

Course evaluation DD2363, spring 2024

The course modules closely follow the book "Methods in Computational Science" by Johan Hoffman, published by SIAM in 2021. Each week solutions to a set of problems from the book should be submitted together with programming assignments in the form of Jupyter notebooks. This continuous assessment is concluded with an oral exam at the end of the course.

No big changes were made for this year.

This year there were too few students that responded to the course evaluation questionnaire to generate statistics so instead the questionnaire from 2023 is included.

DD2363 - 2023-03-13

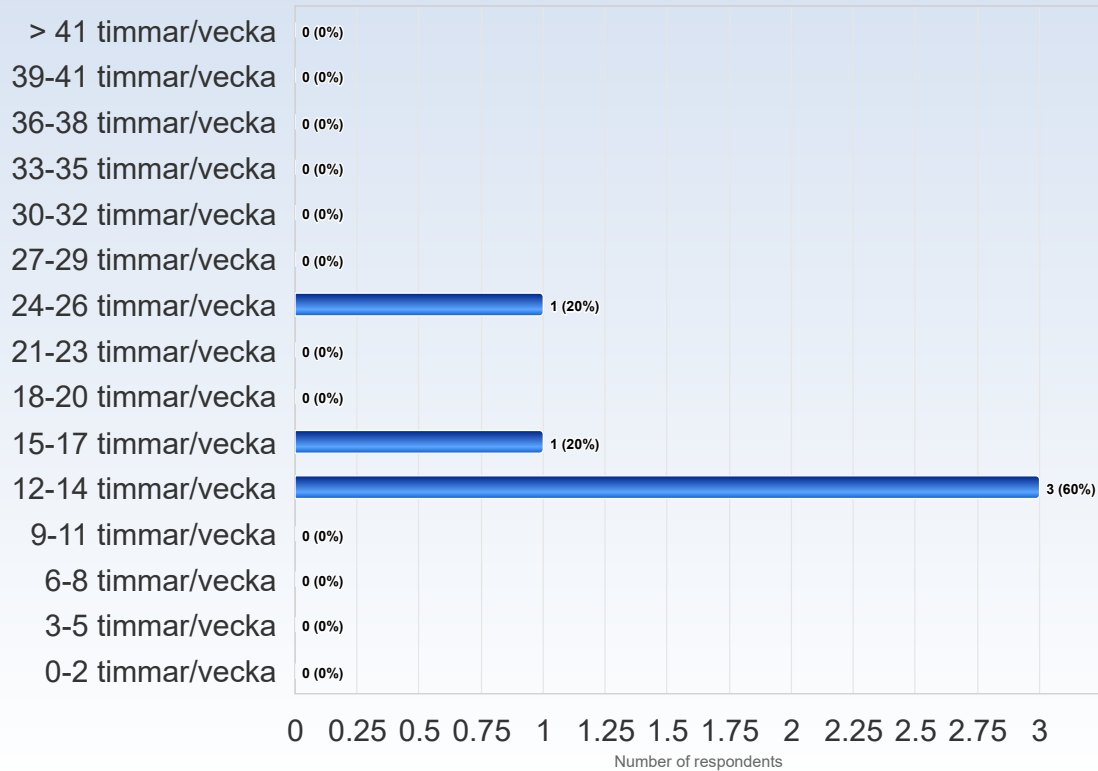
Antal responder: 15

Antal svar: 5

Svarsfrekvens: 33,33 %

ESTIMATED WORKLOAD

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



Comments

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

I should have allocated more time on the course.

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

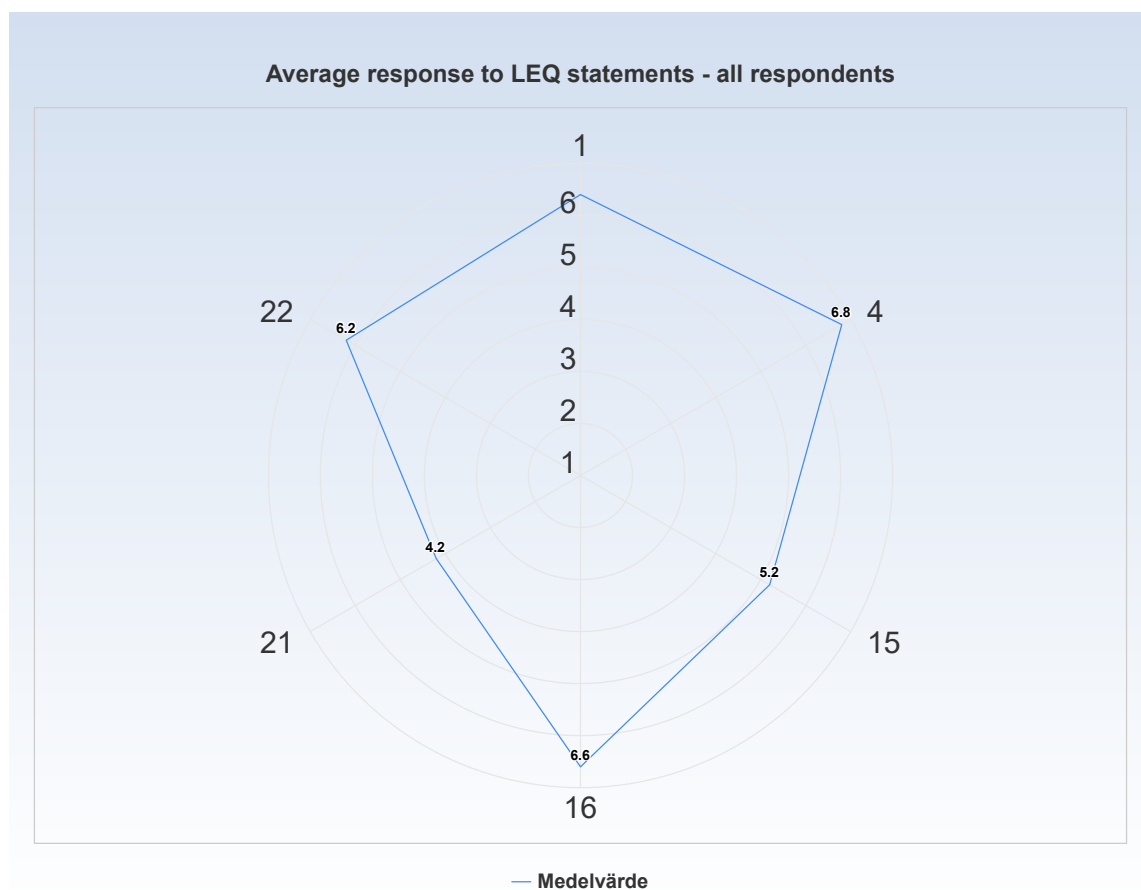
A lot of work but led to a good understanding of the topics

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.

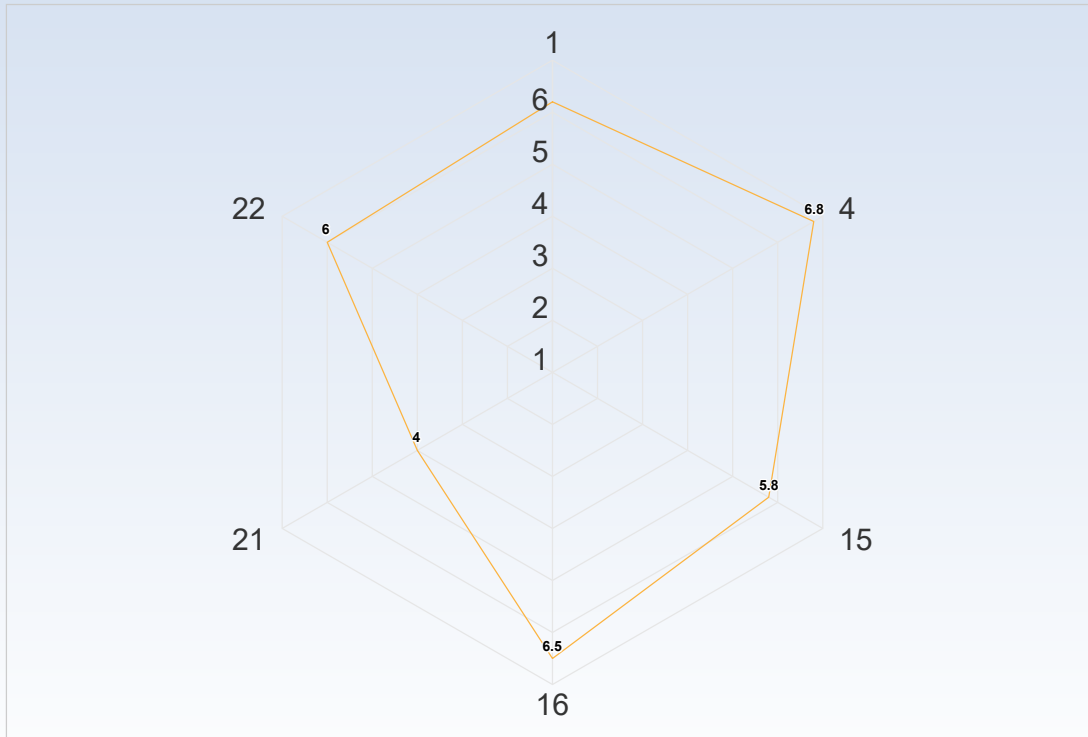
Biggs J. & Tang, C. (2011). *Teaching for Quality Learning at University*, Chapter 6, pp. 95-110. Maidenhead: McGraw Hill.

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.

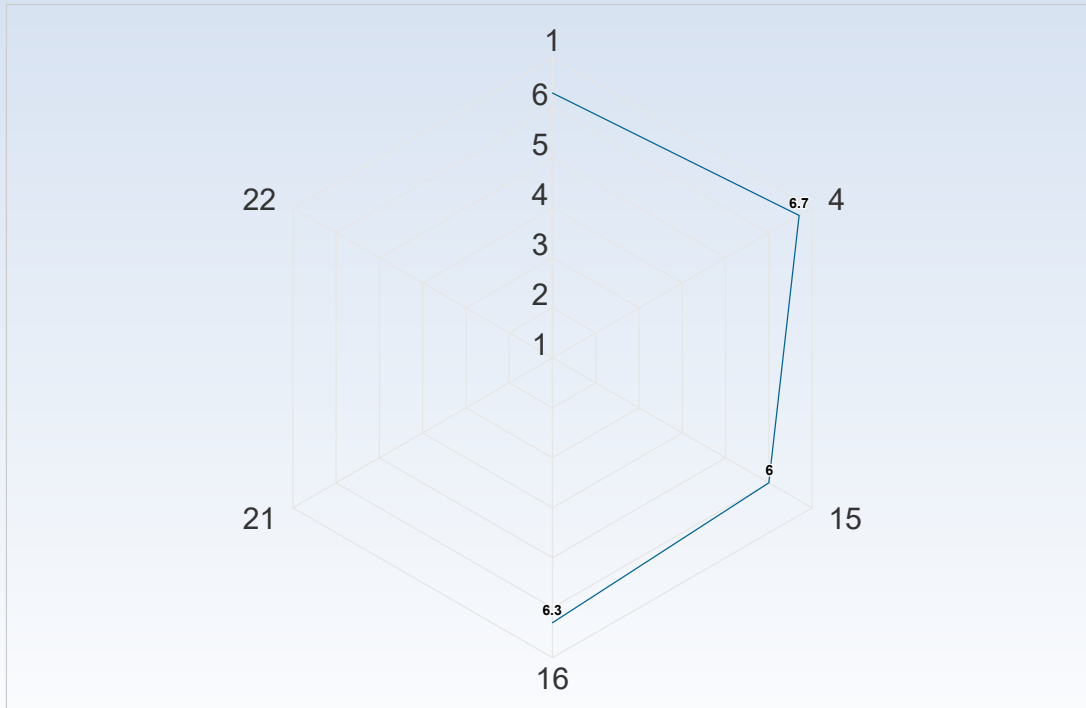
Ramsden, P. (2003). *Learning to Teach in Higher Education*, Chapter 6, pp. 84-105. New York: RoutledgeFalmer.

Average response to LEQ statements - per gender



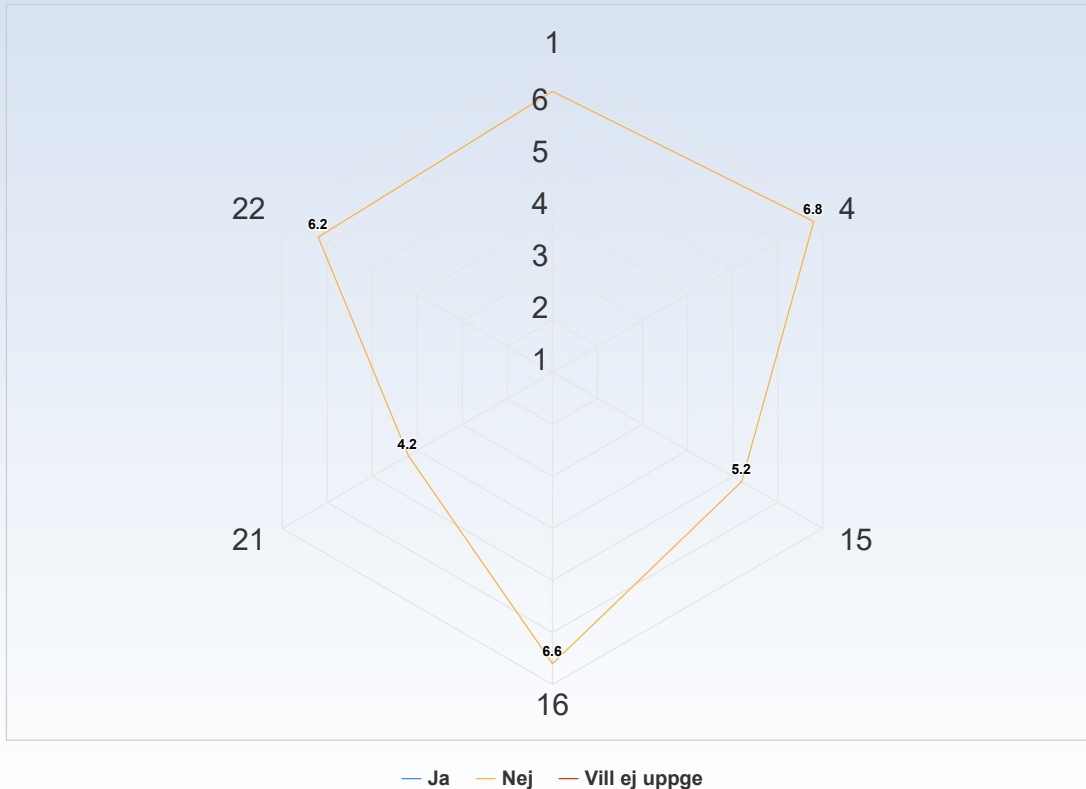
— Kvinna — Man — Annat — Vill ej uppge

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

Average response to LEQ statements - per disability



GENERAL QUESTIONS

What was the best aspect of the course?

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

Weekly submissions which the exams were based on.

Understanding the theory assignments, even though you had to go through a lot to get there.

Fun and interesting material. Good lecturer. The theoretical assignments were for the most part stimulating.

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

There were not so many students therefore the course was more interactive, it was easier to ask questions. The topics were interesting.

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

I liked the weekly structure of assignments, it helped to pace the learning regularly. Definitely better than potentially having one large exam at the end of the course.

What would you suggest to improve?

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

Some overlap with other courses, like implementing Newton's method.

Perhaps throw in a few exercise sessions or two where we get to test/see some more advanced stuff and practice.

Force people to work in pairs on some of the assignments.

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

Maybe consider giving equal amount of points for the lab and problem assignments. Lab assignments gave 2 points against 4 for the problem assignments yet I definitely spent more time getting the labs working and properly tested.

What advice would you like to give to future participants?

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

Do the assignments during the week.

Find someone to work together with on the assignments. You could easily get stuck on parts of the theory and sit hours on end not knowing what to do. It really helps having someone else in the same boat as you so you can discuss the problem. It's also really beneficial for motivation.

Start early on the theoretical assignments and go to the lectures.

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

I would say probably try to keep up with the deadlines not to get overworked at the end of the period

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

Start doing the assignments in time because most of the questions will arise in the process.

Is there anything else you would like to add?

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

Fun course that I would recommend to others. I would have liked to do more about differential equations in particular FEM and apply FEniCS. I did not have time to do the extra assignments those two weeks when we had FEM.

My favorite course at kth so far!

SPECIFIC QUESTIONS

RESPONSE DATA

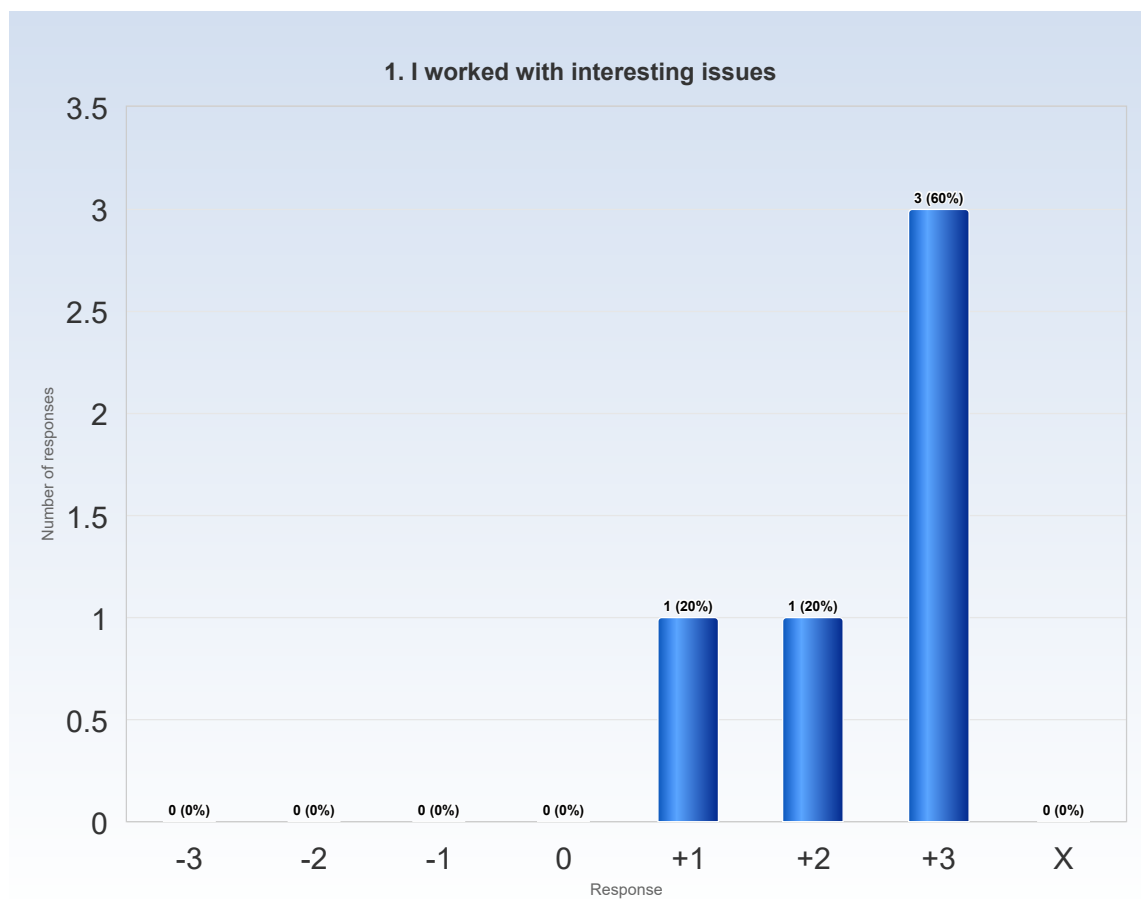
The diagrams below show the detailed response to the LEQ statements. The response scale is defined by:

-3 = No, I strongly disagree with the statement

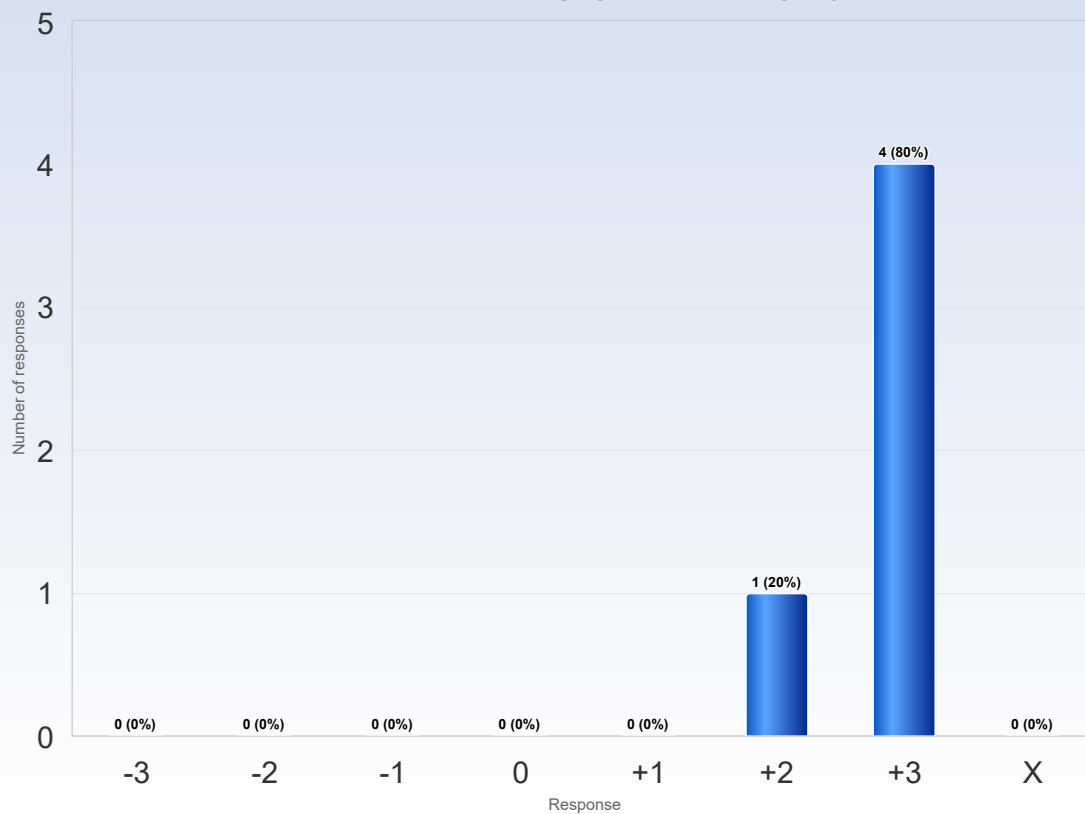
0 = I am neutral to the statement

+3 = Yes, I strongly agree with the statement

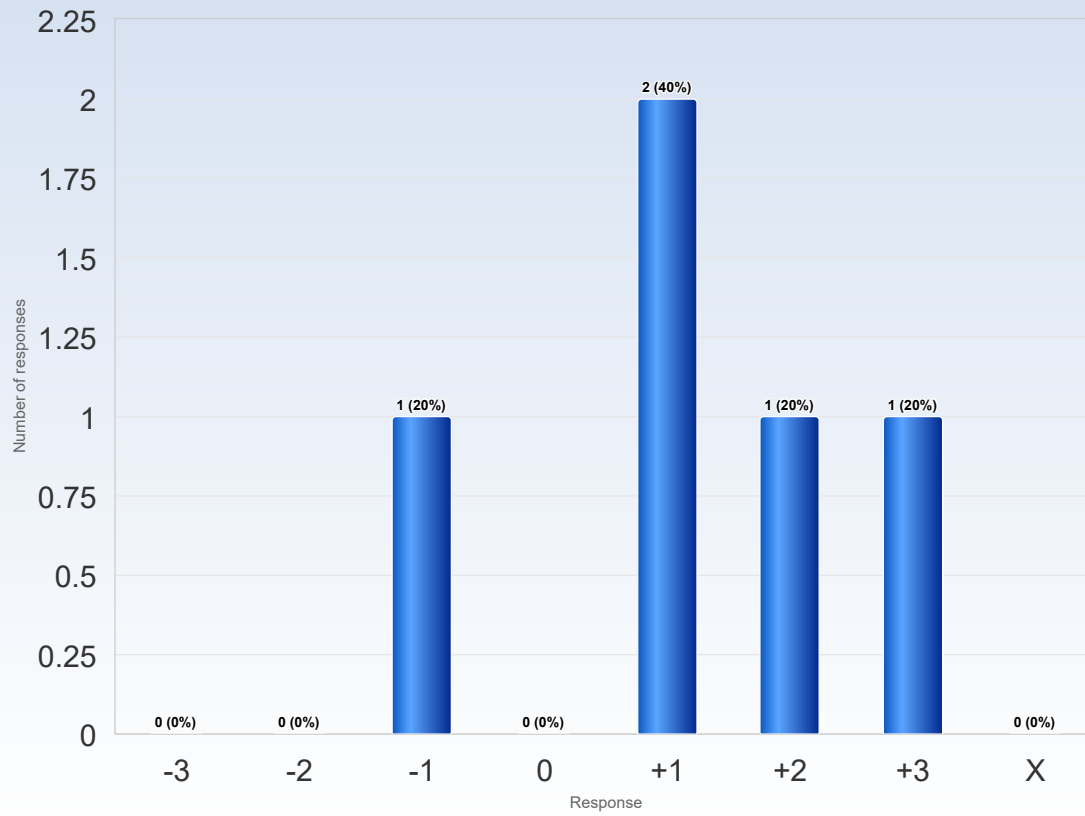
X = I decline to take a position on the statement



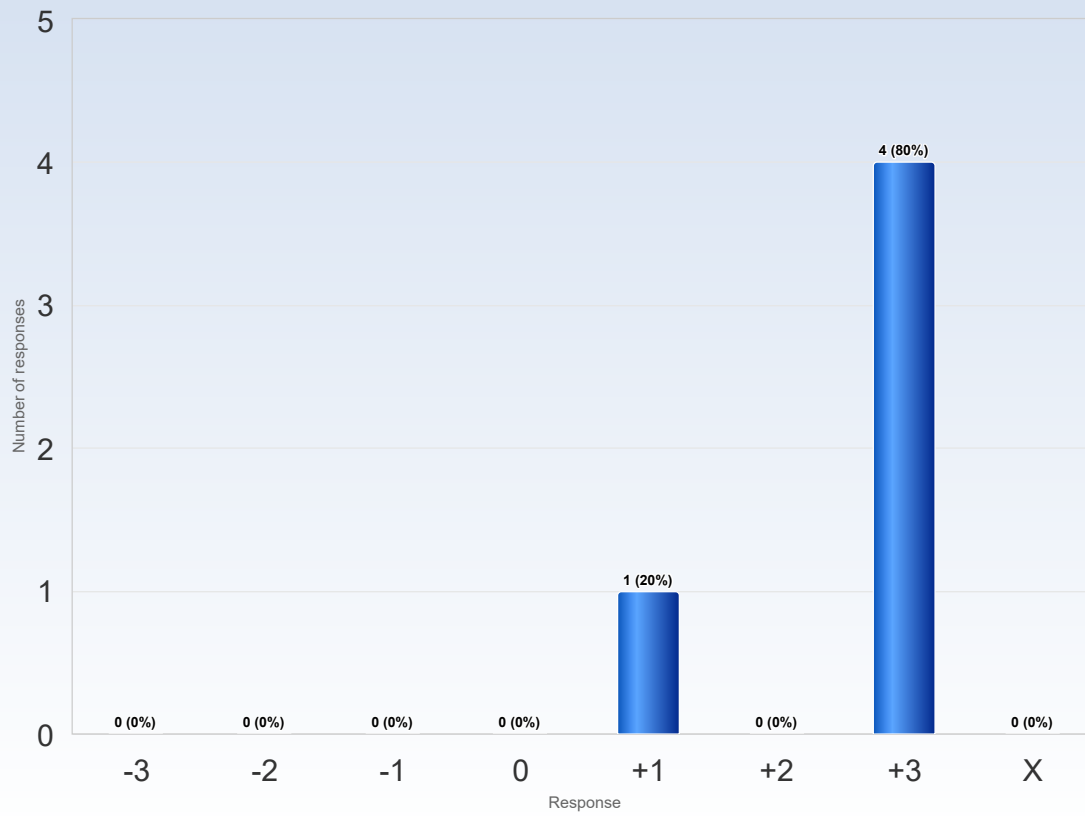
4. The course was challenging in a stimulating way



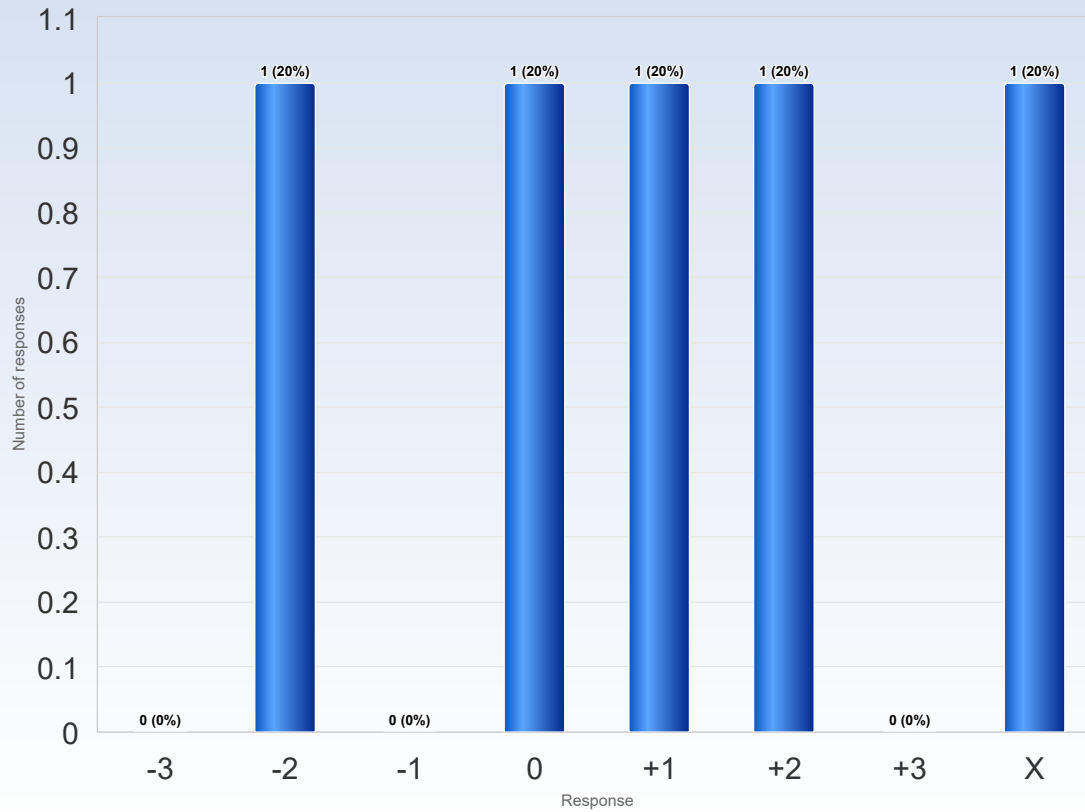
15. I was able to practice and receive feedback without being graded



16. The assessment on the course was fair and honest



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



Comments

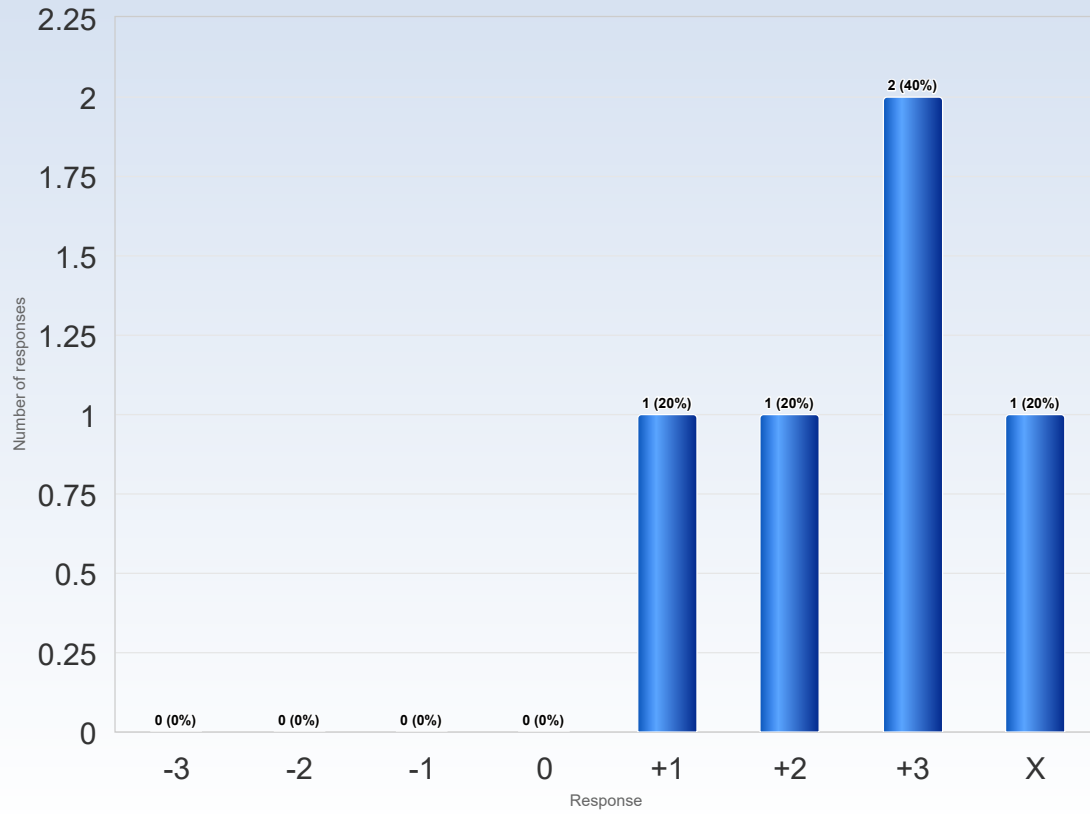
Comments (My response was: -2)

I should've found someone to do the weekly assignments with, I think that would have made the course a lot more fun.

Comments (My response was: X)

i was able but i didn't.

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



Comments

Comments (My response was: X)

I assume so, but i didn't ask.