Report - DH2642 - 2022-06-08

Respondents: 1
Answer Count: 1
Answer Frequency: 100.00%

Please note that there is only one respondent to this form: the person that performs the course analysis.

Course analysis carried out by (name, e-mail):

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DESCRIPTION OF THE COURSE EVALUATION PROCESS
Describe the course evaluation process. Describe how all students have been given the possibility to give their opinions on the course. Describe how aspects regarding gender, and disabled students are investigated.

Students are required to ask questions about the course material when submitting labs in the course. This enables us to quickly react to concerns and update lecture material if needed. Additionally, students can always express their opinions during lab hours, however they are not explicitly prompted to.

At the end of the course, students are asked to fill out the LEQ as well as submit a personal reflection for how the group project went. These are opportunities to express more thought out opinions and influence how the course is given the next year. Through the LEQ results, we are also able to investigate aspects regarding gender and disabled students.

DESCRIPTION OF MEETINGS WITH STUDENTS
Describe which meetings that has been arranged with students during the course and after its completion. (The outcomes of these meetings should be reported under 7, below.)

Students meet with TAs (either individually or in pairs) when they present their labs and optionally if they need help during the labs. During the second half of the course, student groups of up to 4 students are assigned project coaches available for regular meetings. After the main part of the course has concluded and students have turned in their projects, there is an obligatory presentation where selected students present their project to the rest of the class, including some TA's and the course examiner. The audience is able to ask questions during the presentations.

COURSE DESIGN
Briefly describe the course design (learning activities, examinations) and any changes that have been implemented since the last course offering.

The course is evenly divided into two parts. The first of which consists of a set of three tutorials in which students get an overview of all the key concepts. The first tutorial is done individually, and the remaining two are done in pairs. The students are examined orally (P/F) after completing the tutorials, in order to make sure no one gets behind. New for this course offering is that the tutorials include automated tests, and that students are examined individually even if the tutorial was done in a pair. However, since the tutorials were changed, we could no longer offer the online based material in OLI.

During the second part of the course, students come up with a project which includes the concepts they have learned about during the first half of the course. The project is done in student-selected groups of 2-4 people. The project is then graded (A-F) according to a rubric available on the course Canvas page. Some selected groups present their project to the class, with a short demo and explanation of how it works, as well as answering questions from their peers.

During the project we have a discussion panel with selected people from the industry. Students may learn about more advanced topics which they might want to include in their project. Students also get some insight on how it is to work within the industry.

THE STUDENTS' WORKLOAD
Does the students' workload correspond to the expected level (40 hours/1.5 credits)? If these is a significant deviation from the expected, what can be the reason?

The expected workload from the course is 10 hours per week during P3 and P4. The self-estimated workload from the LEQ is distributed around 12-14 hours a week. However, there are a few outliers who spend a significant amount of time (>26 hours). Among the students who spend a lot of time on the course (>18 hours), comments are positive and merely stating the fact that the course felt heavy. In general, students are happy with the workload, and some find the course fun so they do not mind spending time on it.

THE STUDENTS' RESULTS
How well have the students succeeded on the course? If there are significant differences compared to previous course offerings, what can be the reason?

The grades during this course offering were slightly higher than the last one. This can potentially be attributed to the fact that the course duration is doubled during the spring semester compared to the autumn.

STUDENTS´ANSWERS TO OPEN QUESTIONS
What does students say in response to the open questions?

Students love the course structure, with tutorials to introduce them to concepts and later a project where students can express more creativity and learn about more complex topics.

The new changes to the course are also appreciated: using GitHub issues for asking for help and having automated tests for the labs. However, some students feel like the instructions for the tutorial are cluttered. Additionally, students would like to learn more about CSS and design.

SUMMARY OF STUDENTS' OPINIONS
Summarize the outcome of the questionnaire, as well as opinions emerging at meetings with students.

The course gets a lot of positive feedback. The two major concerns are that instructions are cluttered and that students would like to learn more about CSS. The major changes made for this year seem to have had a positive impact. The course load is reported to be slightly too high.

OVERALL IMPRESSION
Summarize the teachers' overall impressions of the course offering in relation to students' results and their evaluation of the course, as well as in relation to the changes implemented since last course offering.

The students in the course perform well, and they seem to enjoy the course based on the LEQ. During this course offering, we observed fewer requests for help. We believe there may be two possible causes: the lab instructions are completely new and include automated testing, and the queue system is now forum based (through GitHub issues), so students can read each others questions as well as the answers from teachers. We take note of the fact that students are interested in learning more about CSS.

ANALYSIS
Is it possible to identify stronger and weaker areas in the learning environment based on the information you have gathered during the evaluation and analysis process? What can the reason for these be? Are there significant difference in experience between:
- students identifying as female and male?
- international and national students?
- students with or without disabilities?

The strong area with the course is the general course outline, with tutorials during the first half and a project during the second half. We believe that many people like to be creative and independent, which is why the project is good. Some kind of tutorial is needed in order to have students learn the course material before starting with a project.

One of the weaker areas are the lab instructions. From the amount of help requests to the feedback on the LEQ, the lab instructions seem to have been improved upon compared to the last course offering.

We cannot see significant differences depending on gender, nationality or disability.

PRIORITIZED COURSE DEVELOPMENT
What aspects of the course should be developed primaily? How can these aspects be developed in short and long term?

The lab instructions can be further improved upon (as well as the automated tests). Additionally, more online based material could be provided, especially regarding CSS. Both of these aspects can be developed short term and long term by asking for students opinion through the LEQ at the end of each course offering.
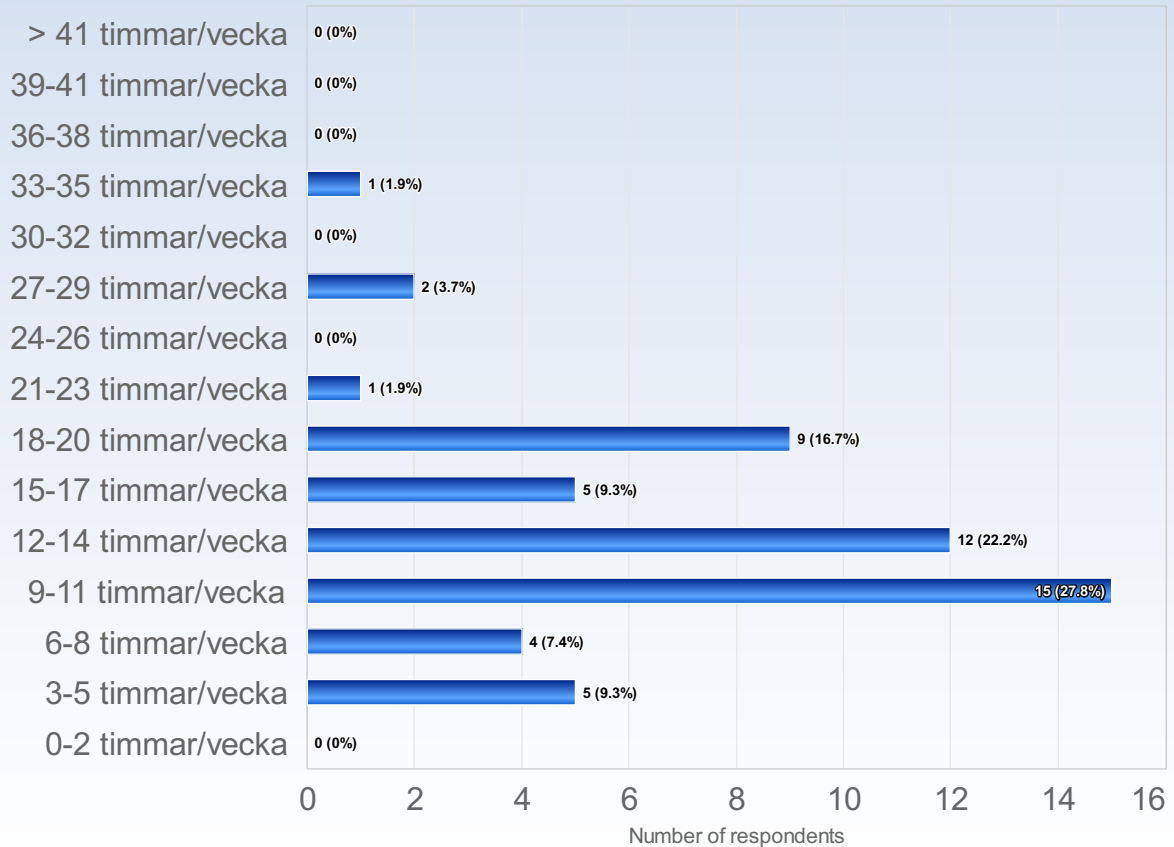
DH2642 - 2022-05-05

ESTIMATED WORKLOAD

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

Category	Value
> 41 timmar/vecka	0 (0%)
39-41 timmar/vecka	0 (0%)
36-38 timmar/vecka	0 (0%)
33-35 timmar/vecka	1 (1.9%)
30-32 timmar/vecka	0 (0%)
27-29 timmar/vecka	2 (3.7%)
24-26 timmar/vecka	0 (0%)
21-23 timmar/vecka	1 (1.9%)
18-20 timmar/vecka	9 (16.7%)
15-17 timmar/vecka	5 (9.3%)
12-14 timmar/vecka	12 (22.2%)
9-11 timmar/vecka	15 (27.8%)
6-8 timmar/vecka	4 (7.4%)
3-5 timmar/vecka	5 (9.3%)
0-2 timmar/vecka	0 (0%)

Number of respondents

Comments

Comments (I worked: 3-5 timmar/vecka)

This number is hard for me to estimate, I had periods where I spent almost all of my studying time on the project. I also had weeks where I did almost nothing.

The tutorials didn't take so much time since the lectures were recorded and could be viewed when we needed them in the tutorials.

The labs stood for most of the work

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

I think the course has a good pace!

The labs required more time than the project

The workload was reasonable.

Getting the labs done in time required quite a lot of effort however the tempo was slowed down significantly during the project. Perhaps a little more time could be redistributed to the labs instead of the project.

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

I loved this course so it was not a problem for me to spend time on it!

The workload was very different from one week to another one.

Some tutorial weeks felt like a bit more.

The hours varied between the weeks depending on how much work other courses took.

The course workload is well balanced, it reflects the course workflow

intensive but worthy

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

The work load was well distributed. It was great to have the lectures recorded, to watch them later.

The course was more technical than I initially expected and so brushing up and getting used to coding again was a bit time-consuming.

I really liked the course so I spent a lot of time working on the project per week. I felt like the workload in the course was quite good as there was plenty of time during the whole semester.

I took the course and completed the labs during a previous semester so I cannot comment on the workload for that during this run of the course. As regard for the project, the overall estimated workload felt well-balanced.

Perfectly fine workload. Project is very flexible in how much time you want to put into it.

I think the workload is not light, (I can't imagine doing this in 1p to be honest) but you learn a lot of things from the course so it's worthwhile.

During the tutorial weeks I spent about 5 hrs per lab with my labpartner coding, and about 5 hrs watching lectures. Then during the project I probably spent closer to 15 hrs per week. Overall it has felt like a good amount of workload in the course.

A heavy course, but a fun one! I have strongly preferred spending time on this course over others

Hours depend if it was a lab submission week or not, as I spent more hours during that time than in other weeks.

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

I think the course was perfectly balanced in regards to time consumption. The assignments did require quite a few hours but this also lead to a deeper understanding of the architecture and the frameworks used.

Varied a lot, especially between the tutorials and the project.

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

Might have been a bit heavy on time but was very interesting :)

The course as it is now is very well implemented regarding the amount of workload in the given time. What is particularly good is that this course seems to take into account that there are more courses going on in the students life. I also remember that Christian Bogdan said that we were permitted more time in this version of the course to complete the labs which was a good decision. If the course sticks with this schedule it will continue to do well!

I worked more hours on this course than any other course i had in parallell because it was a fun course

Comments (I worked: 33-35 timmar/vecka)

Pretty high 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.

Average response to LEQ statements - all respondents

— Medelvärde
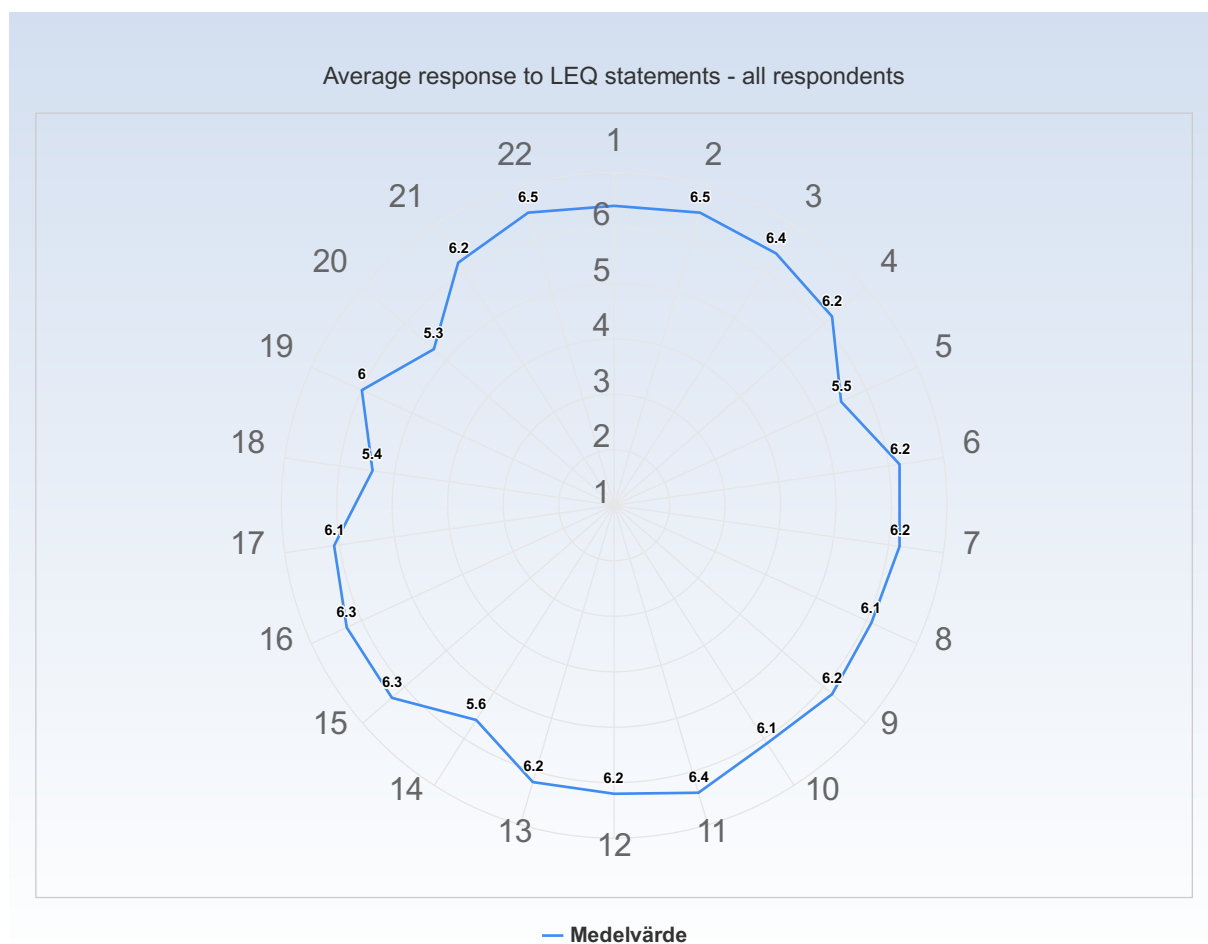
KTH Learning Experience Questionnaire v3.1.4

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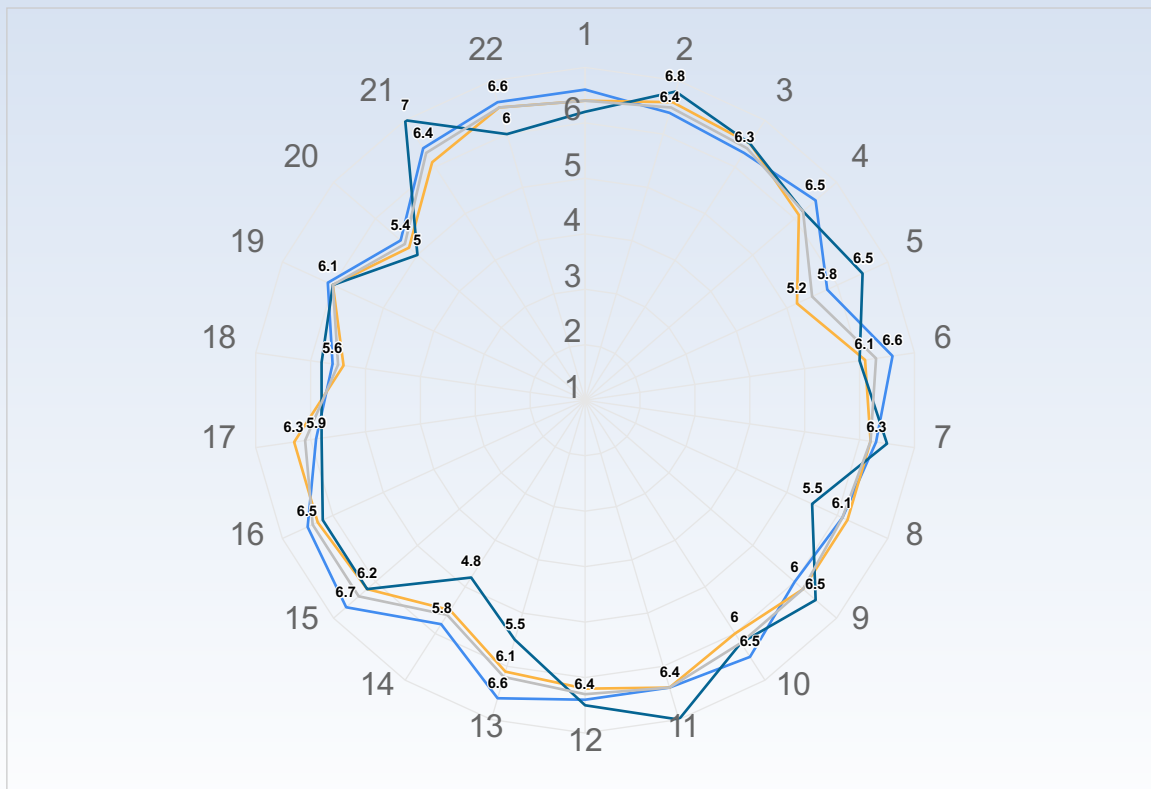
Legend: — Kvinna — Man — Annat — Vill ej uppge — (Answered)

Comments

Comments (I am: Kvinna)

There was no discrimination from a gender perspective.

It is a diverse course and I like that.
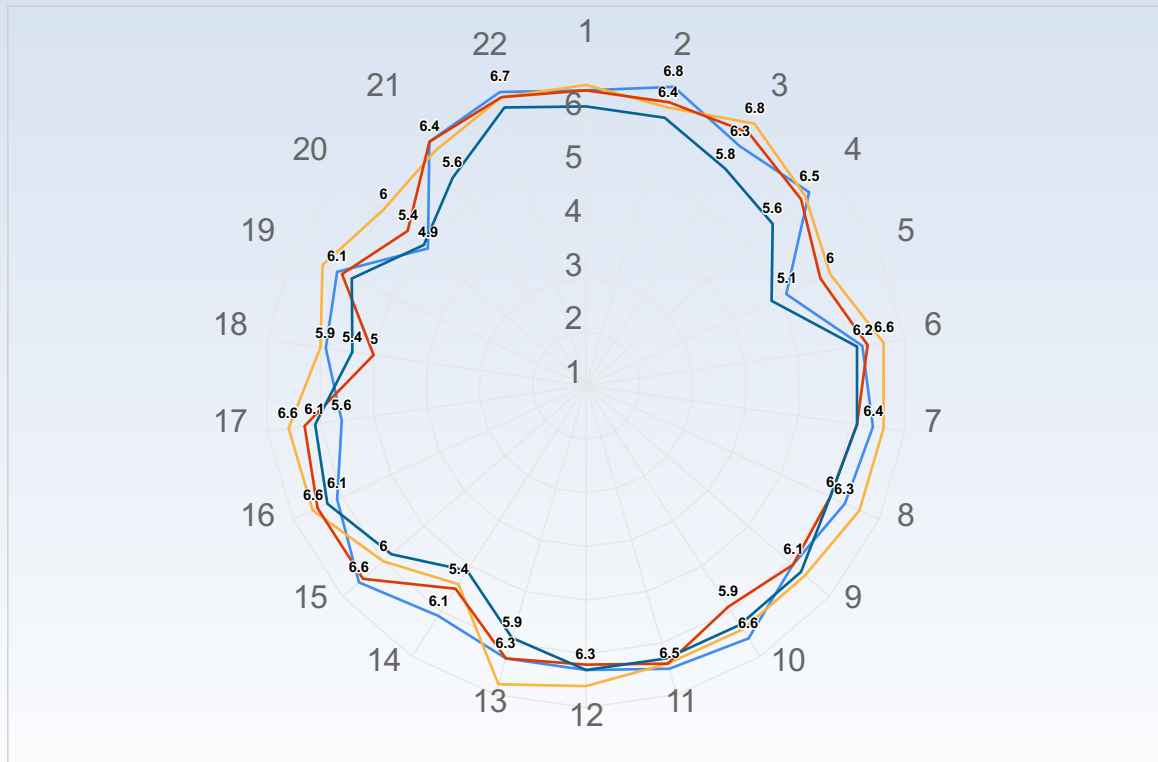
I have nothing to add in regards to this

Comments (I am: Man)

/

Very good.

I don't really know what you want me to write here. There was in my opinion no difference between the education for male and female students.

I felt treated equally in this course.

Comments (I am: Vill ej uppge)

x

Average response to LEQ statements - per type of student

Legend:
- 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 masterstudent)

/

I feel like local students tend to group with people they know but that doesn't matter that much.

Comments (I am: Internationell utbytesstudent)

I'm an exchange student from Switzerland, I had no problem following this course. I really liked the course

Thank you for offering the course in English! Also everyone in my group was kind enough to work in English.

Comments (I am: Svensk student i årskurs 1-3)

I had no problem following the course.

Perfectly suited for 3rd year students

A solid course to take in your third year as one of the optional courses. It sheds tons of light on aspects that are not included in the education so far.
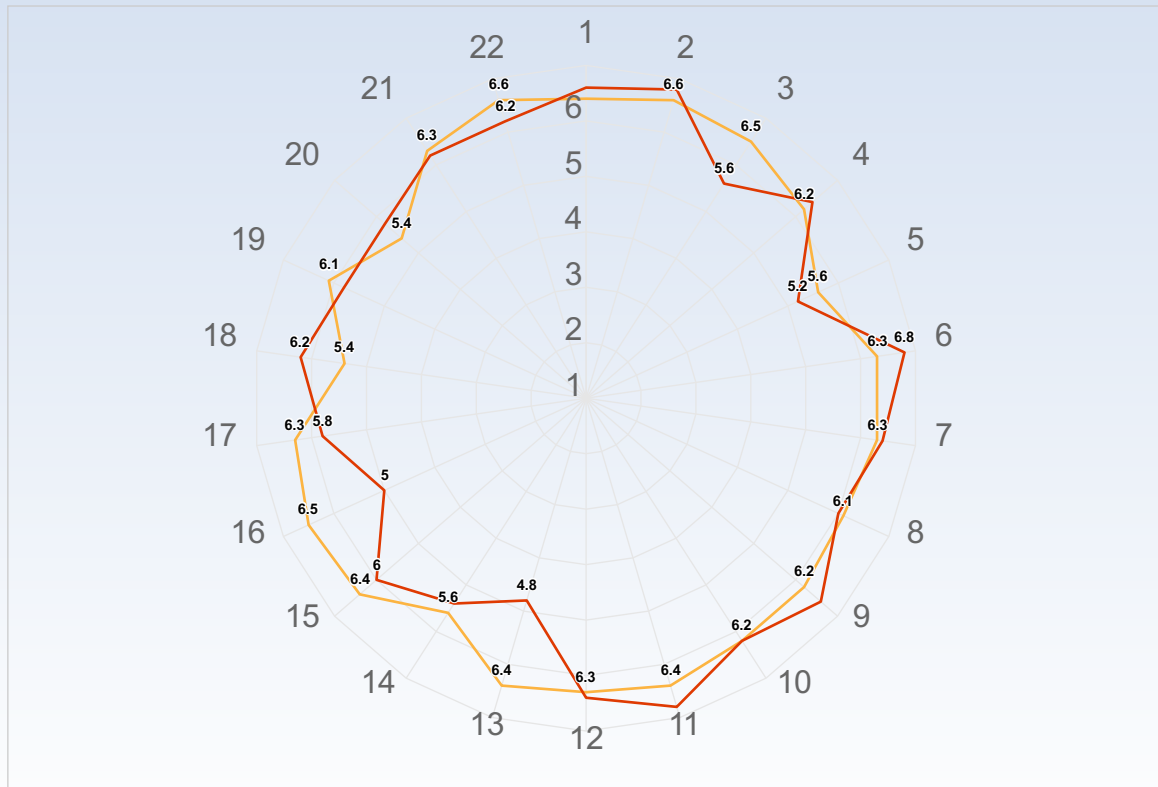
The course was good in regards to this, not too difficult, not too easy

It was good?

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

Very good.

Average response to LEQ statements - per disability

Legend: — Ja — Nej — Vill ej uppge

Comments

Comments (My response was: Ja)

I have dyslexia

Comments (My response was: Nej)

/

The course was well designed in my opinion.

Comments (My response was: Vill ej uppge)

x

As somebody with anxiety and panic attacks, the lab presentations are very anxiety inducing.

GENERAL QUESTIONS

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

The project was very fun and a great learning experience. I think it was well laid out and there were many opportunities for feedback.

I learned to conduct a smaller project while working with others and I learned the basics of new frameworks.

Good tutorial. Fun projects and frameworks to work with.

I love web design and want to get better at it which is what made this course so fun and good

The project when you got to create something of your own.

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

The project was really interesting! I also liked the labs with someone.

the project was a lot of fun

Good intro exercises that taugth us the fundamentals. Fun project where we got to develop our own ideas. And i ive learnd a lot, now i feel like i could develop my own web app for any future ideas.

The lab weeks and the tests which were included were really good at providing students with some base knowledge. I also appreciated the fact that each group got a supervisor for the project, this helped make sure that we finished our work on time and provided us with some useful feedback. Also the possibility to open git issues when something was difficult to understand was really good.

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

Very technical course about frameworks of the moment!

The entire course structure, with labs, issues for help and project

Getting to work with modern architectures in an individually selected project. The tutorial lab was also quite useful.

I appriciated that it was a very practical course

The project since you got to apply the things you learnt and get new knowledge

Great lectures, explaning and using new technologies, really liked that we could choose the framework

I feel like I learned a lot which I can use in the real world

The lab were amazing and were a really nice tools to learn with the tests. If was very efficient to see if we did it right.

Nice to have feedbacks at the middle of the projects (maybe a bit early I feel like the majority of the groups were still early in the project, but on the same time it was a good reminder to move on on the project)

The tutorials gave a great introduction to the course. A few concise lectures worked very well. Project was fun.

The course content in itself was fun and interesting to learn about. The tutorials had clear instructions.

The project is really a good part of the course, it really helps to practice the course knowledge

Key concepts

Project work

The best aspect of the course was that we could choose a project on our own and learn as a peer group!

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

I liked the structure of the course and that it was so practical. The lab gave a great foundation for the project.
Also I really liked to learn how to code with a good structure and following the Model-View-Presenter model. I did have some previous Web development knowledge, but I never learned how to code it "nicely".
Additionaly I really liked the workflow with the git issues, which made it possible to get help really quickly.

The initial tutorials for the labs were very specific and they helped. The tutorials lost some quality along the way.

I think the whole setup is really good and the course is fantastic overall. Having the labs in the beginning allows you to get familiar with the material and then apply what you have learned in the project is a great way to do it. I think having this course over a whole semester like it was this time is a must, as the projects that can be made will be so much better with the extra time that you have with it being over two periods and it allows you to learn so much more.

The project gave a good opportunity for everyone in the group to work with the areas related to the course that they found to be the most interesting.

The projects and the freedom associated with it. While it might seem "lazy" to just let people figure things out, I belive that to be the best way to learn programming (especially web development).

I think the best aspects are the structure and pace. I like this kind of lecture with lab structure, lab helps me understand what I didn't get in class. And in the project, I was able to use what I learned from class and try out my own ideas, which is great for me at least. Additionally, I like the open and inclusive atmosphere, the course is very engaging, and open, and it encourages me to keep a positive mindset even when I met some challenges.

The project! The freedom to explore a subject by doing something.

Probably the project, it was fun and a great learning experience.

The fundamental theory in combination with the path from TW1 to project.

The best class I have taken this year. Having both classes, tutorials and the project is really cool. The involvement of the teaching team was amazing. I really appreciated the tests in the tutorial because I had little background in web programming and for me i think that it was really necessary. I think that one of the main issues with computer sciences in general is that when you're beginning you really don't know the notions or the terms employed, what to do or where to start, but as the labs were really guided I did not run into this problem. So thank you for the time you spend on improving this class!

Learning how to work with framworks/APIs and now having a good understanding of how to create something else in the future

I really liked the teacher and slides and courses. Cristi is very knowledgeable, and you understand very well from him what the purpose of everything is.

The issues page was an excellent idea in getting fast help or feedback.

The TAs were very nice, and willing to help.

The tests for each lab helped a lot in getting a perfect result and the lab slides were very well made and explained step by step the development process we should follow (with the exception of TW3, where it was a bit hard to understand when a test should pass, as the development was done gradually and chunks of code kept on changing).

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

I love the concept of each assignment being based on the previous one where we add more functionality for each week.

Big kudos to Cristian for the very wholesome and informative lectures. You did a great job teaching the concepts of the course and motivated why things should follow a certain standard! Also thank you to the TA's for being very available and quick to resolve git issues.

Much freedom to try things on your own, for instance in the final project.

Being able to cooperate with others and to apply self-chosen technologies in a larger project

The best part of the course was the tutorial sessions, where you can get help anytime from TA's and very accessible.

Felt like we're learning relevant technologies and given the opportunity to make a presentable project. This course highlights aspects of javascript that were unfamiliar to me, but important, such as array spred operator, the use of .map(), .forEach(), .find(). Good that we talked about Promises (as used in React), as they've been quite confusing before the course.

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

The project and the tutorial at the beginning :)

Having git issues and getting help when needed

Good lab structure

The project

The learning! This course was not overwhelming when teaching a new subject. It was easy to understand and work with the labs. Hints were given in the lecture slides and the lab slides which sometimes proved useful. Compared to other courses on this level I would say that this course has taught me the most and I feel confident in both my JS, html and CSS skills. Other courses that have this much new information in them tend to be very difficult but the concept you have here works great!

The tutorial weeks were really helpful for the project. Good that the first week was individual so I could start off and learn I my own pace

The ephasis on project work

What was the best aspect of the course? (I worked: 27-29 timmar/vecka)

Labs and freedom of project choice were great. And I really appreciate meeting with people from the industry.

The freedom to choose your own app

What was the best aspect of the course? (I worked: 33-35 timmar/vecka)

1. Lab help session
2. Lecturer

What would you suggest to improve?

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

Some of the tutorial week and presentation slides were very cluttered and the contents were unnecessarily vague at some points.

Improve the structure of the course, i.e. the tutorial slides specifically!
And introduce more css and other handy tools that gives web applications a smoother look.

Remove or redo the unit tests for the tutorial. They were buggy and hard to understand. I spent a lot of time debugging and trying to pass the tests even even though the functionality was there.

More about styling with CSS because in my opinion, that is the trickiest part.

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

Maybe learn more about CSS.

sometimes it was hard to follow the lectures

Overall the course is good and well organised, however, i feel like the presentation slides where a bit too stacked with information on each page and sometimes hard to follow. I would suggest splitting up slides with a lot of test into more slides, that would make them easier to read and follow.

When we were working on our projects one of the most difficult things was actually setting up the project. In the labs a lot of things were going on behind the scenes and everything was sort of provided for us in the beginning. It would have been useful to get to know how to set up a project as well in order to understand what was needed in order to do so.

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

Not much...

Less cluttered instruction slides for the tutorial, sometimes it was a bit hard to decipher what the actual task was

You should have like that you need to look into maybe 3 groups instead of one and give them feedback since it will be more things you can learn from it.

Lab slides are a chaotic and you sometimes find the needed information 3 slides later

- We lack sometime knowing the good practices. Your code can work but it is not the good convention (for example name convention, the best ways to integrate CSS ...) even if I know it is very hard to transmit this information. For example, it would be nice to have some links on how to handle a database for users.
- In the labs it would be nice to learn use how to debug, for some with experiments it is very natural but some still have difficulties to know the information to look for. So it would be nice to have a few features without unit tests and we have to test by ourselves and think about the possible bugs.

The architecture alternatives to MVP felt very confusing in the lectures.

The presentation slides for the tutorial were kind of unstructured. Not the information but the words was very all over the place and it was sometimes hard to follow.

Nothing specially

No

First of all, I think the idea of a project "coach" is a great one. However, the actual implementation was more like having a "supervisor". Whereas a real "coach" could actually push us to become even better versions of ourselves, tell us what we could improve upon, know our strengths and weaknesses, and be aware of our code base and group processes. That I feel did not happen. As supervisor on the other hand, what actually happened was that our coach oversaw us but also only in case we asked for something. I would prefer to actually have a coach instead of a supervisor.
Second, I found that the UX part was very short. I would have loved to learn more in this regard (at least one full lecture or better two), and I say this even though there are other courses that teach this.
Third, I would teach at least some project management / Scrum etc. skills (one lecture should be fine for that, too), so that groups have a common baseline on how to work together and don't need to find agreement on that as well. Since most of the students I met, had no prior project management know-how, this could certainly make the actual development work much smoother and lead to an overall higher quality of the produced work. If that would be taught, I would also include it as a measurable goal for the grading part regarding "group collaboration". So for instance, showing that there was a plan, an division of responsibilities using some project management frameworks (and maybe even tools) would make this grading criterion more objective than merely asking the group if they collaborated well (and then grading based on that).

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

I think the course was great, so there is not really something to improve.

Keeping the tutorials really basic so all types of students from various backgrounds can keep up.

The only thing I would suggest is to maybe change the grading criteria to take the average of each category, instead of making the lowest grade count.

From the previous time I took this course I thought the labs where too heavy (requiring too much workload) but I cannot comment on anything during this run of the course.

More CSS! It's one of the main things that allow for interactivity so I think a better introduction to the topic would be nice (perhaps talk about some frameworks, touch on more advanced topics like animations)

I don't have a computer science background and sometimes it could be hard to understand the lecture. I have to spend time on terms that students are assumed to know and rewatch lectures to try to understand. This is also one of my biggest challenges, for instance, the observer takes me a while to understand. It's actually not something really difficult to understand, but when I heard observer for the first time I didn't really know what is and then the lecture jumps to the implementation really quick so I missed the whole part.
The lab did help me a lot and the unit test helps a lot since I sometimes don't understand lectures, but sometimes I feel like the lab comments didn't help me to understand the questions. Sometimes I basically just did what was told to be done, and I don't really know why. So I would suggest making the lab comments and instructions more intriguing and prompting students to think.

I felt like the labs in the start sometimes was a bit messy. You were given so much code that it was hard to gain a full overview of what you are doing, sometimes giving you the feeling that you are fixing small things "here-and-there". I would also like to see a more direct approach to React/Vue differences by using for example functional components in react from the start and by using templates in vue. As of now the class-based components felt very similar between the frameworks so it was hard to tell them apart. (In general however, the TW's were good!)

It would be nice with some optional help to brainstorm ideas for the project as it was pretty difficult to come up with a good idea in a pretty short amount of time. This could also be helped by offering some resource for finding APIs as that could help with coming uip with ideas.

I also think it could be good to introduce the students to prototyping/design tools such as figma or adobe XD as it appears to have proven useful for alot of projects in the course, probably doesnt need to be its own component of the course, but part of a lecture or similar.

In my group, there was a person who had already used Figma, and this really helped save time for the project. Also, I think a class to learn about debugging would be welcome. My tutorial partner showed me how to do with examples but with the slides I had trouble understanding how in practice I could do tests.

I know the course is not about the css, but having some more practice on that aspect would be nice, alot of the projects during the presentations looked fantastic, but I couldn't help but feel that those students that had great visuals had prior knowledge on CSS, myself didn't know anything about it, and we didn't have time to spend on it during the project, so I feel that my knowledge is lacking in that department.

The class needs a special lecture on just React. We felt like we really needed a more in-depth view to figure out how everything worked in React, what to import, when and how to use it, etc, steps which were either not mentioned, skipped or not explained more in-depth in the current version on the course. Even a React 101 small tutorial, tailored to fit with the other lectures, which we could've done on our own as additional study material would have helped, because we found that unfortunately the information we found online didn't really fit in with the rigid way the class was built around Dinner Planner.
The class also needs a special lecture on CSS, tips, tricks, good to know, libraries, methodologies, etc. We barely touched upon CSS, yet the project was heavily judged on the CSS, even though the class had no focus on that.

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

Perhaps add in one third party component in the skeleton code for TW3 to give some introduction to working with them before the project.

Styling (CSS) really needs to be included in greater extent, because coming out of the tutorial week, there was little to no knowledge regarding how to style properly.

A bit more attention to standard practices. For example, even though JSX *may* be superior, it doesn't seem to be used much at all within the vue ecosystem, and I think some more focus on the template syntax as well would be nice.

A little more eloborative tutorial documentation for the assignments as we initially had tough time understanding the dinnerpalnner test issues .

The lectures are super fast to follow

Perhaps a table of contents for the slides, as it was a bit hard to locate in them.

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

There's not one thing I can think of!

sometimes instructions were a bit unclear

More CSS and better explaining about the different grades

There is really nothing I can come up with that would improve the course. Stick to the concept you have and it will be great!

Some slides was a bit confusing

Perhaps provide a introductionary course in JS and react

What would you suggest to improve? (I worked: 27-29 timmar/vecka)

Personally, It would be nice to have some meetings on campus. In this case, there will be a sense of collaboration with other students. For instance, it will be nice to have a "Hello world demo" with the initial prototype or simple working app, so we will have the opportunity to receive feedback about the project idea and prototype from other students.

Also about TA. For me, it seems like TA did not really help during the project. We have had several meetings with him and sometimes we had not received helpful answers to our questions.

Including CSS and authentication in tutorial weeks

What would you suggest to improve? (I worked: 33-35 timmar/vecka)

1. Remove lab work team up. Change it to individual work. When working in pairs, it's difficult to learn all things in the labs and also difficult to divide tasks.
2. Change lab code structure to either pure Vue or pure React. The code template used in labs now is mixed with Vue and JSX (React), which is very confusing.
3. Give more freedoms to the group project. The grading criteria is way to complex. Feels like we have to implement something according to what TAs want. Sometimes when something is functionally working, I don't see a reason why we need to spent a large amount of time to change it just to fit what the teaching group wants.

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)

Try something different when tackling the project. Instead of making a dinnerplanner copy, try to model your application differently to explore new design patterns and ways of doing things. I learned a lot by doing this.

Don't be afraid to explore other frameworks and tools and ask you TAs about other css tools etc.

Don't spend to much time trying to get the tests to work on your own. Make an issue on github instead.

plan your workload and work during the whole course

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

Be motivated and ready to learn a lot by enjoying coding!

start with the labs and project in time and make the most out of the project because it is a great possibility to create a cool app.

Just stay on track and everything will sort itself out.

Try to start the project early on and look at the grading criteria before starting on the project so you know what is expected of you given the grade you are aiming for.

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

Start as soon as possible the assignments

Make sure your group has similar ambitions, but more importantly, a similar sense of how to work on the project as my group mates doing everything last minute created a lot of frustration and extra work for me.

Try stuff you have never used before because it's a great time tog learn

You don't need to study hard, just study right and focus on your goal and have a goal planned.

Take the course

- use the labs to test and see if you understand all the principles
- start early in the project, and don't start coding right away but take the time to lay out the ideas and the architectures.

Read the lecture notes before watching the lecture. You might also need to watch a lecture twice since the pace is pretty fast.

For me it was very beneficial to the labs together with your lab partner so you can during the process discuss the different parts and such. I learned more this way rather than have split the work and been reading on my own.

Work consistently, don't wait until a few days before the deadlines

Take it if you have enough time

Have fun with the course and challenge yourself

The more you yourself put into the course, the more you get out of it.

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

For the project: Develop a website, you would use yourself. This way it is much more fun to work on it.

start early and keep some time each week to understand the topics.

Start the project early and have regular meetings with your group. My group started right away and it made sure that we had plenty of time to discuss our idea, how we were going to do it and plan our work.

I would advice to try to keep a steady pace with the project, and not to loose momentum by getting to distracted with other things (sometimes this is hard to avoid and in such cases you should try to get back on track with the project as soon as possible).

Begin work early and make a good prototype!

Work work work! You have to spend time on this course apparently. Also in the group project, it's better to collaborate with people with similar ambitions rather than the ones you are familiar with.

don't start slacking with the theory, it's crucial to understand the basics before starting with the assignments

Take the tutorial lecture slides seriously, and really understand what's in them.

Find a good API.
Report freeloaders.

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

Start working on the project early on - it takes time!

Don't overcomplicate the application. It can be very simple, yet made powerful by a great design/UX or extended with some cool API functionality.

Don't choose a too complicated app for the project, as it will make it more difficult to focus on the details.

Its going to be super smooth,If you prepare yourself with Javascript and react/Vue framework before you take this course.
Otherwise, its important to attend lectures for the better understanding.

It's possible to run some functions directly fro the browser console, without having to go through manual steps leading to those functions.

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

Work often !

Get started with the project early

Try to find a group where everyone complements each other's knowledge instead of everyone knowing the same thing

To start early with the project, especially if you want higher grades. I would also try to really understand the labs because they give you a great foundation for the project and how you are meant to implented it to achieve most of the requirements for atleast a passing grade!

If a participant in your project is not doing anything, talk to your TA about it as soon as possible!

Start early

What advice would you like to give to future participants? (I worked: 27-29 timmar/vecka)

Choose wisely the right people to work with. Because it is so easy to end up in an unbalanced team.

What advice would you like to give to future participants? (I worked: 33-35 timmar/vecka)

1. Start the project as soon as possible.
2. Try implement database of your project as soon as the basic function is done. Don't wait until the last step when all functions are implemented. Unless you are very familiar with setting up database.
3. Try to find teammates that have the same aiming grades.

Is there anything else you would like to add?

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

No

You did a great job with answering Github issues. The assistants were very fast and helpful.

Loved the course!

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

x

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

Cristian is a great teacher! :)

Nope

Really nice course. Thanks.

Nothing

I really enjoyed this course and learned a lot of valuable skills for my future (such as a new programming language, new frameworks, new software design patterns and group collaboration skills). I loved the slides, which were well-made for re-reading things (though maybe not so well-made for a presentation/lecture). I like the overall structure of going through a tutorial before working on a bigger project in a bigger team. It was all very close to reality and did not feel at all like a university course you just took for the credits.

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

It was my favourite course at KTH so far :)

I felt the instructor was a bit rigid in some of my interactions with him. Having an overall inviting and humble attitude helps from the students' perspective.

Not really, just wanted to say again that I think this is a great course and that I learned a lot from it.

Good course!

I feel like this is a course that is improving all the time, so I sincerely hope it will be better in the future.

It has been a very fun course!

Really nice class!

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

I think the combined approach in the tutorials is a nice way to show react and vue at the same time, but it also makes it a bit difficult for students to see what's going on, and how a project in one or the other is usually set up.

I like the content taught and the format, lots of hands-on. Unfortunately, the "group dynamics" is a hit or miss aspect that's difficult to get right in this setting.

Is there anything else you would like to add? (I worked: 18-20 timmar/vecka)

/

nope

Great class over all

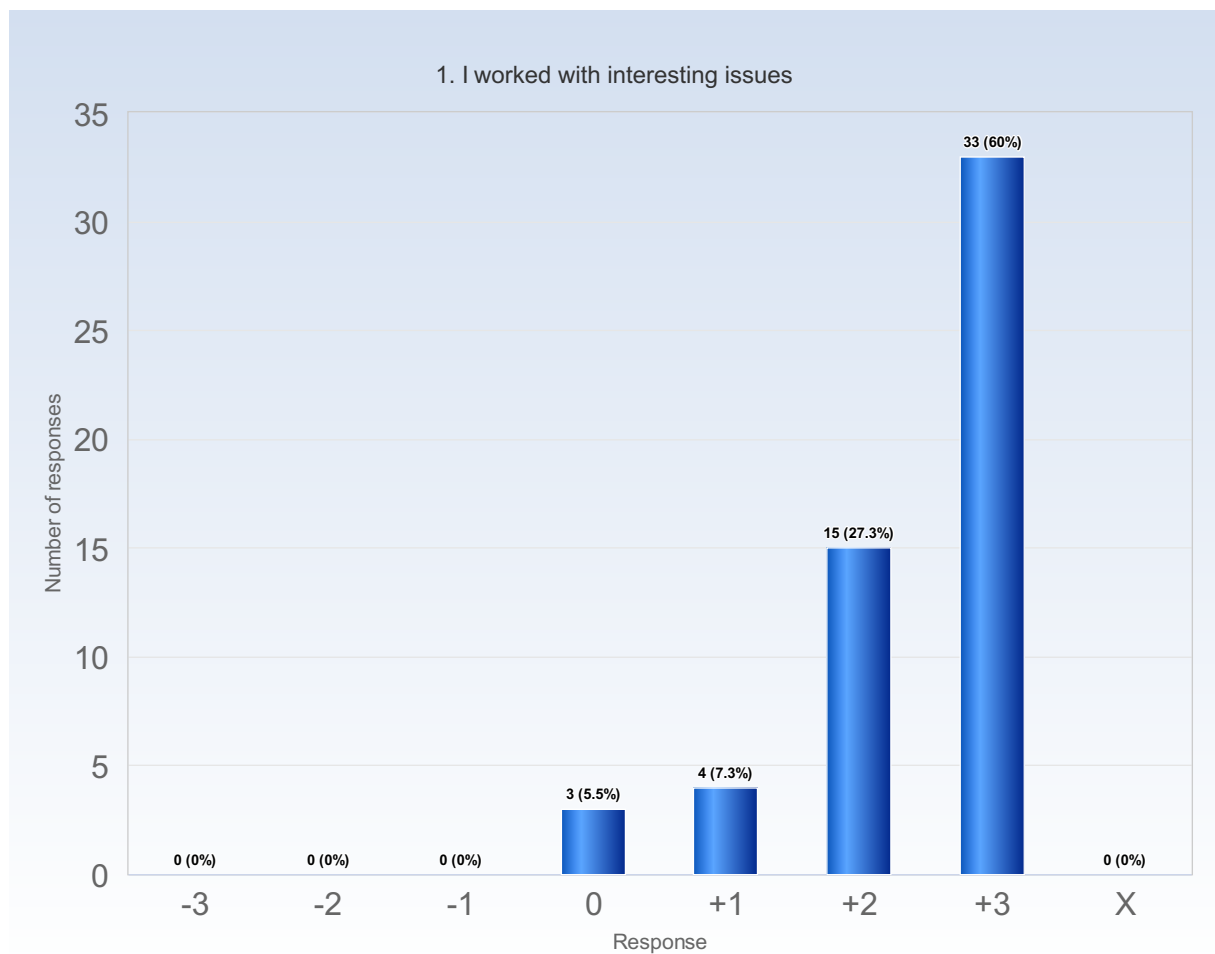# SPECIFIC QUESTIONS

RESPONSE DATA

The diagrams below show the detailed response to the LEQ statements. The response scale is defined by:
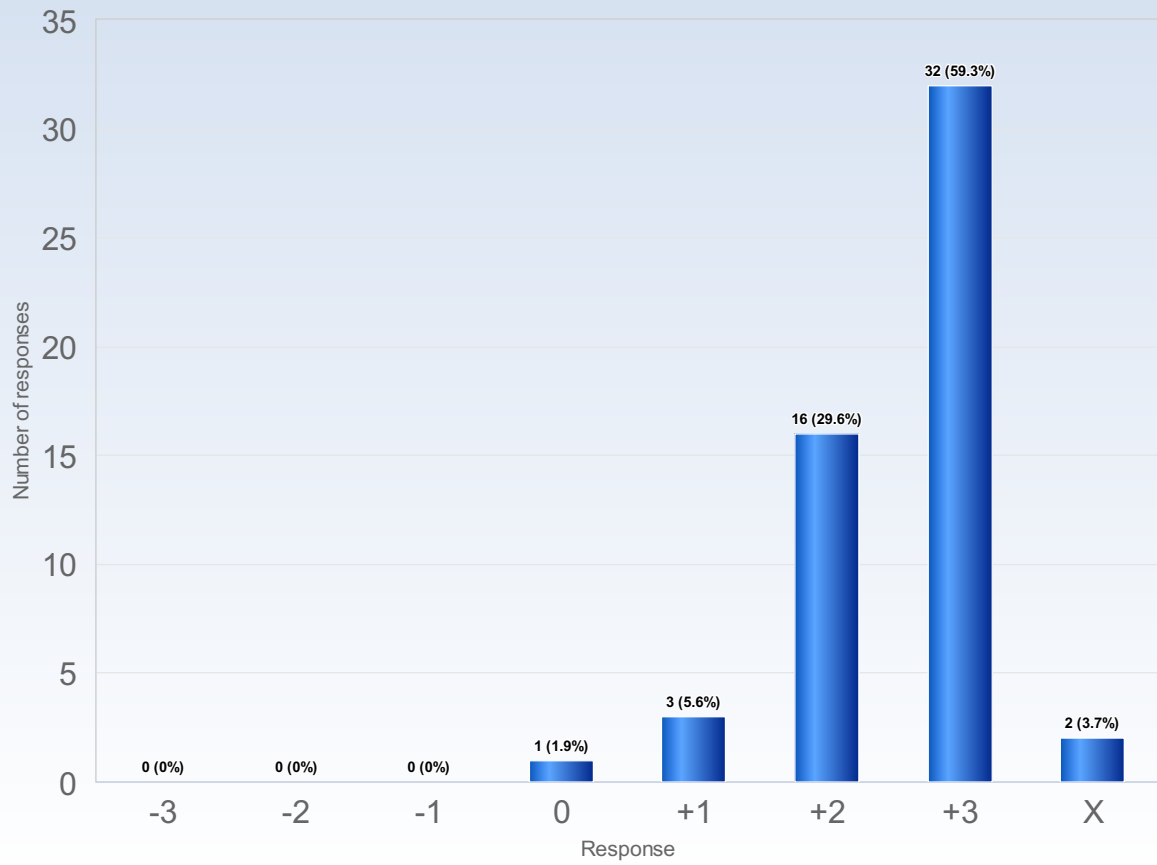
-3 = No, I strongly disagree with the statement
0 = I am neutral to the statement
+3 = Yes, I strongly agree with the statement

X = I decline to take a position on the statement

1. I worked with interesting issues

Response	Number of responses
-3	0 (0%)
-2	0 (0%)
-1	0 (0%)
0	3 (5.5%)
+1	4 (7.3%)
+2	15 (27.3%)
+3	33 (60%)
X	0 (0%)

2. I explored parts of the subject on my own

Number of responses

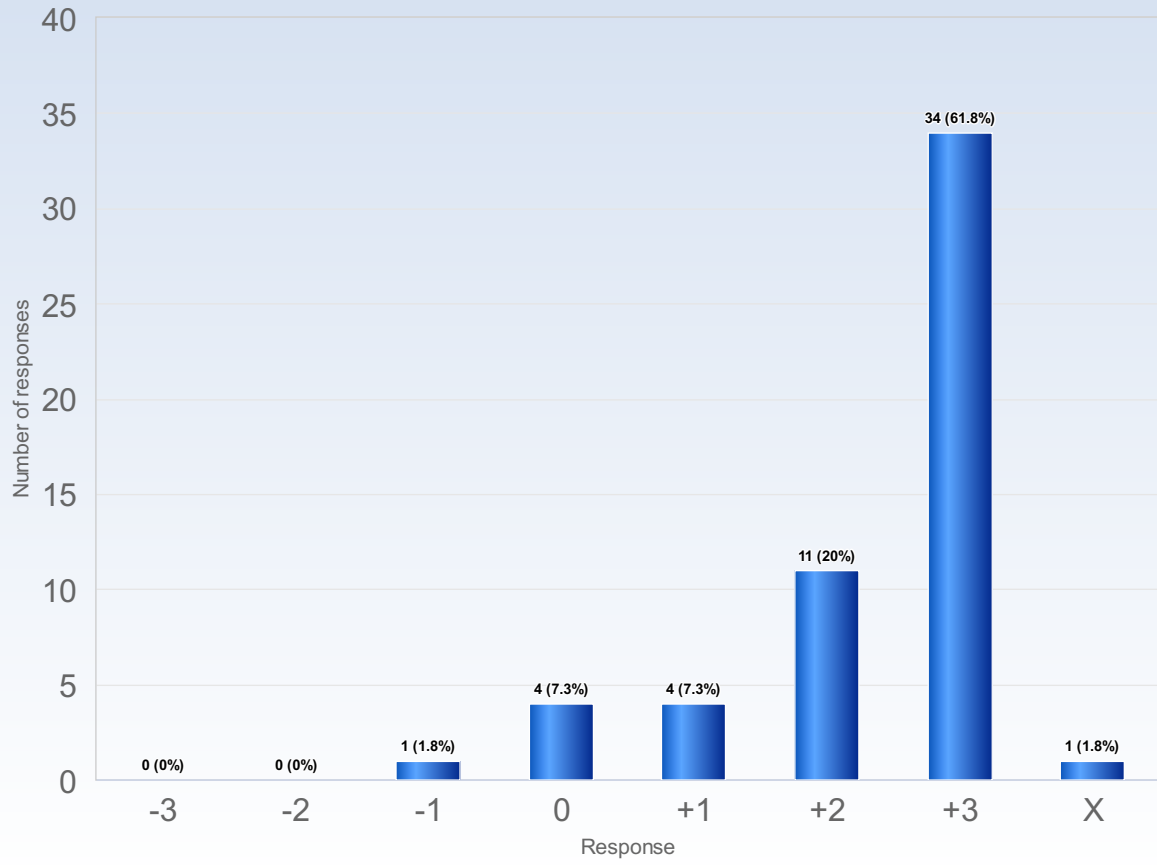| Response	Count
-3	0 (0%)
-2	0 (0%)
-1	0 (0%)
0	1 (1.9%)
+1	3 (5.6%)
+2	16 (29.6%)
+3	32 (59.3%)
X	2 (3.7%)

Response

Comments

Comments (My response was: +2)
The project enforced this

Comments (My response was: +3)
Amazing labs! Thanks!

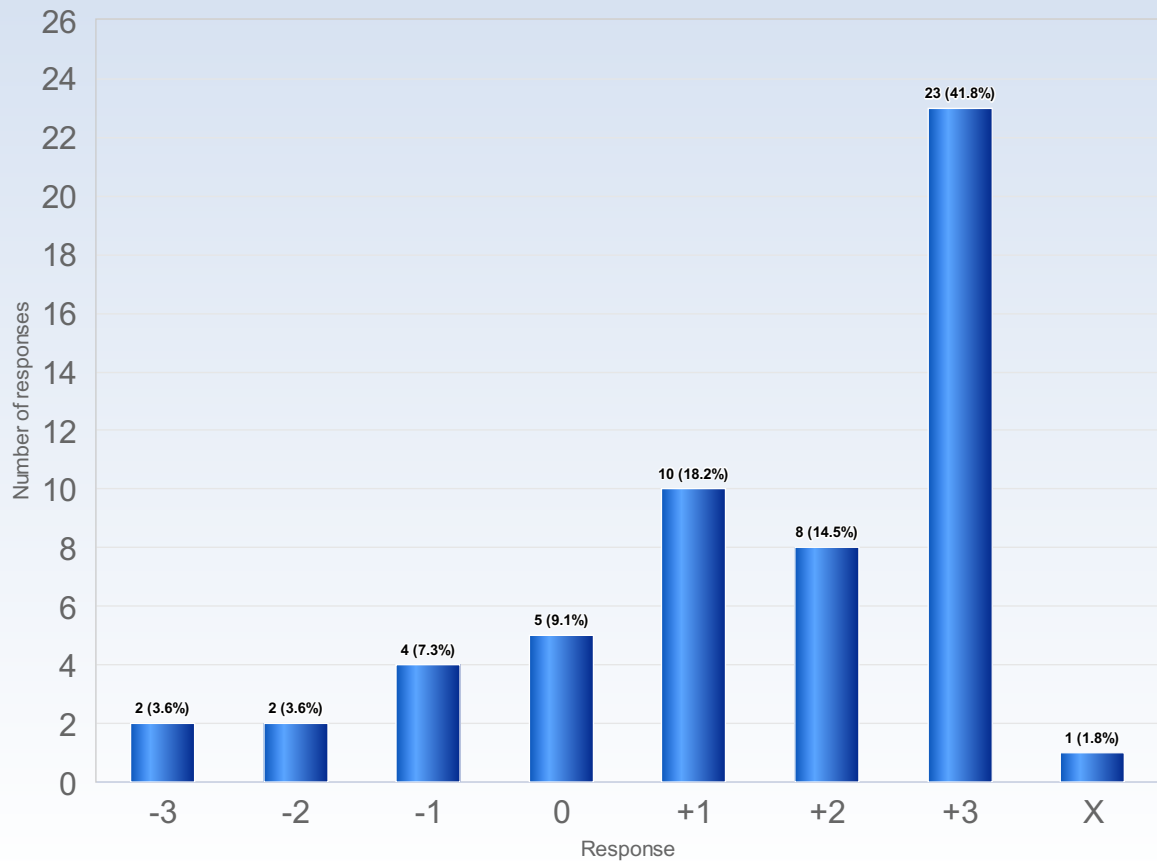# 3. I was able to learn by trying out my own ideas

Number of responses

Response	Count
-3	0 (0%)
-2	0 (0%)
-1	1 (1.8%)
0	4 (7.3%)
+1	4 (7.3%)
+2	11 (20%)
+3	34 (61.8%)
X	1 (1.8%)

4. The course was challenging in a stimulating way
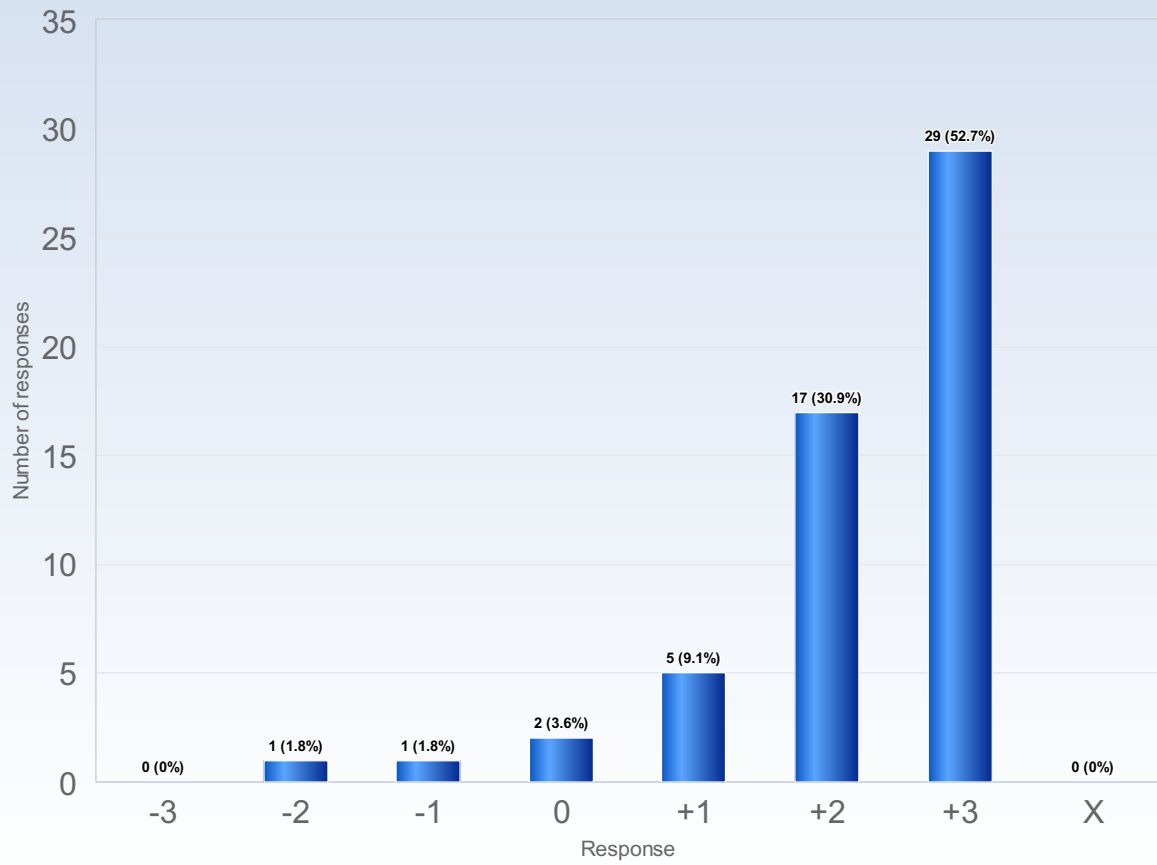
Comments

Comments (My response was: +3)
  Project + labs is really good!

5. I felt togetherness with others on the course

Comments

Comments (My response was: -3)

My project group were generally quite slow to do things and usually did not have things done by times decided upon and did not really communicate these issues ahead of time.

Comments (My response was: -2)

The forced pairing up for the project was not good for my team, as we had to work with freeloaders who didn't do their part, and our final grade was negatively impacted even though half of the team did most of the project on their own. The project grading is not fair from this point of view, as everybody is graded the same, regardless on the amount of work they did.
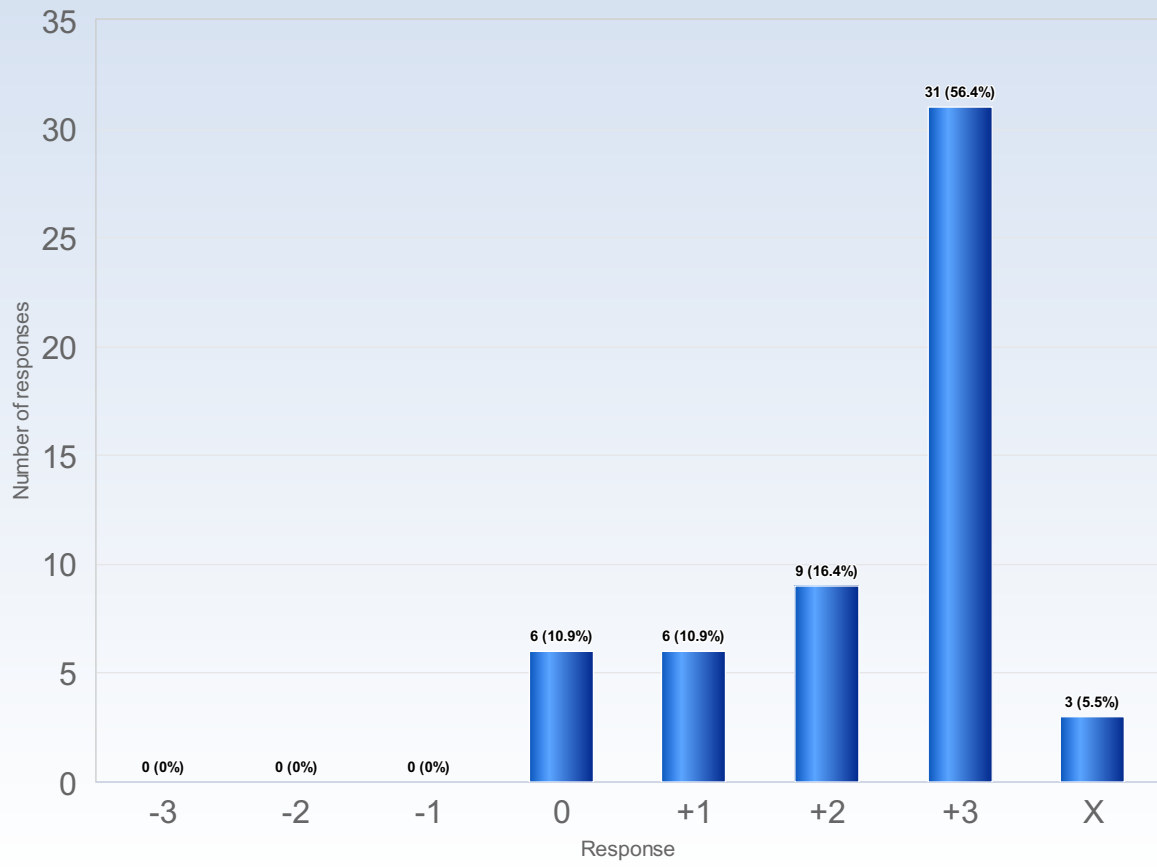
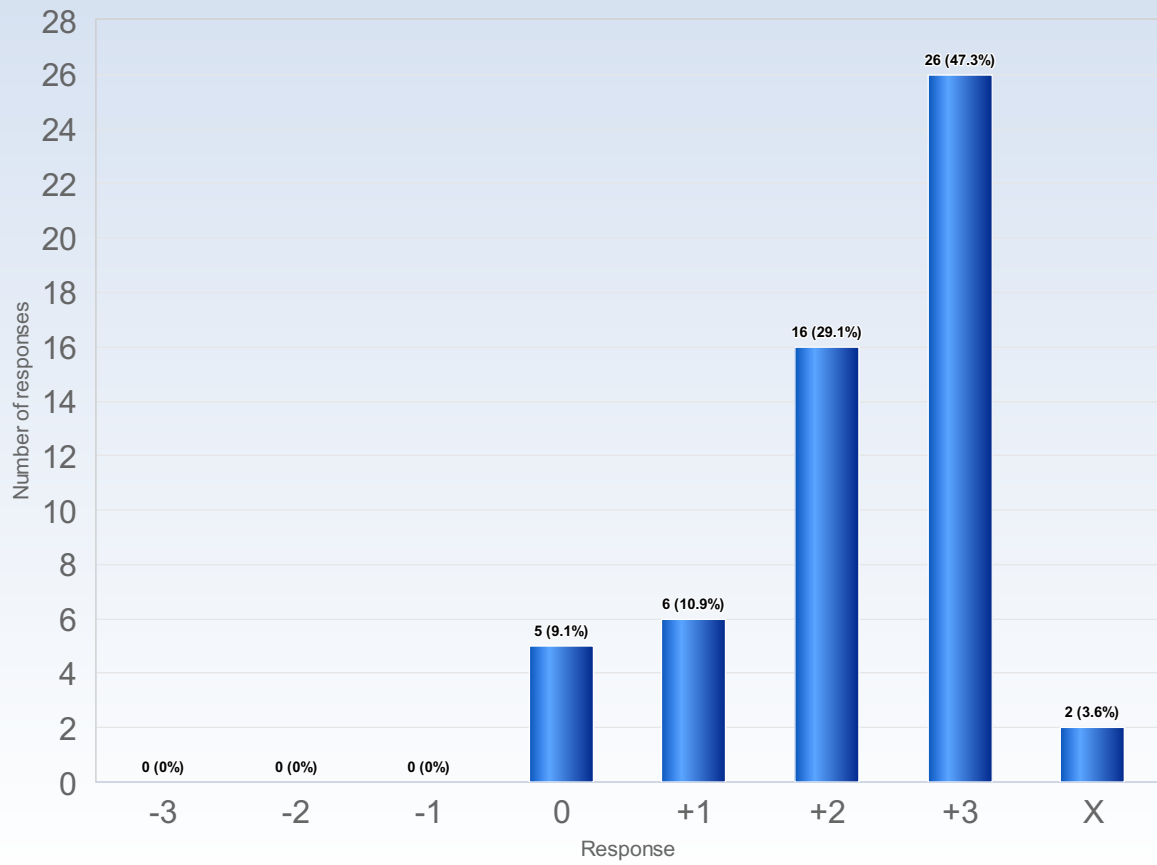Comments (My response was: -1)

only my project member

Comments (My response was: +1)

Mostly with students i knew since before.

6. The atmosphere on the course was open and inclusive

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

Chart:
- Y-axis: Number of responses (0 to 28)
- X-axis: Response

Response	Count
-3	0 (0%)
-2	0 (0%)
-1	0 (0%)
0	5 (9.1%)
+1	6 (10.9%)
+2	16 (29.1%)
+3	26 (47.3%)
X	2 (3.6%)

Comments

Comments (My response was: 0)
I did not look at the intended learning outcome

Comments (My response was: +1)
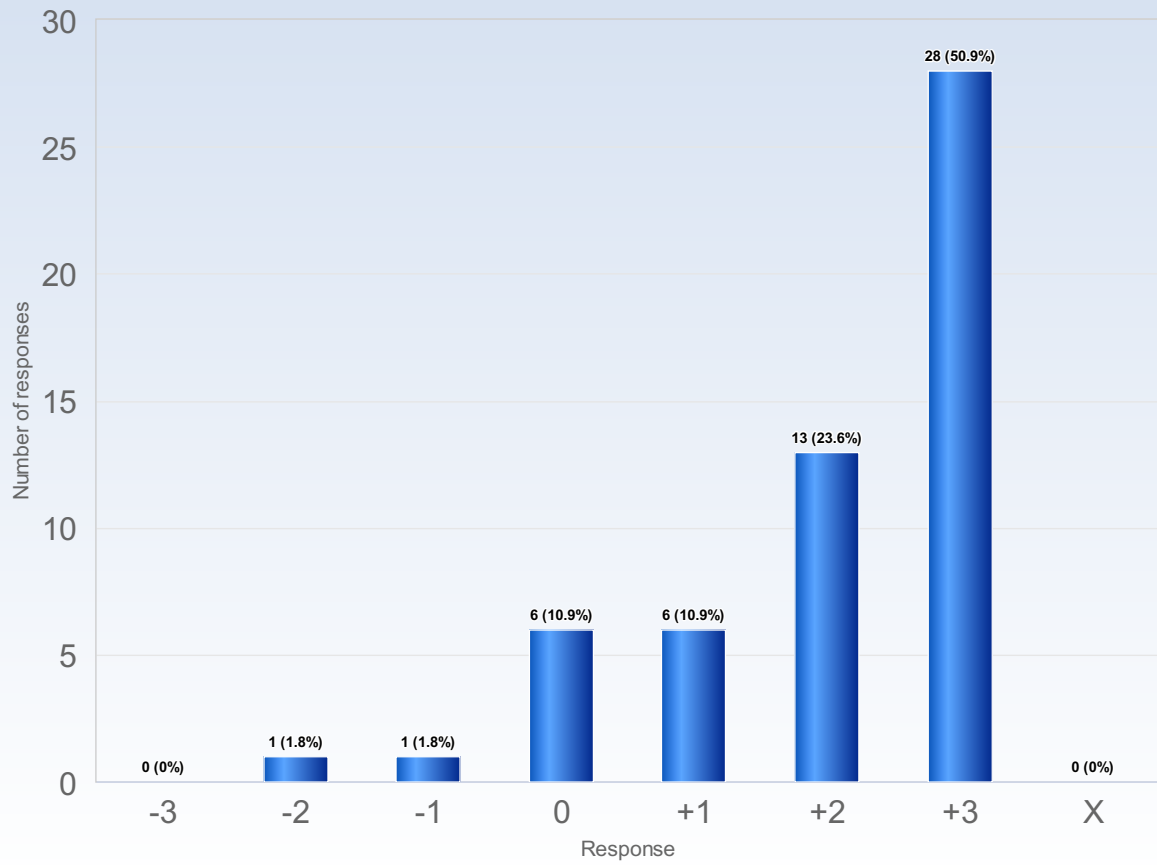Didnt really look at them

Comments (My response was: +3)
Learned more than I expected!

Comments (My response was: X   )
didnt read learning outcomes

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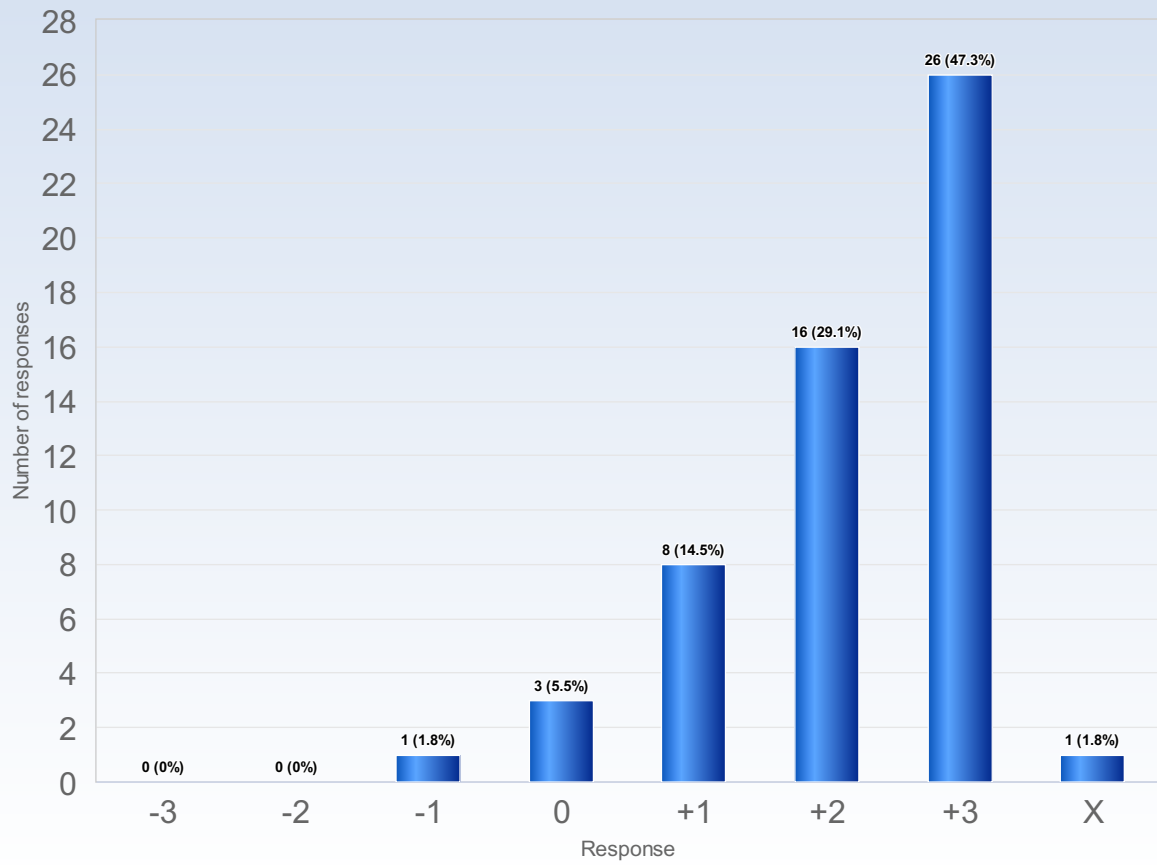

Comments

Comments (My response was: -2)
Having the tutorials in one single slide was horrible! The instructions on the slides were also very confusing and It was hard to follow

Comments (My response was: +2)
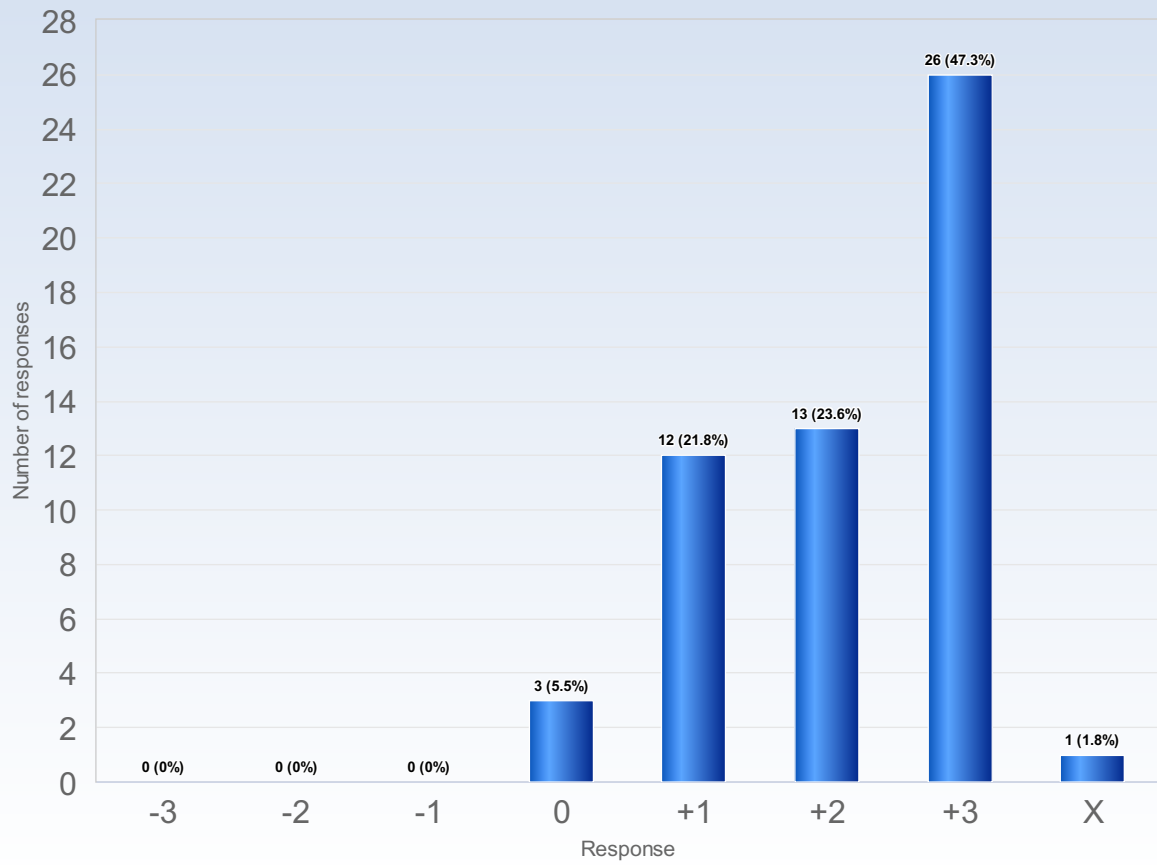Project worked better than labs

9. I understood what the teachers were talking about

Response	Number of responses
-3	0 (0%)
-2	0 (0%)
-1	1 (1.8%)
0	3 (5.5%)
+1	8 (14.5%)
+2	16 (29.1%)
+3	26 (47.3%)
X	1 (1.8%)

Comments

Comments (My response was: +1)
sometimes har to follow the lectures

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

Number of responses

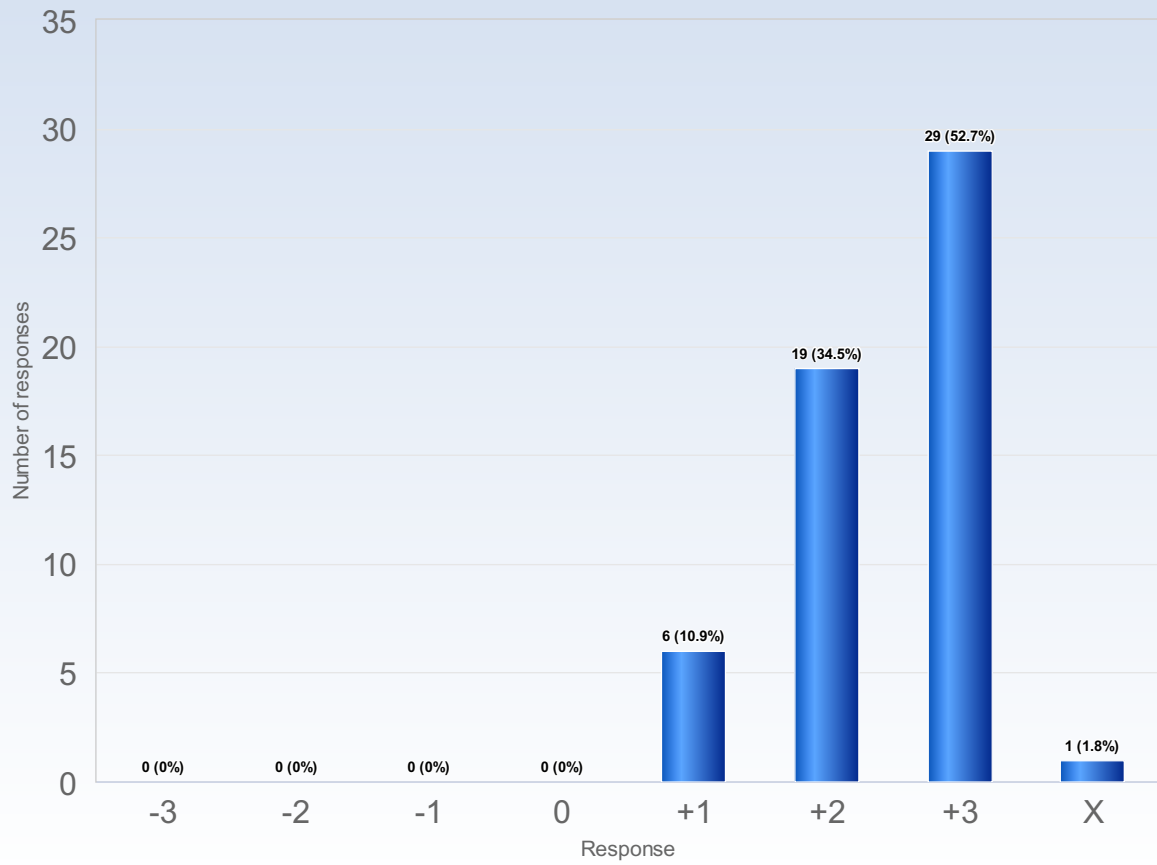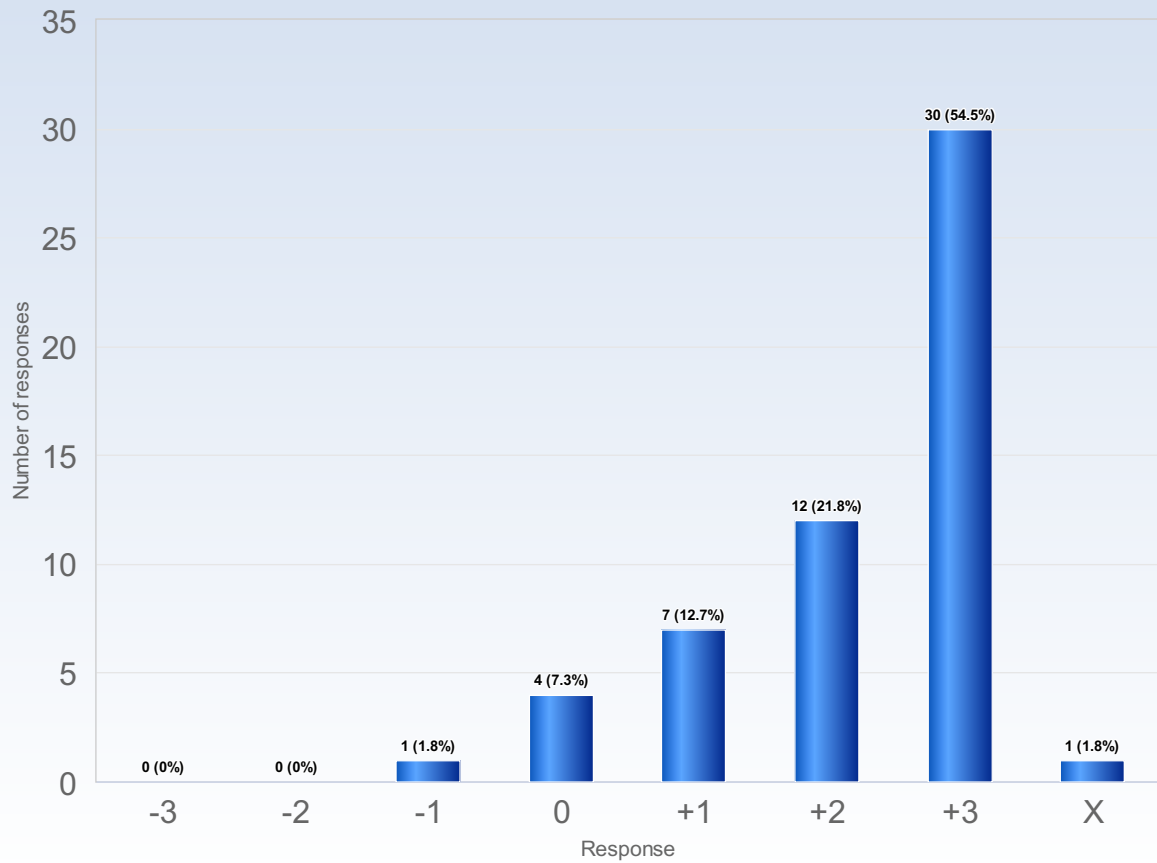| Response	-3	-2	-1	0	+1	+2	+3	X
	0 (0%)	0 (0%)	0 (0%)	3 (5.5%)	12 (21.8%)	13 (23.6%)	26 (47.3%)	1 (1.8%)

Comments

Comments (My response was: +1)

Would be good to see real projects, the labs are very confusing until everything has been implemented

11. Understanding of key concepts had high priority

Response	Number of responses
-3	0 (0%)
-2	0 (0%)
-1	0 (0%)
0	0 (0%)
+1	6 (10.9%)
+2	19 (34.5%)
+3	29 (52.7%)
X	1 (1.8%)

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

Number of responses

Response	Count
-3	0 (0%)
-2	0 (0%)
-1	1 (1.8%)
0	4 (7.3%)
+1	7 (12.7%)
+2	12 (21.8%)
+3	30 (54.5%)
X	1 (1.8%)

Comments

(My response was: 0)
The tutorials were quite strict and I felt like there weren't much space for cool features/functionalities
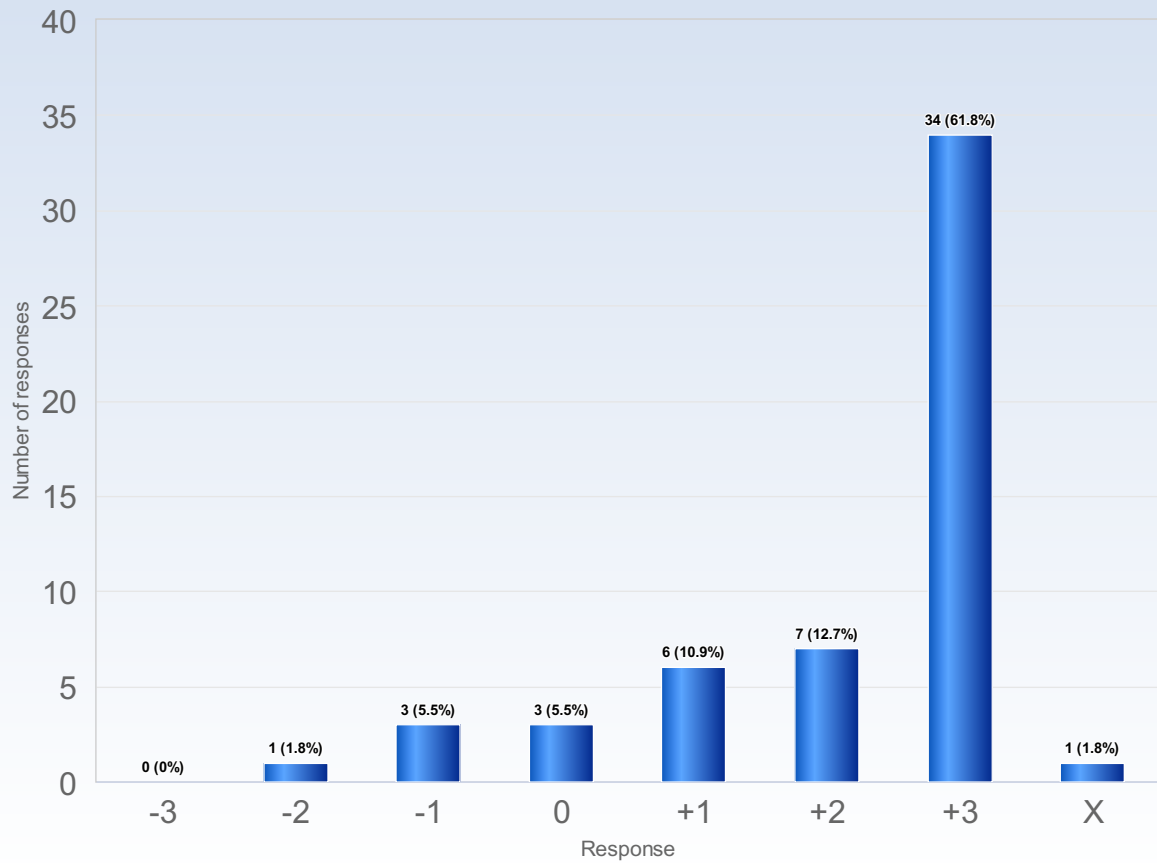
(My response was: +3)
As said I didnt really look at it but I would think so

(My response was: X)
didnt read learning outcomes

13. I understood what I was expected to learn in order to obtain a certain grade

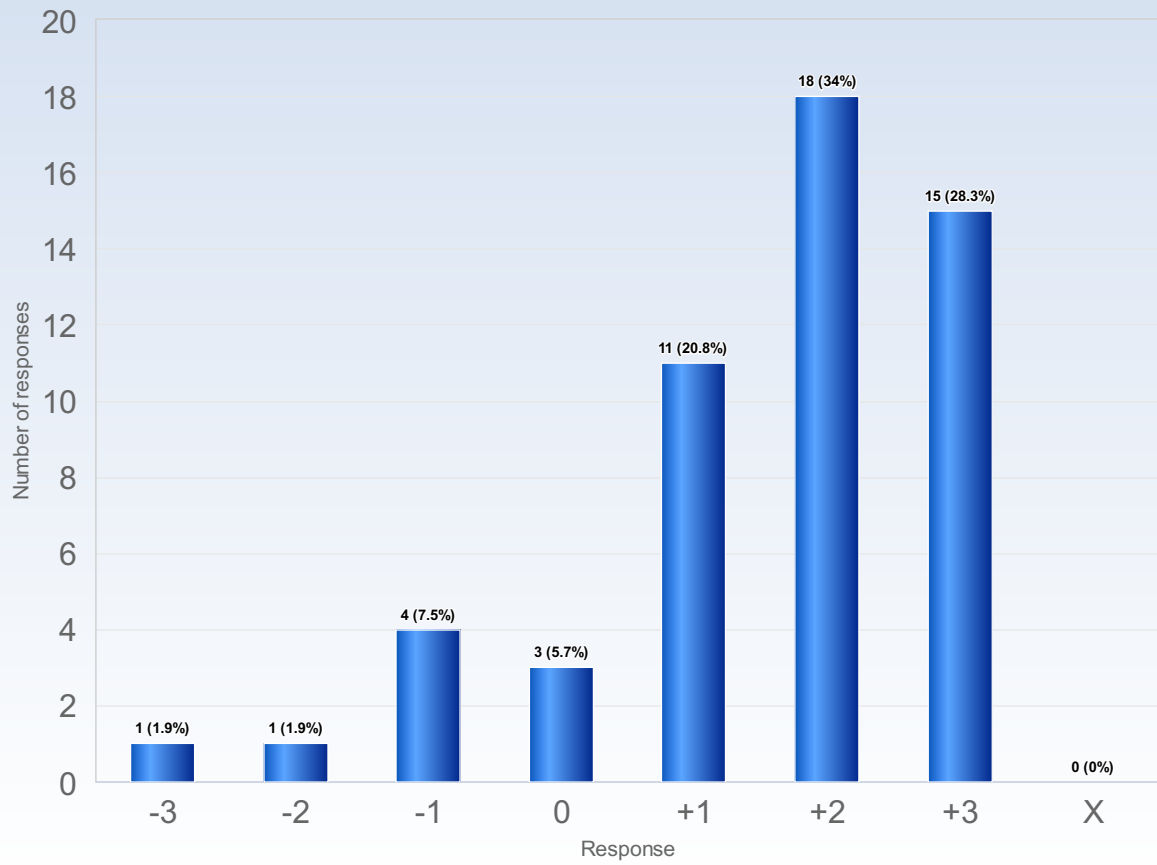| Response	Number of responses
-3	0 (0%)
-2	1 (1.8%)
-1	3 (5.5%)
0	3 (5.5%)
+1	6 (10.9%)
+2	7 (12.7%)
+3	34 (61.8%)
X	1 (1.8%)

Comments

Comments (My response was: +1)
The table with what one would have to accomplish to achieve a certain grade was also a bit confusing. Some major things like having a login and so on could have been listed as it belonged to all grades

Comments (My response was: +3)
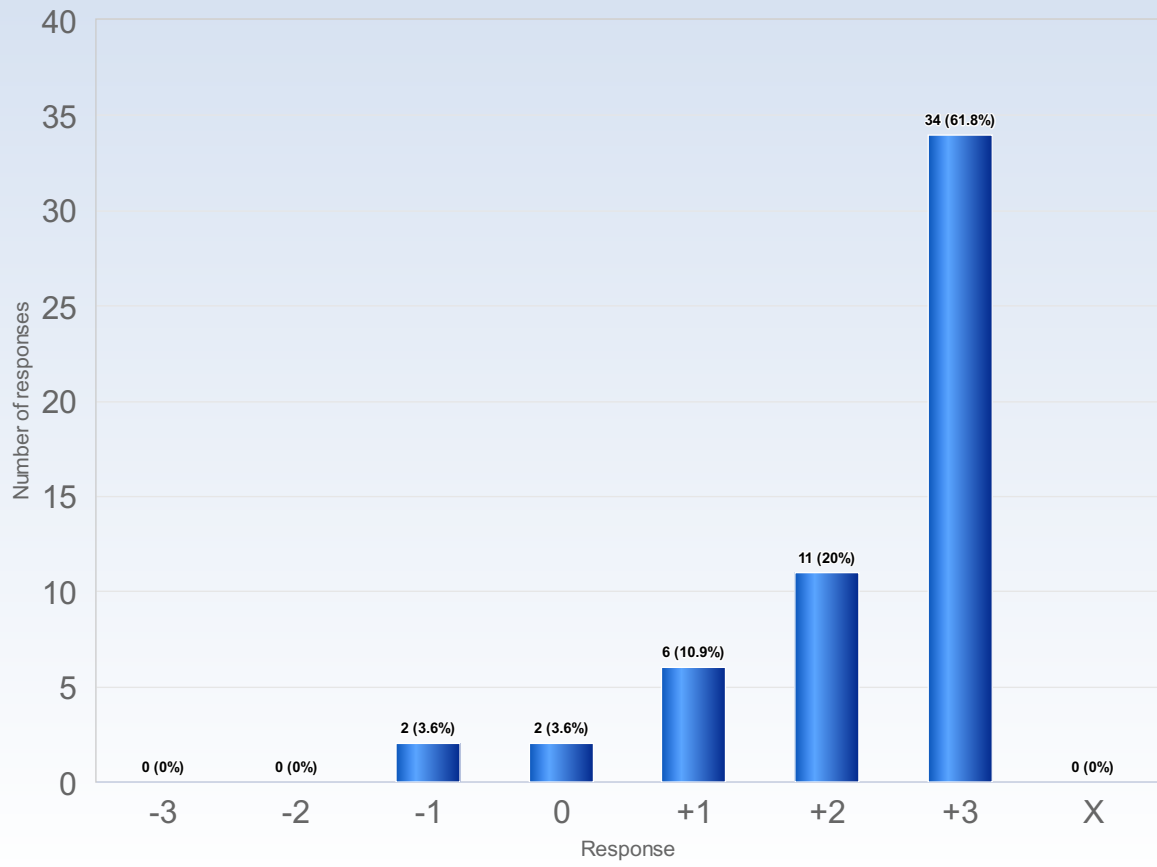The grading matrix was of great help

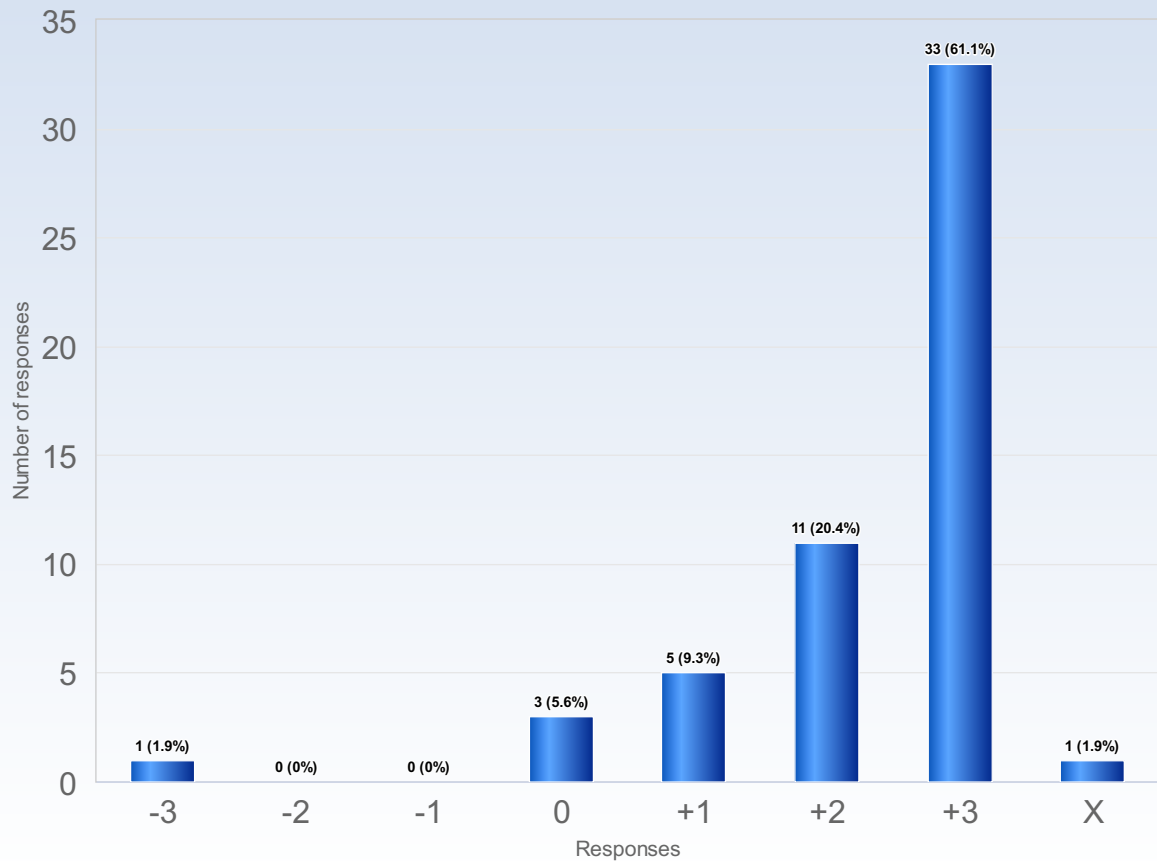## 14. I received regular feedback that helped me to see my progress

Number of responses

- -3: 1 (1.9%)
- -2: 1 (1.9%)
- -1: 4 (7.5%)
- 0: 3 (5.7%)
- +1: 11 (20.8%)
- +2: 18 (34%)
- +3: 15 (28.3%)
- X: 0 (0%)

Response

Comments

Comments (My response was: +2)
    didnt ask for much feedback on project

15. I could practice and receive feedback without being graded

Number of responses

Response	
-3	0 (0%)
-2	0 (0%)
-1	2 (3.6%)
0	2 (3.6%)
+1	6 (10.9%)
+2	11 (20%)
+3	34 (61.8%)
X	0 (0%)

16. The assessment on the course was fair and honest

Chart showing "Number of responses" (y-axis) vs "Responses" (x-axis):
- -3: 1 (1.9%)
- -2: 0 (0%)
- -1: 0 (0%)
- 0: 3 (5.6%)
- +1: 5 (9.3%)
- +2: 11 (20.4%)
- +3: 33 (61.1%)
- X: 1 (1.9%)

Comments

Comments (My response was: -3)

If you present a lab after the assessment week, the TAs don't respect the 5 minute presentation and question time that the rest of your peers had, and keep you in for half an hour asking numerous questions about the theory. My project partner was asked 1 question and let go during TW3 presentation week, I got asked 10 questions and then let go after the presentation week. It was not a problem from my side, because I studied the coursework beforehand and understood the assignment and had previous knowledge in web development so I answered everything correctly, however it was very unfair that the assessment was not done the same for everybody. Additionally, the final grade of the project is for all the team, even though most of the time the teams have a memeber who does the bare minimum which heavily impacts the grade for everybody.

Comments (My response was: +1)

I feel like taking the average of the grade for each part of the final project would be fairer than having the lowest grade trump all others. (did not affect my grade, but caused some stress to worry about if all parts were at the highest level).

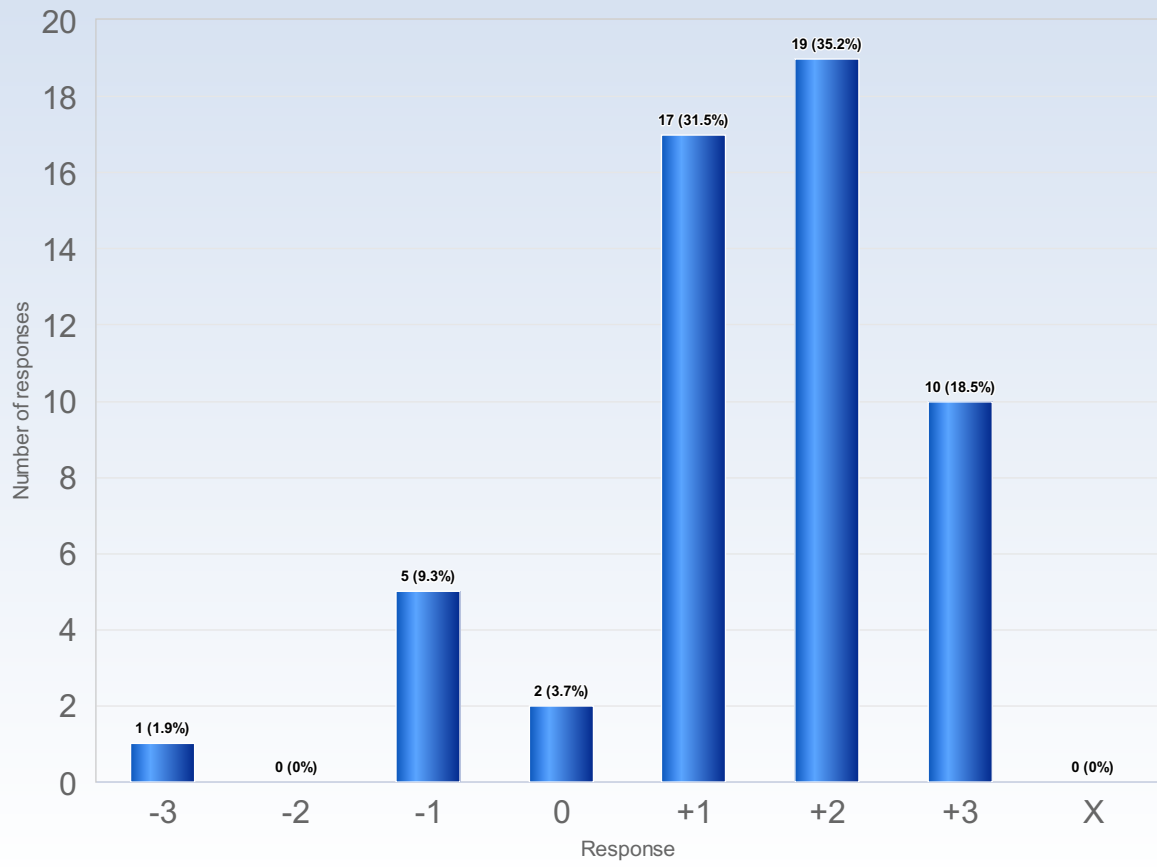## 17. My background knowledge was sufficient to follow the course
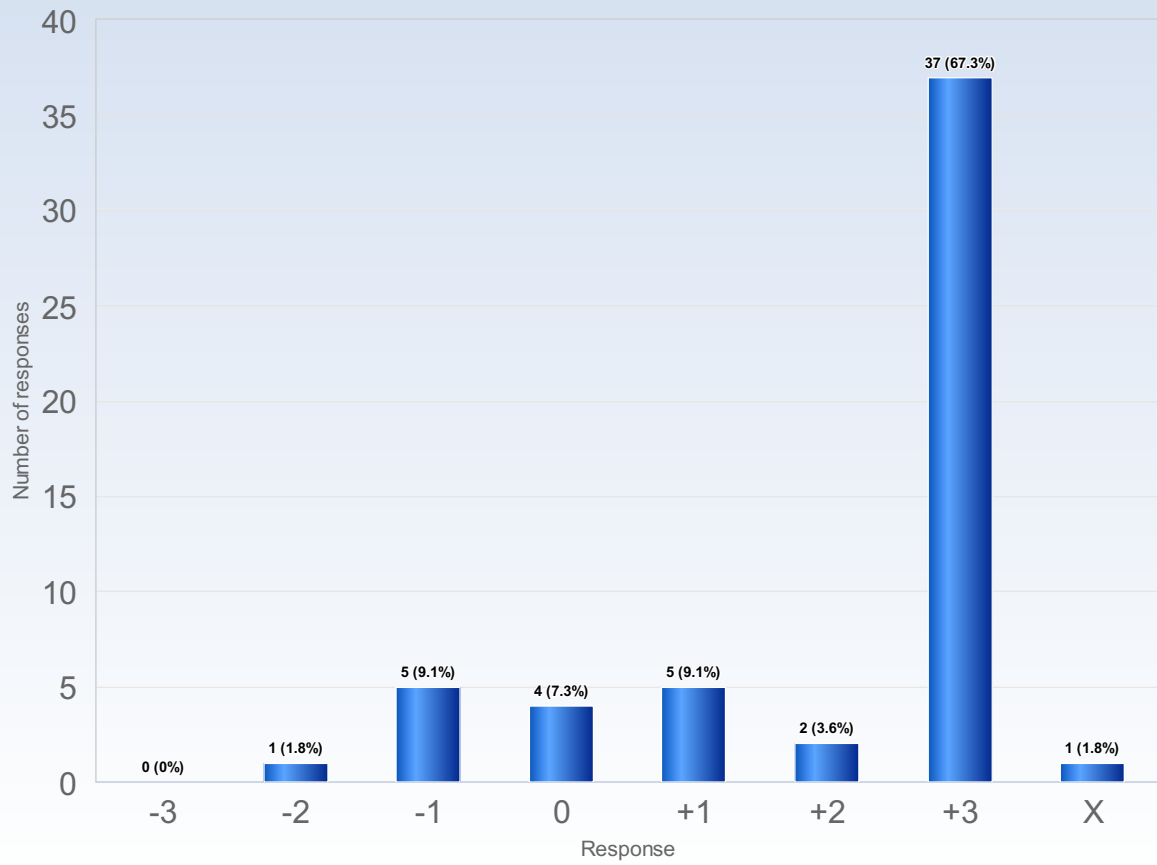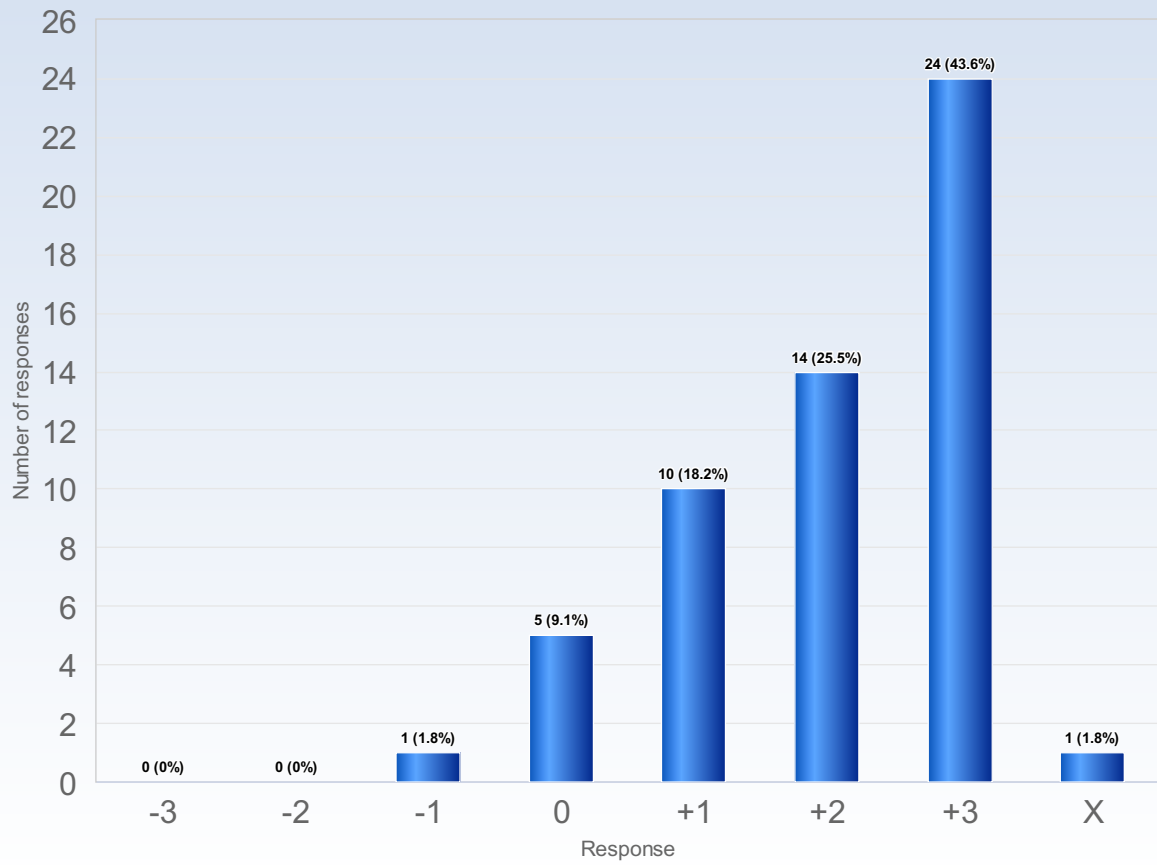

Comments

Comments (My response was: +3)
Taken Web-development before
The lab weeks were really great at giving students some basic knowleddege

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

Number of responses

Response		
-3	1 (1.9%)	
-2	0 (0%)	
-1	5 (9.3%)	
0	2 (3.7%)	
+1	17 (31.5%)	
+2	19 (35.2%)	
+3	10 (18.5%)	
X	0 (0%)	

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

Number of responses

Response	
-3	0 (0%)
-2	0 (0%)
-1	1 (1.8%)
0	5 (9.1%)
+1	10 (18.2%)
+2	14 (25.5%)
+3	24 (43.6%)
X	1 (1.8%)

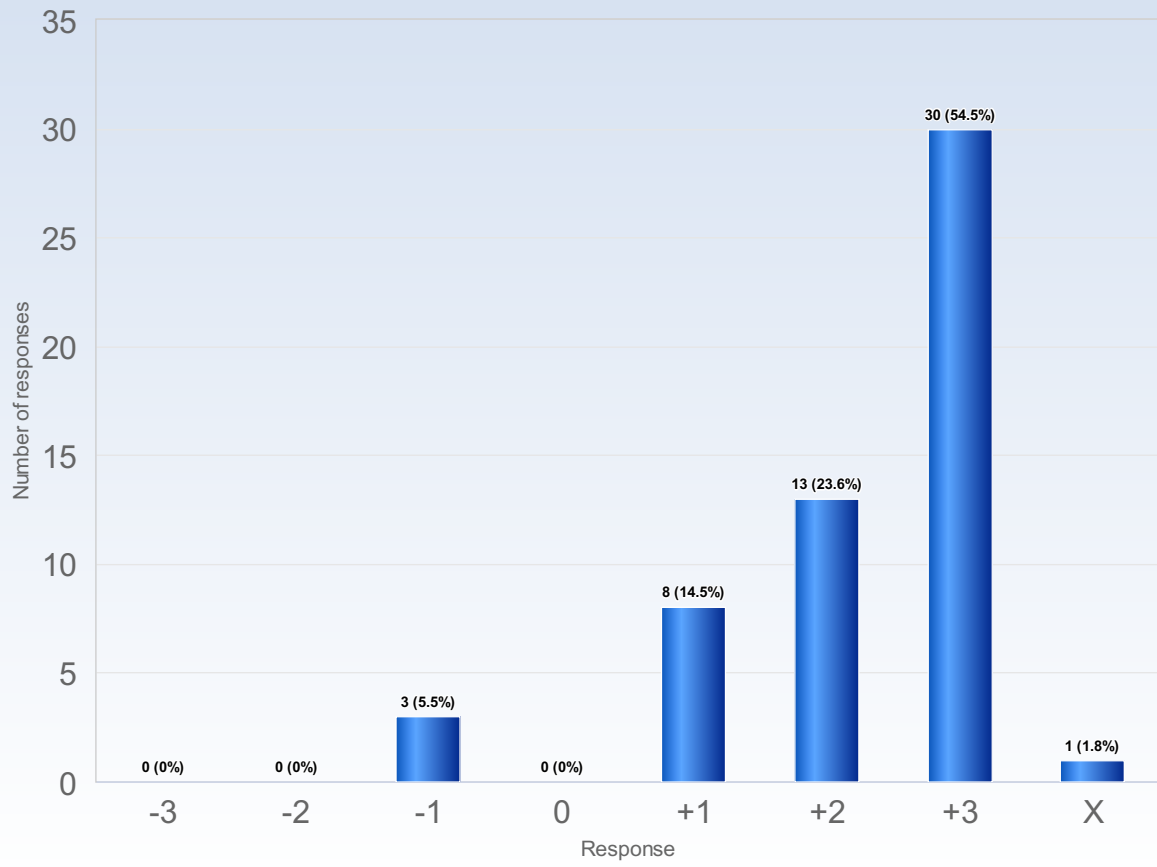## 20. I had opportunities to influence the course activities
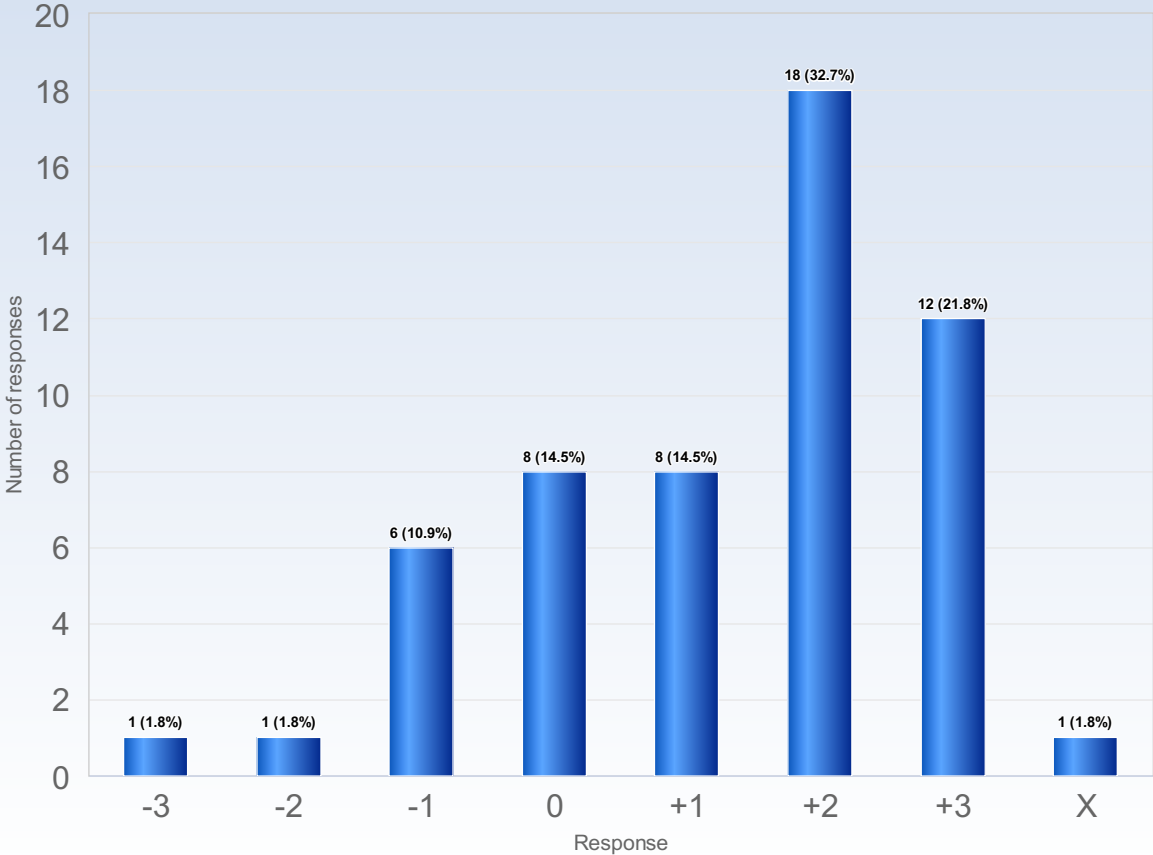
Comments
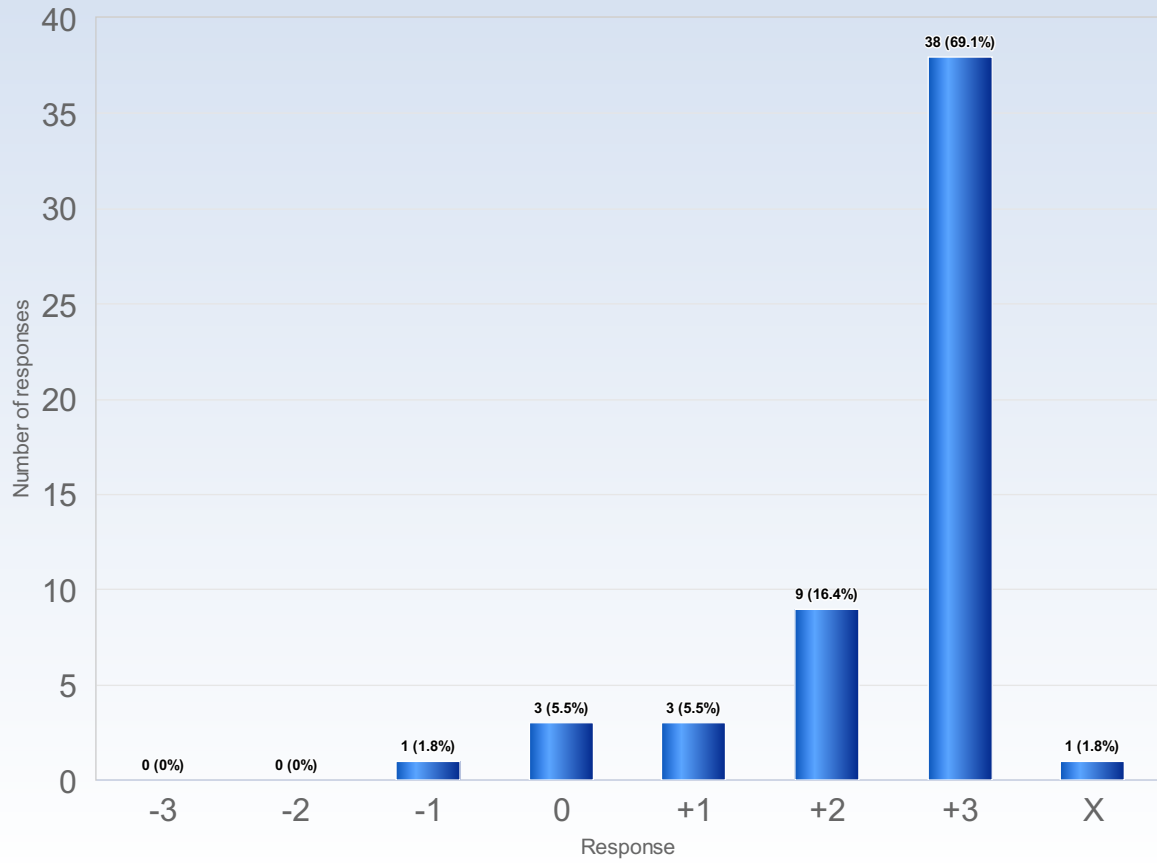
Comments (My response was: +3)
Yes, since we chose the projects ourself.

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

Number of responses

Response	
-3	0 (0%)
-2	0 (0%)
-1	3 (5.5%)
0	0 (0%)
+1	8 (14.5%)
+2	13 (23.6%)
+3	30 (54.5%)
X	1 (1.8%)

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

Chart — Number of responses vs Response:

Response	Number of responses
-3	0 (0%)
-2	0 (0%)
-1	1 (1.8%)
0	3 (5.5%)
+1	3 (5.5%)
+2	9 (16.4%)
+3	38 (69.1%)
X	1 (1.8%)

Comments

Comments (My response was: +3)
Very good to have git issues!
Anton Forsman for best TA!

SPECIFIKA FRÅGOR

Hur gick projektet utan automatiska enhetstester?

We didn't use unit tests in our group project. It's a bit more difficult to debug and test some functions. But generally it's fine.

It was fine. Sometimes, it would have been better to have some because some of the functions weren't working but that was because we did huge changes somewhere and we knew we had to fix other stuff.

At first it was ok, but then the code was growing and we were breaking things that were working previously, and it was sometimes hard to find which commit was breaking everything. With unit tests, this wouldn't happen!

It was fine, testing on your own by actually using the app is good practice I think. You can always create unit tests yourself if you feel that it is helpful.

It worked great. It was a great exercise to start a project from scratch and not build on an existing skeleton.

Sometimes harder to follow our improvements but it is also good to be autonomous.

Debugging was generally quite straight forward so it was fairly simple.

Great, the unit tests were great in the tutorial to make sure that you were on the right track but wasn't necessary in the project

Without the unit tests, we had to look out more cautiously for bugs. But I think it was great to also code without unit test, because then we had to think about what could go wrong.

There was a lot of manual testing involved. We had to keep our eyes on the console.

actually good! point out to the students that they should try the dinnerplanner manually more. The functionalities that would benefit a lot from unit tests would have been hard to create tests for in the project.

It was definitely felt in the end when a lot of things had the risk of going wrong, manual tests were not nice.

It went good since we used a lot of console.log to debug and tests. It would be fun to implement own tests but the time was narrow.

Very good. We used user evaluation to make sure we were on track.

Great.

It went good. There were some bugs that was hard to figure out, but I wouldn't say that it would have been any different without the unit tests in the labs. I think having the unit tests in the lab was really good as it helped you realize what you were doing wrong while learning it, and then in the project you could often use what you learned from problems in the labs.

The unit tests are nice, but twice we have been debugging for quite some time until we figured out that the unit tests were broken. But for the first iteration with unit test these are already working really good

generally pretty good, however, it's hard to know how unit tests would help us out since we don't have a lot of experice with them. I would imagine that they would benefit larger project a lot though.

Good! Some bugs were hard to conclude and took loads of time but I think that's how it is working with web development

Worked okay, we did a lot of "PrintLine" testing which is bad practice (however quite efficient)