X	0 (0,0 %)

Comments

4. The course was challenging in a stimulating way
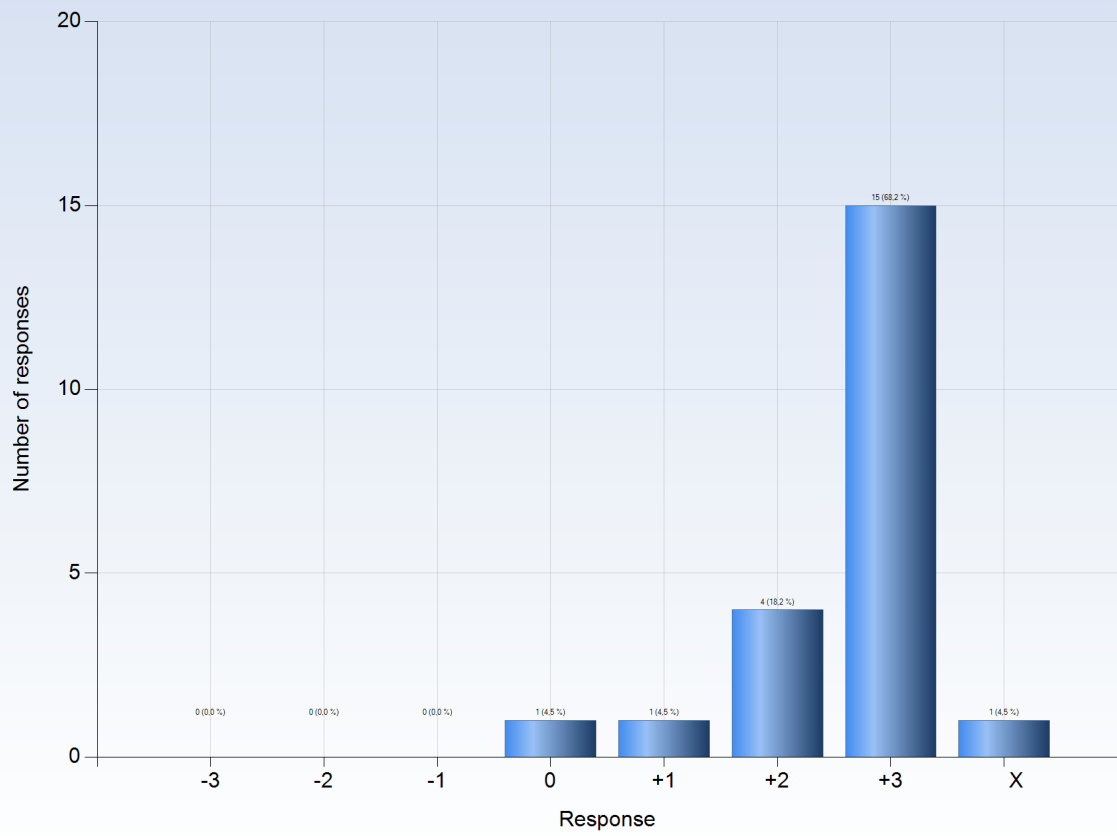
Comments

Comments (My response was: X   )
What does this even mean? How would i observe/measure this?

5. I felt togetherness with other course participants

Response	Number of responses
-3	1 (4,8 %)
-2	2 (9,5 %)
-1	1 (4,8 %)
0	3 (14,3 %)
+1	4 (19,0 %)
+2	8 (38,1 %)
+3	2 (9,5 %)
X	0 (0,0 %)
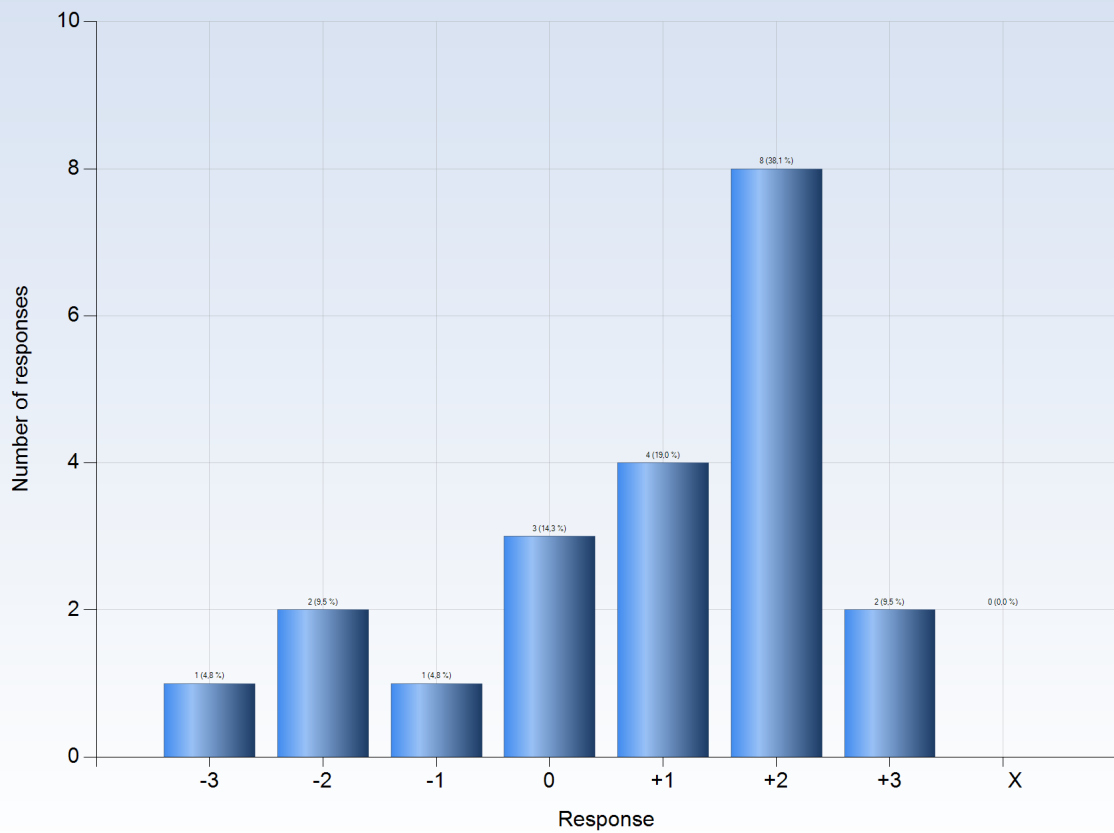
Comments

Comments (My response was: -2)
Other than my lab partner, no, not really.

Comments (My response was: 0)
Not thanks to the course. I had friends from previous.

Comments (My response was: +2)
Trevligt med inte så många kursdeltagare

6. The atmosphere in the course was open and inclusive
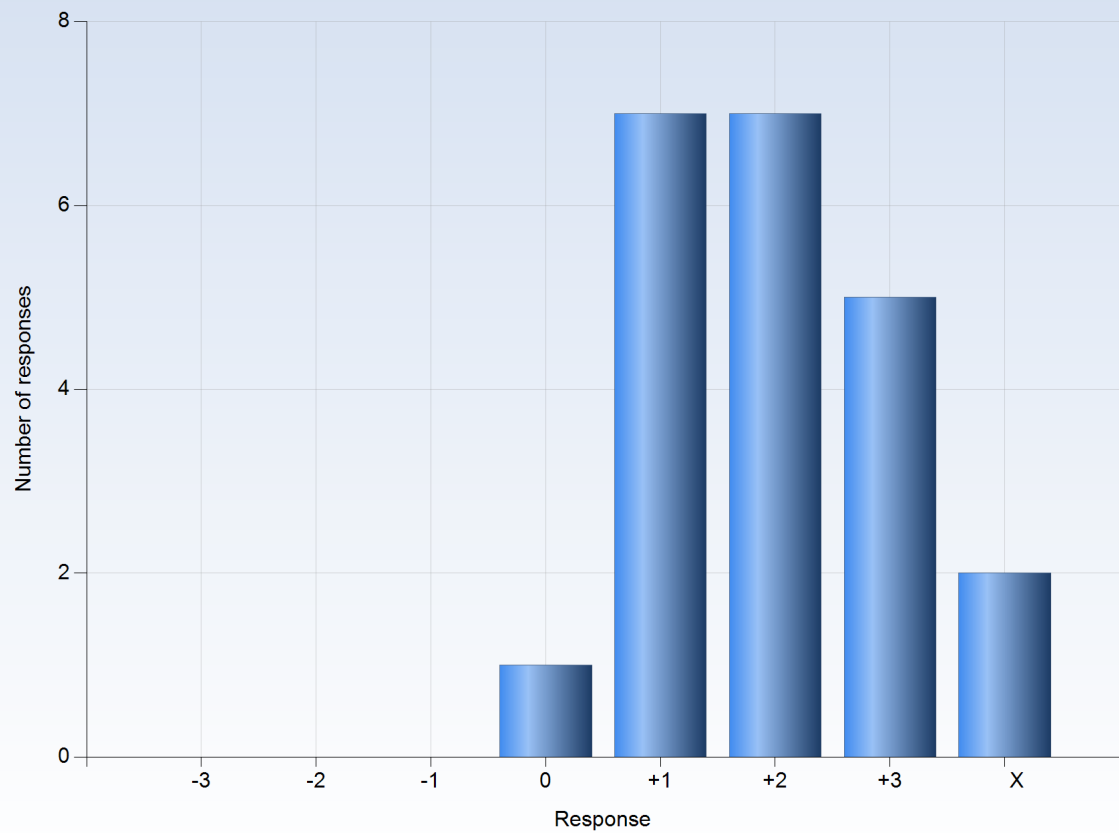
Comments

Comments (My response was: 0)
Well, it was more curteus.

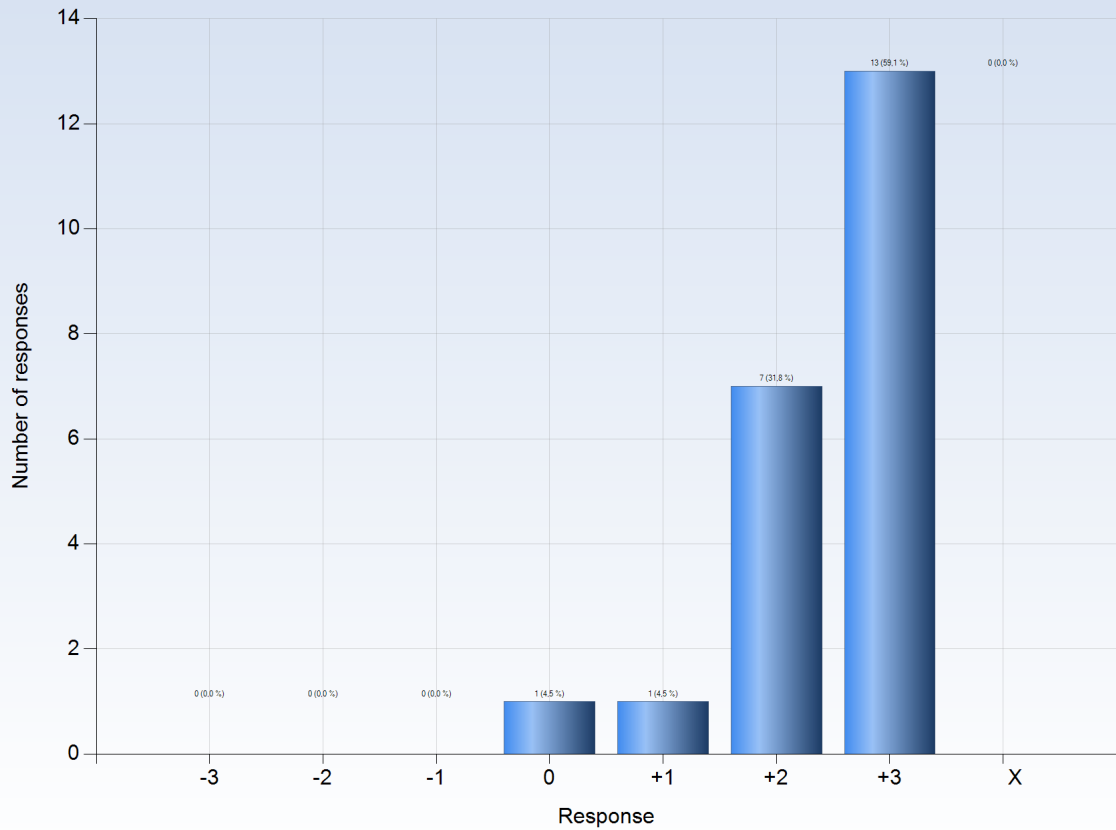# 7. The learning objectives helped me understand what I was expected to achieve

Number of responses vs Response

- -3: 2 (9,1 %)
- -2: 0 (0,0 %)
- -1: 0 (0,0 %)
- 0: 8 (36,4 %)
- +1: 3 (13,6 %)
- +2: 4 (18,2 %)
- +3: 4 (18,2 %)
- X: 1 (4,5 %)
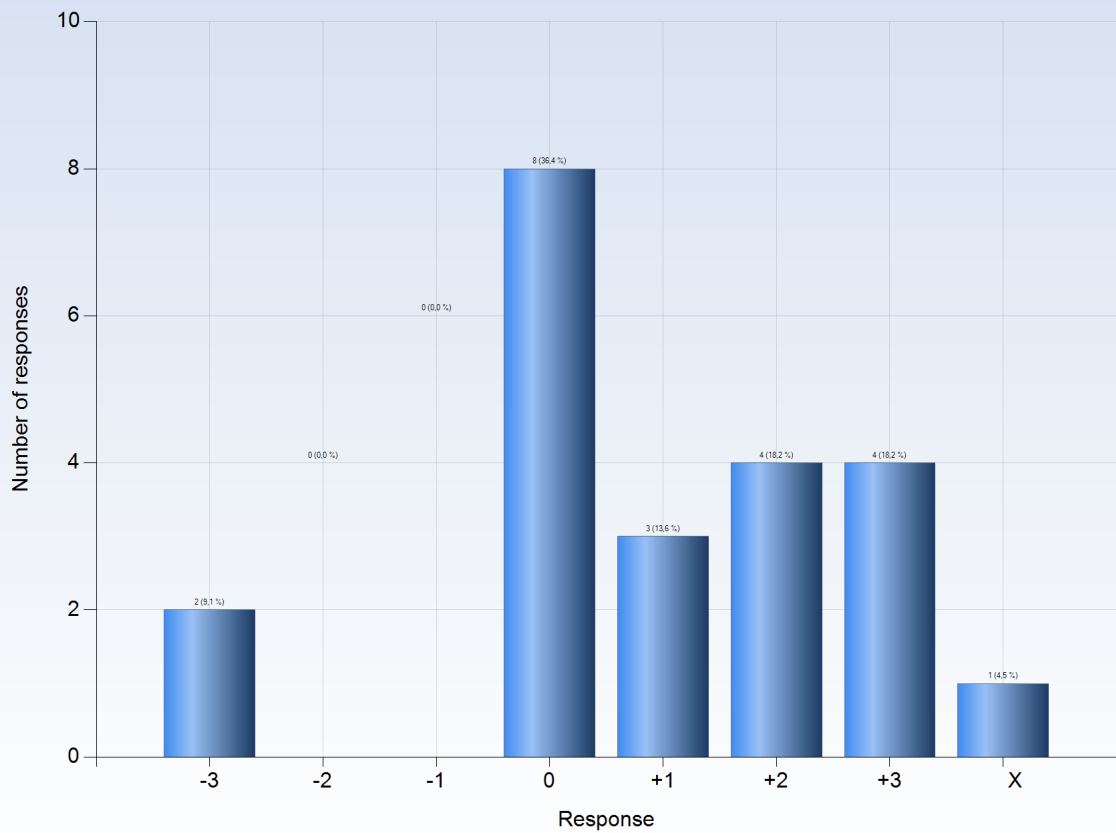
Comments

Comments (My response was: 0)

Läste ej lärandemålen

Only looked at them before applying.

8. I understood how the course was organized and what I was expected to do

Comments

Comments (My response was: +2)

Please provide the course program pdf in English, otherwise crystal clear.

Nicely regular structure and schedule.

Comments (My response was: +3)

Approved aids during problem sessions were not clear in the beginning of the course.

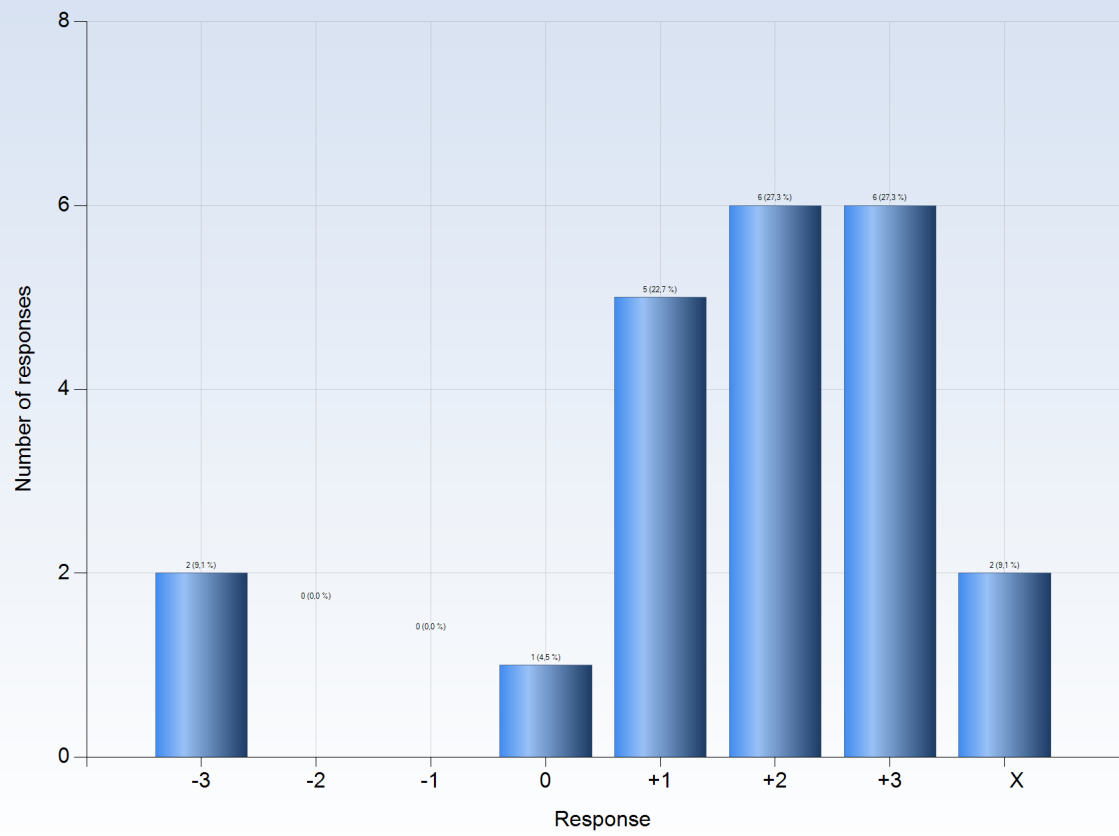## 9. I understood what the teachers were talking about
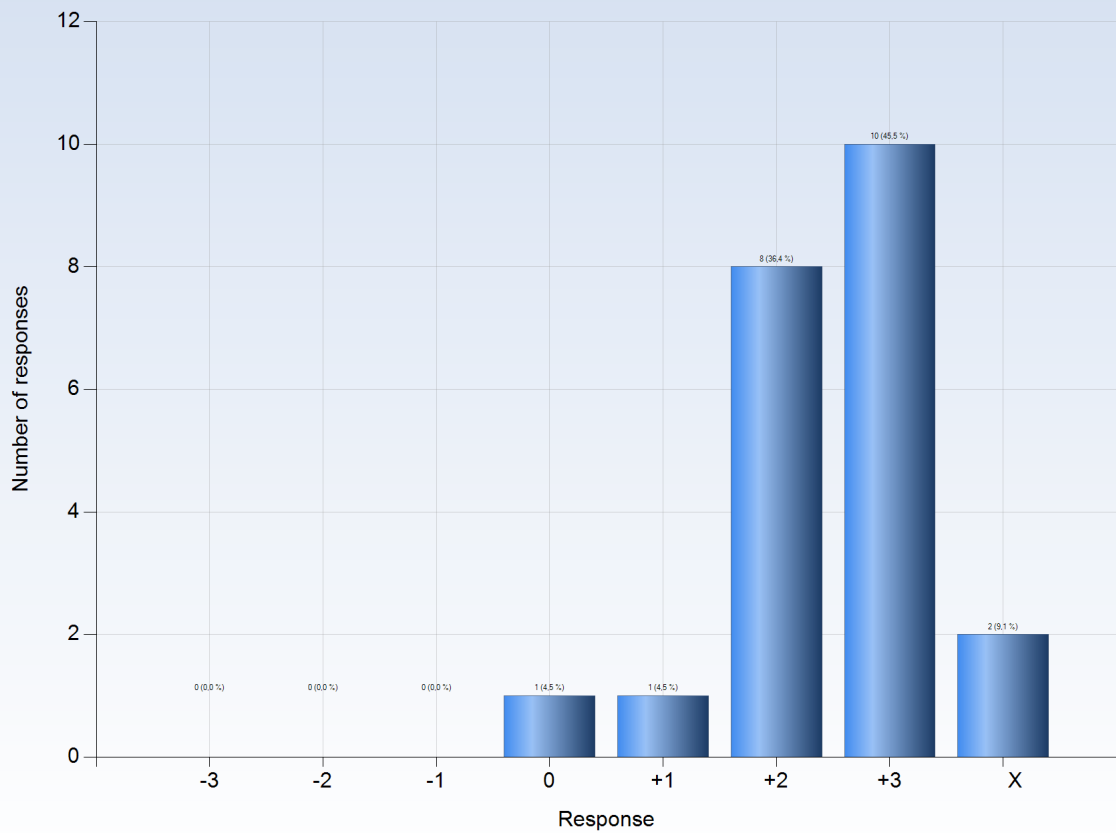
Comments

Comments (My response was: 0)
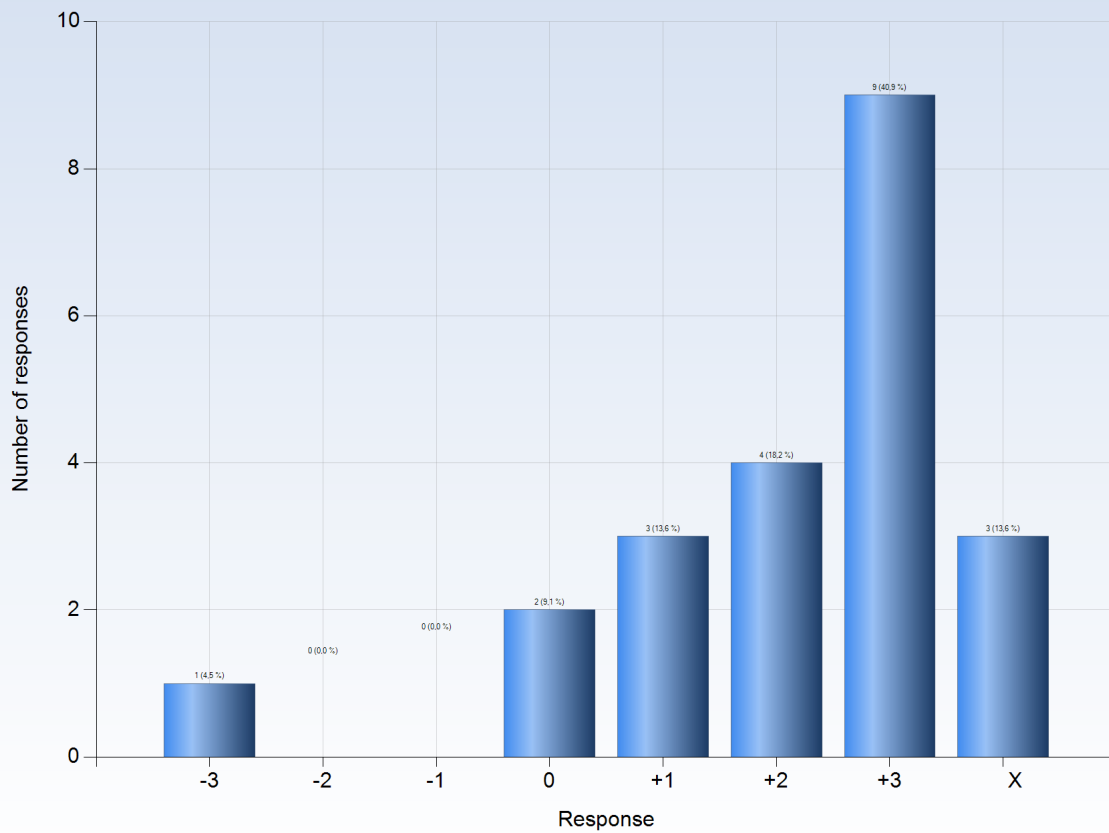Well, i AM fluent in english after all.

Comments (My response was: X   )
I didn't attend many of the lectures.

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

Comments

11. Understanding of key concepts was given high priority
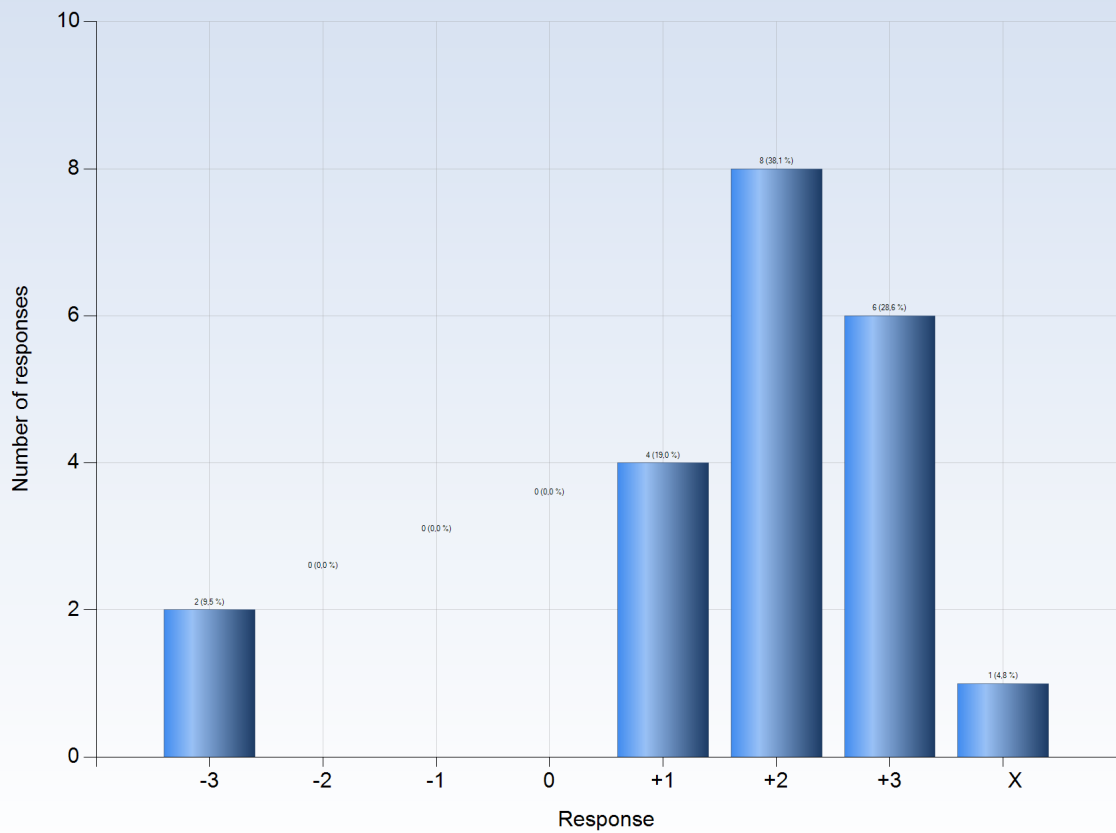

Comments

Comments (My response was: -3)

Nah. Since the course was 4.5 hp PER PERIOD, it competed with at least 2 other courses. So there was about 1, maybe 2, full days of work per concept. Do you think a novice masters dynamic programming in 1-2 days, without any help? (and no, lectures are not good, they generally have a normalized gain of 0.3. Go read Hake, Prather or Wieman on the subject.)

Comments (My response was: +1)

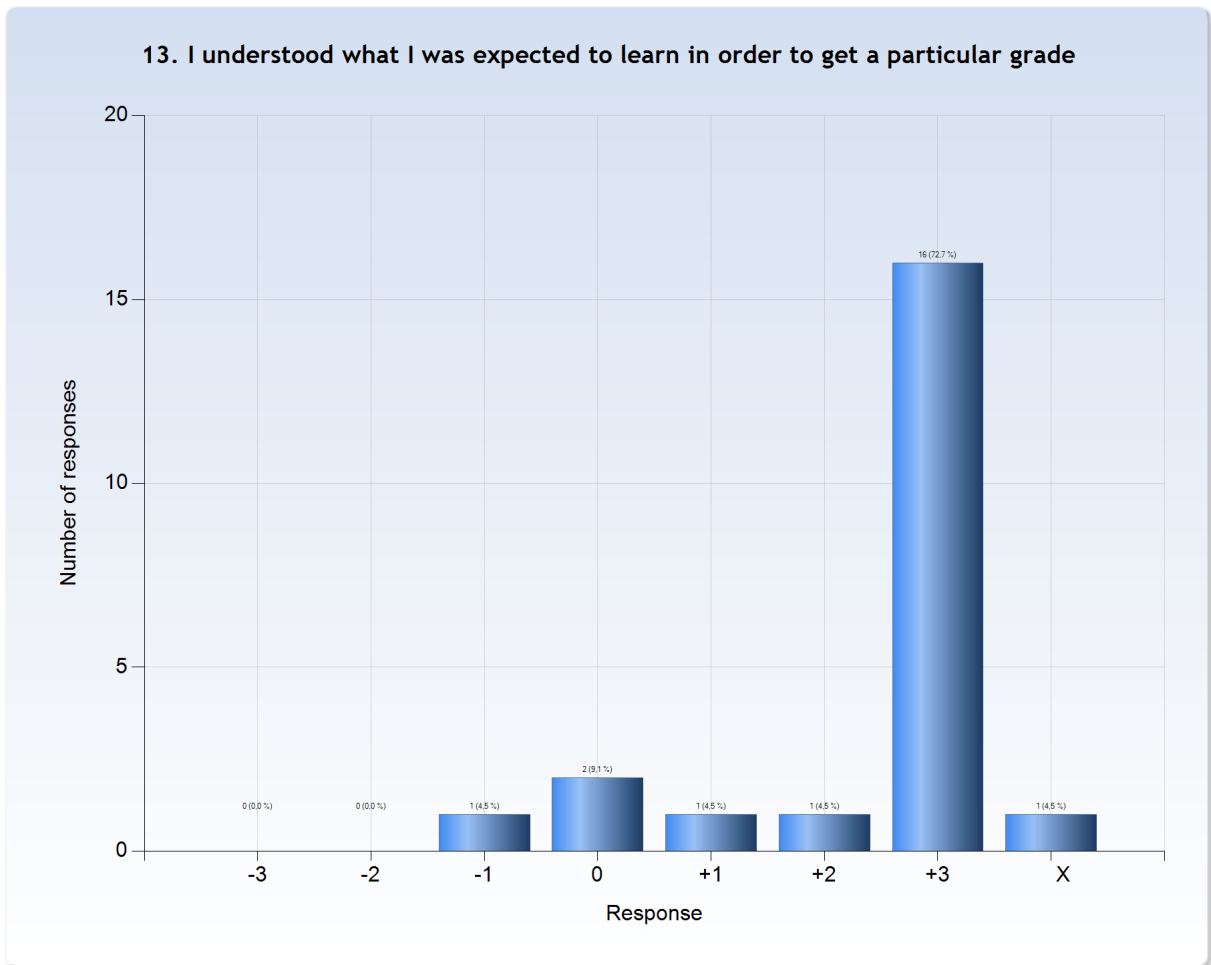Spretig kurs, så vet inte om det fanns så många "centrala begrepp"

12. The course activities helped me to reach the learning objectives efficiently

Comments

(My response was: -3)
I got nothing from this course which i could not have gotten for free from the internet.

13. I understood what I was expected to learn in order to get a particular grade
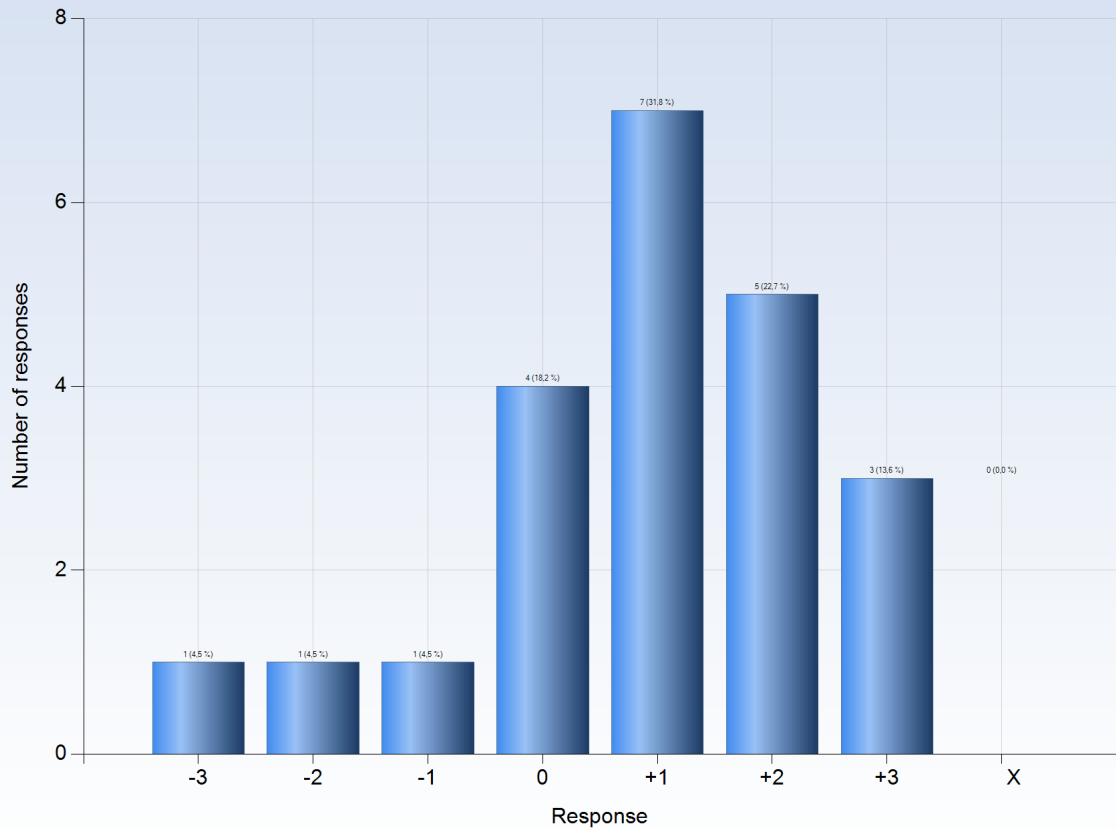

Comments

Comments (My response was: -1)

Grading was confusing, maybe I am stupid

Comments (My response was: +3)

This was very good. However homework points should be updated after every week, now we had to remember or note down the points we thought we had got and plan on that less reliable information.

14. I regularly received feedback that helped me see my progress

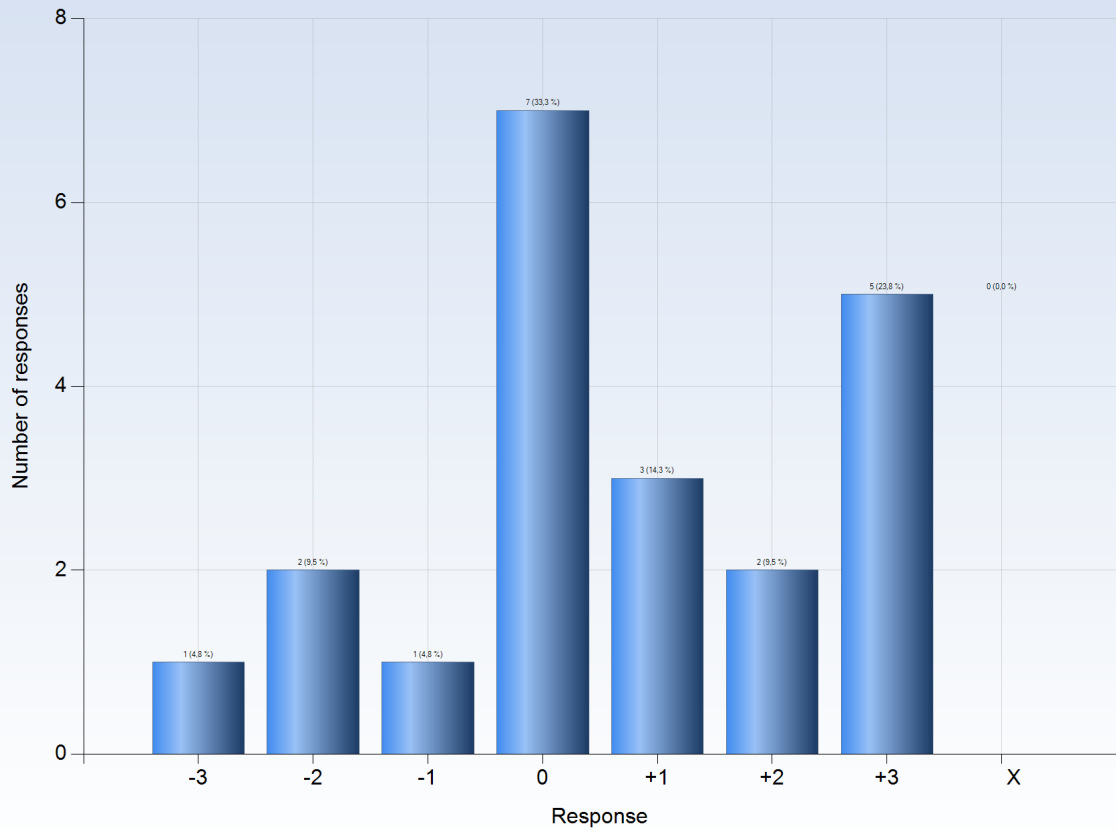| Response	Number of responses
-3	1 (4,5 %)
-2	1 (4,5 %)
-1	1 (4,5 %)
0	4 (18,2 %)
+1	7 (31,8 %)
+2	5 (22,7 %)
+3	3 (13,6 %)
X	0 (0,0 %)

Comments

Comments (My response was: -3)
Kattis: Wrong Answer

Comments (My response was: -1)
Only by Kattis. Maybe partly during the presentations.

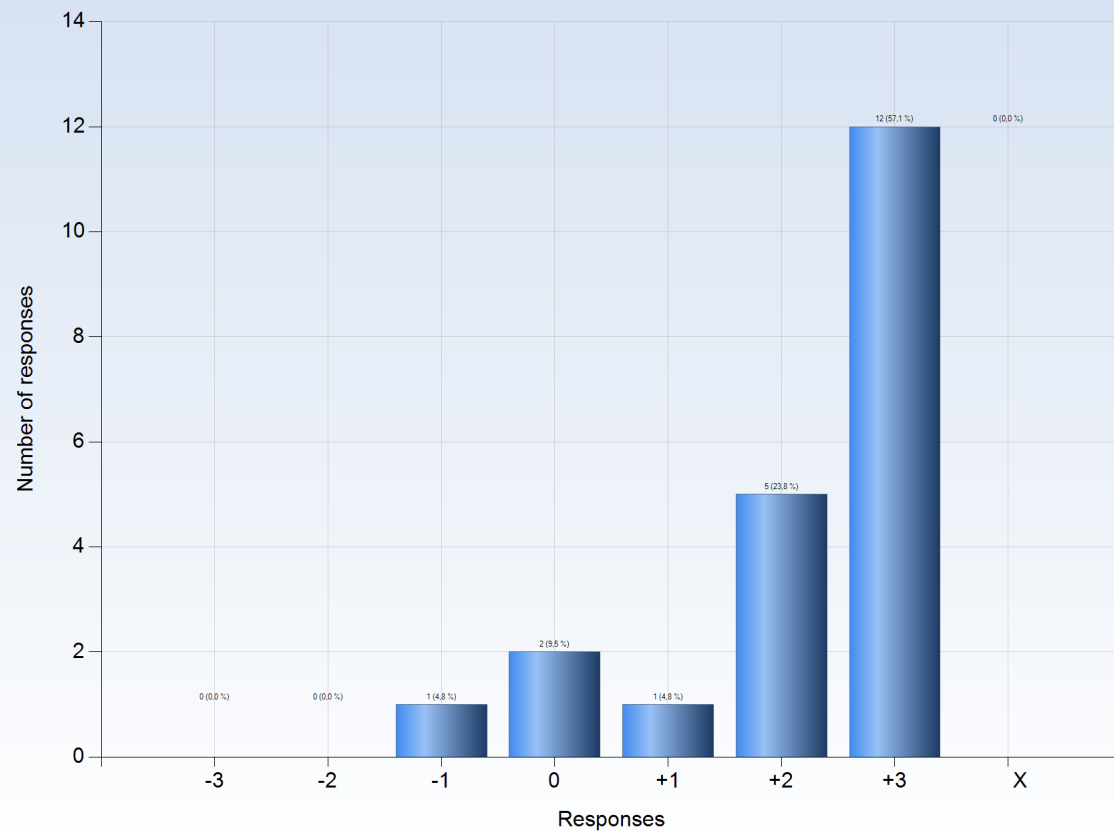# 15. I could practice and receive feedback without any grading being done

Number of responses (y-axis) vs **Response** (x-axis)

- -3: 1 (4,8 %)
- -2: 2 (9,5 %)
- -1: 1 (4,8 %)
- 0: 7 (33,3 %)
- +1: 3 (14,3 %)
- +2: 2 (9,5 %)
- +3: 5 (23,8 %)
- X: 0 (0,0 %)

Comments

Comments (My response was: 0)

I could practice on Kattis. My feedback was Wrong Answer and Time Limit Exceeded

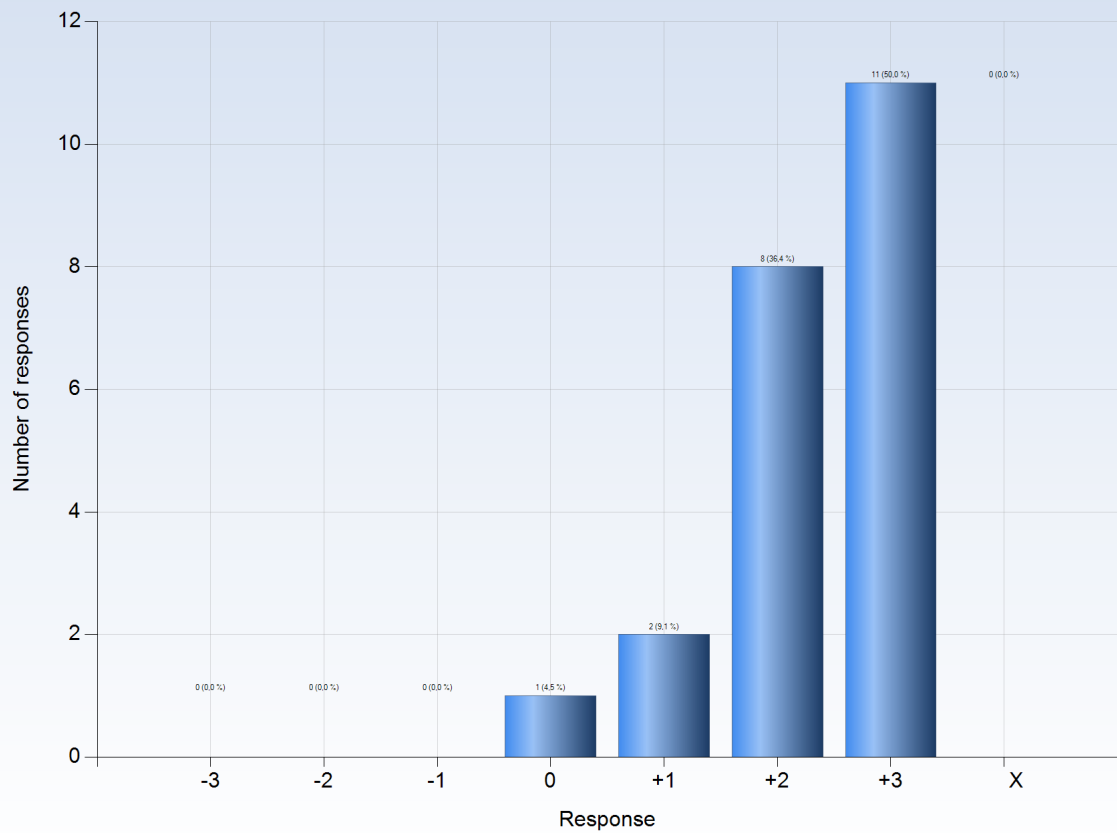## 16. The assessment on the course was fair and honest

Comments

Comments (My response was: +2)

Lite märkligt att om man fick ett D på OVN1 och C på LAB1 hade man lika gärna kunnat få E på LAB1 med samma resultat

Comments (My response was: +3)

Probably the most fair course

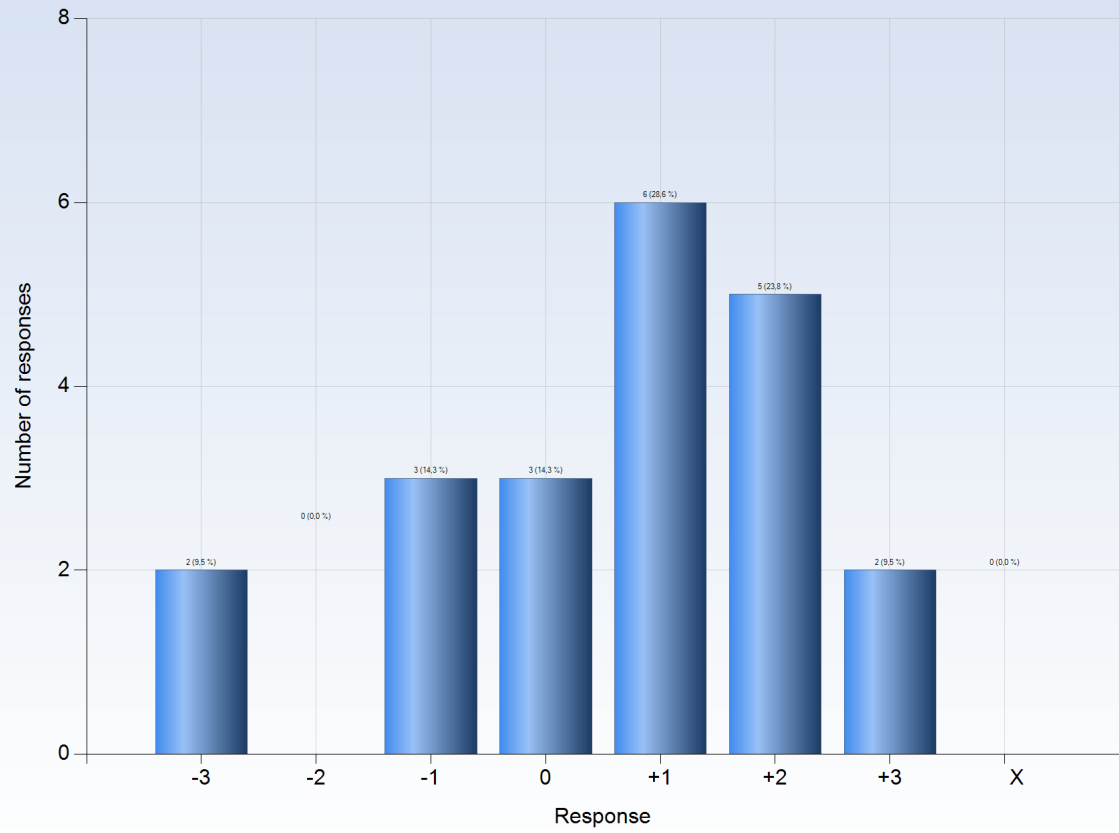## 17. My background knowledge was sufficient to follow the course

Number of responses (y-axis), **Response** (x-axis)

- -3: 0 (0.0 %)
- -2: 0 (0.0 %)
- -1: 0 (0.0 %)
- 0: 1 (4.5 %)
- +1: 2 (9.1 %)
- +2: 8 (36.4 %)
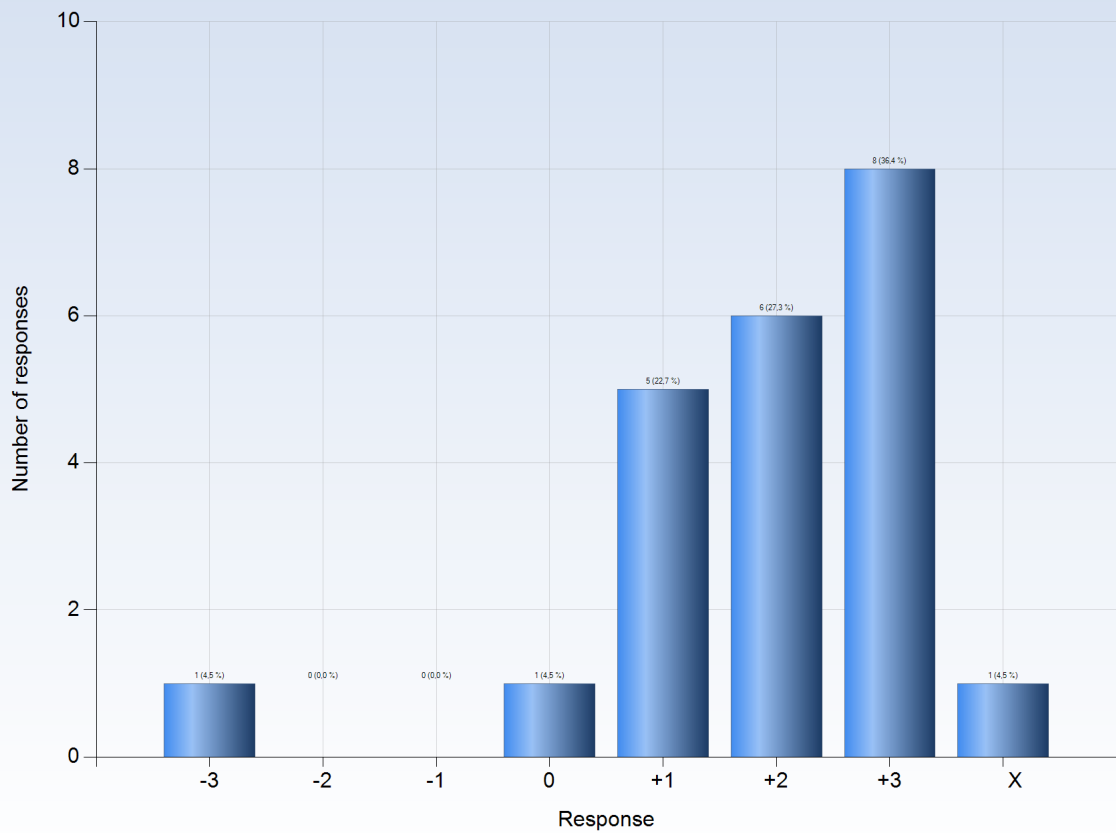- +3: 11 (50.0 %)
- X: 0 (0.0 %)

Comments

Comments (My response was: 0)

No previous experience in competetive programming, enough for an E

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

Number of responses

2 (9,5 %)	0 (0,0 %)	3 (14,3 %)	3 (14,3 %)	6 (28,6 %)	5 (23,8 %)	2 (9,5 %)	0 (0,0 %)
-3	-2	-1	0	+1	+2	+3	X

Response

Comments

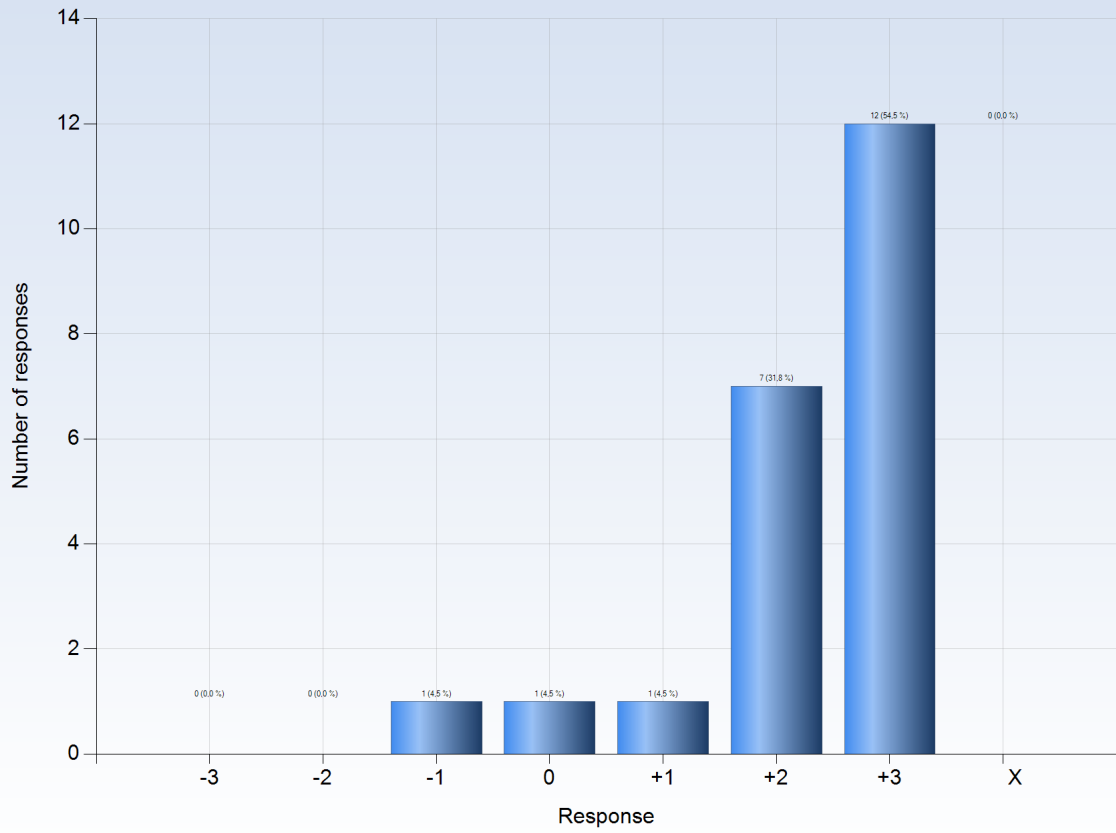# 19. I could learn in a way that suited me

Comments

Comments (My response was: -3)
I prefer efficiency. I doubt "do whatever you usually do" is up to modern science in learning.

Comments (My response was: +1)
Yes because I could solve things in my own time and pace. No because I would've liked more interaction with other students.

20. I had opportunities to choose what I was going to do

Number of responses

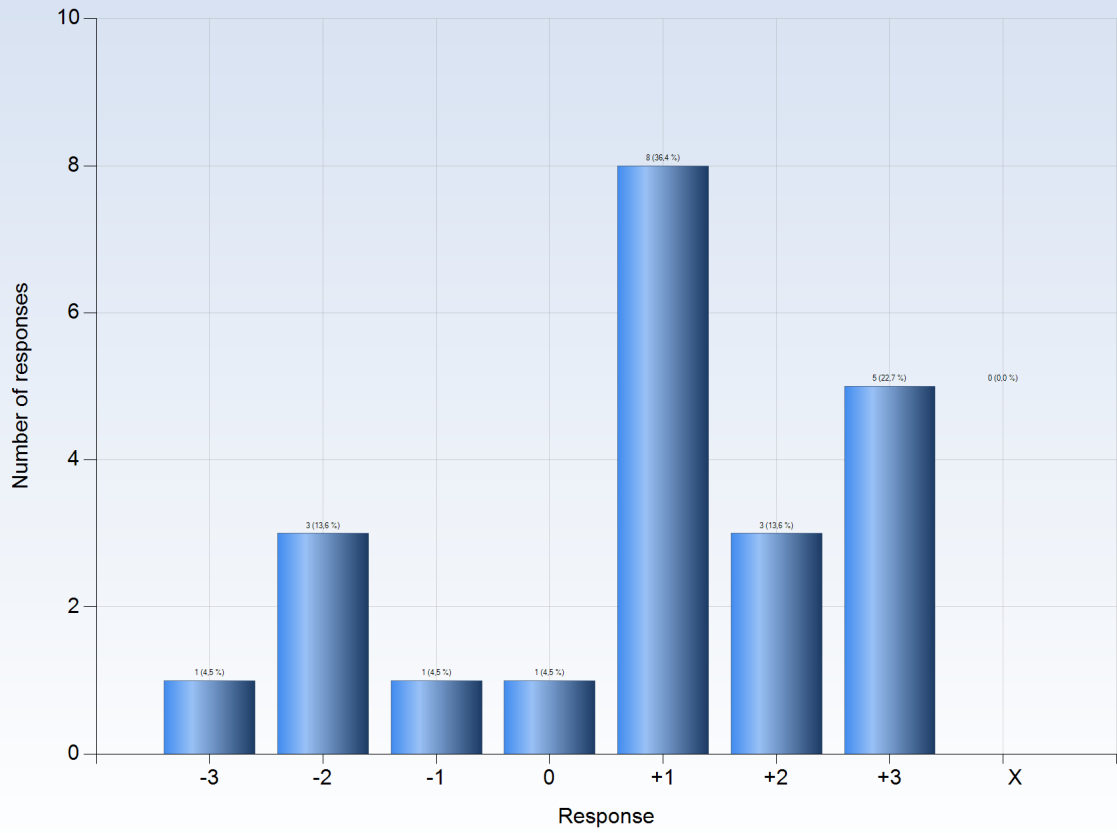|	
-3	0 (0,0 %)
-2	0 (0,0 %)
-1	1 (4,5 %)
0	1 (4,5 %)
+1	1 (4,5 %)
+2	7 (31,8 %)
+3	12 (54,5 %)
X	0 (0,0 %)

Response

Comments

Comments (My response was: +3)

Had to do about 1/6 of homeworks for E, so we could say we had a freedom of about 83%

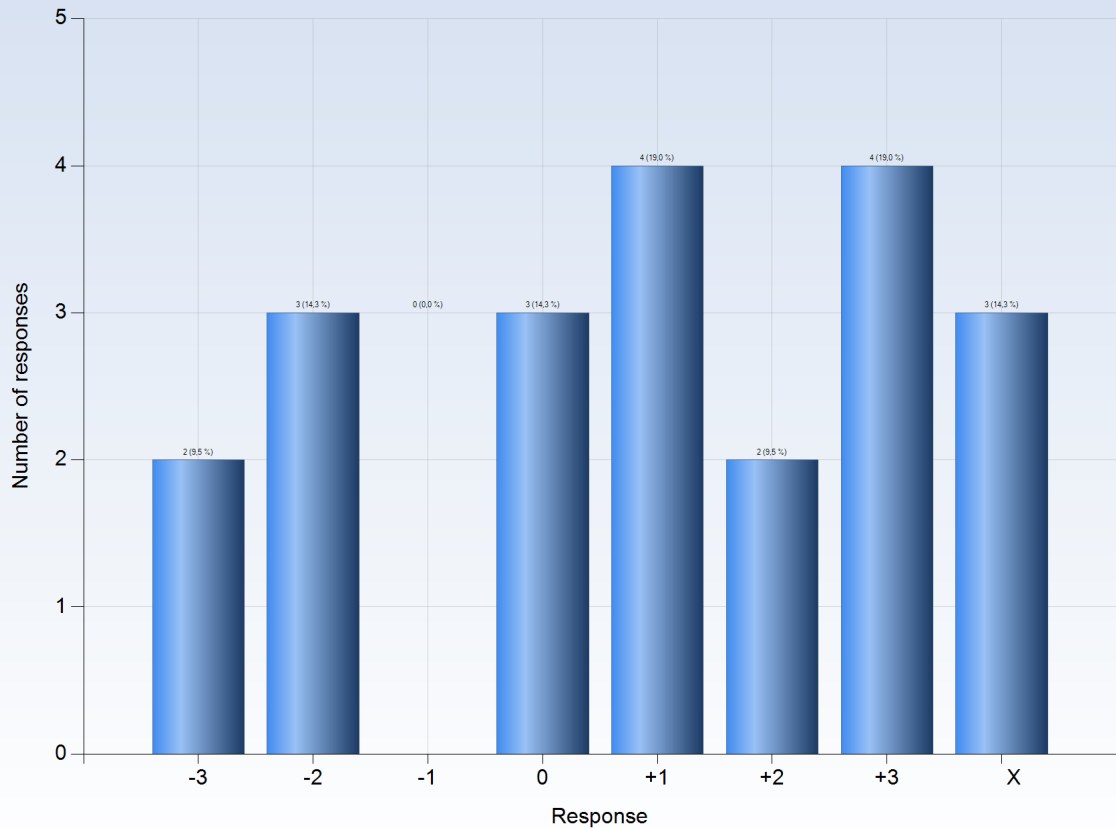## 21. I could learn by collaborating and discussing with others

Number of responses

- -3: 1 (4,5 %)
- -2: 3 (13,6 %)
- -1: 1 (4,5 %)
- 0: 1 (4,5 %)
- +1: 8 (36,4 %)
- +2: 3 (13,6 %)
- +3: 5 (22,7 %)
- X: 0 (0,0 %)

Response

Comments

Comments (My response was: -2)

On homeworks, No by design On labbs, one partner.

22. I could get support if I needed it

Comments

Comments (My response was: -2)
There was almost no public discussion and I felt like questions regarding home works and labs were not particularly encouraged. In contrary.

Comments (My response was: 0)
Somewhat difficult, the feeling was that you were supposed to manage on your own.

Comments (My response was: X   )
Didn't really need support, so I didn't investigate this.