

Course Analysis for “Deep Learning, Advanced” (6 HP) HT21

DD2412/FDD3412

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Forms of Assessment

The course contains two examination components

- **LAB1:** which consists of writing assignments as well as quizzes on the different topics of the course, the assignments are individual and are graded in P/F/Fx
- **TEN1:** which corresponds to a final implementation project, in a group of 3 for master students (DD2412) and 1-3 for doctoral students (FDD3412). The projects are graded in A-F/Fx.

Participation and Graduation Statistics

Number of registered 2nd-cycle students (DD2412): 104

Number of registered 3rd-cycle students (FDD3412): 14

Number and rate of graduated 2nd-cycle students (DD2412): 89 (**85%**)

Number and rate of graduated 3rd-cycle students (FDD3412): 11 (**79%**)

Grades distribution for passing 2nd-cycle students (DD2412): **A(51, 49%), B(20, 19%), C(17, 16%), D(2, 2%), E(0, 0%)**

Summary of course evaluation

Course evaluation format: 22 Standard LEQ Statement Questionnaire

Participation rate: **22%** (22 responded out of 98 invited)

Course load on the students: Figure 1 shows the distribution of the course load in week/hours.

General evaluation: As can be seen in Figure 2, in general, students agree with all the 22 LEQ statements with varying degrees from weak agreement (3 statements got rounded average of 5) to moderate (17 statements got rounded average of 6) and strong agreement (2 statements got an average closer to 7). Comparing Figure 2 (HT21) with Figure 4 (HT22), it can be concluded that the general perception of the course has clearly improved from last year.

Diversity: The general trend is the same across various subpopulations, that is, the average of all questions clearly and consistently lean on the positive side. However, contrary to the last year (HT20), in HT21, there is a significant difference based on gender where female respondents have clearly a higher number of strong agreements (16 statements) than male respondents (2 statements). There seems to be still a significant difference between international and domestic students' responses as well where the agreement of international students is higher in 16 out of 22 LEQ statements (compared 20/22 from HT 20).

Important Figures

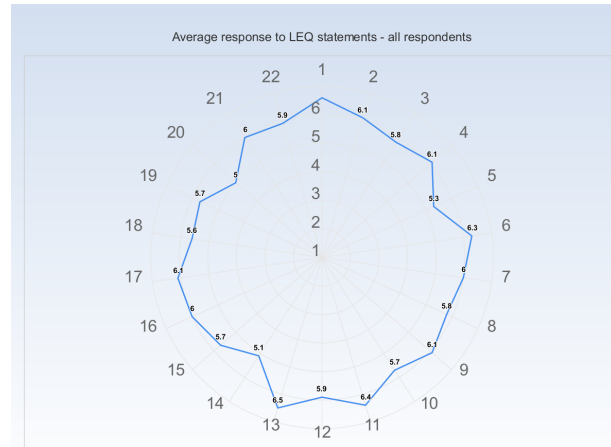
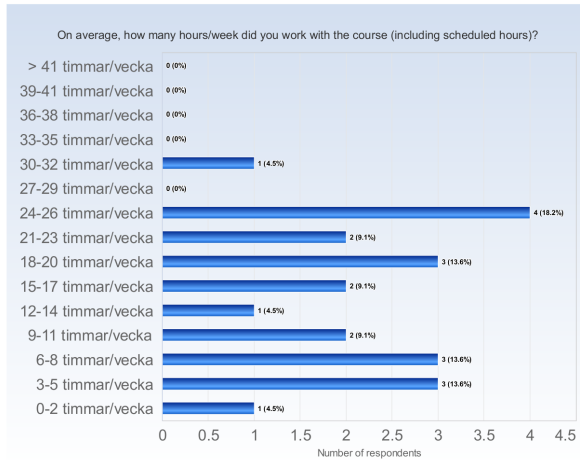


Figure 1: coursework statistics per week (HT21) Figure 2: average agreement level for LEQ statements (HT21)

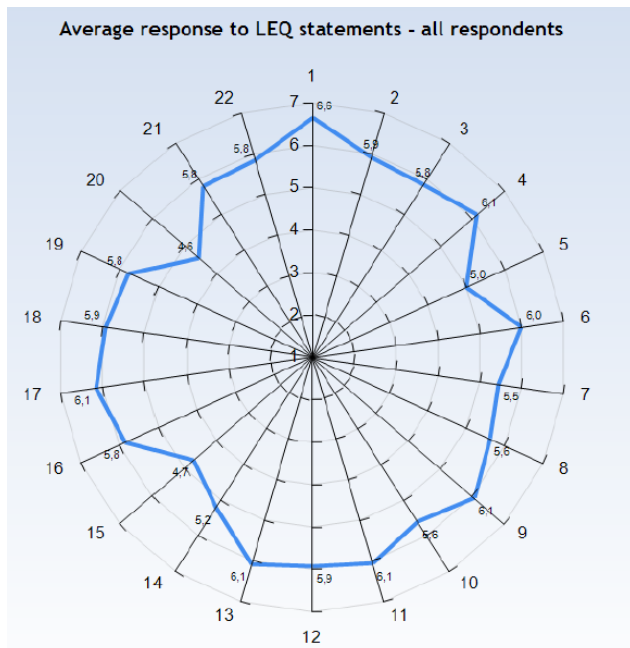
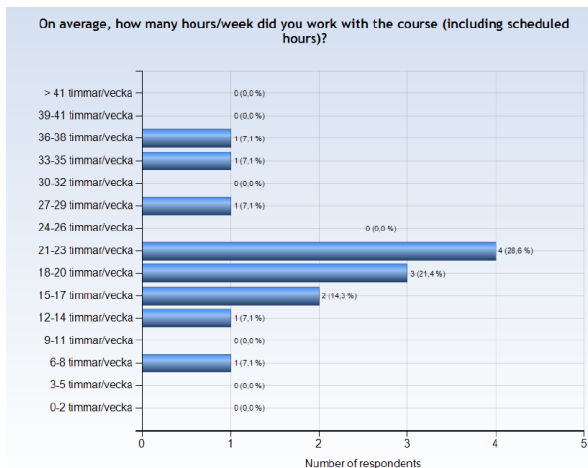


Figure 3: coursework statistics per week (HT20) Figure 4: average agreement level for LEQ statements (HT20)

Course Analysis

Course load for students: While the spread of the course load among students is still relatively large, the average is about 16 hours (Figure 1). This is consistent with the workload required for

a 6HP course *running over 1 period*. It is however surprising that the course, now running over two periods, has a similar workload per week compared to last year (average 18 hours, Figure 3). The course responsible suspects that the students have reported the time mostly based on the P1 experience which is more dense. It should be noted that the large spread is also expected as this is an advanced course and requires different levels of preparation depending on the suitability of the participating students' backgrounds.

Notable positive points: The observations of what aspects have worked better than other aspects is quite similar to the last year: in general, the students were satisfied with the content and format of the course. They mentioned that they “worked with interesting issues” (level of agreement: 6.4/7), liked the atmosphere of the course and strongly agreed (6.3/7) that “The atmosphere on the course was open and inclusive”. Importantly, as a result of the update in presenting the ILOs and evaluation criteria, the students found the expectation of what should be learnt in the course was very clear (6.5/7) where they also strongly agreed (6.3/7) that understanding the key concepts of the course had high priority. Furthermore, similar to the previous years, in the free-text section many students considered the following aspects of the course stand out: 1) the lectures' content that is cutting edge methods and therefore exciting for the students to engage, 2) the project that was fun, relevant, and open to choose its topic, and 3) the variation of activities and assignments.

Notable points of improvements:

- Most respondents liked the two-period idea (13/22) but some had arguments for both one and two periods (2/22) and some were completely against a two-period course (3/22) mainly due to the clashes it causes in the second period due to a late start of the project work.
- the workload seemed to be perceived much more balanced compared to HT19 and HT20 but can be still improved.
- some students were missing some per-topic practical implementation exercises
- some students didn't feel they benefited or were fully engaged with the essay writing assignments.

Teacher's view: the students' view in general has a clearly positive tone, similar to last year but with some improvements. In 2021, we still had the lectures over zoom which many explicitly found hurting their performance. As last year, I believe this significantly degrades the experience of the students for lectures, in-class peer-discussions, and “whiteboard Q&A”. On the positive side, the course became more inclusive, I believe, and significantly more questions were asked during the zoom lectures compared to the normal lecture halls.

Going from HT20 to HT21, there is no new point of improvement that were absent in HT20 evaluation which suggests there was no clear degradation. So, similar to the last years, the teacher absolutely agrees with all the remaining points of improvements. As all of them were anticipated, are lacking mainly due to the time constraints on both the teacher and TAs, and are planned to be mitigated in the future iterations.

Planned Measures for the next round

- Keep the course running through two periods: P1 and P2
- Flipped classroom:
 - replace lectures with digital at-home video lectures that students can watch at their own time and pace
 - Weekly physical sessions to discuss the content of the video lectures.
- The optional programming assignments will become mandatory and replace the writing assignments, so the empirical aspects of the course are enhanced.
- The quizzes, as the formative assessment will cover all course topics so that students can assess their high-level understanding of individual topics.

Proposal regarding potential changes to the course

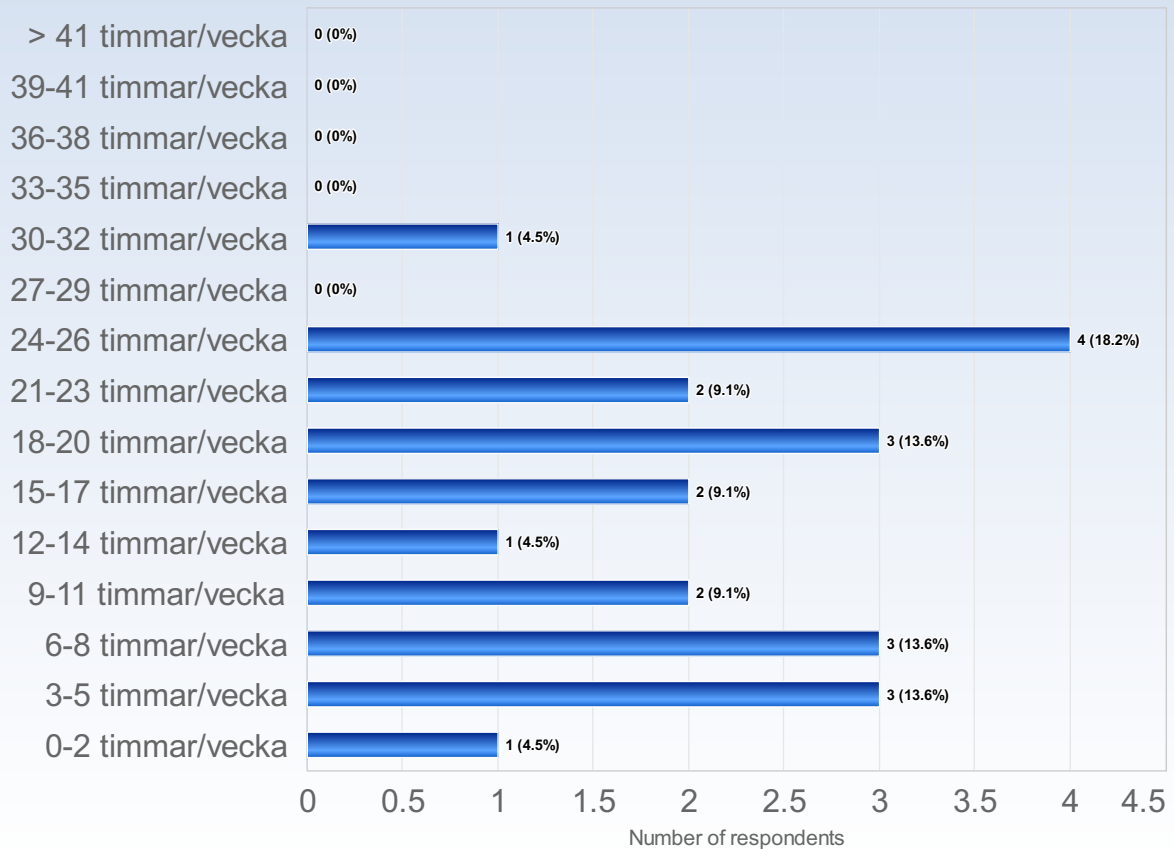
- The opinion is reinforced that the course should become a 9-credit course
- It should be graded as P/F or 3-scale grading since it is mainly a project course with open-ended objectives

DD2412 - 2021-12-20

Antal respondenter: 98
Antal svar: 22
Svarsfrekvens: 22,45 %

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)

Information was provided in a very concise way, which allowed me to understand the concepts much faster. Most of the time spent on this course was on the assignments and project.

6 credits spread out over two periods made the workload split up into two chunks (for me): the essays (+ quizzes) and the group project. I would have liked to see a bit more about e.g. transformers/attention. In between those chunks I didn't do much work.

The workload was the highest during the assignment deadline and the project deadline, but I actually did study consistently throughout the course which is rare for me. Generally I think that it met my expectations and that it was on a good level.

Comments (I worked: 6-8 timmar/vecka)

For both periods, I did most/all of the work in 1-2 weeks per period rather than spreading it out across the entire period.

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

on P1 the course was super light honestly there was not much to do apart writing the essay. P2 was much more intense with the project; in P2 I had much more hard time to balance my schedule as the project was very time consuming and there was also much more going on with other courses a

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

Little work on the first period, way more work in the second one, specially when the project deadline was coming close

For P1 it was around 8-10 hours a week but for P2 the workload was a lot higher at 16-20 hours a week. I feel like the course could easily be upgraded to a 7.5 or 10 ECTS course which would be a lot more representative of the actual course load.

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

Given the course is a 6 credit course, the work load was a little bit over the limit. Personally, I've learnt quite a lot but making this atleast a 7.5 credit course would be appreciated

The lectures were informative, but they required me to do extensive readings to follow up.

Why is this course 6p? It makes no sense

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

The course requires a lot of work but it's really exciting on the same time as it deals with interesting fields that students who aim to work with Deep Learning should be familiar with. Papers targeted for the individual essays and projects were carefully chosen and really interesting to read. The group project is the most important and thus time consuming part and that determines the final grade as well. It's really important that all group members participate actively and are equally ambitious, there we could replicate a paper from a major conference on Deep Learning techniques, chosen among the course sections and TAs put a noticeable effort to help us adjust the proposal for the desired grade.

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

The only time I felt that I relaxed a bit in this course was during the exam period in October and the week after that, other than that there was pretty much always something to do in P1 and in P2 it was difficult to meet the deadline without working late evenings.

I think that the workload was OK

The course had a really heavy workload.

LEARNING EXPERIENCE

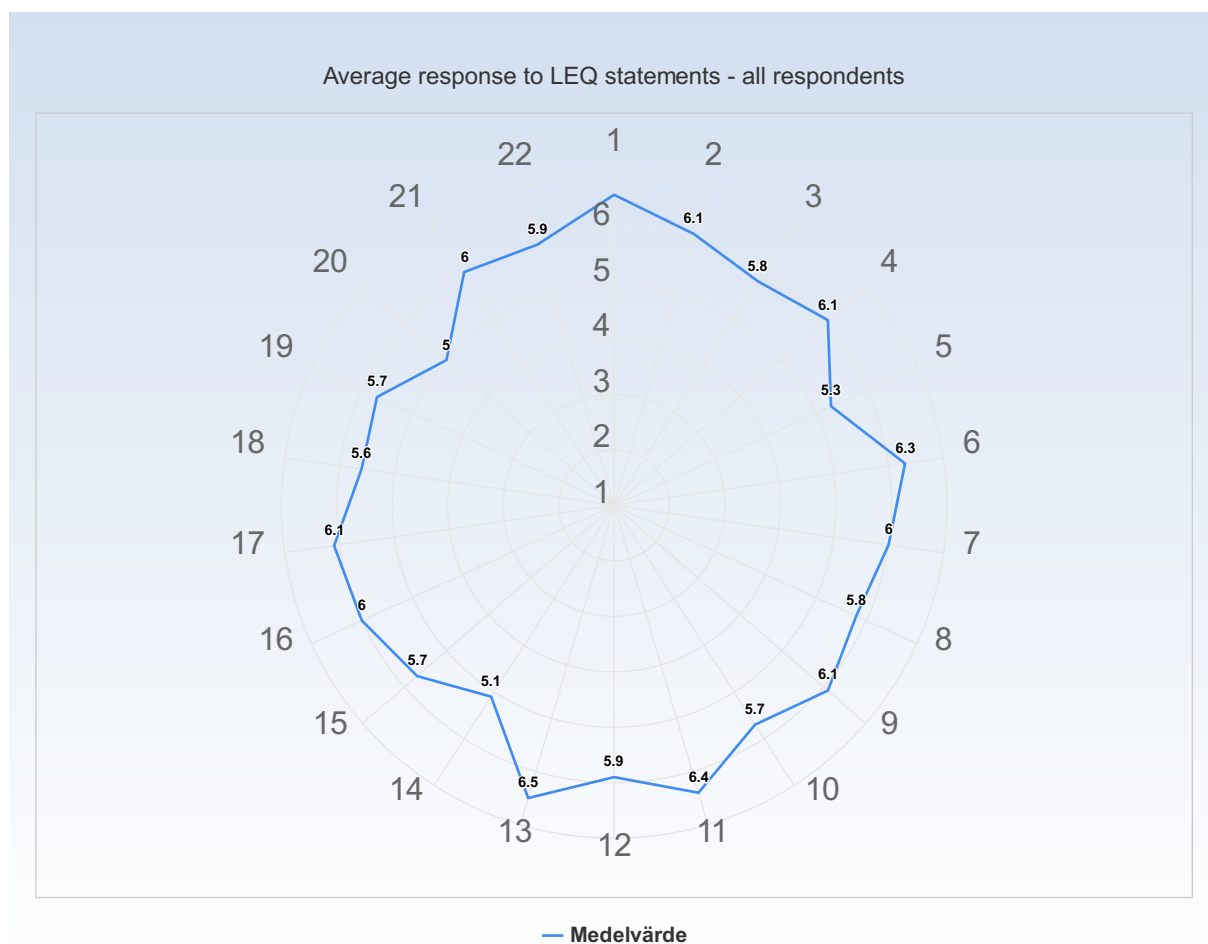
The polar diagrams below show the average response to the LEQ statements for different groups of respondents (only valid responses are included). The scale that is used in the diagrams is defined by:

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.

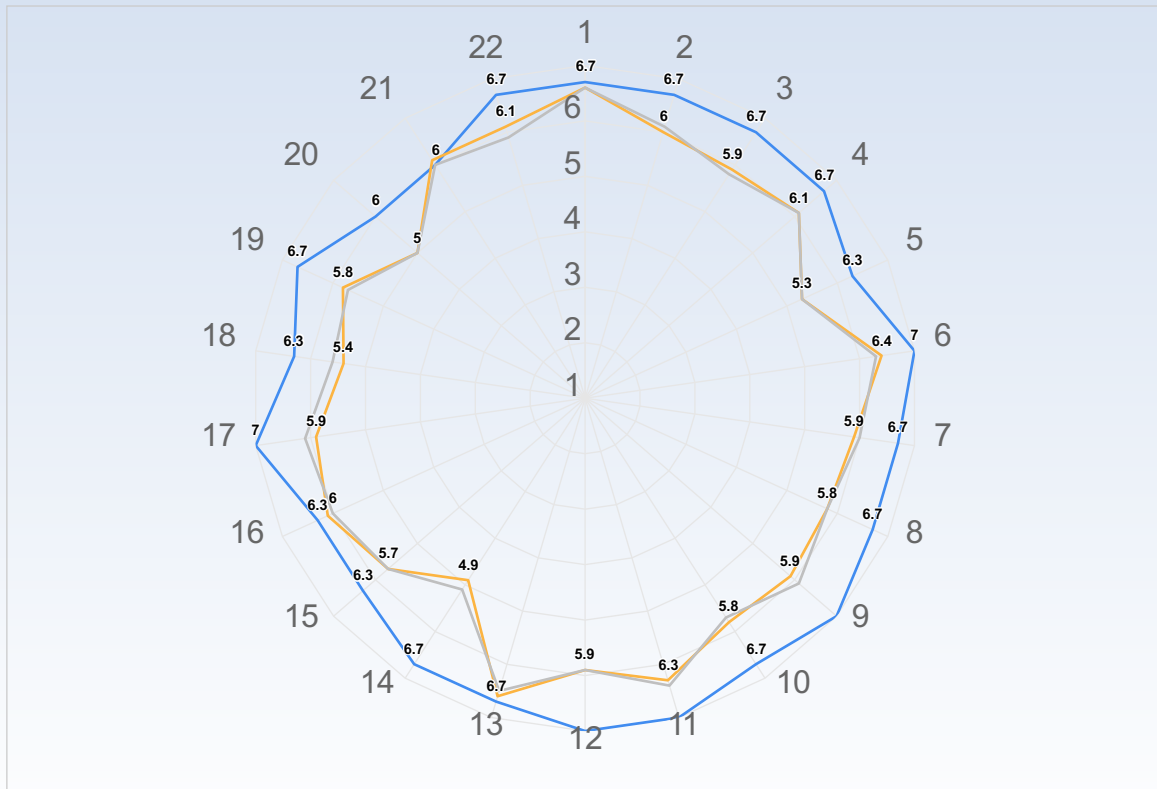
Biggs J. & Tang, C. (2011). *Teaching for Quality Learning at University*, Chapter 6, pp. 95-110. Maidenhead: McGraw Hill.

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



— Kvinna — Man — Annat — Vill ej uppge — (Answered)

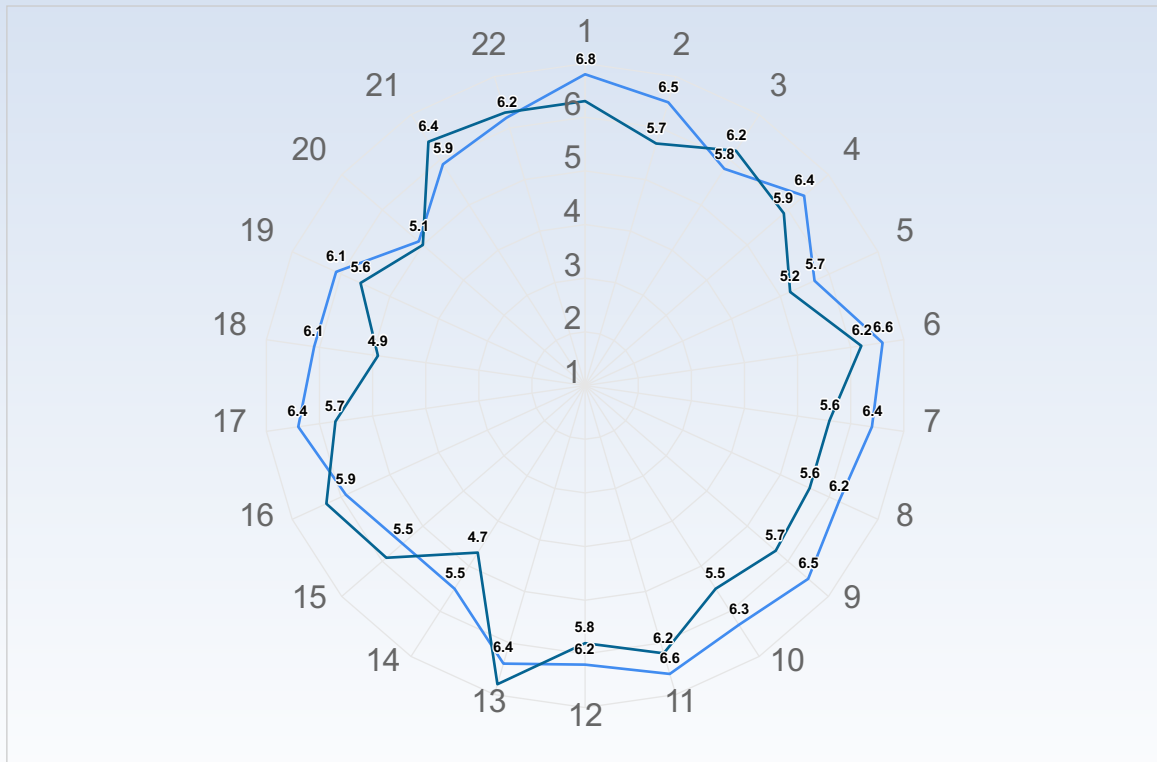
Comments

Comments (I am: Man)

Benis

I didn't see this influencing my performance

Average response to LEQ statements - per type of student



- Internationell masterstudent
- Svensk student i årskurs 4-5
- Internationell utbytesstudent
- Annan typ av student
- Svensk student i årskurs 1-3
- Vill ej uppge

Comments

Comments (I am: Internationell masterstudent)

Work load was quite heavy but that's what deep learning is about

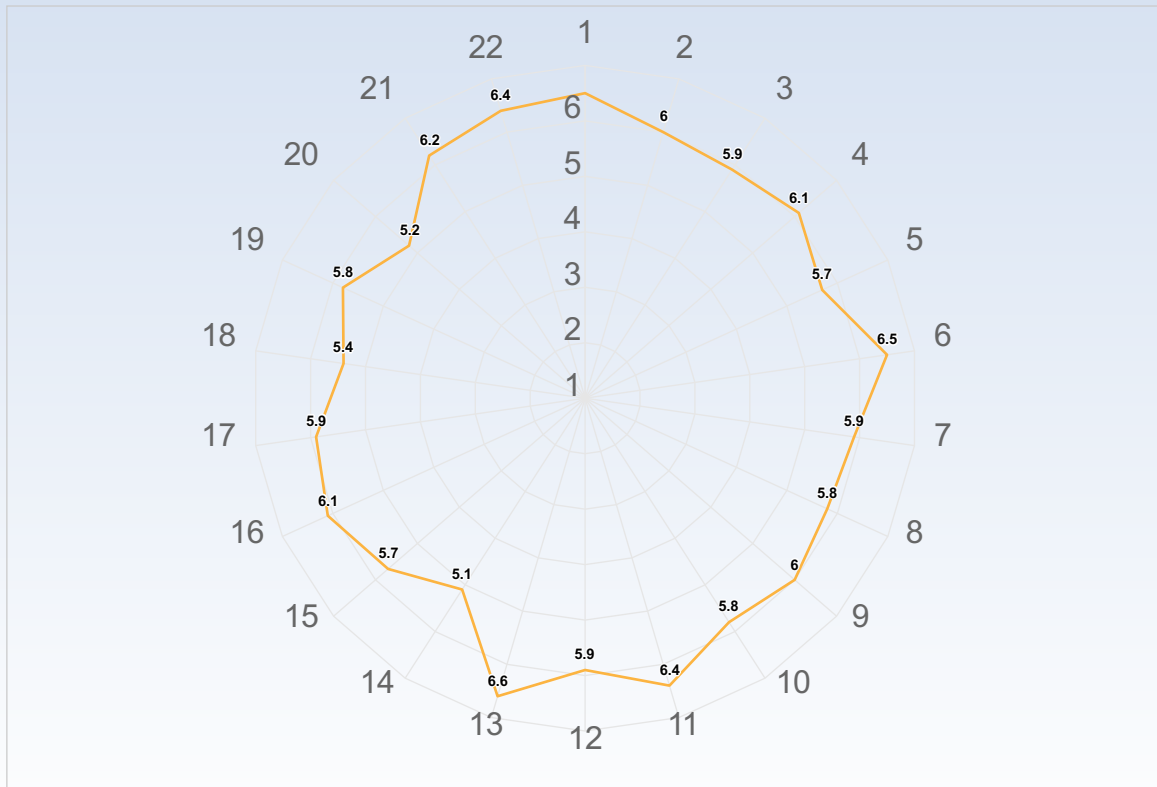
Comments (I am: Internationell utbytesstudent)

The course is great and had a friendly atmosphere.

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

Worked well for me. I think it was good to take the course late in the master since it built upon many of the other advanced courses i took.

Average response to LEQ statements - per disability



— Ja — Nej — Vill ej uppge

Comments

Comments (My response was: Ja)

Visually impaired. Nothing to complain about, I had no problems reading or understanding any topic or material in the course.

GENERAL QUESTIONS

What was the best aspect of the course?

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

That there was not a lot of work to do

What was the best aspect of the course? (I worked: 3-5 timmar/vecka)

Very well organized course, both in terms of lectures and assignments. The openness to students's input was also one of the best aspects of this course. Communication between the teacher/TAs and the students was very clear.

That you could tailor your learnings and had a lot of choice. A wide range of examination moments and material for own research and learning. Really liked that i could build on my thesis project and do more research into that topic.

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

It's inspiring and fun that the course is so focused on recent research. Most courses are spent reading about things that people figured out decades ago, or in the case of deep learning at least 5-10 years ago.

The project

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

Lecture were really nice! interesting topics and well explained! Also reading papers was nice, although I did not particularly like writing essays

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

The final project

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

Being the course based on the newest papers

The lectures were amazing. He was able to explain really complicated and cutting edge research in a way I understood. The lectures involved so many interesting topics. I really enjoyed the quizzes too where the focus was on our own learning and understand and not so much getting a good grade on that. This helped me immensely

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

The course itself

The course presented interesting ideas and directions in modern deep learning that go over traditional classification problems. Students might feel that the course repeats what they might have learned, but going deeper into the course, they would realize that it actually delivers new content, new perspectives of many popular deep learning techniques (e.g., uncertainty estimation, variational autoencoders). The essay assignments were interesting. I wouldn't have read that many papers in a course if not for the assignments. Students had good opportunities to discuss the papers, which ease the learning process.

Course content are very interesting. Lectures did the material justice.

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

The uncertainty module was probably the most interesting learning I've had during my three semesters at KTH, it was brilliant and something I would like to have a full course about.

As mentioned above the group project is the most important part of the course and hopefully determines the final grade as well. It was really fun to participate actively in very challenging projects, where we could replicate a paper from a major conference on Deep Learning techniques but also do extra things on our own that we agreed with the TAs through dedicated sessions, which helped us explore in depth the area and draw interesting conclusions. I believe that the most important take-away of the group project is that we familiarized with coding deep models in a way closer to a real-life scenario and then put our ideas, experiments, conclusions etc. into paper to produce a coherent final report. Meanwhile this process can also serve as a preparation stage for the master thesis that most of us are starting this month.

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

I like course as a whole. It was nice to practice to summarise scientific articles and even though the project was difficult I felt like I learned a lot.

The final project was the most interesting part of the course.

I thought that uncertainty estimation was especially interesting. I also liked the parts on generative modeling.

The content of the course was really interesting and the lectures covered them in depth.

What would you suggest to improve?

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

Rathre than only have essays for the most part, have very small programming assignments

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

Nothing really. Only thing was that I wished that I could have collaborated more with other students, but that was not possible for obvious reasons. I think however that this is an important thing to integrate into the course when the situation allows for it. Especially, I think students would benefit from being able to work together on the assignments for better understanding of the course content.

I was also thinking about the fact that you had to pick assignment topics before the lectures on the topics, to be able to finish them in time, which made it harder to know which topics were the most interesting. However, I don't think that the deadline should be moved, it is better to focus on them for the first part and then focus on the project, but maybe a lecture covering the high level of each topic could be provided in the beginning of the course.

What would you suggest to improve? (I worked: 6-8 timmar/vecka)

For the essays, I wrote about explainability and generative models, and in the project we worked on generative models. The rest of the course contents, I have 0 clue on. Even if they were brought up during lectures, I have no understanding or even remembrance of them.

Each module of the course needs a practical exercise connected to it (and with practical exercise I include the essays), otherwise it's 100% a waste of time. If that means one or two modules need to be cut out in favor of one more proper one, that's worth it.

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

project part is still a bit of a mess. We had little to no guidance in our work. Communication between lecturer and the class was not great either.

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

I did not think the essays were a good way of examining out knowledge. It would have been better with programming labs.

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

The project. I feel like 3 points is not enough for it. The workload is way higher than that. I would also suggest that you have two options with a project. You can either choose to implement it from scratch or you could use already existing code and then focus more on adding to it and perform more tests. I just found it really difficult to see how to implement everything from scratch and get it to work where we are only supposed to spend 3 points on it. This is just the basic requirement for passing not even talking about adding anything extra to the project. I would also have liked more projects with more reasonable computational budgets. The papers were really cool but too many of them required multiple days on a supercomputer to train. I would like to have some where we can train a real sized model.

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

Having more lectures could help, it was quite difficult to understand and follow all the lectures. But I think that's a choice a student needs to make, what interests him and what doesn't

I don't have any particular idea as I think the course is already pretty dense, not sure what could be added or removed.

The focus on computer vision throughout this and previous DL course is concerning. Much of what I've learnt, I've discovered, only applies to CV and sometimes NLP and other "big" areas. There aren't really any disclaimers for us when this happens.

The essays and the project brought the course down a couple of notches. Essays were really boring and uninspiring, and with no practical experience. Labs would be preferable. The project was extremely narrow in what you were allowed to do (paper >= october 2020). Would also have been great not to have been limited to topics you've written an essay on - I discovered later in the course that I would have liked to work on a topic which I found more interesting, but I didn't have this option.

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

One thing I felt that was missing from the lectures was a few words about transformers, which although were addressed in some individual essay and group project readings, they were missing from the lectures. When implementing a transformer for the group project, we felt we focused on our previous knowledge of the transformer architecture (concepts like self-attention, multi-head attention, the [CLS] token etc.) rather than things we were exposed during that particular course, which can be challenging for someone who is less familiar with the aforementioned concepts. Other than that it was a great course! It would be unfair to start complaining about the delays in quizzes when generous deadline extensions were provided, the delay in practicals that were optional anyway, some inconsistencies in slide coloring code (e.g. some light green text appearing here and there) and notation (e.g. $\arg\max_{x}$ instead of $\arg\max_{x}$ etc.) since it is obvious that the course material is being improved annually anyway instead of focusing on the content itself that was well presented.

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

There are many things I would like to see improved. To begin with I would've liked it if students instead of having to write two essays instead could choose to write one essay and solve one of the notebooks on a topic that was given. That way one could both do theory and practical work.

Overall I felt like there were so many lectures in the first period and so much theory that the topics that a student chose not to write about were simply ignored. I for one did not have time to study the later two topics in depths and summarise the lectures to to the heavy workload. Summarising the articles took much longer than I thought.

I believe the course should be worth at least 7.5 credits. The amount of lectures in P1, the two essays and the quizzes means that it feels like reading a course on 100%. In the second period a lot of time is also spent on the project. If the course was worth 6 credits, 3 credits the first period and 3 credits the second period, it would mean that one should spend roughly 8 hours per week. In P1 this is simply not possible due to there being at least 2 lectures per week which takes up half of that time and it takes almost as long to just go through the lectures again and summarise them afterwards. In P2 more than 8 hours per week are also required to finish the project with a higher than E grade.

To allow students to spend more time on the course one could perhaps make it worth 9 credits and then make the notebooks on each topic obligatory.

Personally I would also like to see the deadline for the project extended until January but a requirement to have the students show that they have completed at least 50% in December.

Allow students to form groups of less than three students. Not all students are equally ambitious and it is difficult to find members that share the same level of ambition. Additionally, maybe it would be beneficial to introduce a project presentation or examination to eliminate passengers in the group. It is really demotivating to have put so much effort into a project and end up sharing your hard work with the group's passenger.

I think that it was a good idea to limit the number of essays to 2 because the workload would have been too high otherwise. But on the other hand, this also means that I didn't learn that much about the other two topics. I'm not sure how to fix this.

The workload of the course was too much, especially having to do the project in the next period made things difficult to manage.

What advice would you like to give to future participants?

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

Start the project assignment as early as possible. It might not be super complicated but there are usually some computational limitations that make the development process less efficient, thus taking more time than expected.

Start going through the content as soon as possible. It is important to find what you want to learn, so you can dive into those concepts faster. This enables you to get a project which is interesting to you. Also the essays takes at least twice as long as you think, so start with them in time.

What advice would you like to give to future participants? (I worked: 6-8 timmar/vecka)

Read the papers together with your friends

What advice would you like to give to future participants? (I worked: 9-11 timmar/vecka)

Start early in the project and try to get help as soon as you need it.

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

Start with the project in time because it takes time.

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

Start early on the project (and don't let the essays for the last week)

Start the project as early as you can and really look at the computational time of the papers and choose one that isn't too crazy.

What advice would you like to give to future participants? (I worked: 18-20 timmar/vecka)

This course is very intensive but at the end you would be aware of most of the state of the art methods at the forefront of deep learning

Since the videos and slides of previous course occurrences are available on Canvas, I would encourage future students to watch them in order to have a sense of what would be in the lectures so they could follow.

When it comes to the project, take it seriously from the start. The ideal scenario is to start the project early so you and your group have more time to tackle many hassles during the project. What I've seen, especially for students with little research experience, is that they take the project the same way they take regular assignments. However, the final project is entirely different. There are no clear instructions to follow, so you often don't know what to expect. The final project is a very good case study, you'll learn a lot from it, and the key to success is to start early.

Read all essay papers until you have a vague overview of the domain. This gives you a better idea of what you find interesting - your first instinct could be off.

Make yourself comfortable with PyTorch or Tensorflow in your own time. This course and DL offer you very little in hands-on experience with modern DL frameworks, you have to learn yourself.

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

Hossein gave interesting lectures, pay attention to them!

As with group projects in general, it's really important that all group members participate actively and are equally ambitious, so that the workload is balanced among people. Resources can be a problem so I'd recommend that groups ensure that they have proper access to GPUs long before they start working on the group project and address them early, for instance lack of availability in GPUs and denial to increase project quotas are known issues with GCP, which weren't avoided this year again.

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

Just start the project early... If you think it will take X hours double that to be sure cause there are always issues that you run into, at least if you want to achieve a higher grade.

Start working on the essays and the project as soon as possible. Invest time in coming up with a concrete and feasible project proposal.

Start asap with the project

the course has really good lectures so watch them and the reading material is a bunch of really interesting papers so read them as much as possible.

Is there anything else you would like to add?

Is there anything else you would like to add? (I worked: 3-5 timmar/vecka)

Thank you for a great course! after over 6 years at KTH this is probably one of the best courses i have taken. Great teacher, eager to help the students to succeed, to be able to learn as much as possible, and always listen to feedback. I really liked that there were a lot of different smaller tasks instead of a large examination were you need to memorize a lot. I always appreciate quizzes, great tool to learn since you can fail until you get it right. It is a pleasant way of learning step by step, instead of being punished for not understanding.

Is there anything else you would like to add? (I worked: 6-8 timmar/vecka)

This is a very interesting course and I my impression of Hossein is that he is very knowledgeable.

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

honestly improve communication and TAs. Also there was not a chance to communicate withing classmates, which took away much of the learning experience.

Is there anything else you would like to add? (I worked: 15-17 timmar/vecka)

This is one of the best courses I have ever had and I thoroughly enjoyed it. The lectures were so good and it is a really good idea to try and implement the latest research.

Is there anything else you would like to add? (I worked: 21-23 timmar/vecka)

I mentioned in the multiple choice part that it felt like working alone especially in the first part that took place through zoom and although I tried to organize group gatherings through ML master's discord server in the physical rooms, which were not used by the course but were still available during lecture hours, people preferred joining remotely. I wish that the pandemic becomes an epidemic very soon so that lectures actually take place in the physical rooms next year as it's always exciting to interact with people sharing the same passion. This was a general issue however and not particularly related to the DL Advanced Course. Then coming back to the resources, it can be a problem accessing GPUs on Google Cloud Platform, there was an announcement about low usage of our credits and during that time our group had already abandoned any hopes on GCP and started training on our laptops (we had Nvidia Geforce RTX GPUs so it was possible to do everything offline) but for students with less resources it can be challenging to train a deep network offline.

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

I just wish I had had more time to work on the course because I believe it is one of the best I have read during my MSc.

SPECIFIC QUESTIONS

RESPONSE DATA

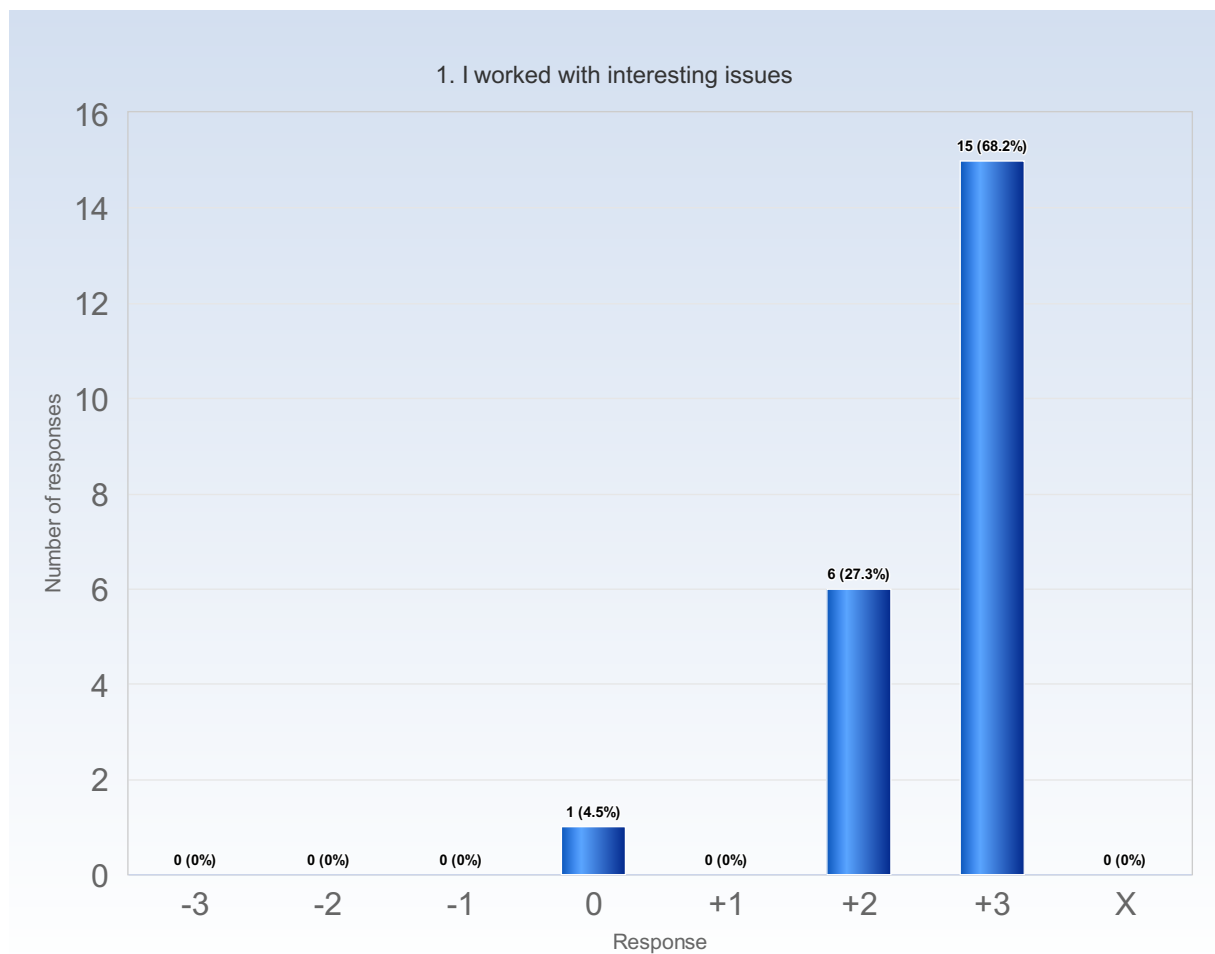
The diagrams below show the detailed response to the LEQ statements. The response scale is defined by:

-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

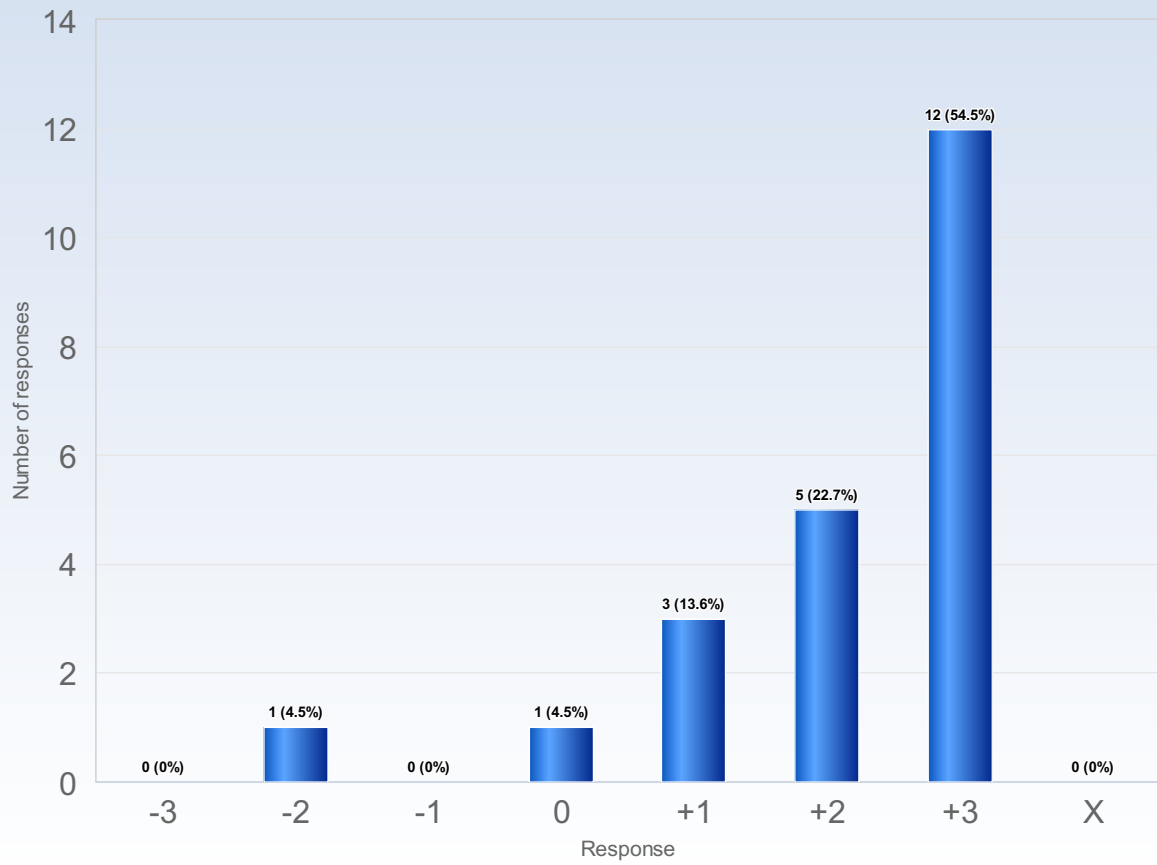


Comments

Comments (My response was: +3)

My favourite part of the course

2. I explored parts of the subject on my own

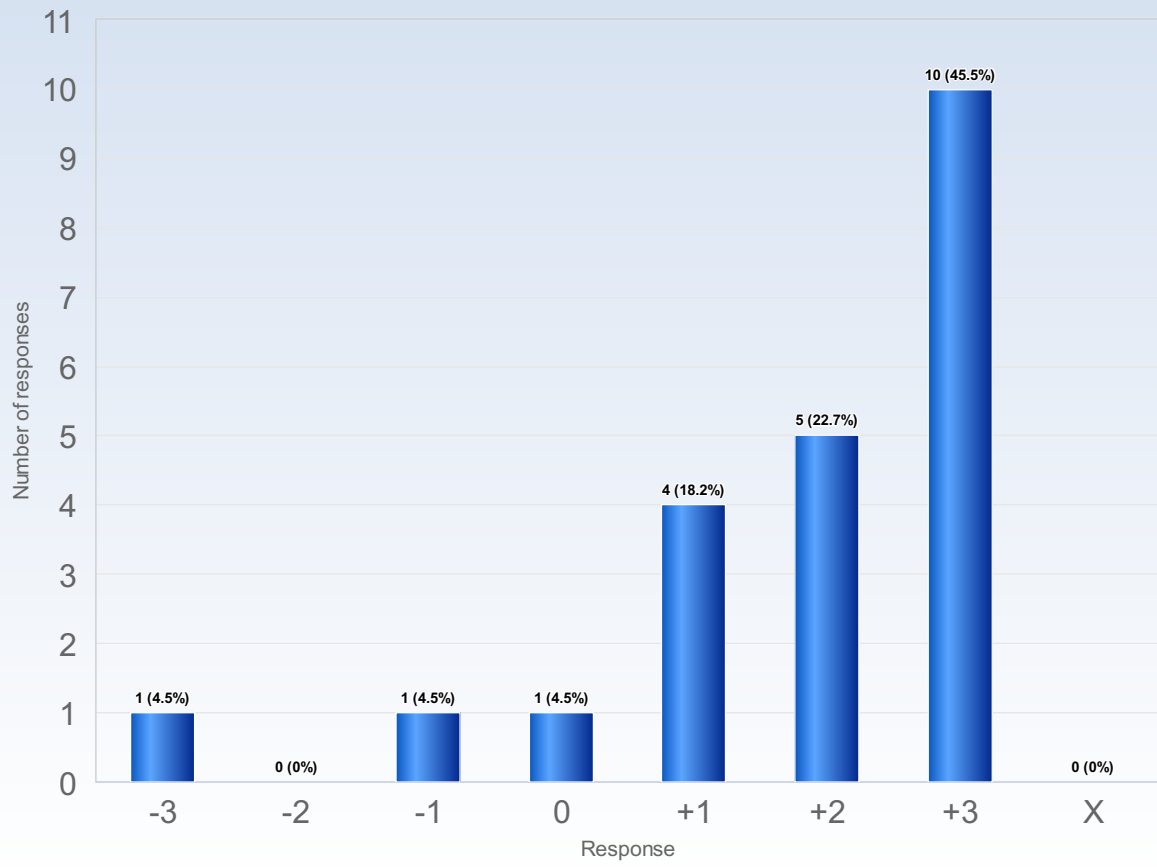


Comments

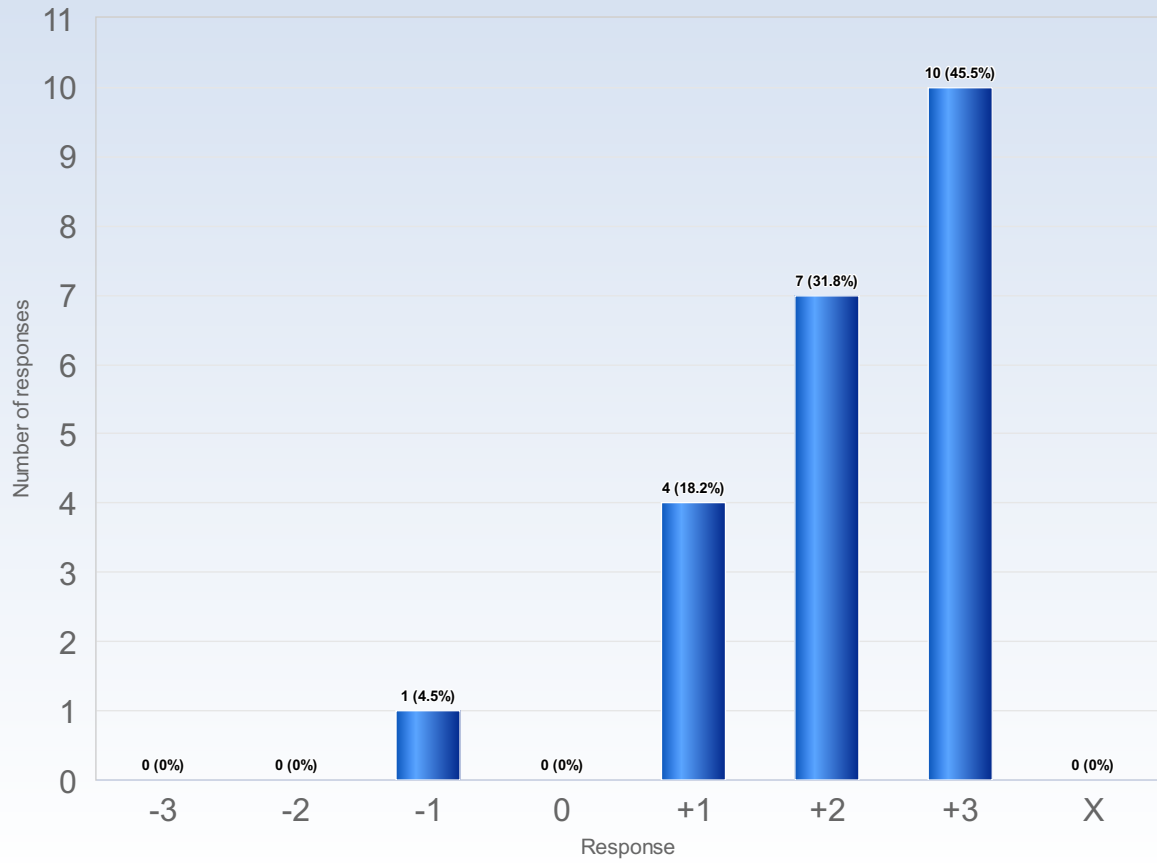
Comments (My response was: 0)

Yes but would've liked to do more

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



4. The course was challenging in a stimulating way

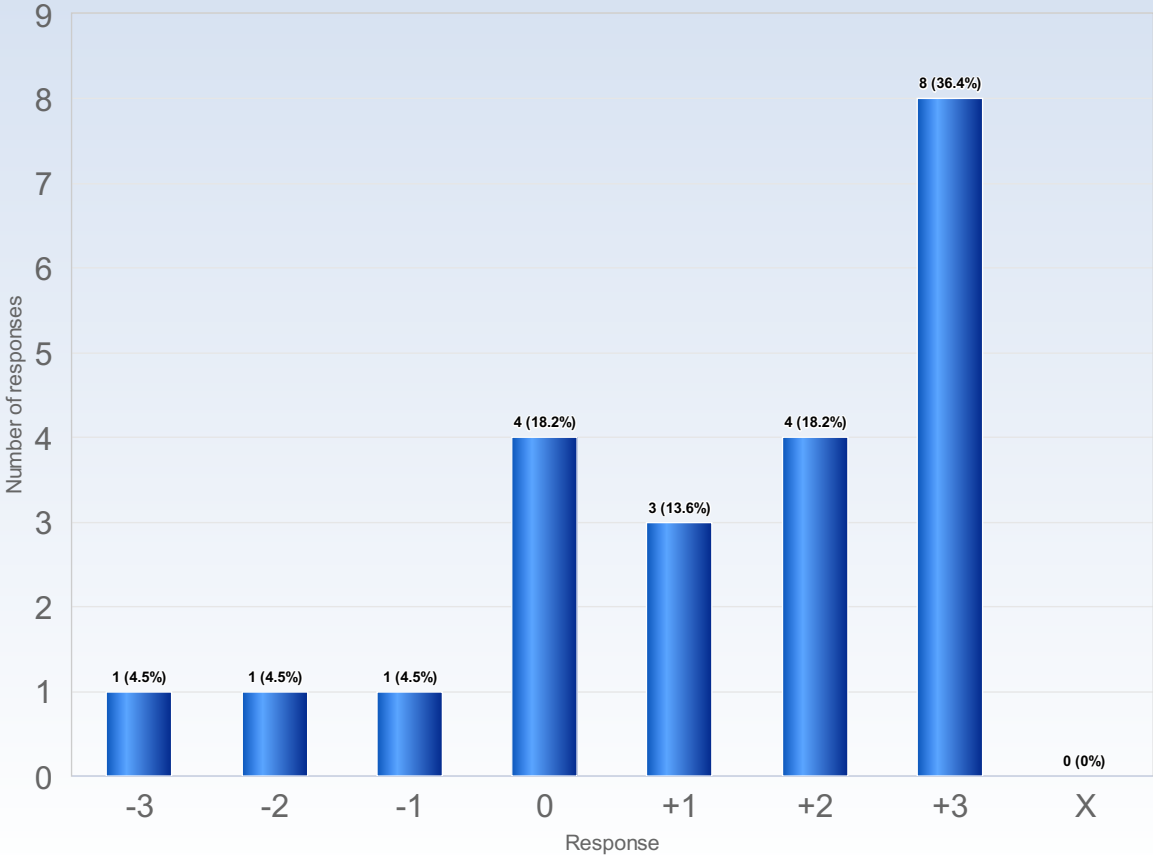


Comments

Comments (My response was: +3)

Just great, you could decide by yourself

5. I felt togetherness with others on the course

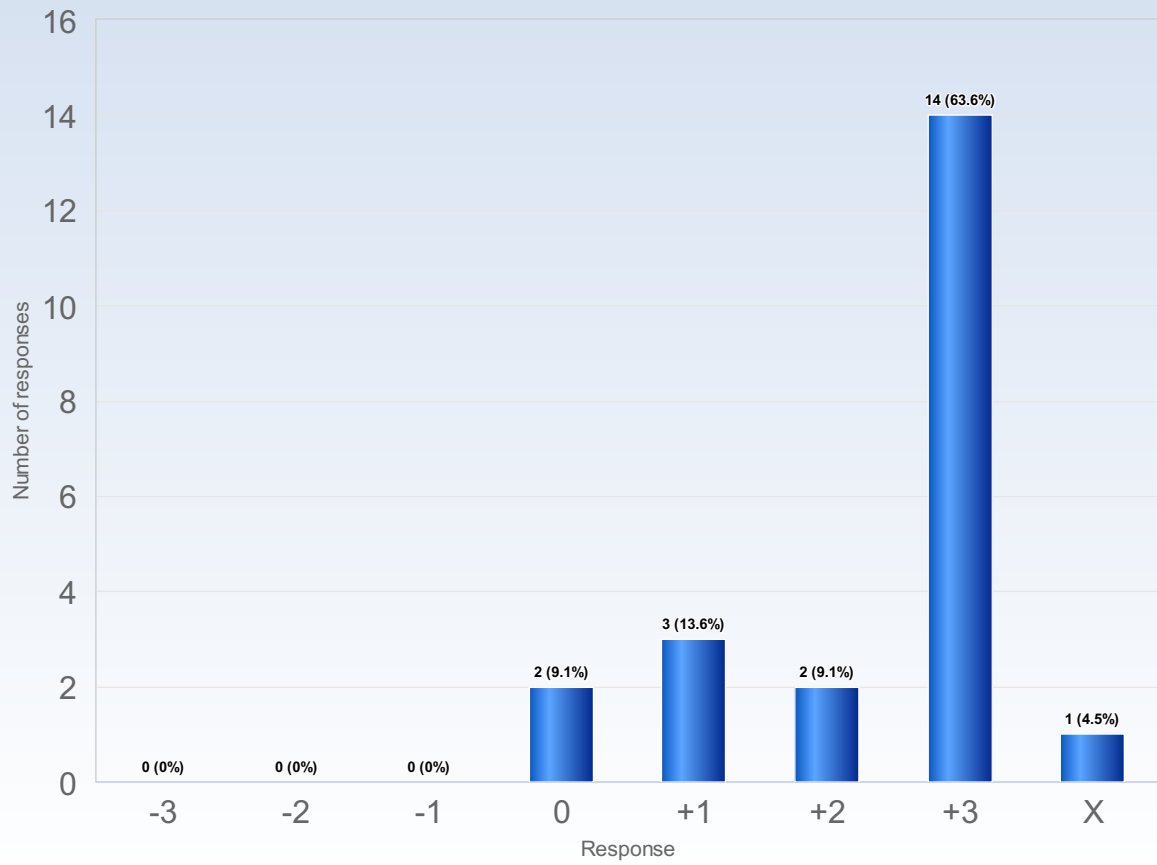


Comments

Comments (My response was: -1)
COVID...

Comments (My response was: 0)
Classes were on zoom.

6. The atmosphere on the course was open and inclusive

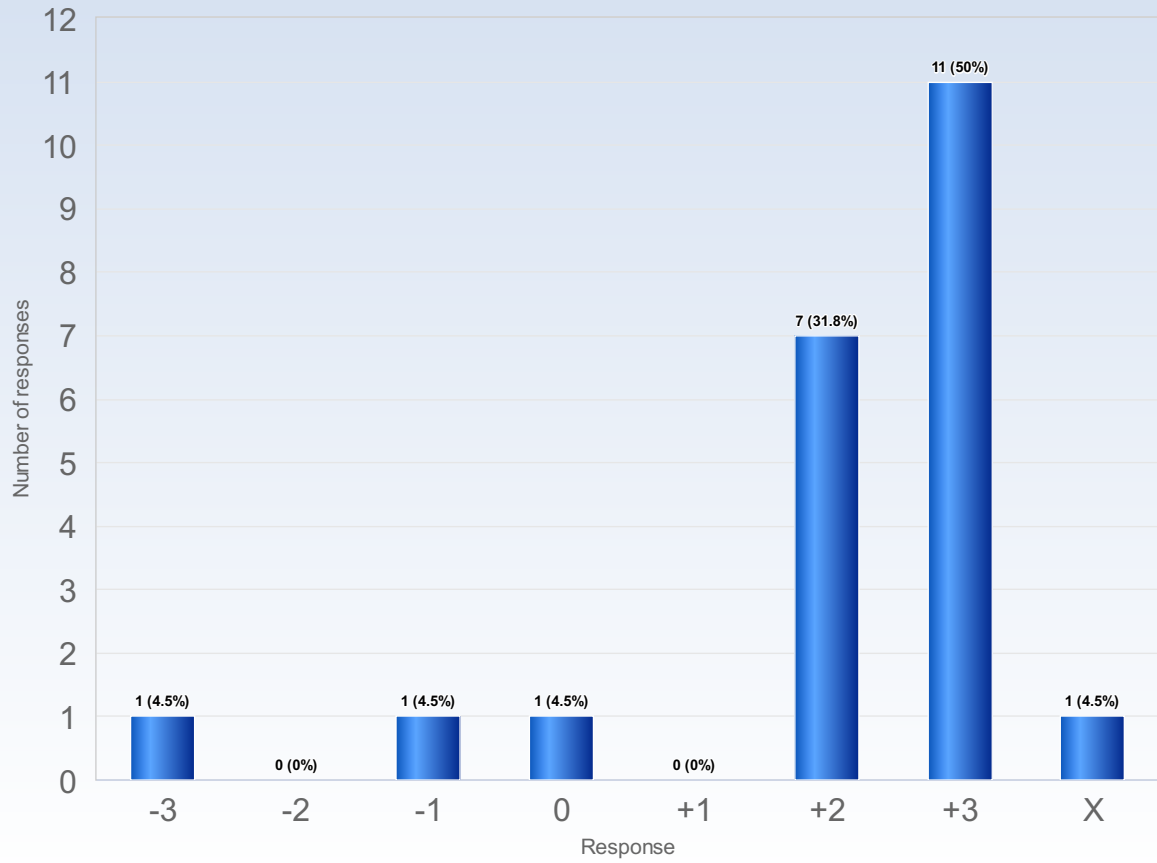


Comments

Comments (My response was: 0)

Its hard to make this work well with an online course I think.

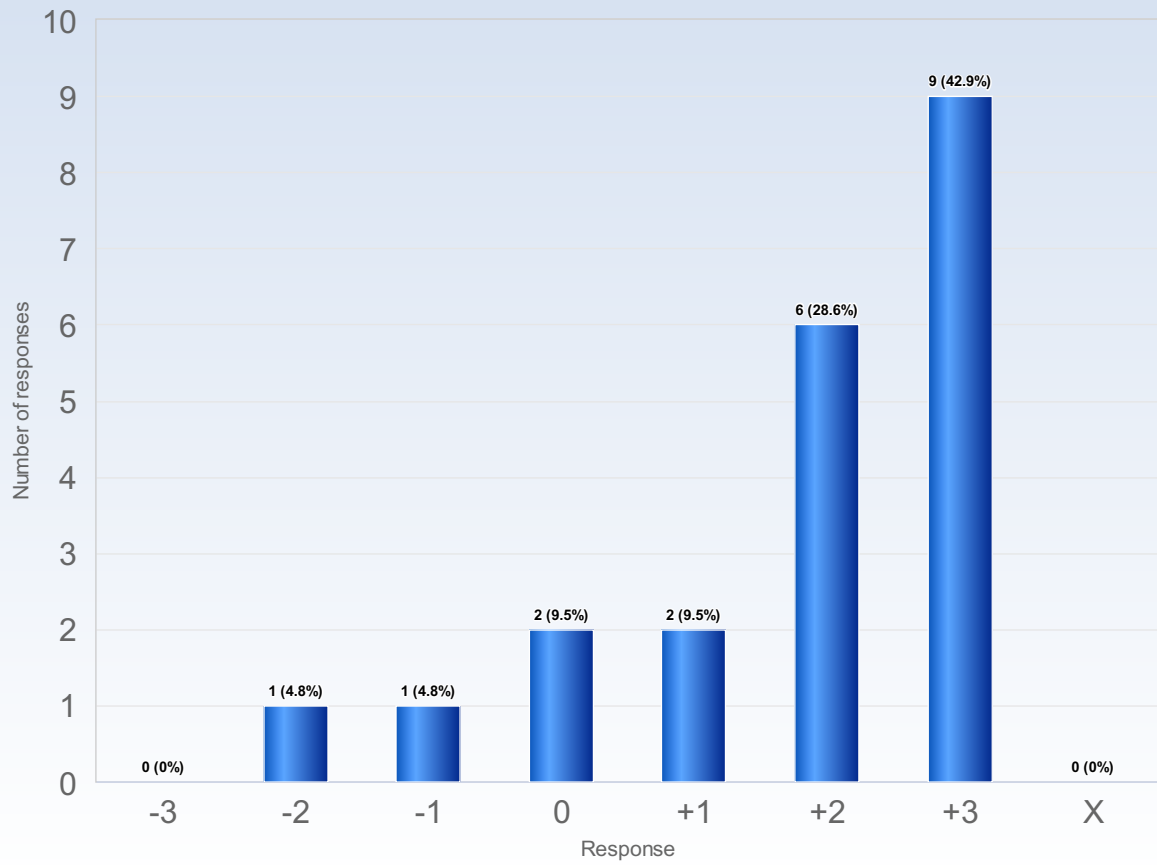
7. The intended learning outcomes helped me to understand what I was expected to achieve



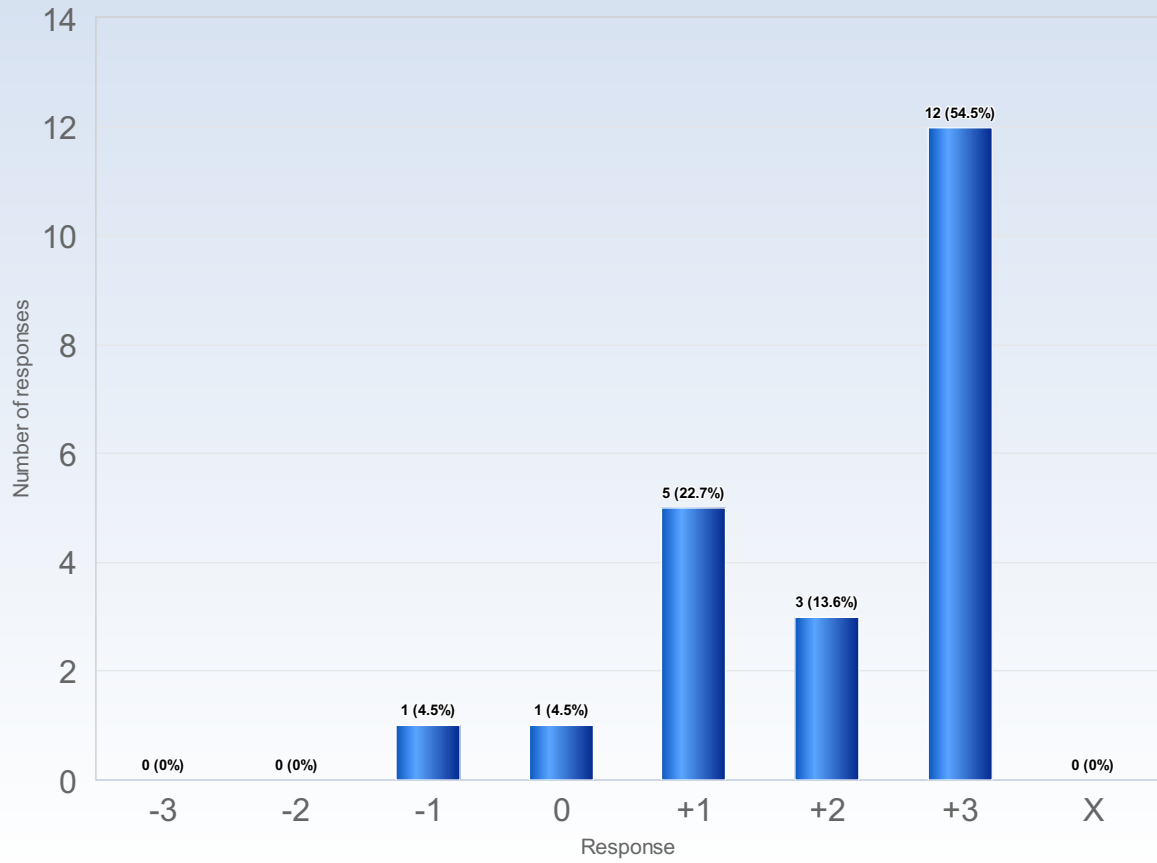
Comments

Comments (My response was: X)
didnt read em

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



9. I understood what the teachers were talking about

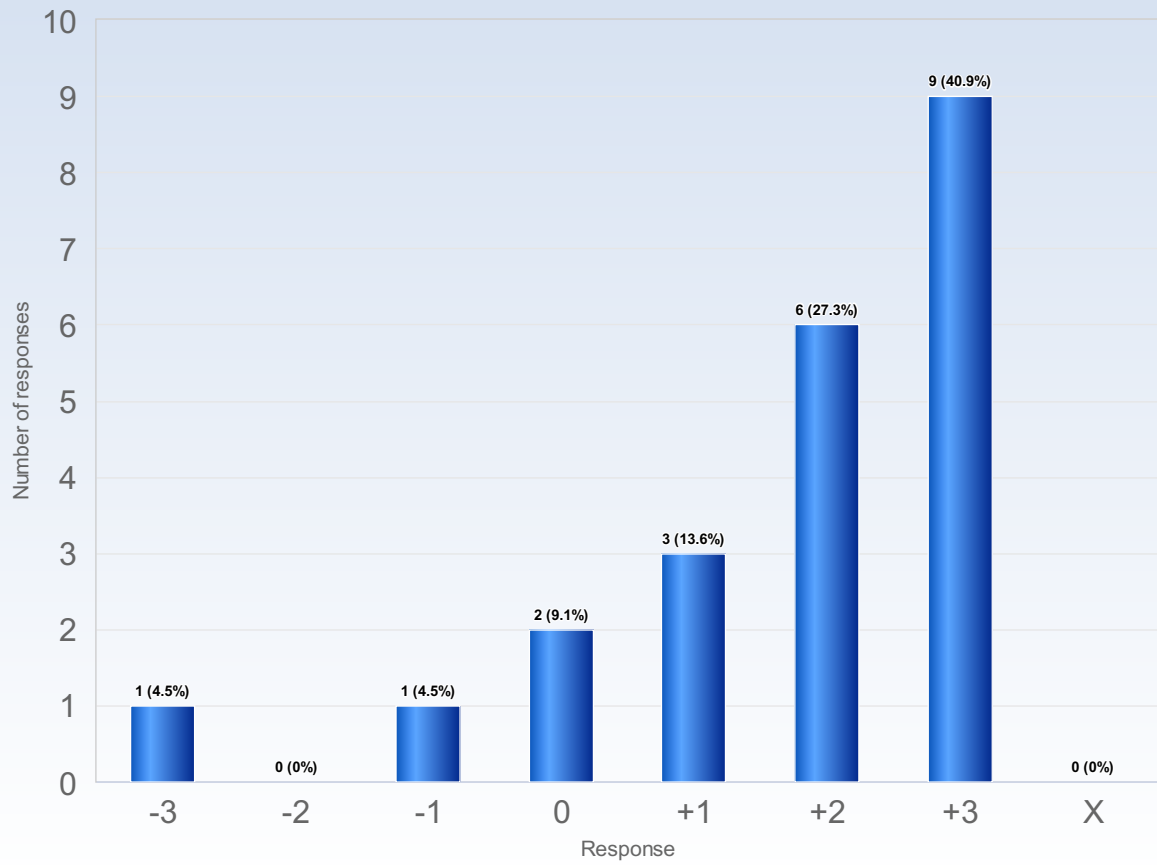


Comments

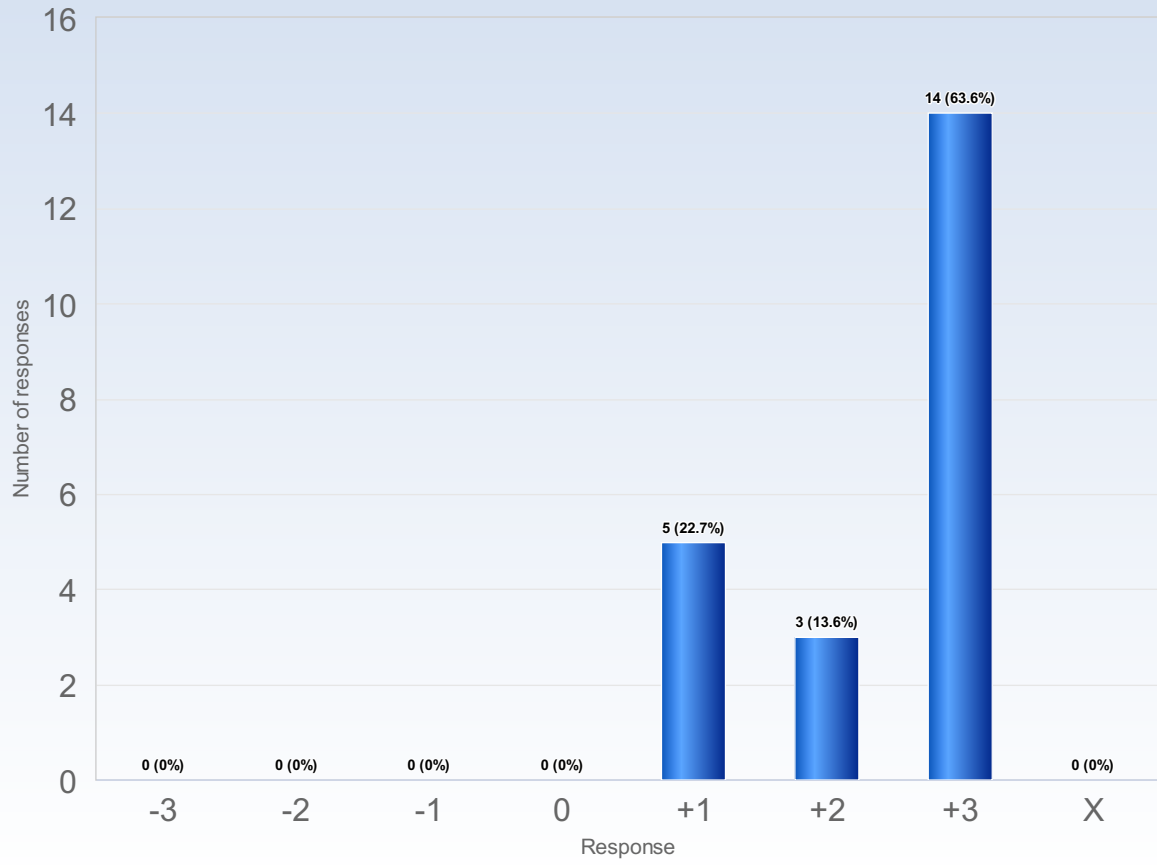
Comments (My response was: 0)

Some topics were difficult but Hossein is overall a very good teacher

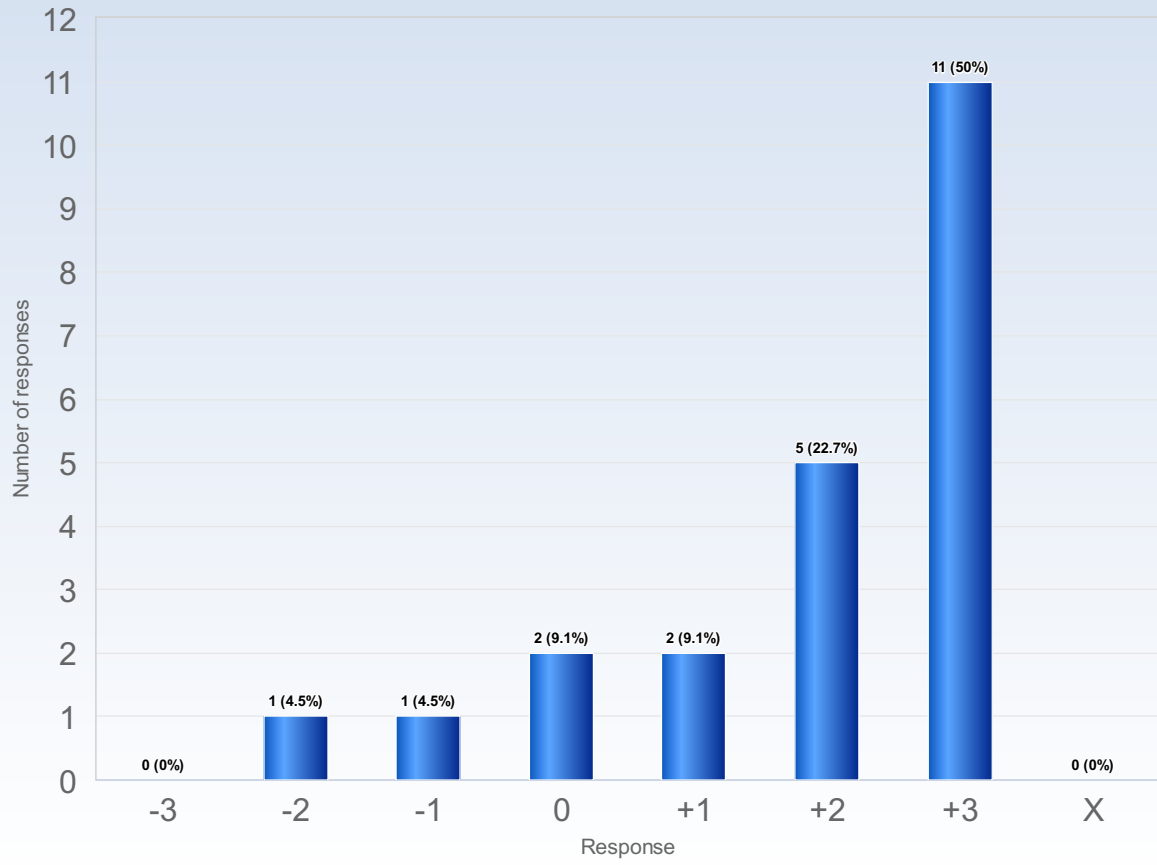
10. I was able to learn from concrete examples that I could relate to



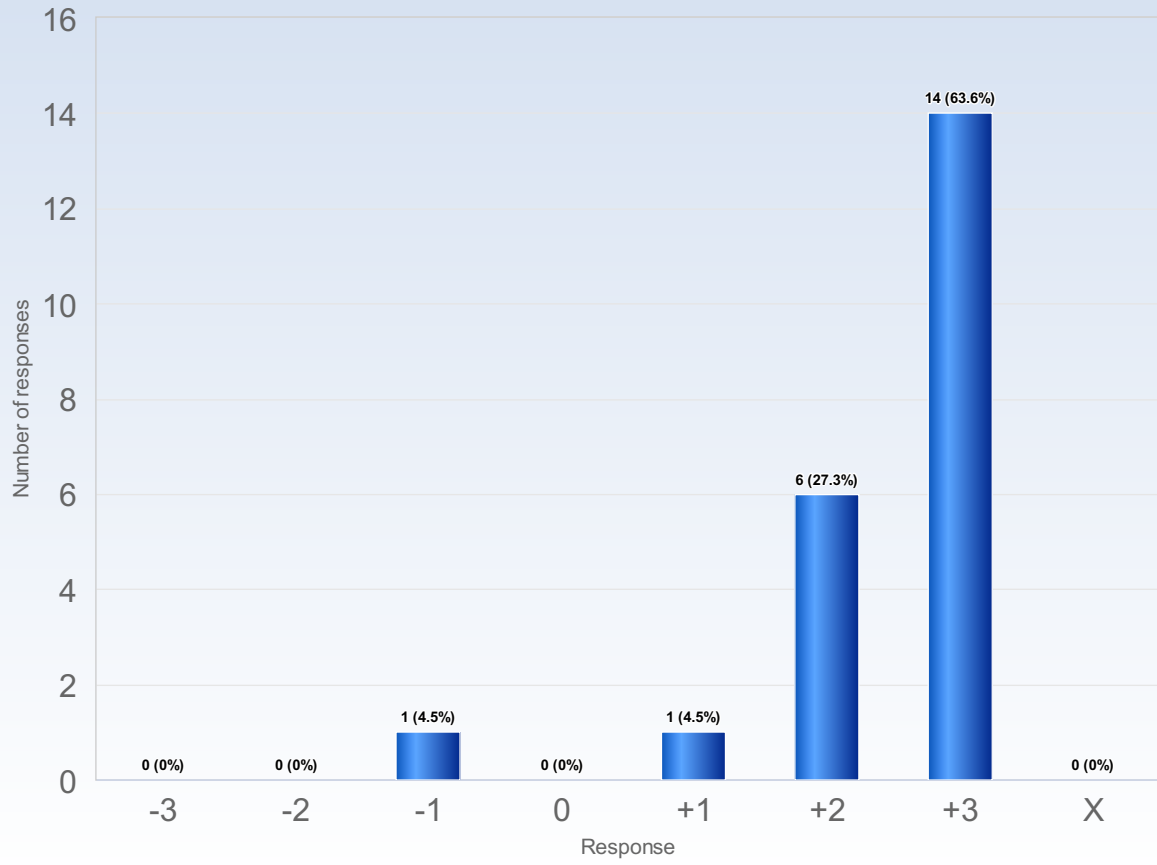
11. Understanding of key concepts had high priority



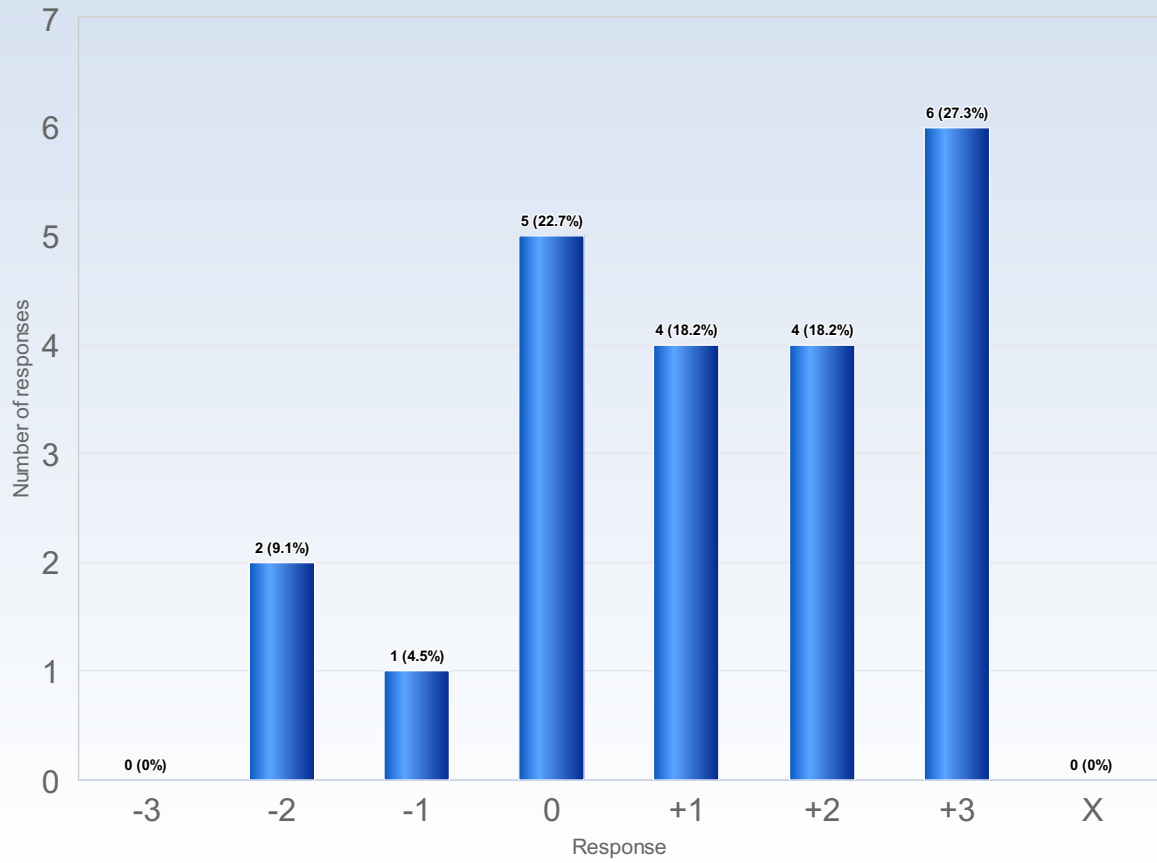
12. The course activities helped me to achieve the intended learning outcomes efficiently



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

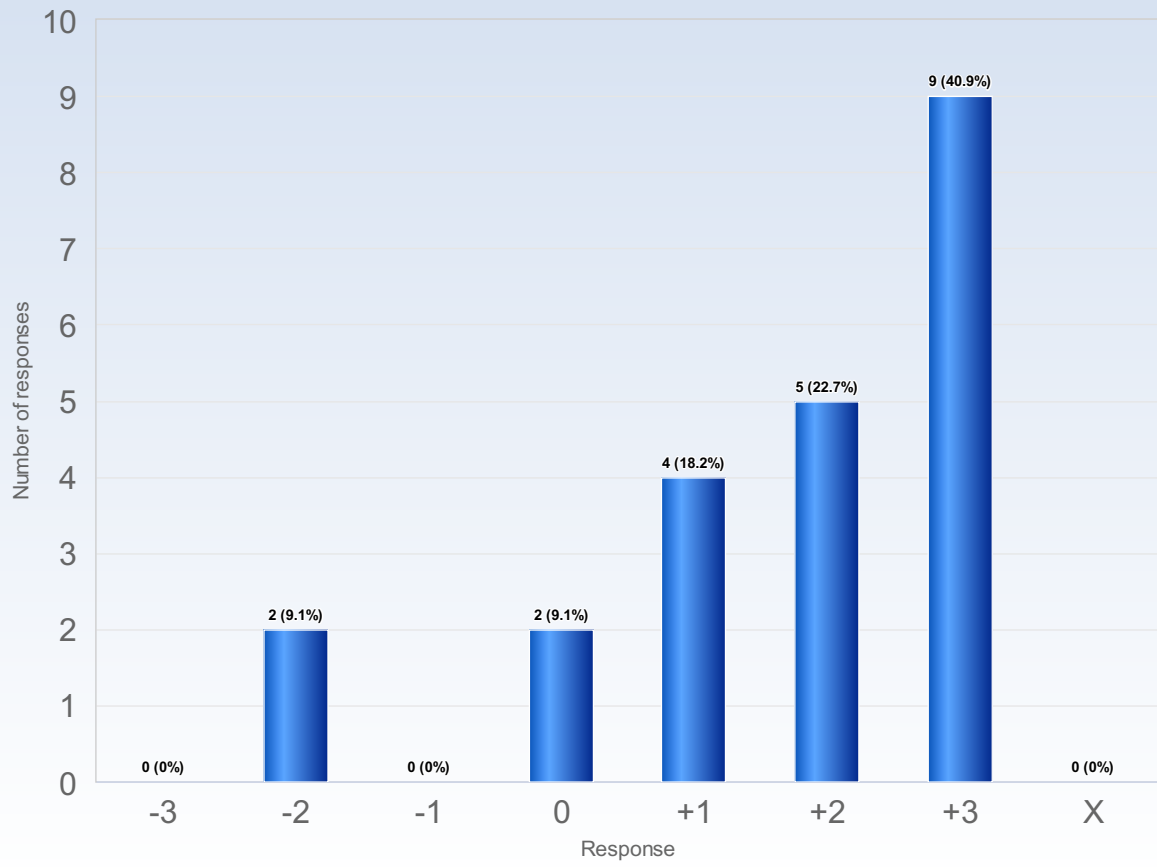
Comments (My response was: -1)

I'll expand on this later

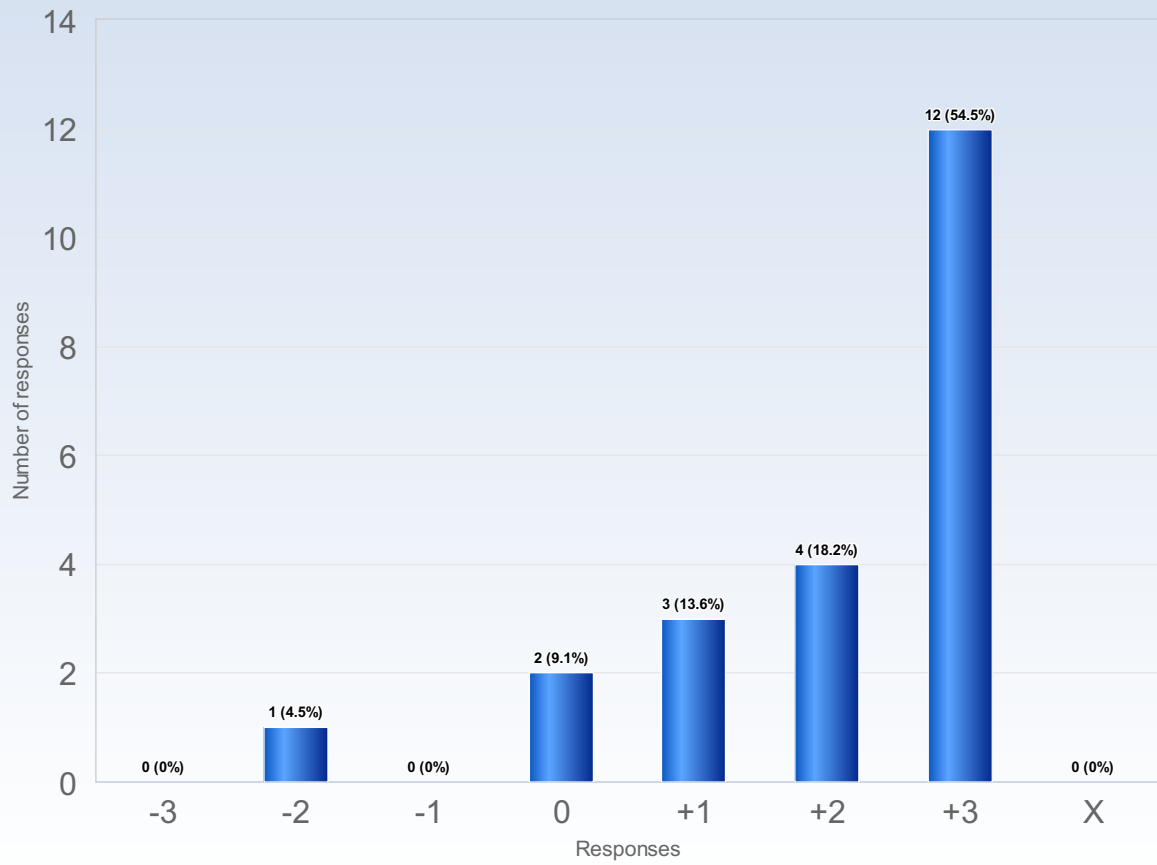
Comments (My response was: +2)

Could be better but i like quizzes

15. I could practice and receive feedback without being graded



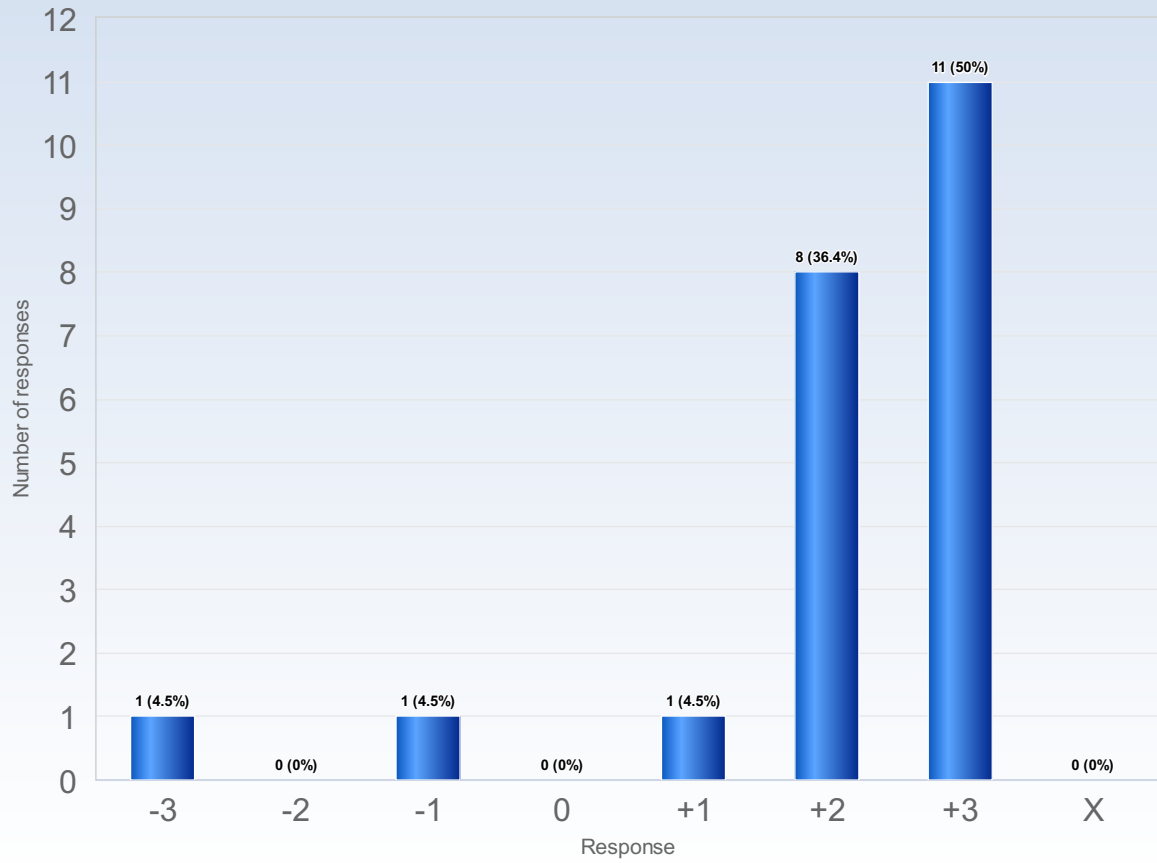
16. The assessment on the course was fair and honest



Comments

Comments (My response was: 0)
Do not yet know the assessment

17. My background knowledge was sufficient to follow the course

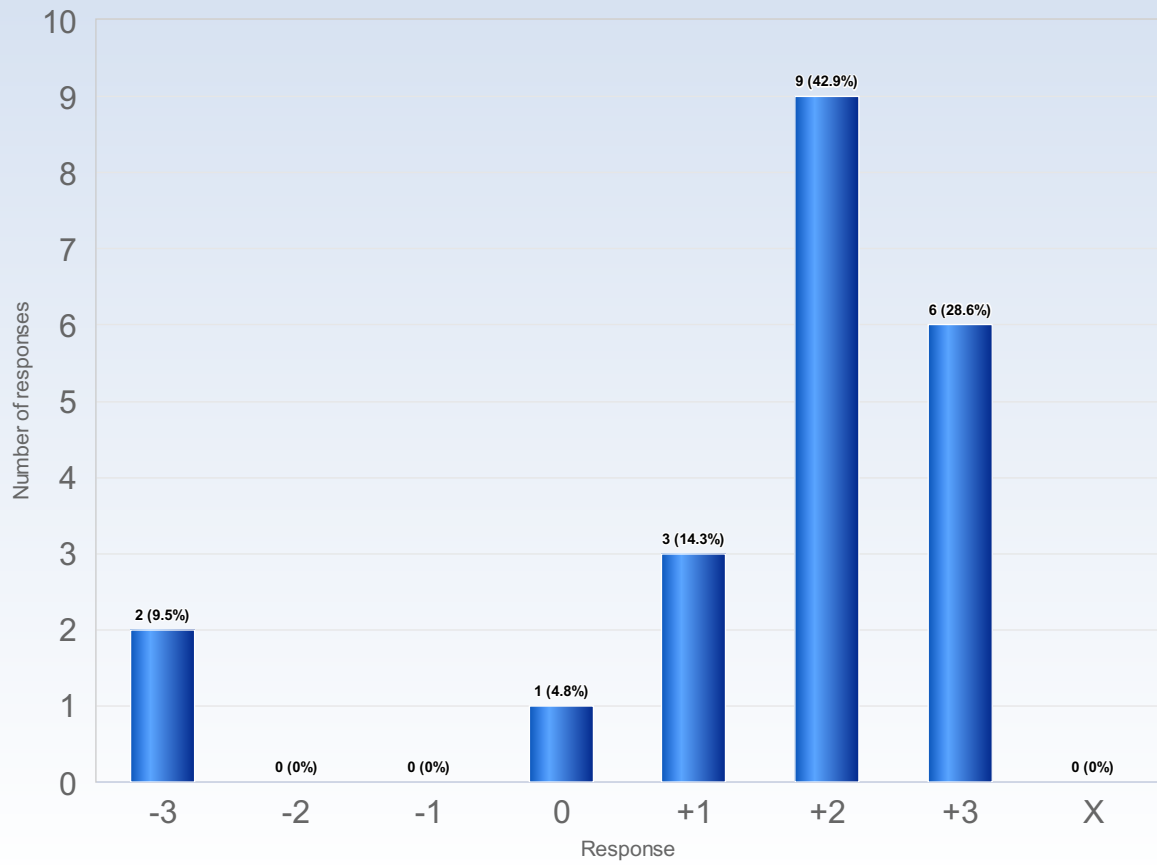


Comments

Comments (My response was: -1)

Man I need to get better at probability theory

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



Comments

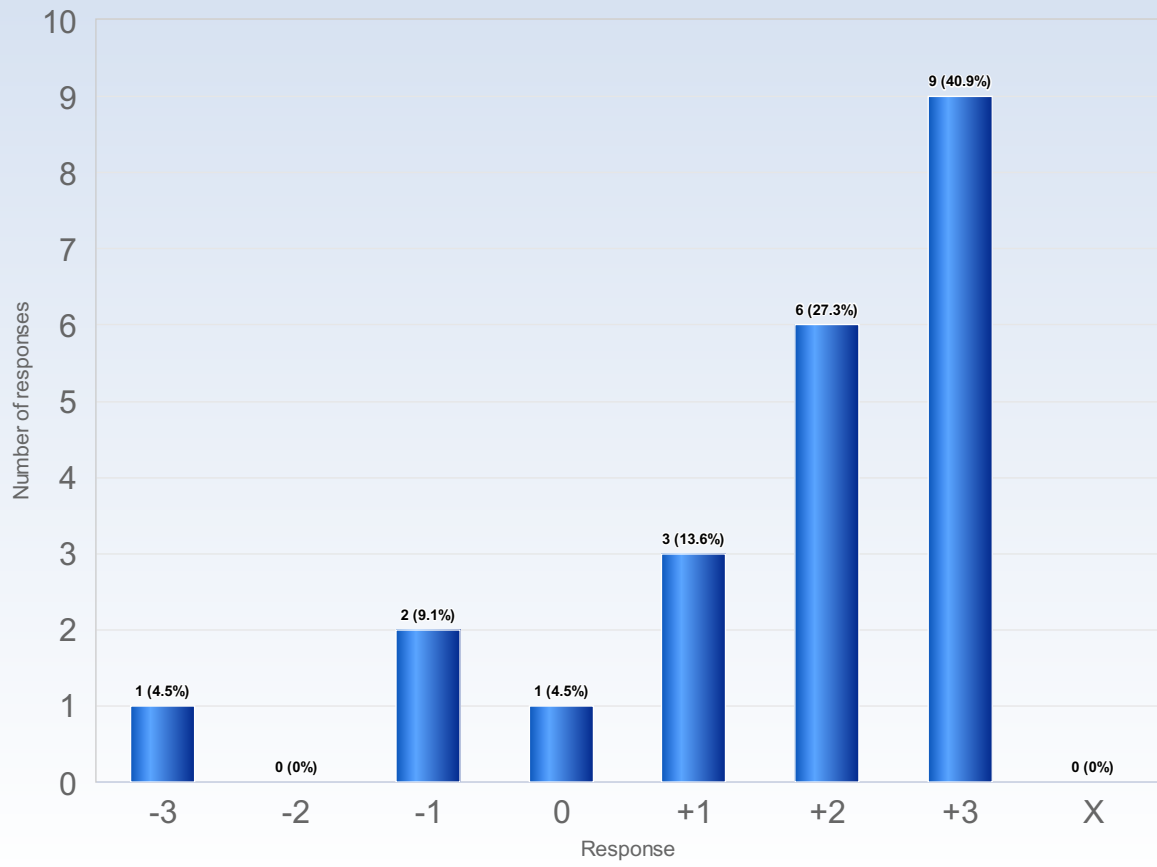
Comments (My response was: -3)

I would've liked to spend more time to reflect on what I learned but there was simply not enough time. I only did this for the first 2 modules in P1

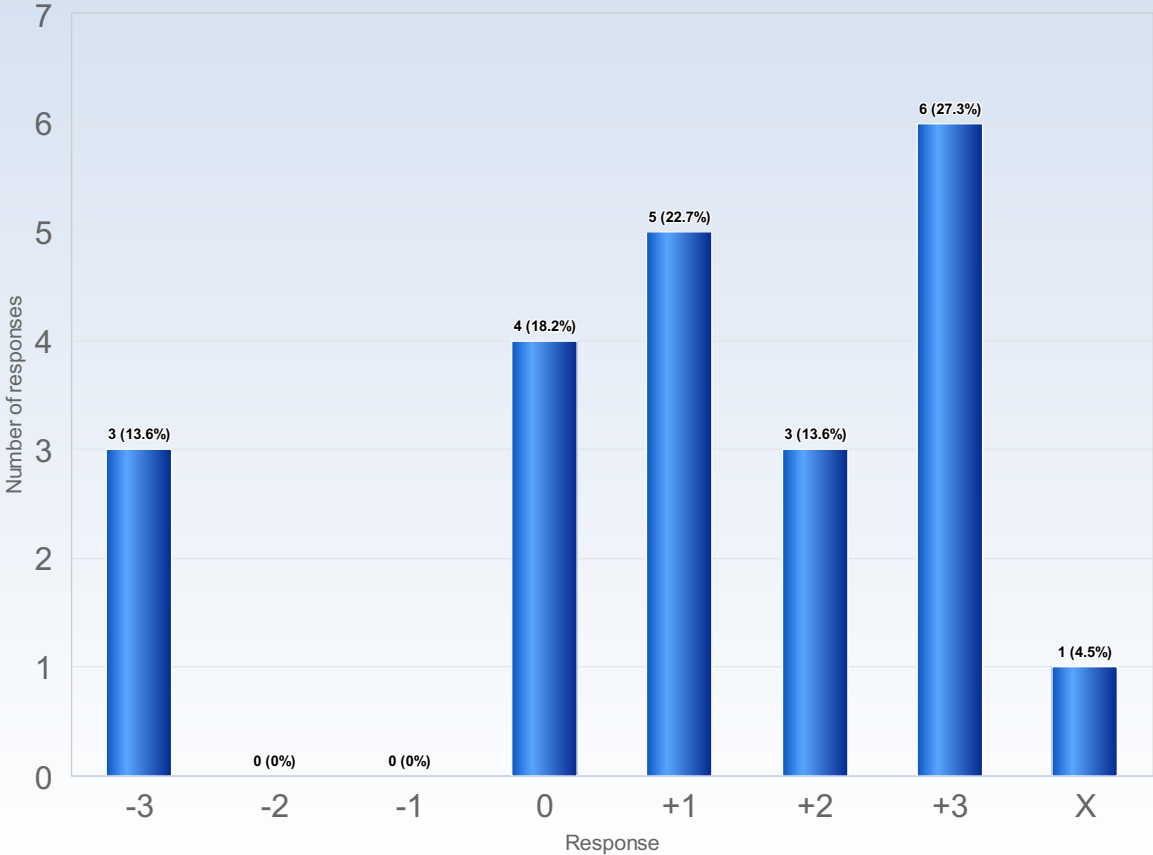
Comments (My response was: +2)

More than other courses for sure

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



20. I had opportunities to influence the course activities



Comments

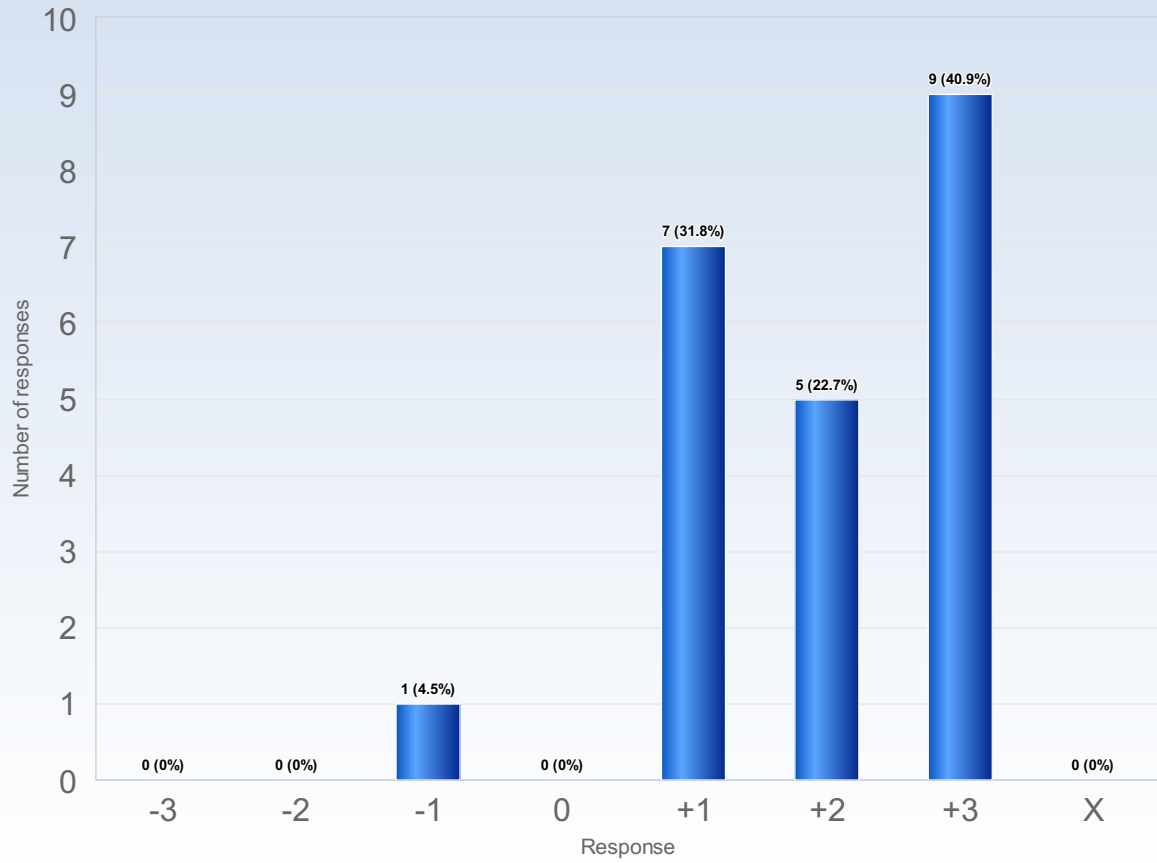
Comments (My response was: -3)

Not at all I'm afraid...

Comments (My response was: +3)

Always got answers fast, and opinions were listened to

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

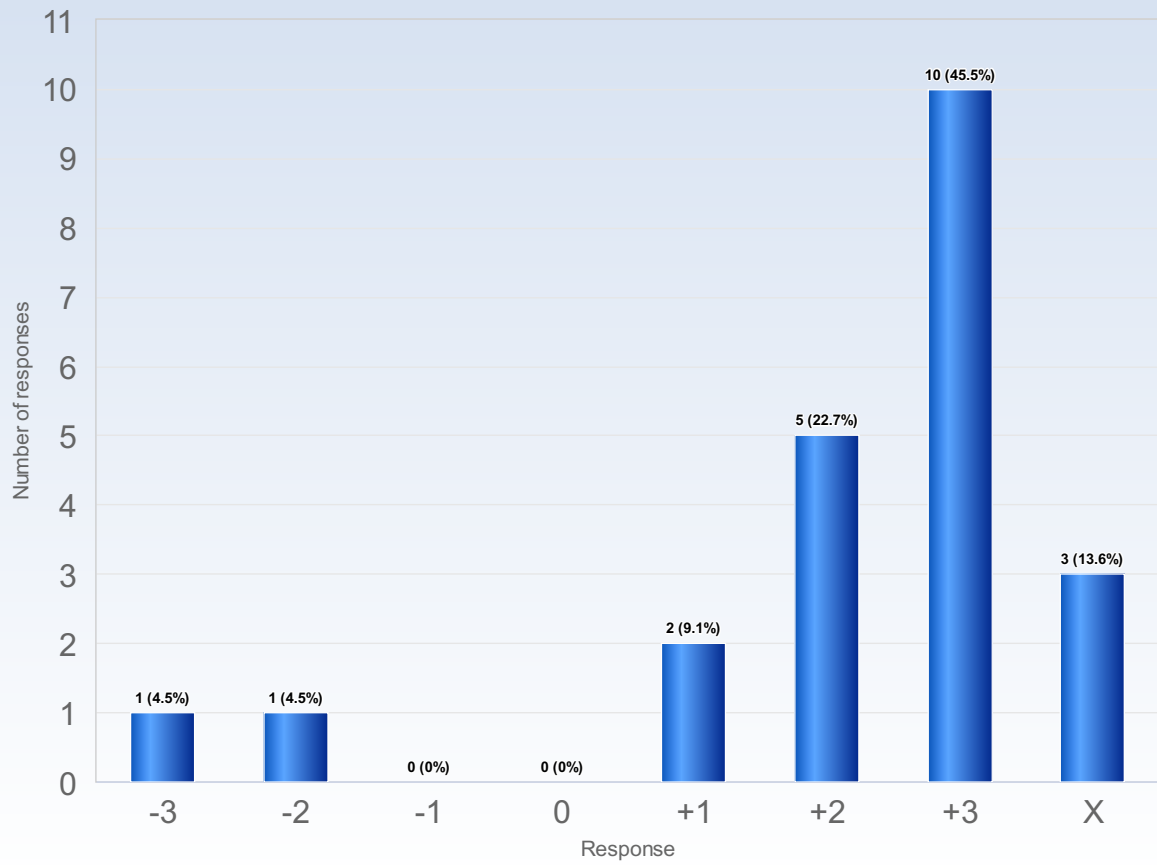


Comments

Comments (My response was: +1)

Except for the project i did everything on my own
Mainly on group project; not the first period.

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



Comments

Comments (My response was: -2)

not all TAs were really responsive, especially for project part

Comments (My response was: X)

I didnt attend help sessions, so I dont know how well they worked.

SPECIFIKA FRÅGOR

Kursen i både P1 och P2 var en bra idé

SPECIFIKA FRÅGOR

Kursen i både P1 och P2 var en bra idé

No. I would have preferred the project having its deadline right after the exam period. That way you could work on the project during the exam weeks as well if needed and finishing it on time would be no problem. The way it was structured, we waited with the project and somewhat forgot what it was about

It all depends on how you fill out the remaining points. I read only this and one 7.5 hp course in p1 and it was fine (as expected), but in p2 I read this and two other courses and it gets a bit much. Not only because of time but also because thinking about 3 courses at once is more than my brain can handle.

yes and no, but mostly no. The project is very challengin and time consuming so it definelty need more than half a period to be done. On the other hand having a "small" course over two period completely messed up everyone's schedule, and most of us had 3 courses on either P1 or P2. This + the fact that deadlines were still the usual for every other courses (like deadline on last week of Dec) put a ton of pressure on students.

Yes, it's very hard to complete the course in one period as the project takes a while.

Yes absolutely, there is no chance that it would've been possible to do all of this in one period

Yes, it helped us to spread the workload more uniformly without having to rush through any of the assignments (essays or projects).

I think it was definitely a good idea, this way we were able to focus more the theoretical part in P1 and then change that focus to the project in P2. Otherwise it would be an overload of work, making the learning process a bit more difficult because we would probably have to "sacrifice" that focus in the lectures in order to have time for the assignments.

Yes, doing only in one period would be too much to get a decent project

I liked it.

Yes I really think so. It just meant that i could soak in each topic better, and didn't feel stressed. It enables you to first learn the concepts, then explore them, then identify what you find interesting, and that leads to a project which is interesting and fun since you picked what you liked.

I think it's a good idea for groups that start the project early. Also, having this course with such dense content in two periods make it more relaxing, at least, one wouldn't feel a strong pressure in their vein going through the course. I believe, this definitely helps students' health, well-being, and, overall, their learning outcomes.

yes

Yes, but make the course 7.5p (which it honestly is)

I'm not sure. On one hand, it makes sense to have the project after we have had a chance to learn some of the material, and since training can take so long it's a good idea to have the project in P2. On the other hand, since many other courses are restricted to one period, I studied at 125% pace while also trying to find a master thesis project, which was not very nice.

Having to do the project along with other subjects in P2 was the most stressful aspect of the course. I would have personally preferred to have the course completed in P1.

I think its best to keep it this way, at least if the final examination is a reimplementatoin of a paper (which I think is great, regular final exams are archaic and at least for me does not facilitate any long term learning).

Obviously yes. It has been extremely time efficient to be able to plan understanding the concepts, writing the individual essays, investigate potential resource issues, discuss the project concepts on a high level within the group and with the TAs to decide on a complete proposal and even start coding in parallel with attending the lectures, which allowed to dedicate a whole period on coding the project and understanding the underlying concepts in-depth. In overall it was a very exciting course! We learned a lot of things, it was closer to what I had been expecting at master level than last year's course, the material was undoubtedly carefully selected and I really enjoyed taking it; I hope next year it becomes even better. :)

I truly agree with with. This gave more time for the project and for training models.