

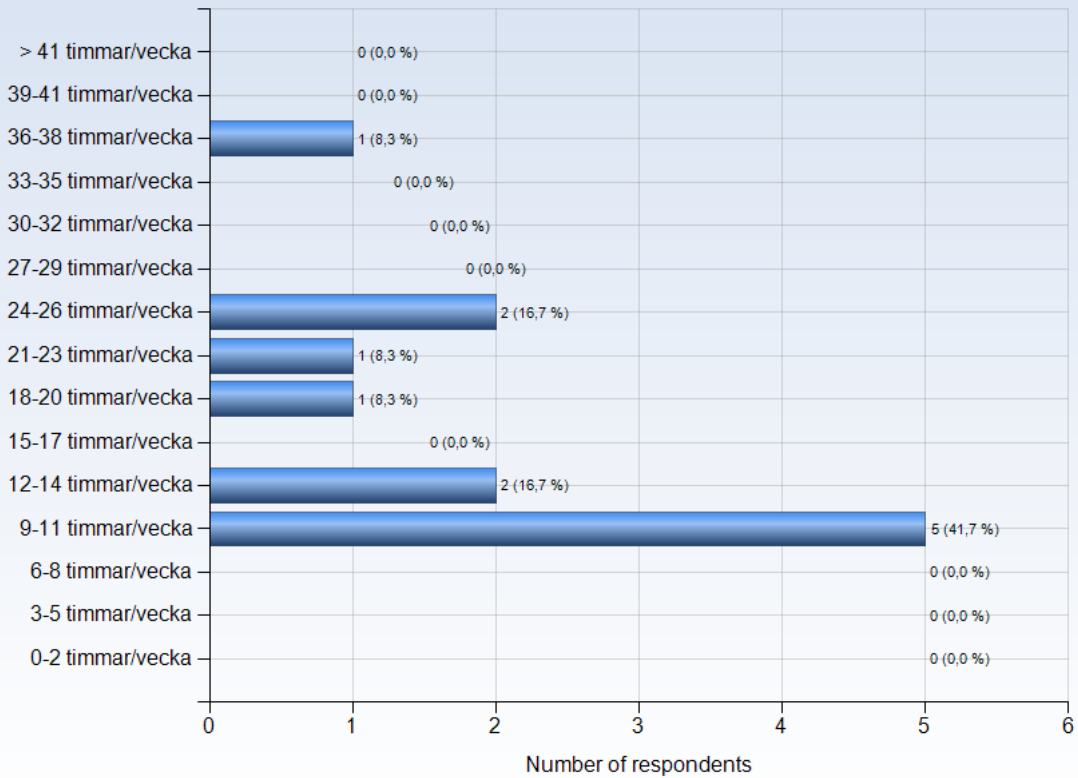


SG2215 - 2021-06-08

Antal respondenter: 34
Antal svar: 12
Svarsfrekvens: 35,29 %

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)

It was fine.

The course is rather complex and demands continuous work in order to fully grasp all the aspects. Some weekly quizzes would force us to be more constant

Satsade inte på högt betyg.

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

The workload was very concentrated to small periods of time which meant that you could have a week with almost no workload and weeks with 30-40 hours.

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

Arbetsbördan kändes lagom. Det kändes inte överväldigande att delta på föreläsningar, gå igenom anteckningarna till dessa i efterhand, läsa den rekommenderade kurslitteraturen samt gå igenom tentauppgifterna.

Comments (I worked: 36-38 timmar/vecka)

A demanding but rewarding course, the proofs takes a lot of time to memorize but yields a good understanding of the relevant material for compressible flows.



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:

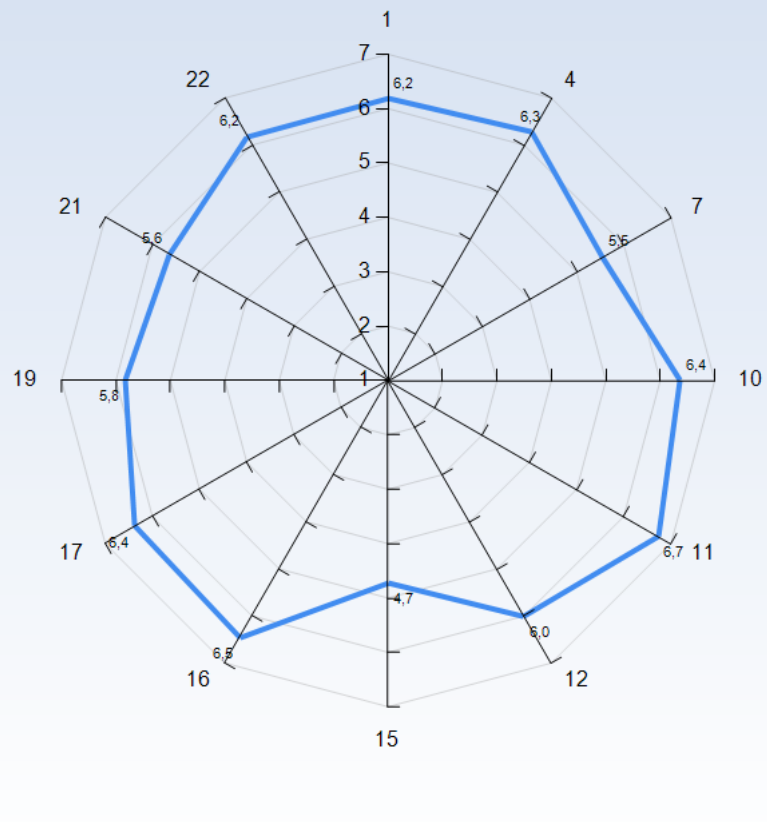
1 = No, I strongly disagree with the statement

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.

Average response to LEQ statements - all respondents





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.

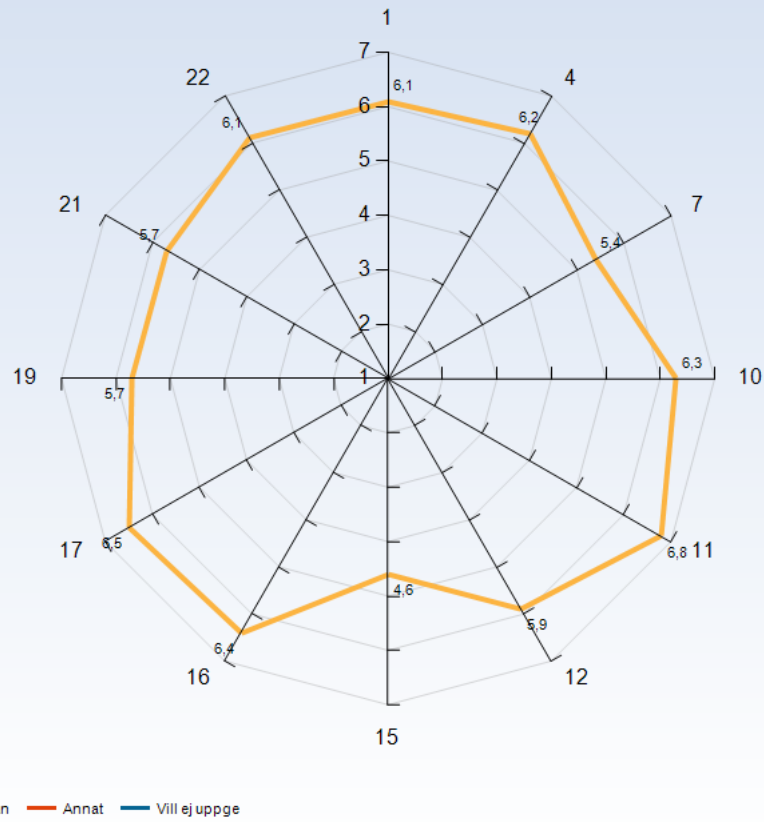
Biggs J. & Tang, C. (2011). *Teaching for Quality Learning at University*, Chapter 6, pp. 95-110. Maidenhead: McGraw Hill.

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



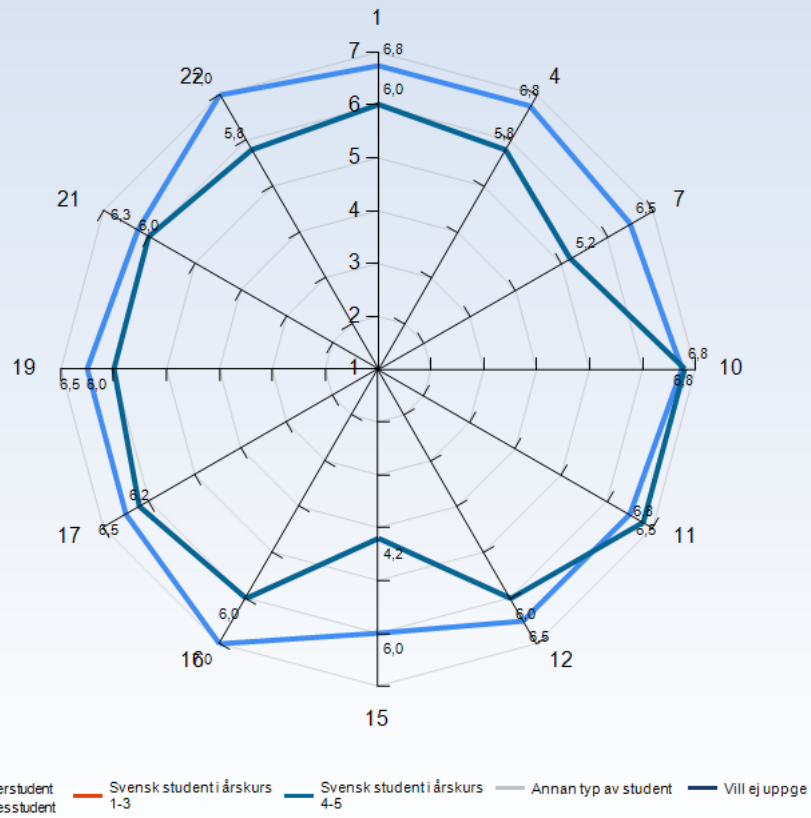
Comments

Comments (I am: Man)

No influence

-

Average response to LEQ statements - per type of student



Comments

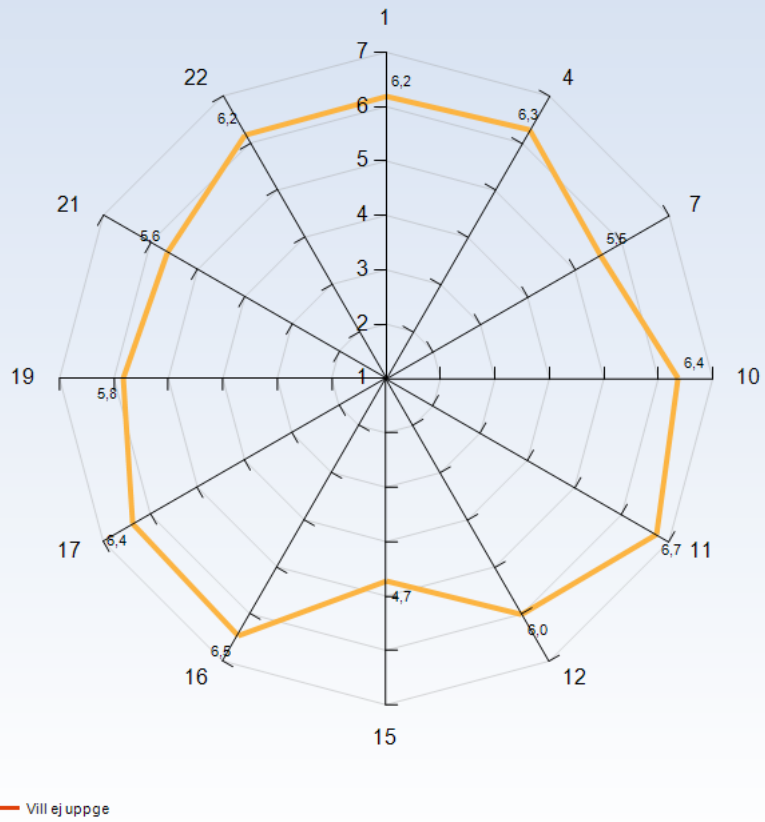
Comments (I am: Internationell masterstudent)

No influence

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

-

Average response to LEQ statements - per disability



Comments

Comments (My response was: Nej)

-



GENERAL QUESTIONS

What was the best aspect of the course?

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

Laboratory work, that really helps to understand the theory.

Very complete !

Väldigt bra och tydliga föreläsningar.

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

The laborations

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

The form of the lectures

What was the best aspect of the course? (I worked: 24-26 timmar/vecka)

Jens är en mycket bra lärare. Kursen är mycket välstrukturerad och det är tydligt vad man ska kunna. Föreläsningarna är mycket välstrukturerade och lätta att följa. Ett extra plus är att föreläsningarna följer samma struktur som kurslitteraturen. Om något i föreläsningstexterna är otydligt kan detta förklaras om man läser motsvarande sektion i kurslitteraturen.

What was the best aspect of the course? (I worked: 36-38 timmar/vecka)

I thought it was very fun to cover many topics for compressible flows with a reasonable depth giving a good idea about the physics and mathematics used for modeling it. I really liked the oral examination as well since it felt like a fair overall assessment of your knowledge. Compared to a fully written exam it's easy to do accidental mistakes which often results in a lot of points being deducted the oral examination does not have this problem and hence I liked it. It was really fun with the labs as well.

What would you suggest to improve?

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

- I think sometimes there was too much math, which is not that important for engineers (of course it is, but understanding the concepts is more important and if someone is interested in derivations he can always check them in text books anyway).

- Maybe add to course some mention about CFD technics and discuss how to asses the flows in real applications (As our examples were mostly academic tasks)

Having more ungraded assignments and quizzes

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

When writing all equations, be more consistent in explaining what the variables are. just as reminders, then it will be much easier to understand the derivative process.

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

The written version of the lecture was not always easy to read

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

Jag fann laboration 1 lite överväldigande. Vi hann inte riktigt gå igenom allt efteråt på ett tillfredsställande sätt, det drog över sent på kvällen och blev stressigt.

What would you suggest to improve? (I worked: 36-38 timmar/vecka)

It would be nice to be able to download the lecture notes, at least for me I could not accomplish this through "box".



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)

Although it is hard it is worth to read the chapters of the text book prior to the corresponding lectures, especially that the book is very well written and easy to read (and doesn't make you fall asleep while reading, which is not so obvious for scientific books ;)

Follow all the lectures, prepare well all the oral exam questions

Anteckna föreläsningarna väl, man kommer väldigt långt bara på materialet i föreläsningarna. Kursboken är bra men inte helt nödvändig.

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

Go through your old thermodynamic notes

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

Use the book !

What advice would you like to give to future participants? (I worked: 24-26 timmar/vecka)

Jobba med instuderingsfrågorna parallellt med att deras teori går igenom. Det förbättrar inlärningsprocessen och underlättar studierna inför tentan senare.

What advice would you like to give to future participants? (I worked: 36-38 timmar/vecka)

Start with the exam questions ASAP!!!

For the oral examination I had to memorize roughly 250 equations and this was only possible by finishing the exam questions long before the exam took place and I could use the days before the exam to memorize and revise the material. If you start with the exam question a week before the exam you won't have time to learn and memorize the material. When preparing for the exam make sure your derivations are rigorous mathematically and that you understand well the physical principles utilized, this will help a lot if you're aiming towards a higher grade.

Also, the literature used for this course (the Anderson book) is totally worth it since the examiner follows the book very closely.

Is there anything else you would like to add?

Is there anything else you would like to add? (I worked: 24-26 timmar/vecka)

Som sagt, Jens är en mycket bra lärare. Hans struktur och tydlighet är något fler lärare bör ta efter.

Is there anything else you would like to add? (I worked: 36-38 timmar/vecka)

Really liked this course a lot!

SPECIFIC QUESTIONS



RESPONSE DATA

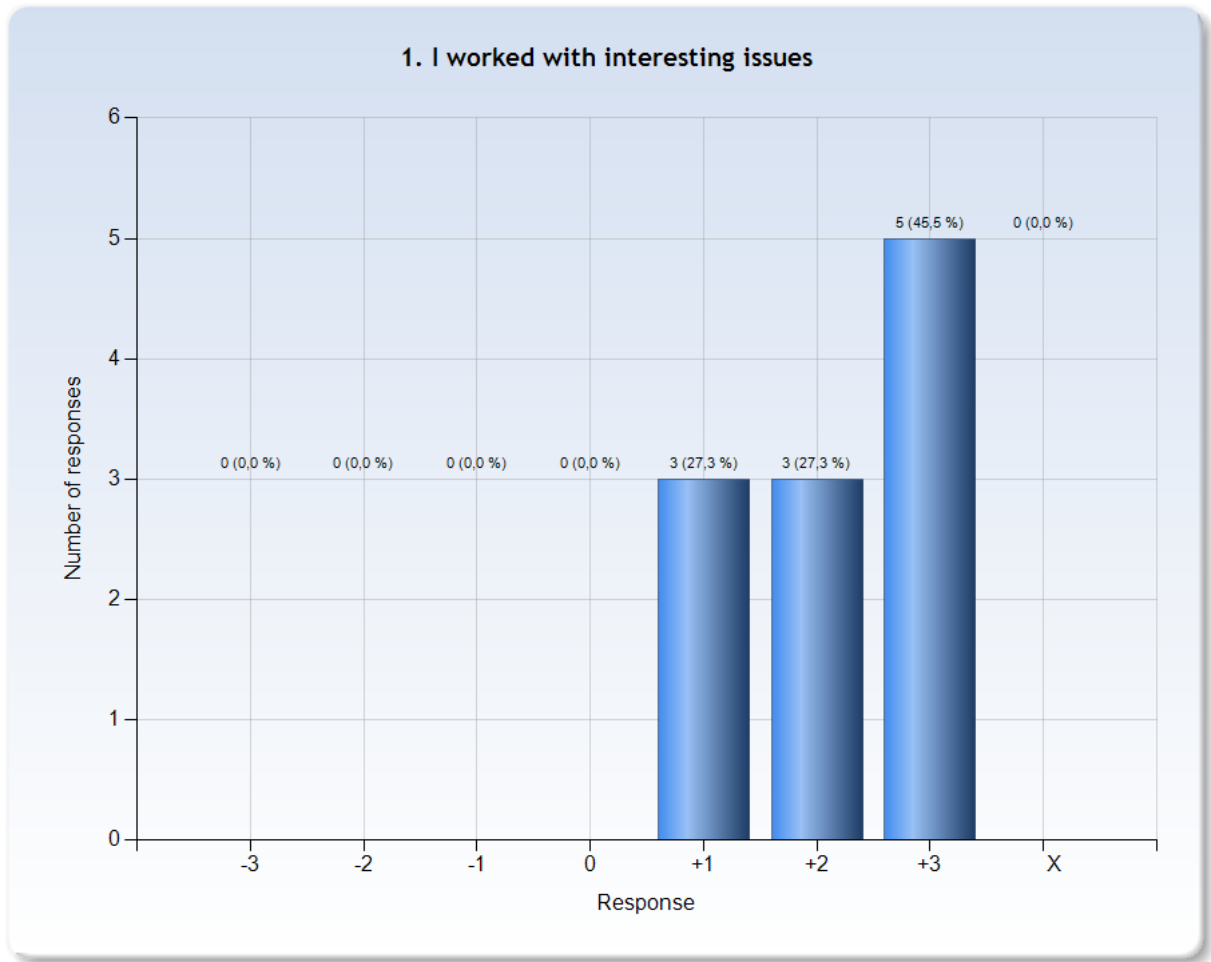
The diagrams below show the detailed response to the LEQ statements.
The response scale is defined by:

-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

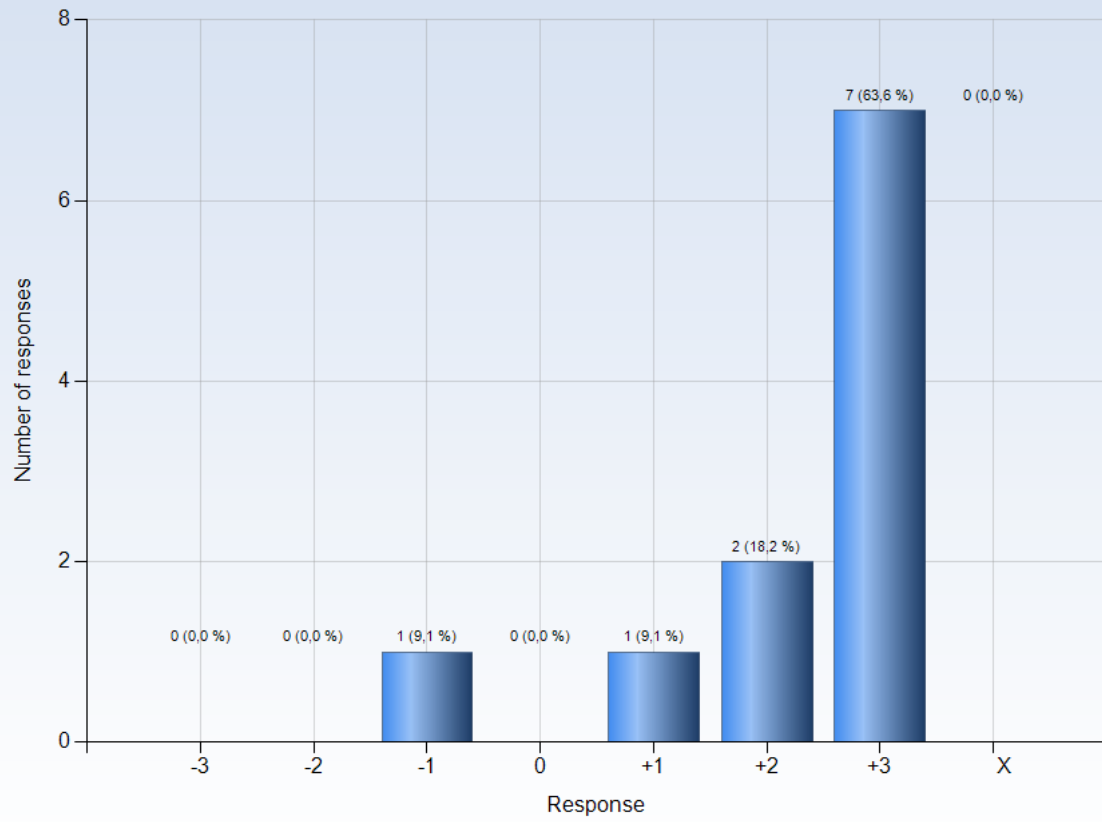


Comments

Comments (My response was: +1)

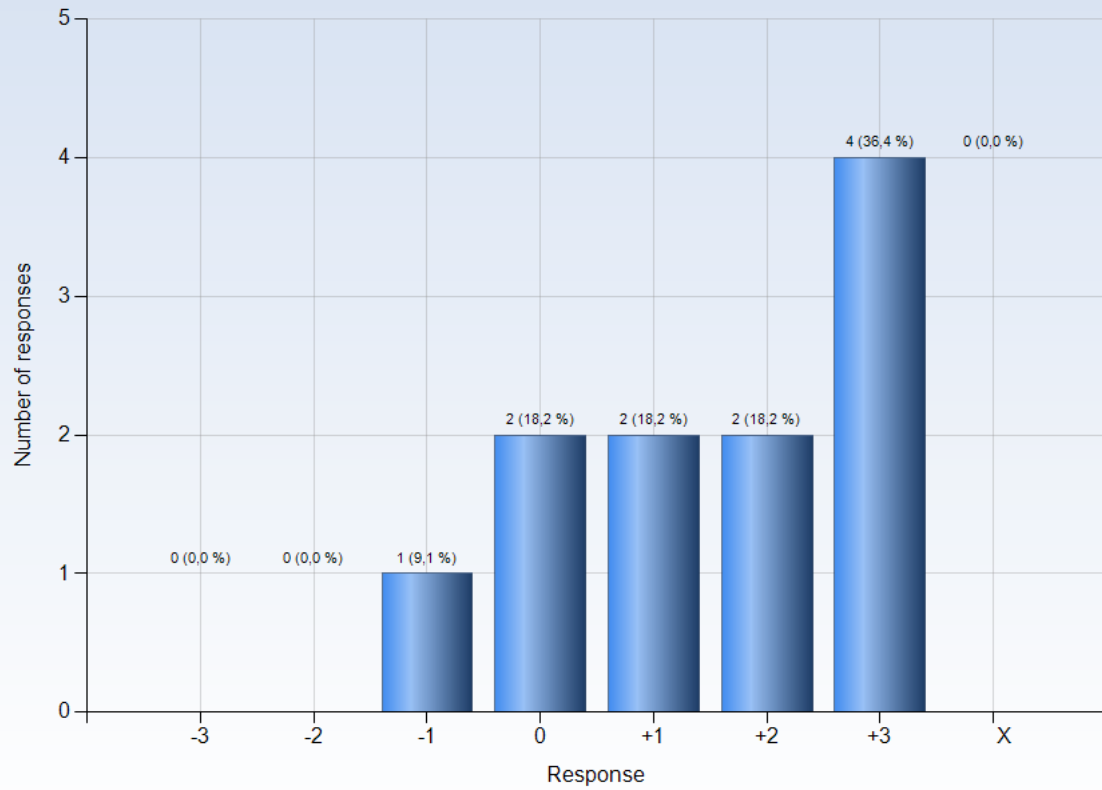
Yes, although I felt that we did not apply enough the maths on practical issues/examples

4. The course was challenging in a stimulating way



Comments

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



Comments

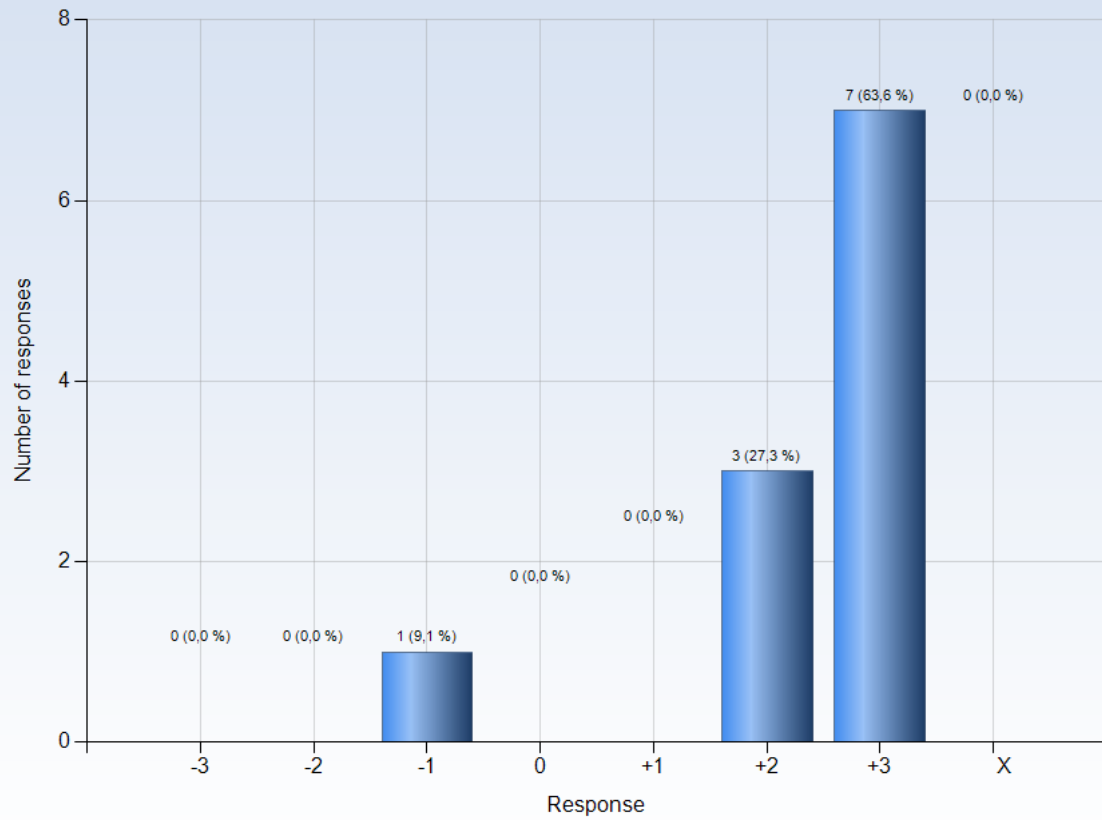
Comments (My response was: -1)

I was not familiar with the intended learning outcomes

Comments (My response was: +3)

Utgick från de möjliga tentafrågorna som svar på denna fråga, samt de kapitell som rekommenderades att läsa.

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



Comments

Comments (My response was: -1)

Maybe not enough examples

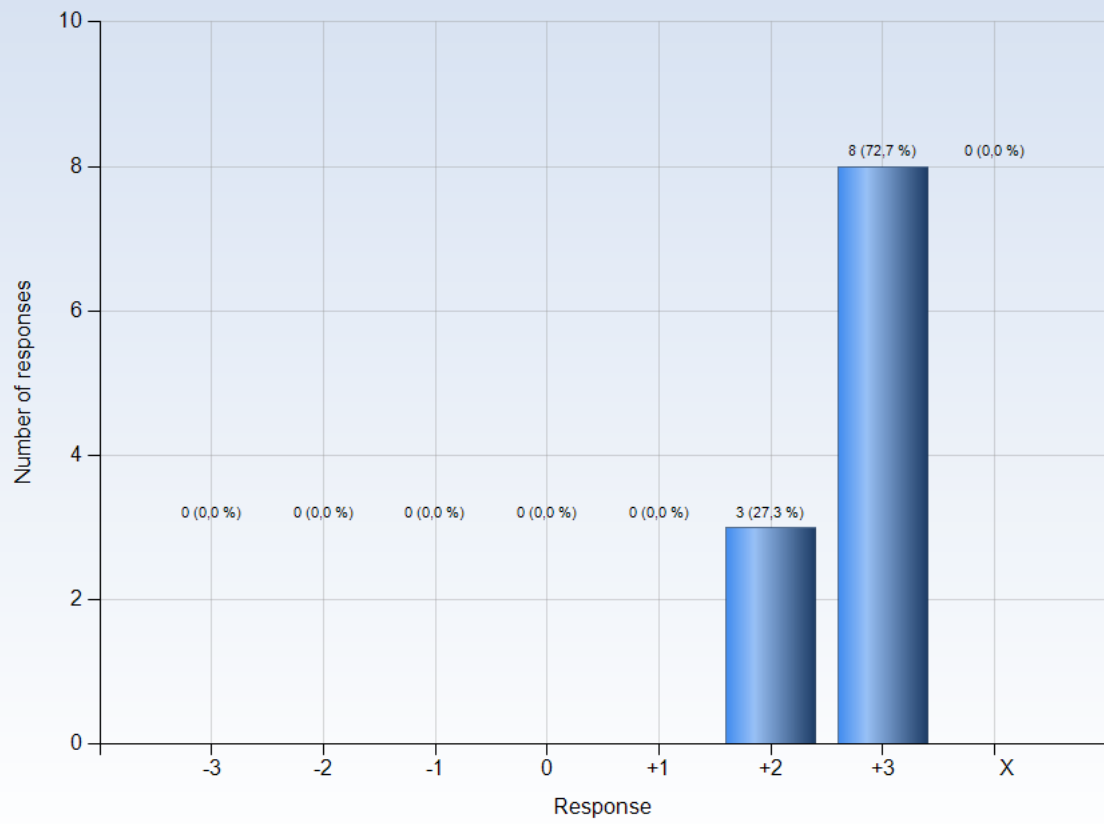
Comments (My response was: +2)

But I think that there could have been more examples from real life applications. I think sometimes we were focusing too much just on theory.

Comments (My response was: +3)

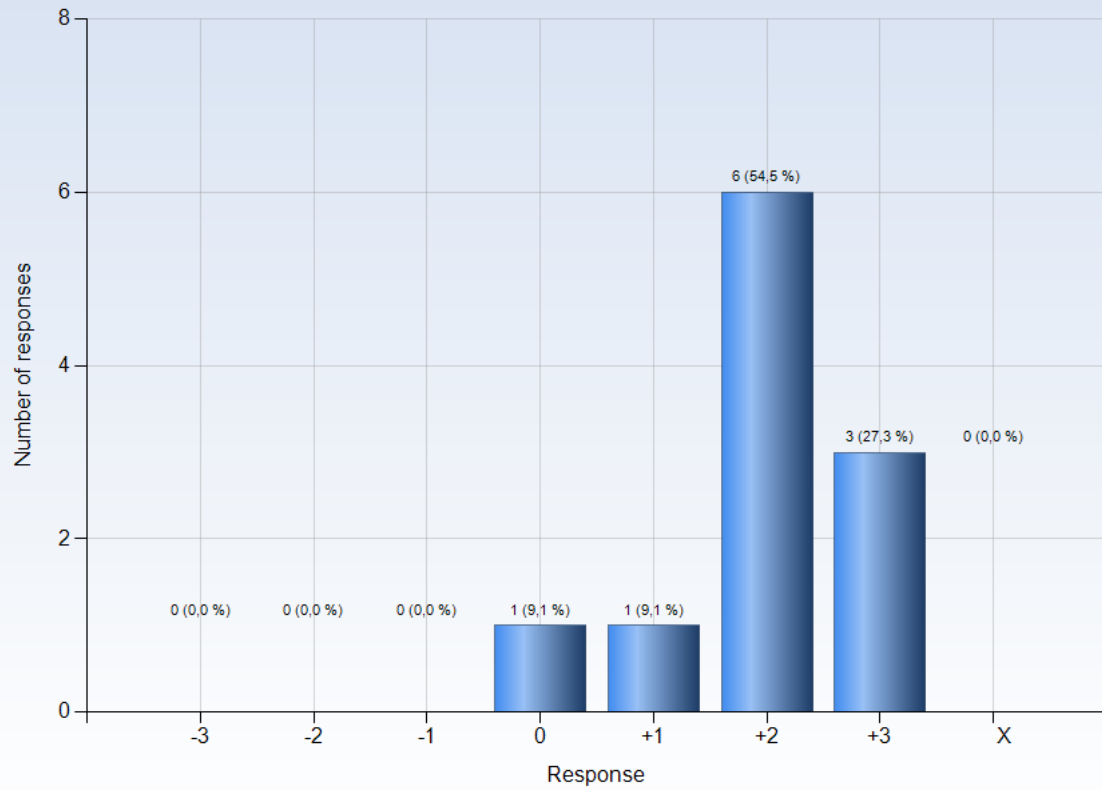
Kurslitteraturen tog upp många konkreta exempel på tillfällen där teorin fanns. Laborationerna blev också ett konkret exempel.

11. Understanding of key concepts had high priority



Comments

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

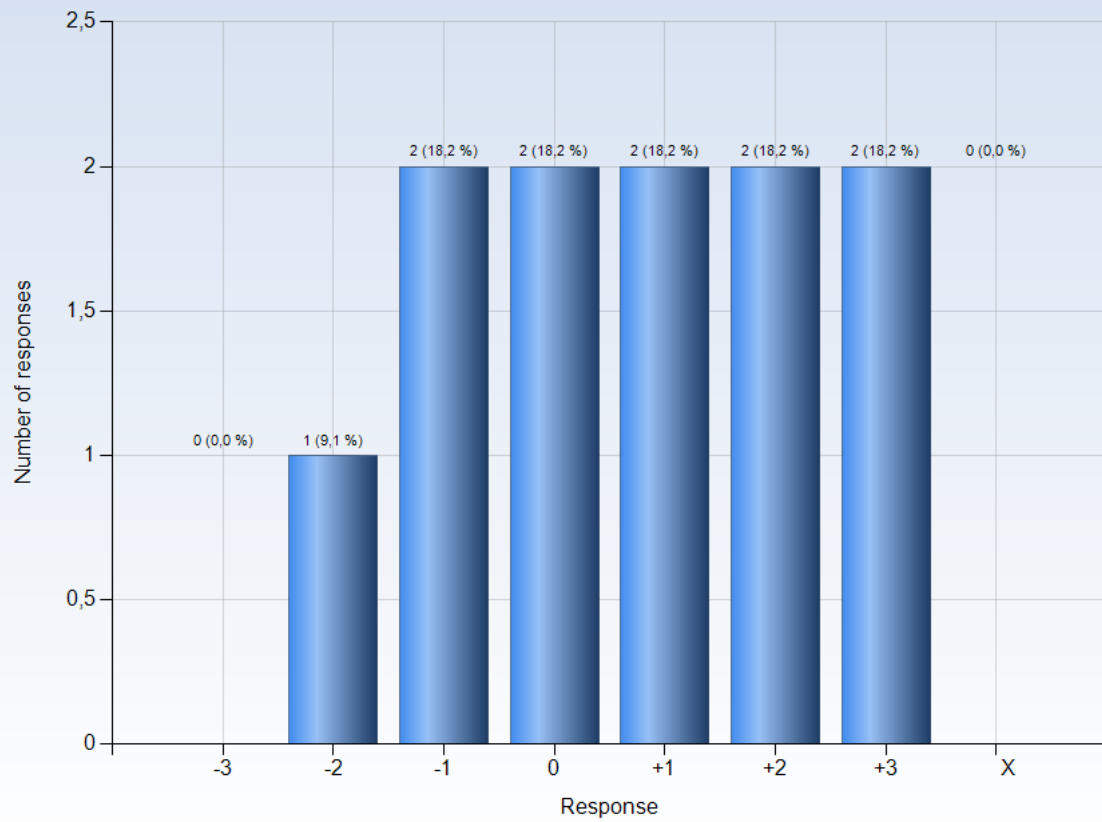


Comments

Comments (My response was: +2)

En av laborationerna var lite rörig.

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



Comments

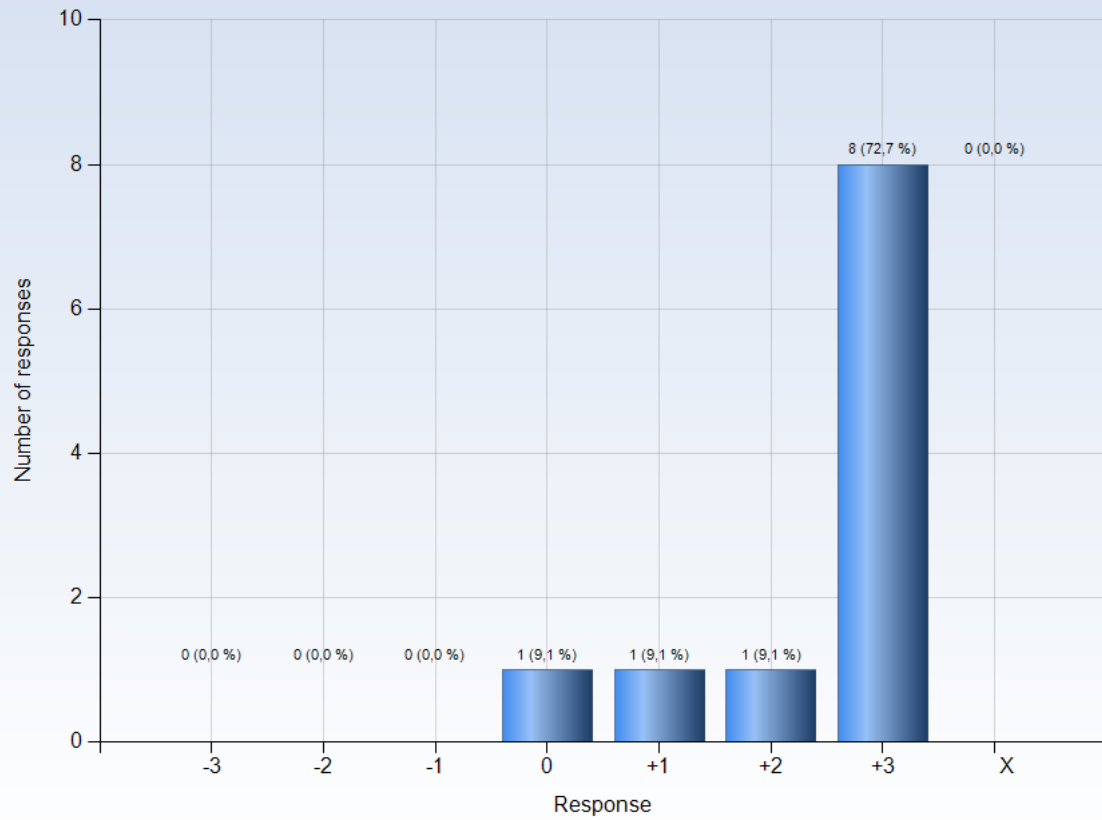
Comments (My response was: -1)

I think that some study quizzes and non graded assignments should be provided to help students

Comments (My response was: 0)

Jag gjorde det aldrig, men om jag haft frågor tror jag Jens hade svarat tillfredställande på dessa över mail.

16. The assessment on the course was fair and honest

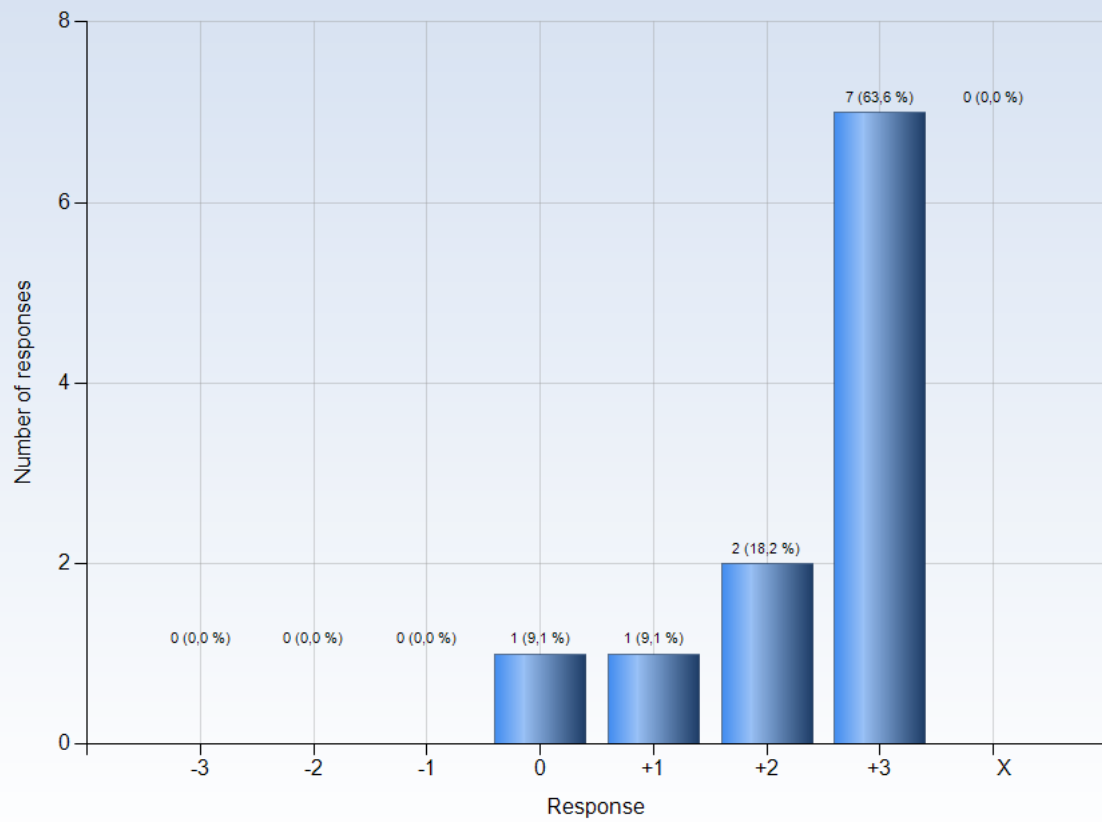


Comments

Comments (My response was: +3)

Nu var det muntlig examination där man kanske inte kunde visa lika mycket som under en skriven. Men den kändes ändå komplett och rättvis.
Completely fair grading, and very honest professor

17. My background knowledge was sufficient to follow the course

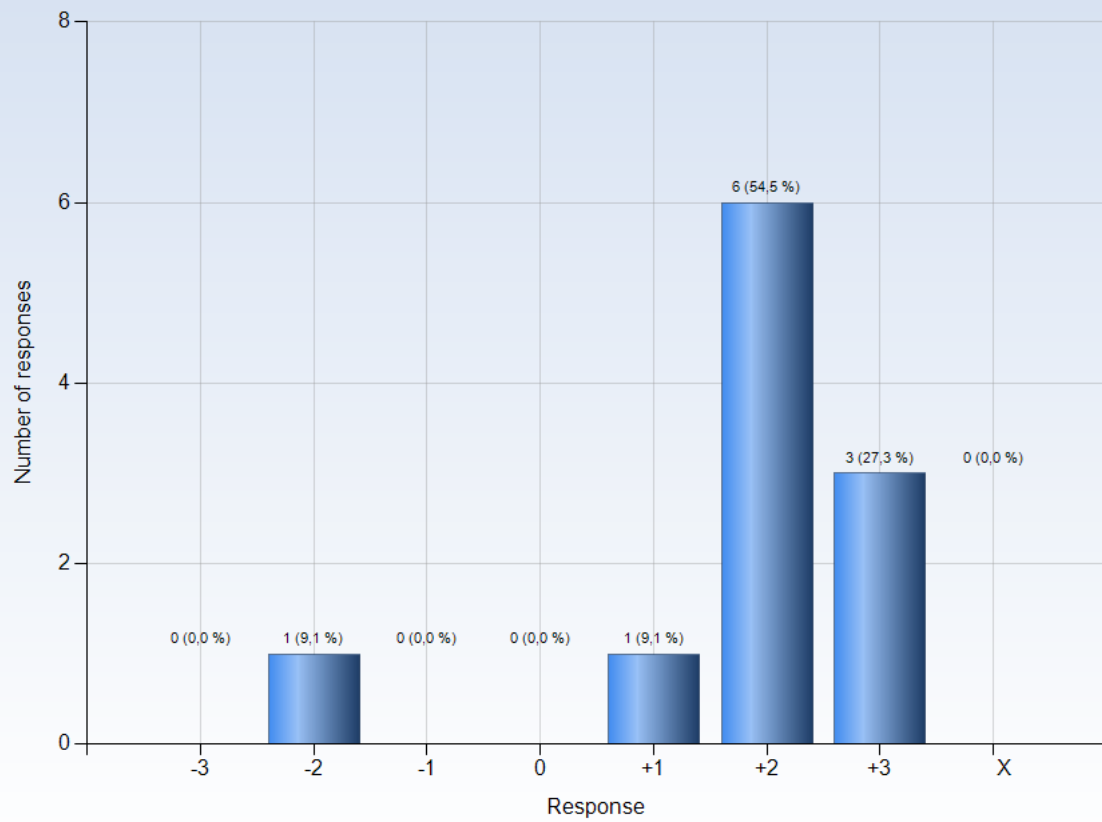


Comments

Comments (My response was: +3)

Yes, it is possible to follow the course, provided that one attends all the meeting with attention.

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



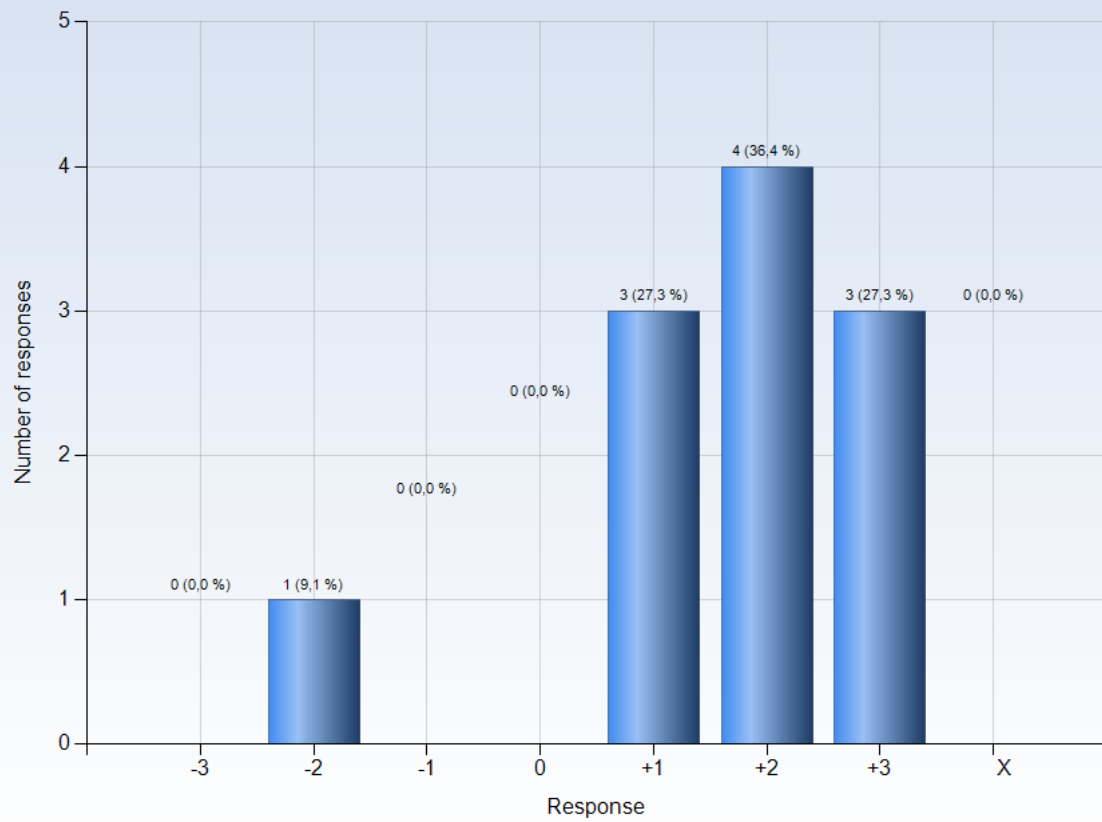
Comments

Comments (My response was: +2)

Laborationer.

Really enjoyed the labs

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



Comments

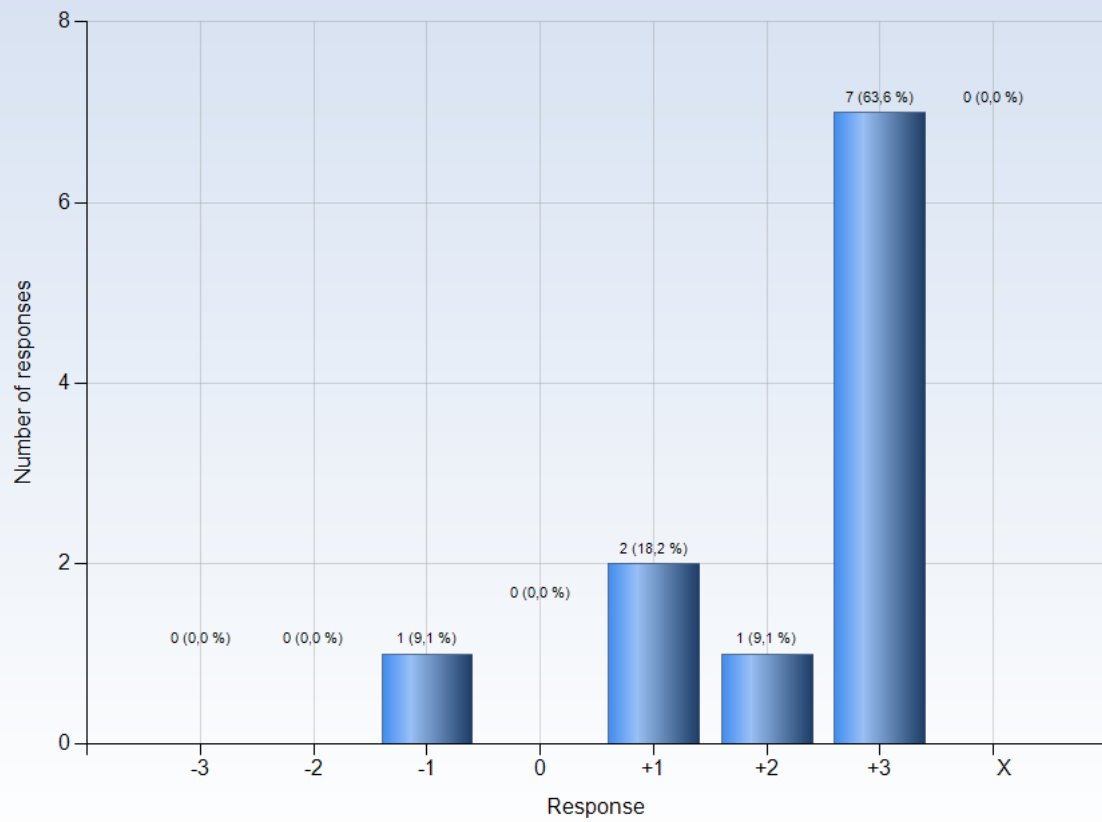
Comments (My response was: -2)

Not really, apart from the labs, there is not really a collaboration between students

Comments (My response was: +1)

Delvis genom den gemensamma labrapporten till den sista labben.

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



Comments

Comments (My response was: +2)

The professor and assistants were really available if needed

Comments (My response was: +3)

Frans helped out a lot if you had a question which was very appreciated.