ESTIMATED WORKLOAD

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

> 41 timmar/vecka	0 (0%)
39-41 timmar/vecka	0 (0%)
36-38 timmar/vecka	0 (0%)
33-35 timmar/vecka	0 (0%)
30-32 timmar/vecka	0 (0%)
27-29 timmar/vecka	0 (0%)
24-26 timmar/vecka	0 (0%)
21-23 timmar/vecka	0 (0%)
18-20 timmar/vecka	1 (20%)
15-17 timmar/vecka	0 (0%)
12-14 timmar/vecka	1 (20%)
9-11 timmar/vecka	2 (40%)
6-8 timmar/vecka	1 (20%)
3-5 timmar/vecka	0 (0%)
0-2 timmar/vecka	0 (0%)

Number of respondents

Comments

Comments (I worked: 9-11 timmar/vecka)
The workload was managable, most of the time spent is on the simulation within ANSYS.

Comments (I worked: 18-20 timmar/vecka)
Personal commitment, not mandated.
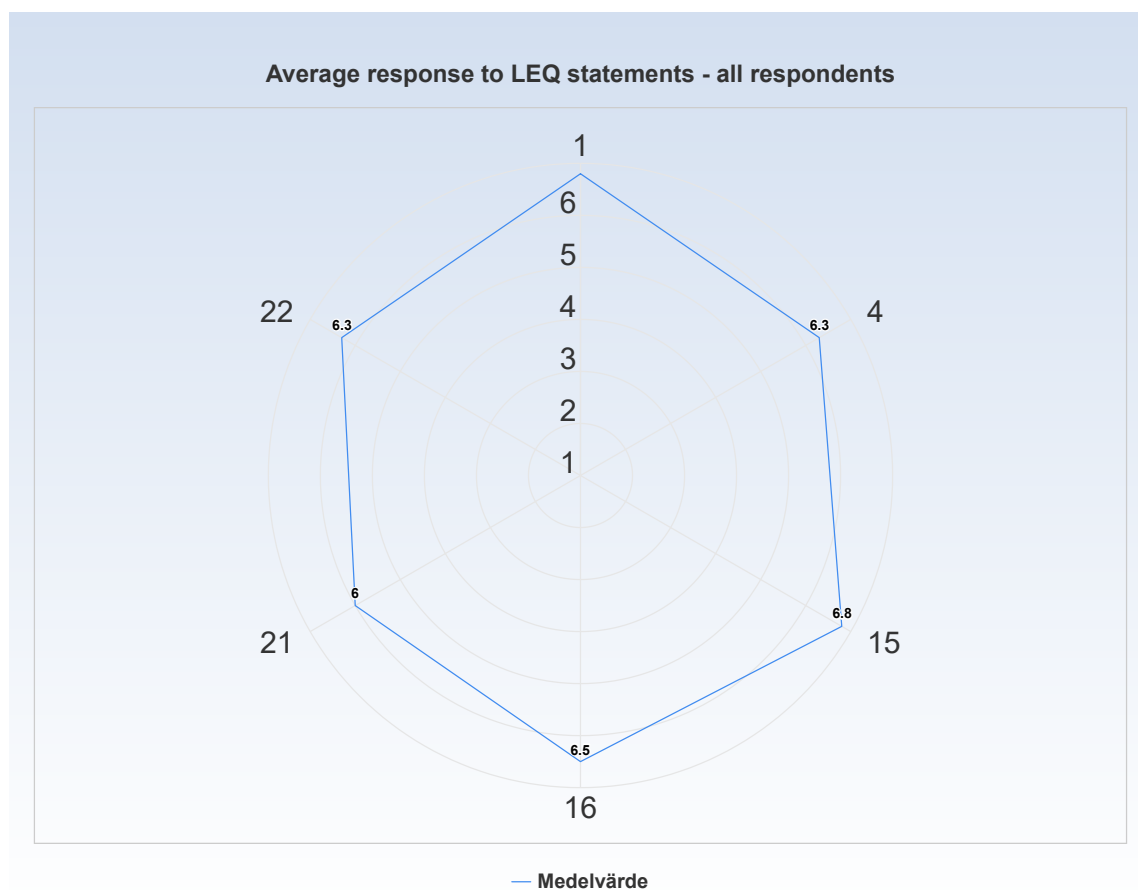
LEARNING EXPERIENCE

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.
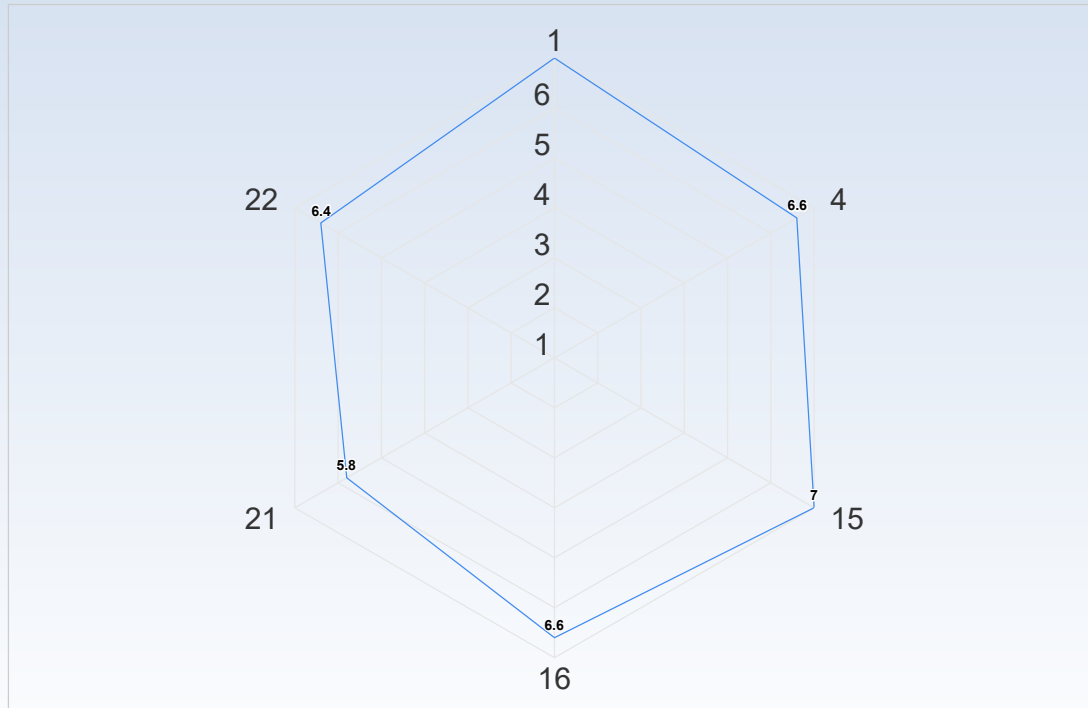

Ramsden, P. (2003). *Learning to Teach in Higher Education*, Chapter 6, pp. 84-105. New York: RoutledgeFalmer.

Average response to LEQ statements - per gender
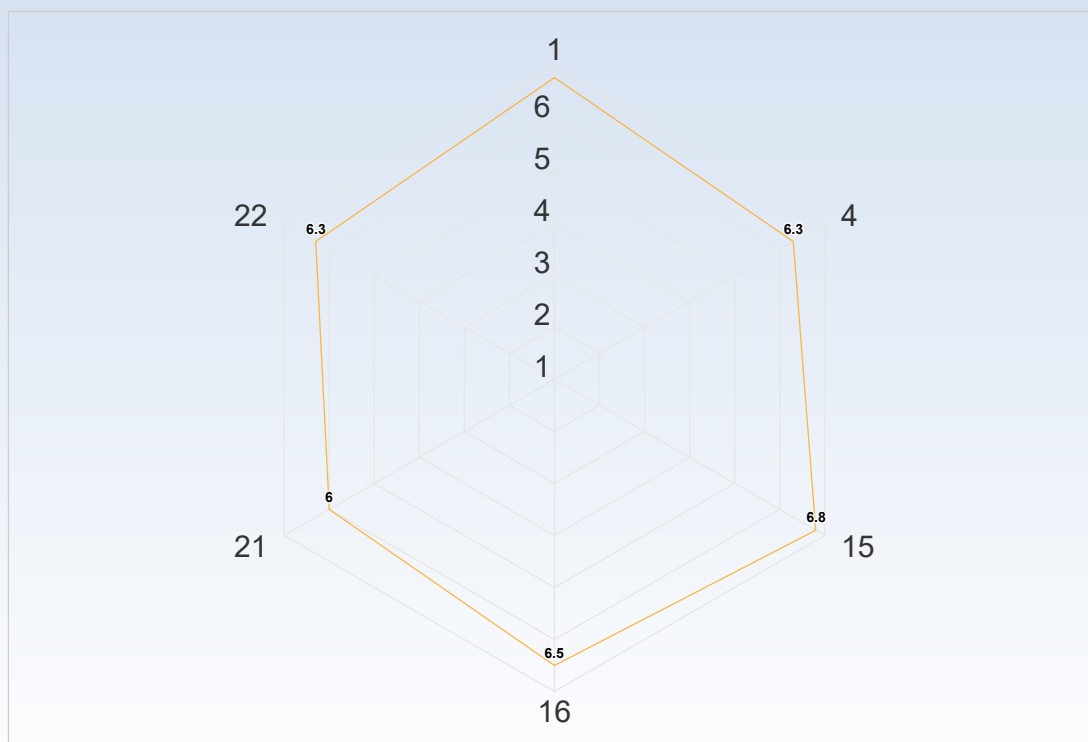
Kvinna — Man — Annat — Vill ej uppge

## 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 utbytesstudent)
Undergraduate Year 3 Exchange Student

Average response to LEQ statements - per disability

Ja —— Nej —— Vill ej uppge
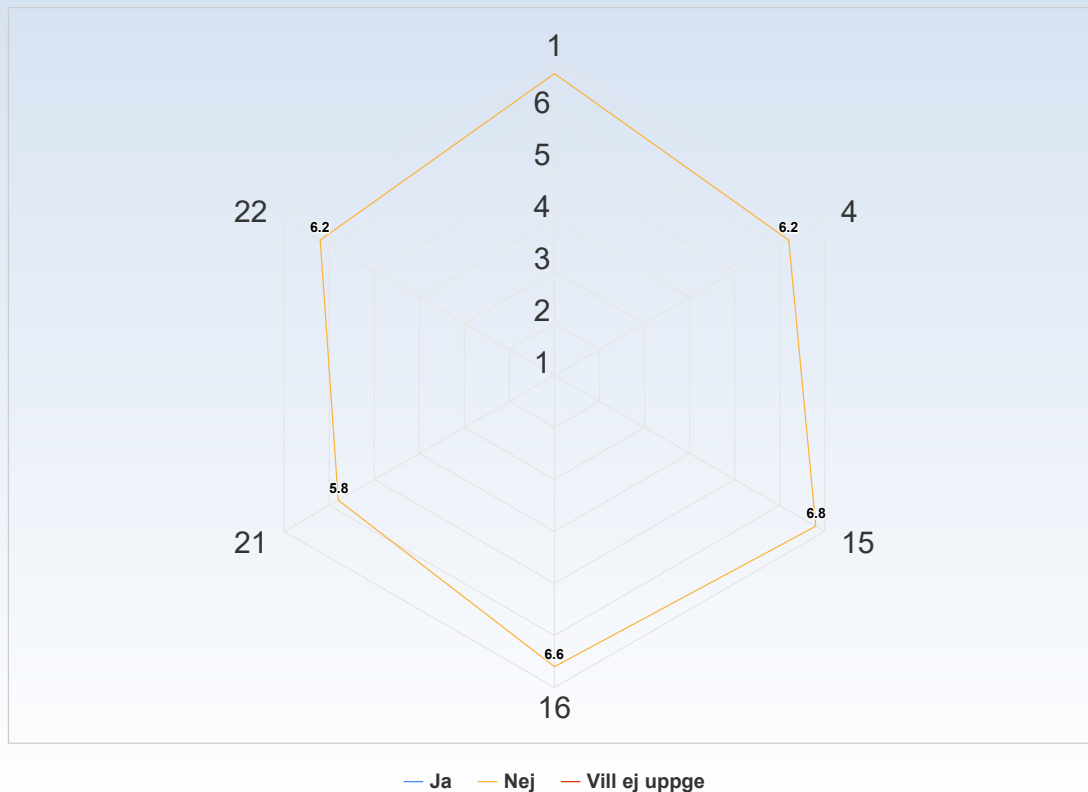
GENERAL QUESTIONS

What was the best aspect of the course?

What was the best aspect of the course? (I worked: 6-8 timmar/vecka)

Having the possibility to study on projects in collaboration with companies. We had the great chance to collaborate with NorthVolt which was extremely helpful for us

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

the learning of the general workflow during fluid simulations and the various types of CFD models.
Freedom to work with interesting topics and tools.

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

Have the opportunity to study on interesting topic and sharpen skills in CFD commercial software.

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

Learning the fundamentals. Good workshop and external lectures.

What would you suggest to improve?

What would you suggest to improve? (I worked: 6-8 timmar/vecka)
The theoretical lectures were poor

What would you suggest to improve? (I worked: 9-11 timmar/vecka)
NIL
More demo labs or labs where you can come and get help for the software

What would you suggest to improve? (I worked: 18-20 timmar/vecka)
Improve quality of the lectures. Can be made more interesting. Teaching was monotonous at times.

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)
start early
Projects might seem simple but they require more work than it looks like.

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

Is there anything else you would like to add?

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

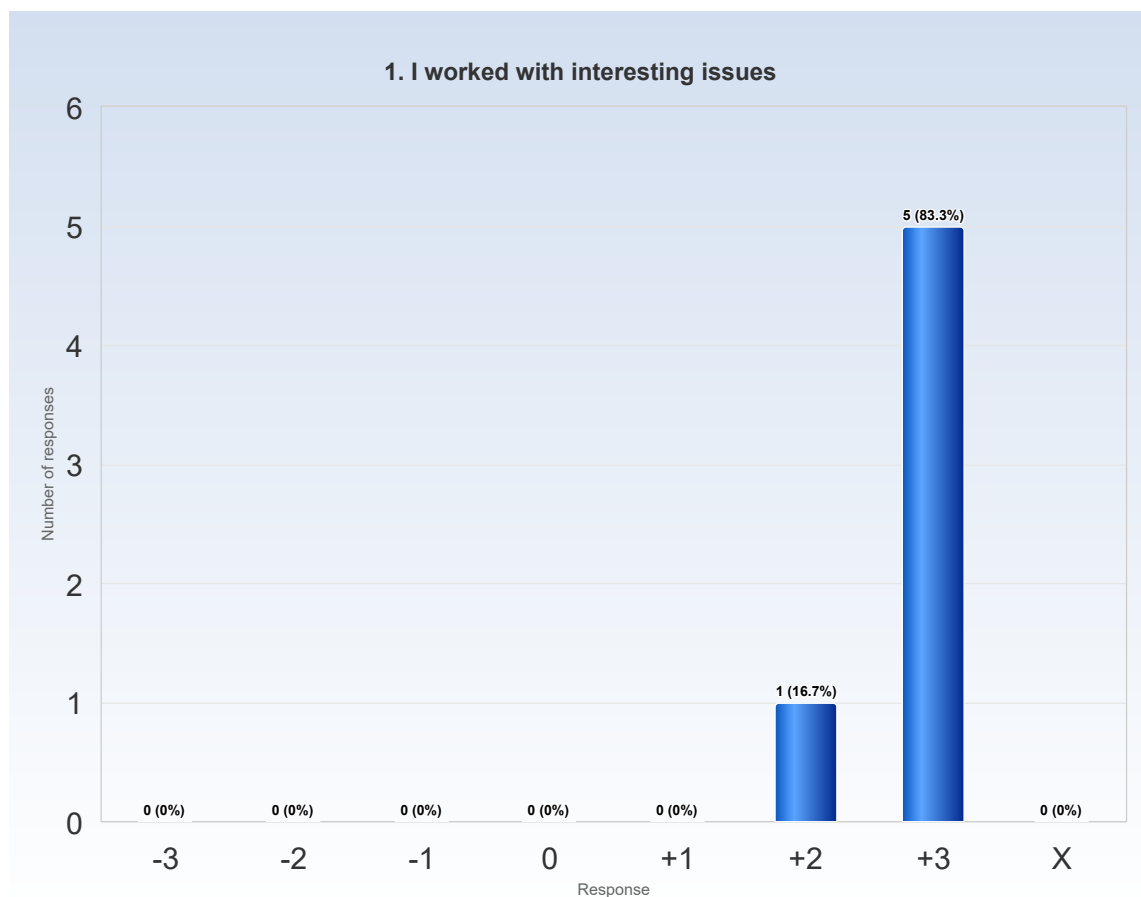# SPECIFIC QUESTIONS

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

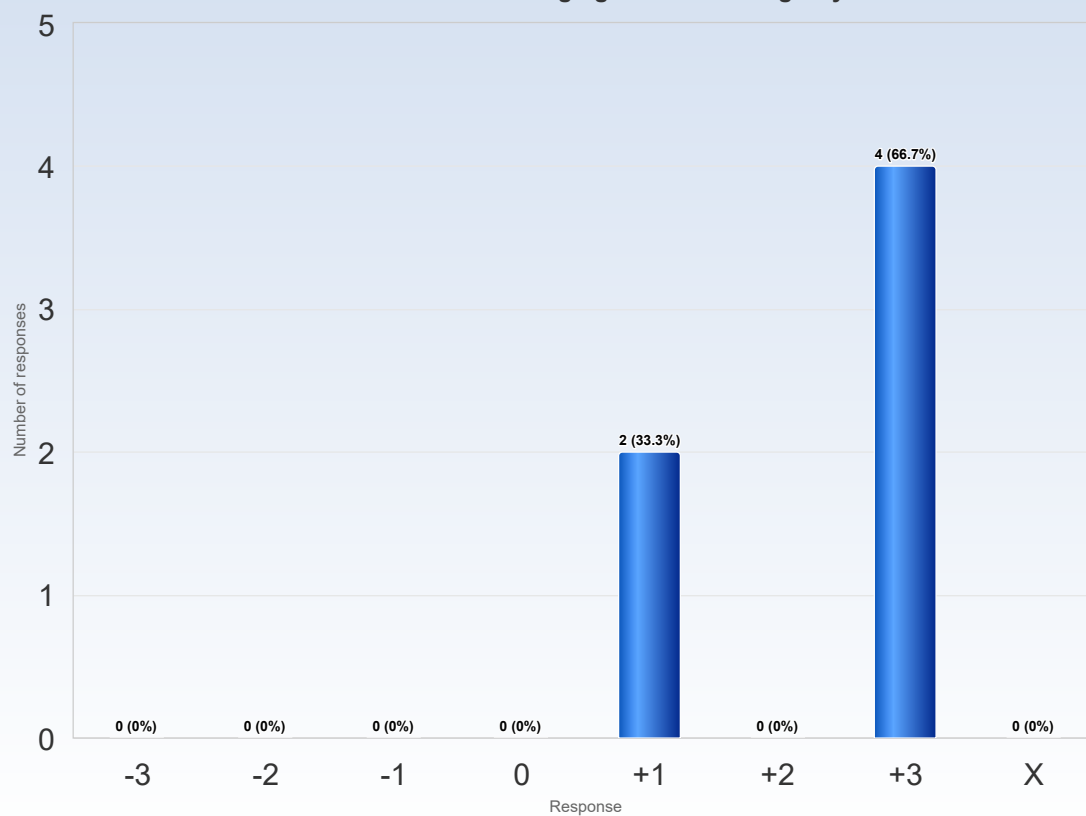X = I decline to take a position on the statement

1. I worked with interesting issues
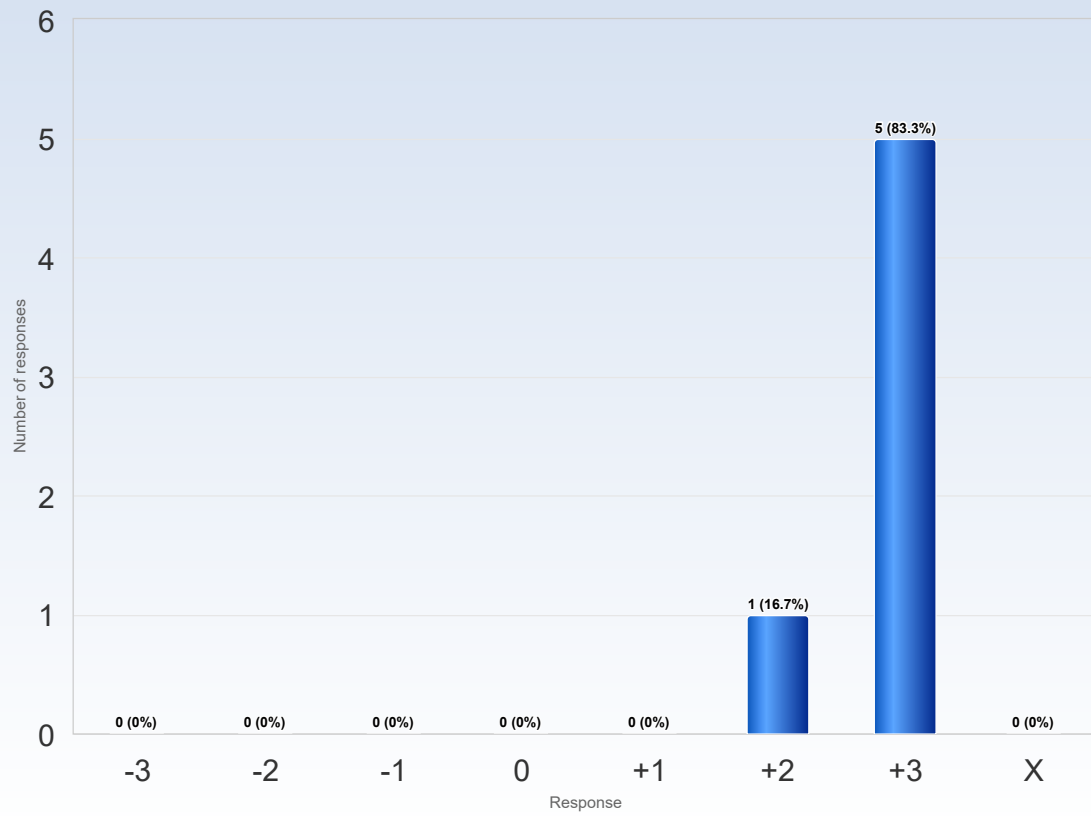

Comments

Comments (My response was: +2)

I worked with non mechanical thrust vectoring using Coanda surfaces and the simulation and the topic was interesting and provoked thought about the real world engineering use cases.
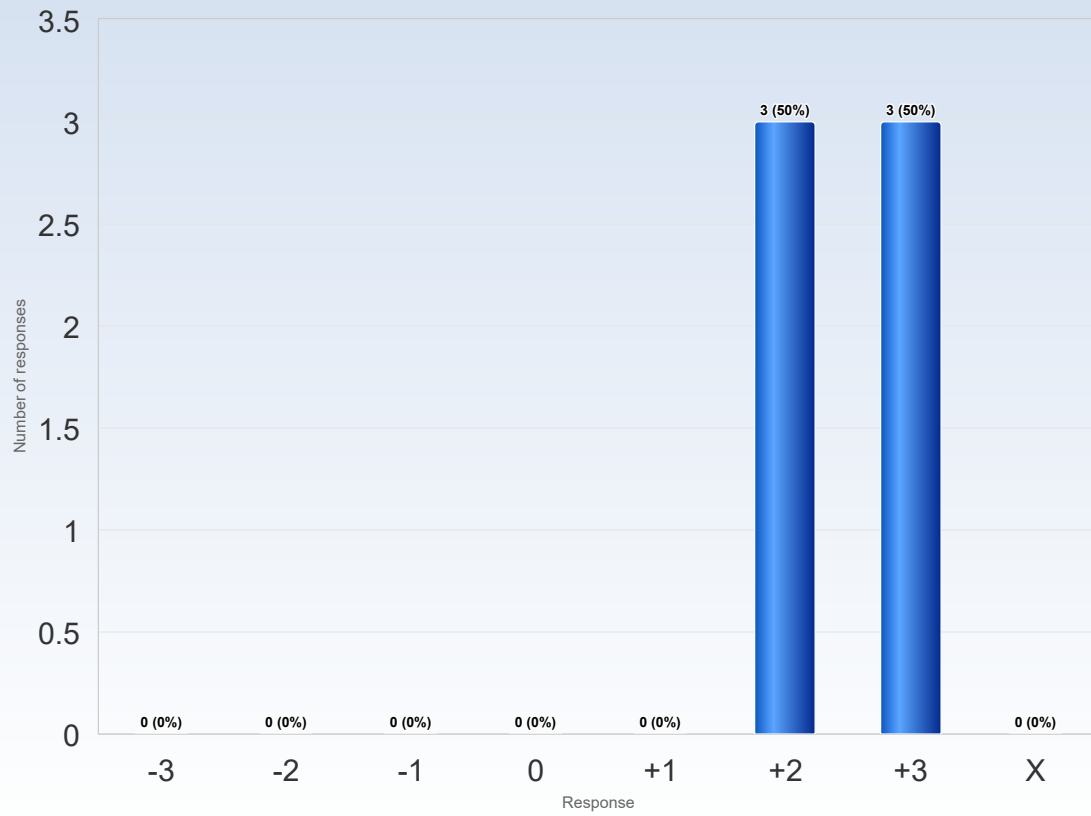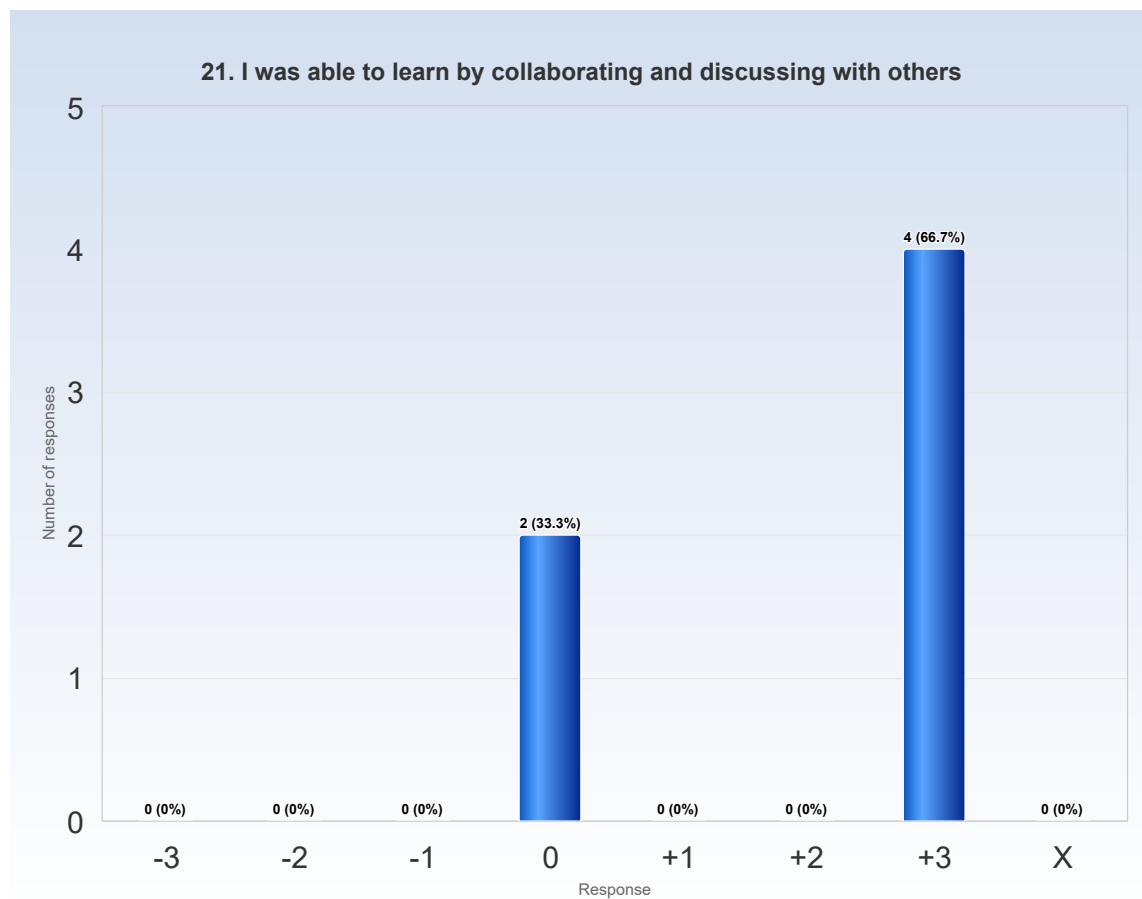
4. The course was challenging in a stimulating way

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

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

Number of responses

0 (0%) 0 (0%) 0 (0%) 0 (0%) 0 (0%) 3 (50%) 3 (50%) 0 (0%)

-3   -2   -1   0   +1   +2   +3   X

Response

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

Number of responses

Response	
-3	0 (0%)
-2	0 (0%)
-1	0 (0%)
0	2 (33.3%)
+1	0 (0%)
+2	0 (0%)
+3	4 (66.7%)
X	0 (0%)

Comments

Comments (My response was: +3)

good group mates allowed for the sharing of information and help.

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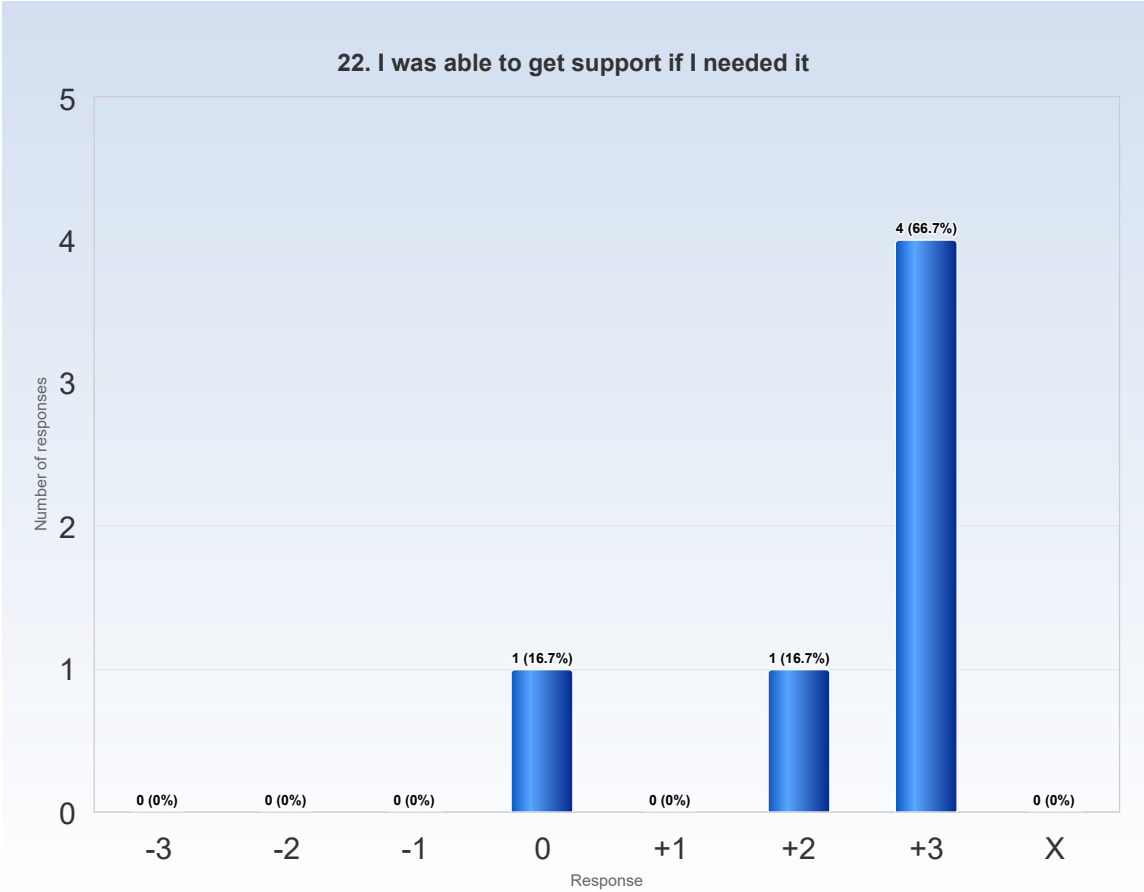
Comments

Comments (My response was: +2)

stefan was always ready to reply to our queries.