



# UMEÅ UNIVERSITET

## Final report: 5KE002HT20 Aquatic Chemistry

**Unit code:** 5KE002

**Name of course:** Akvatisk kemi/Aquatic Chemistry

**Credits:** 15 hp

**Pace:** 100%

**Semester:** Fall of 2020 (Dates: 02/11/20 - 15/1/21 )

**Course coordinator:** Michael Holmboe

**Delivery (campus/online-remote):** 'campus' (due to COVID-19 all but the first two weeks were delivered online)

**Indicate if the unit is part of a program:**

Optional to students in the Life Sciences program, CHEMistry teachers etc.

<b>Number of registered students</b>	7 registered, including one re-registered student from a previous year, which ended up not taking the exam.  (3 Life sciences students, 4 from other programmes)	
<b>Number of responses on course evaluation</b>	6	
<b>Grade</b>	<b>#</b>	<b>%</b>
Fail (U)	0	0
Pass (G)	2	33
High Pass (VG)	4	67
Grade 3		-
Grade 4	-	-
Grade 5	-	-
Completes	6	100
Incompletes	1* (re-registered student)	0
* Many were re-registered students from previous cohorts		



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**Course evaluation**

&lt;&lt;See appendix&gt;&gt;

**Comment by course coordinator:**

The first two weeks of the course were held on campus, in person, but after the stricter corona recommendations implemented around Nov 17, all lectures and calculation exercises were made using Zoom. Still, all labs were made in person on campus.

**Summary of comments by the students:**

***Is there anything you are particularly pleased with during the course? What has been good during the course?***

I like dynamic classes/teachers and I found that Frasse knew how to make his subject very interesting. How the whole lab week is done was also a thing I appreciated.

The combination of lectures with practical lab work. The compendiums that we received were also very good and helpful throughout the course.

Printed compendiums, well organized learning platform, uploaded lectures and old exams, fun labs!

I really like the intense lab week of 5 days.

***Anything during the course you would like to change?***

Something with the calculation sessions was not working for me at least, I can't say what but it could have been better

The calculation exercises could be integrated into the regular lectures.

Clarification on some calculations needed for the labs - CEC, surface charge density.

There should be a bit more applications of the topics. So where one can find examples in nature for a given example.

***Could you give three reasons why you would recommend the course to other students***



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- If the student is interested in the "water issue" and in understanding this essential element - A whole lab week is also THE point that makes me recommend this class - ?
Committed lecturers that discusses the topics in the course in an interesting and fun way. You get a deeper understanding of the importance that minerals, humic and pH etc. have for the transportation and speciation of metals in water. Labs!
Interesting and relevant application of chemistry, fun labs and good study material
The course gives a very detailed insight into how aqueous chemical systems work. The topics in general are very interesting. I really like the lab week since it build up to analyzing our own samples.
Interesting fun and usefull

***Summary of changes introduced after the last time the course was delivered***

New course website on Canvas instead of Cambro. All lectures were done using the large media screens in Fören/Aktern and recorded via Zoom, allowing for hybrid teaching.

***Summary of suggested changes prior to the next time the course is delivered***

Improve the format for the calculation exercises, in case they need to be held online again.

Final report created 4/3/2021, by Michael Holmboe



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**Appendix.**  
**Course evaluation 5KE002HT20**

# Course evaluation for Aquatic chemistry 56000HT2020

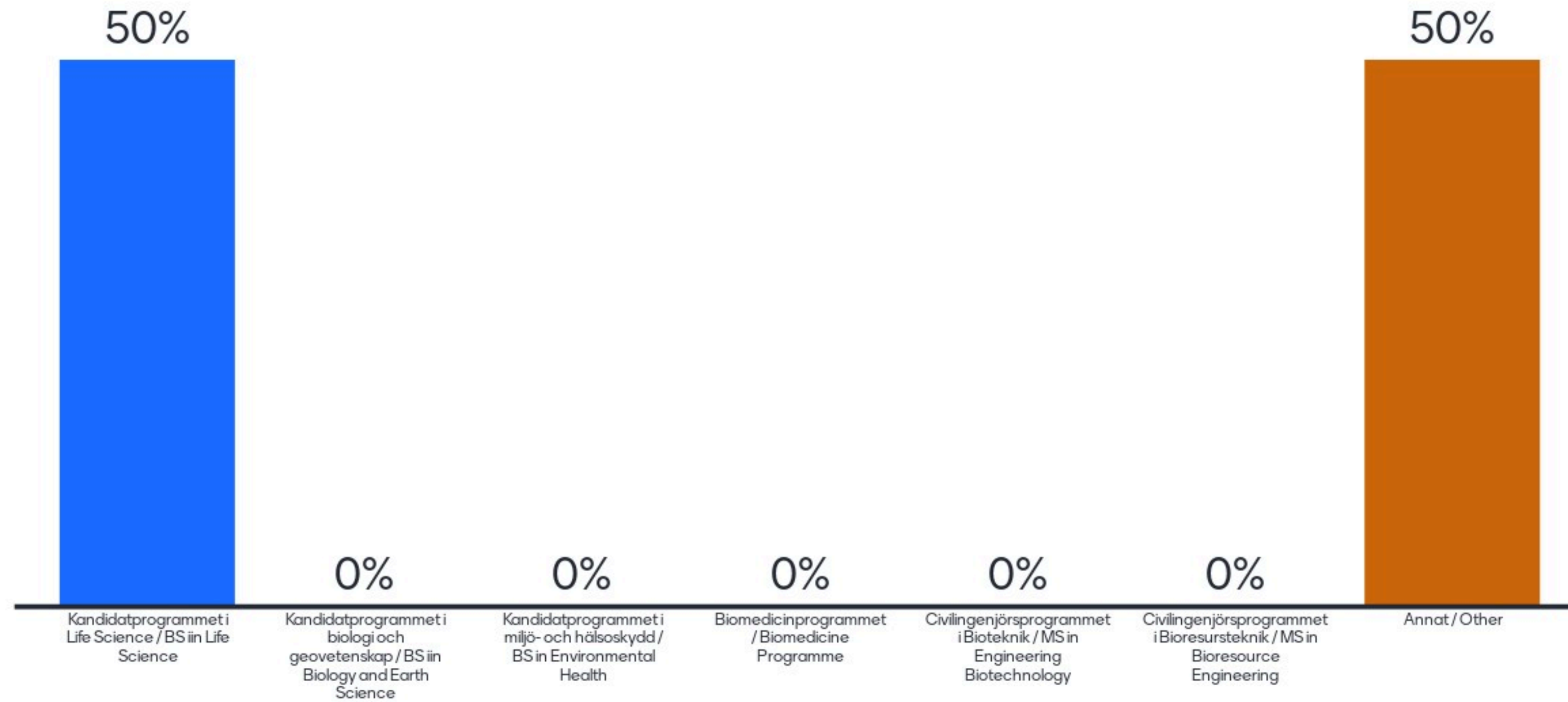
It is time for the course evaluation for Aquatic chemistry! Please take a few minutes to answer the questions, since the more input we get the better for next years students.

Thanks for participating!

/Michael Holmboe



# Vilket program går du? Which program do you study?

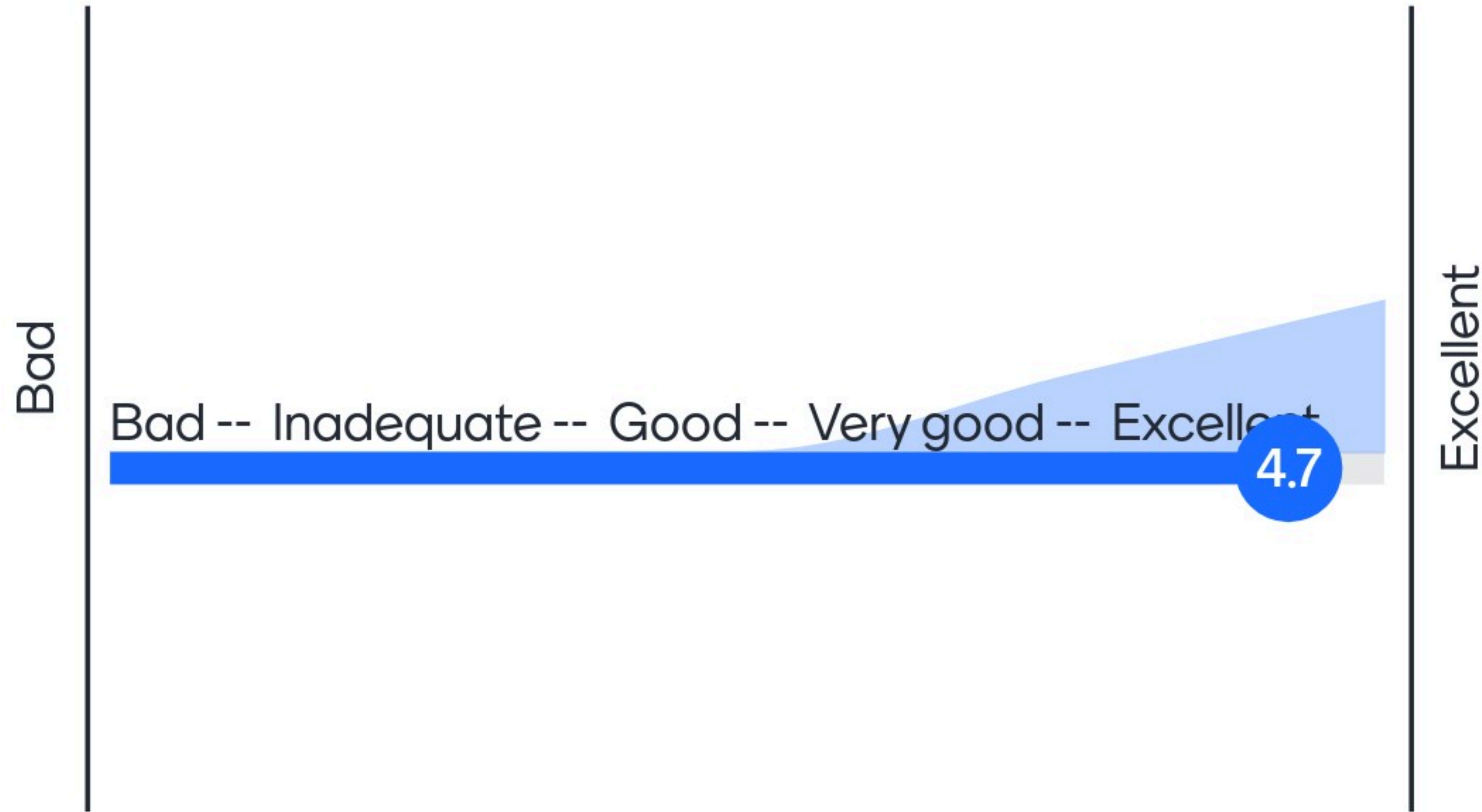




# How would you assess the quality of the course as a whole? On a scale from 1-5!

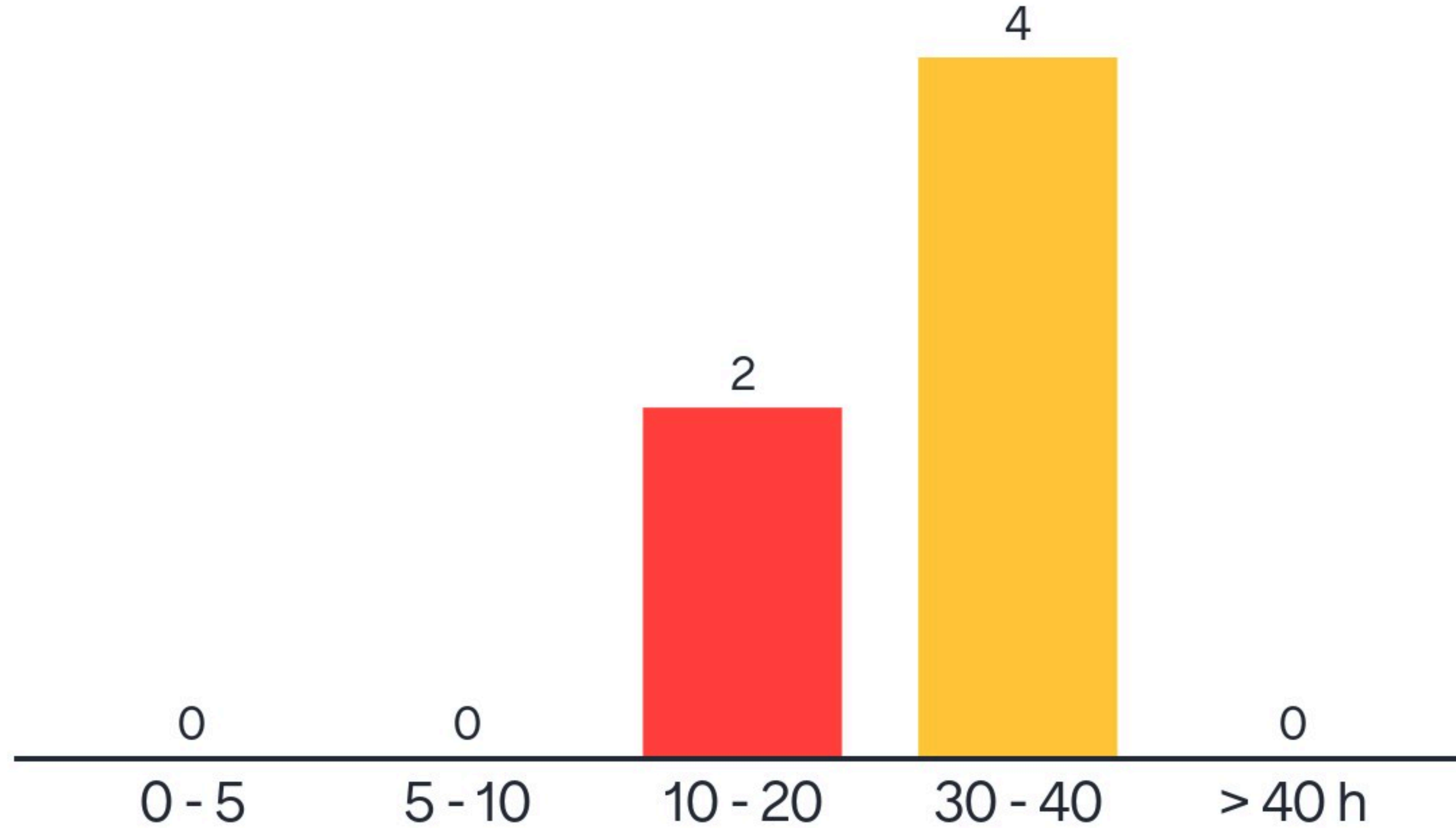


# How would you assess the way you have been treated in general as a student during the course? On a scale from 1-5!

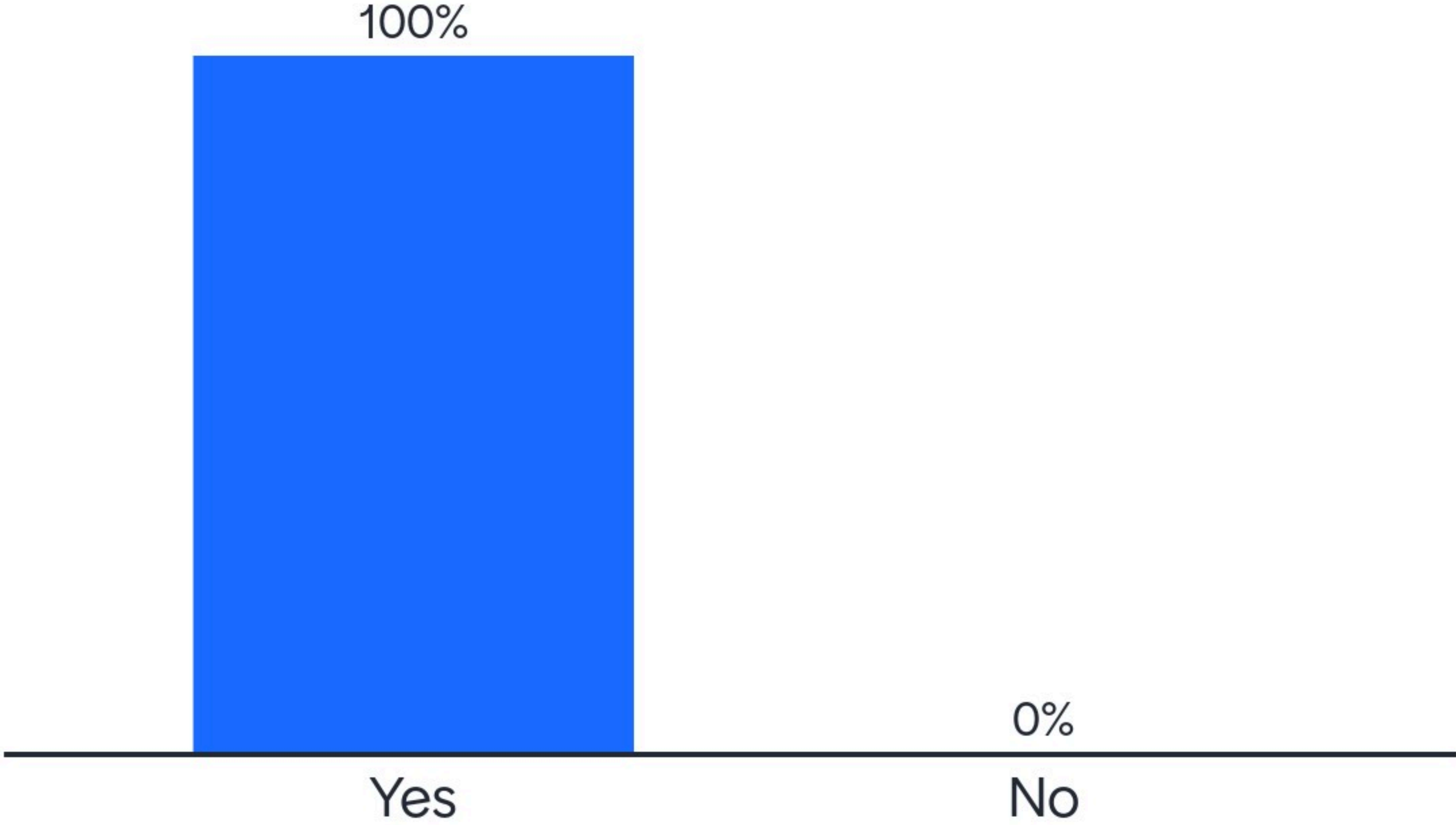




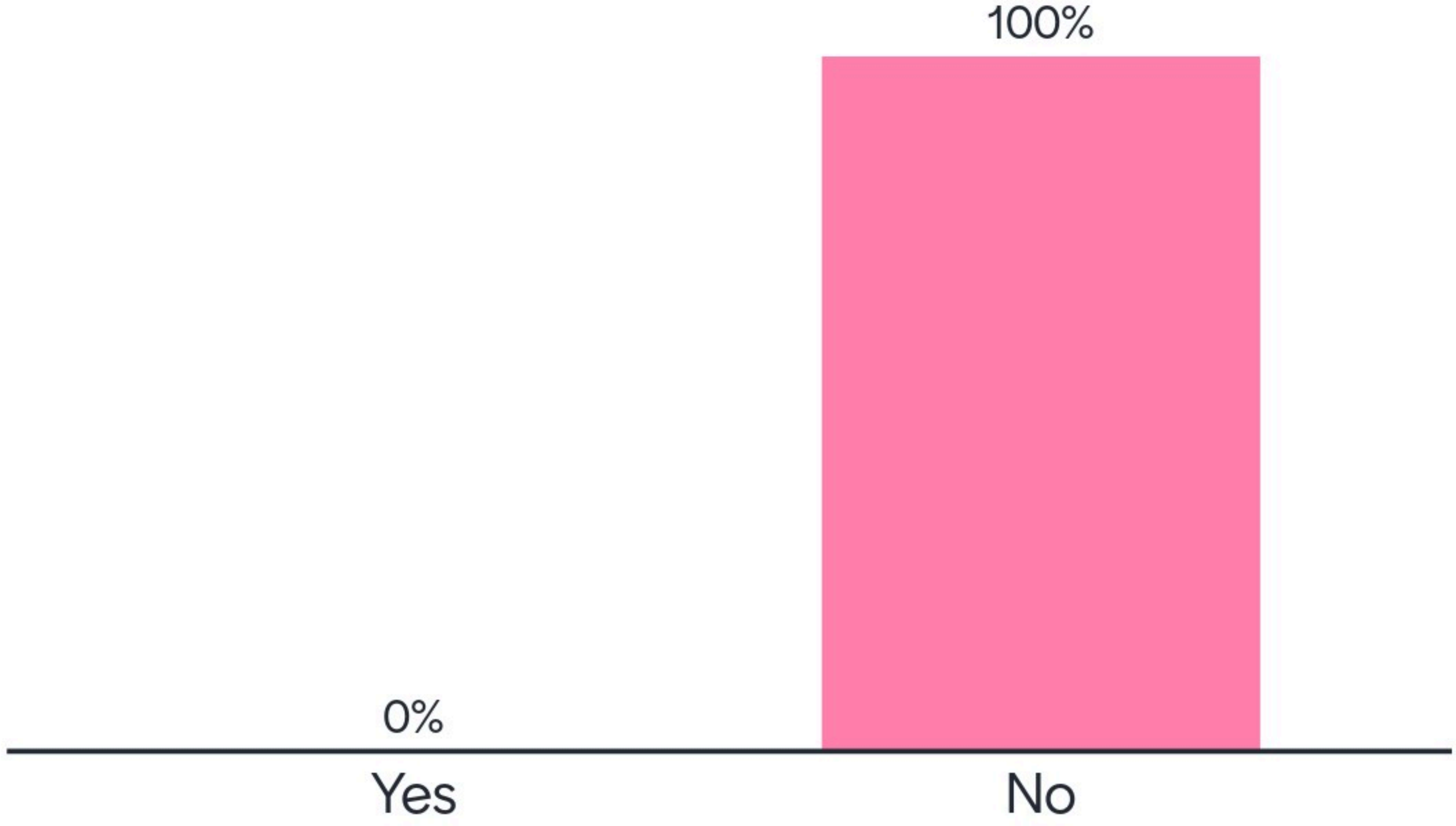
On average, how many hours per week have you devoted to your studies (scheduled hours plus own studies)



# Do you feel that female and male students have had the same conditions/opportunities during the course?



# Have you been treated differently due to your gender or ethnicity?





# Is there anything you are particular pleased with during the course? What has been good during the course?

I like dynamic classes/teachers and I found that Frasse knew how to make his subject very interesting. How the whole lab week is done was also a thing I appreciated.

The combination of lectures with practical lab work. The compendiums that we received were also very good and helpful throughout the course.

Printed compendiums, well organized learning platform, uploaded lectures and old exams, fun labs!

I really like the intense lab week of 5 days.

The labs were fun and informative

# Anything during the course you would like to change?

Something with the calculation sessions was not working for me at least, I can't say what but it could have been better

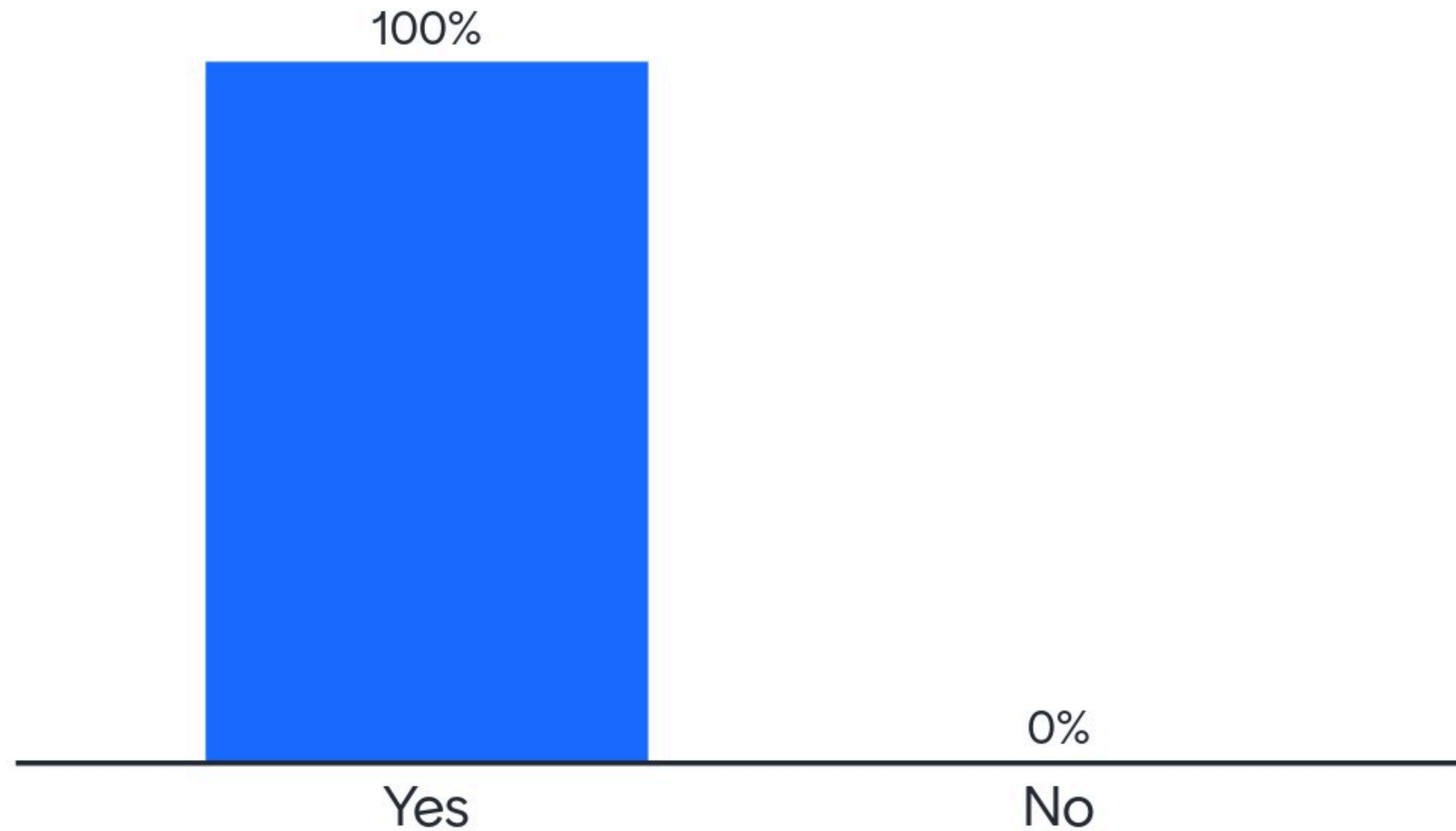
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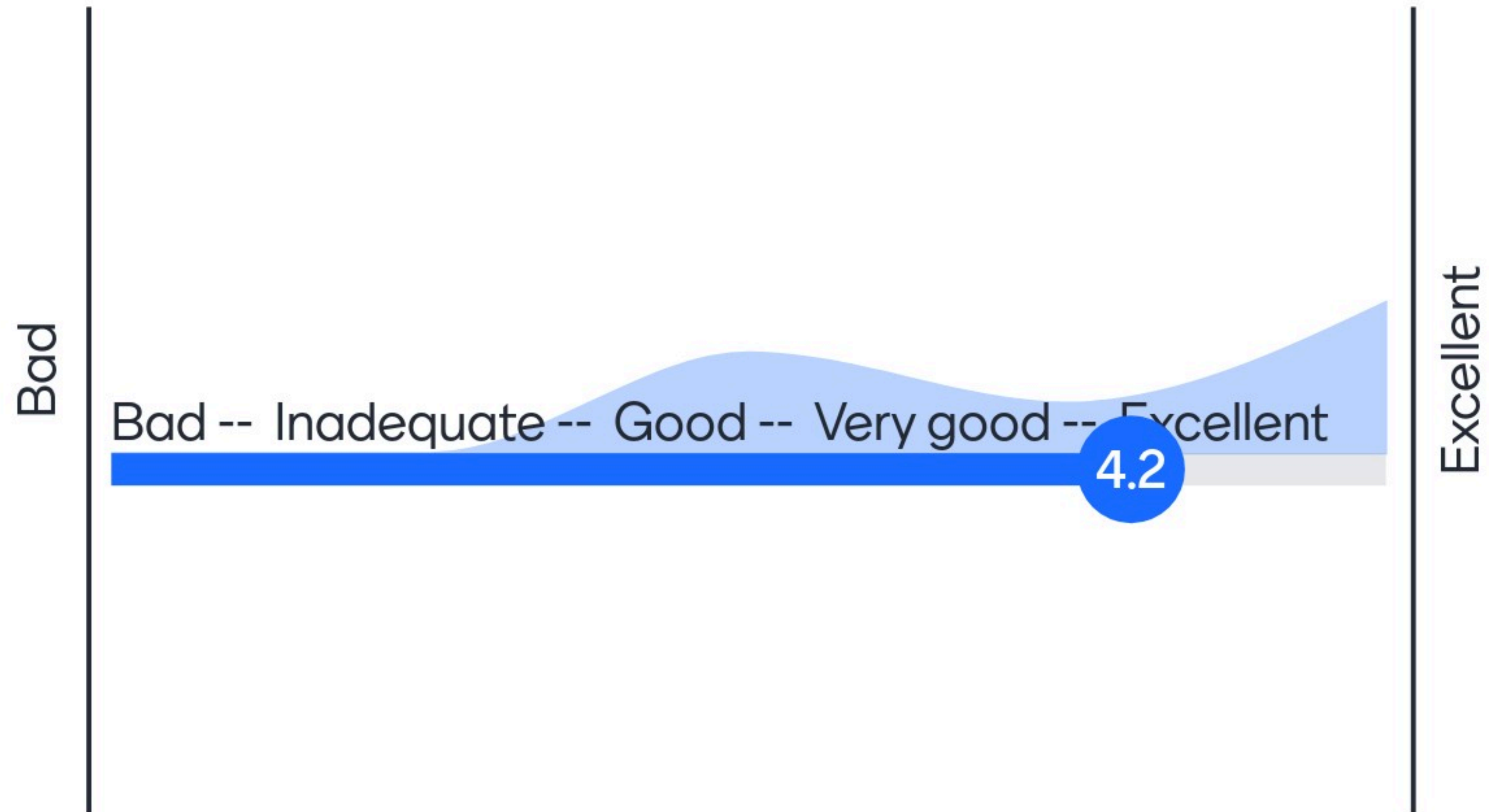
# Do you think that the content of the course and the exam reflect well the course requirements/expected learning outcomes?



**If you answered no on the previous question, is there any particular topic you think was missing/poorly covered?**

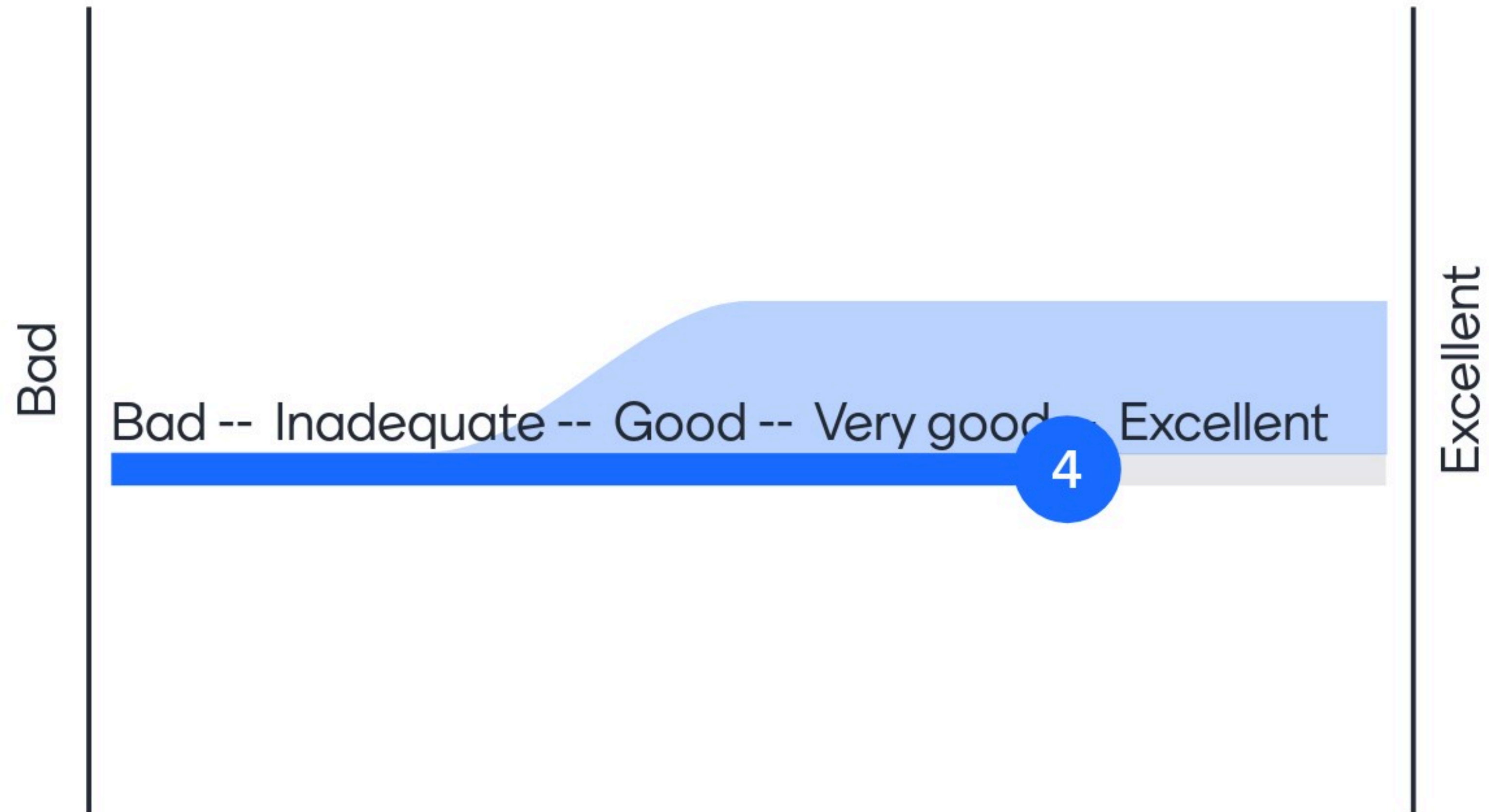


# How would you assess the quality of the lectures, on a scale from 1-5!

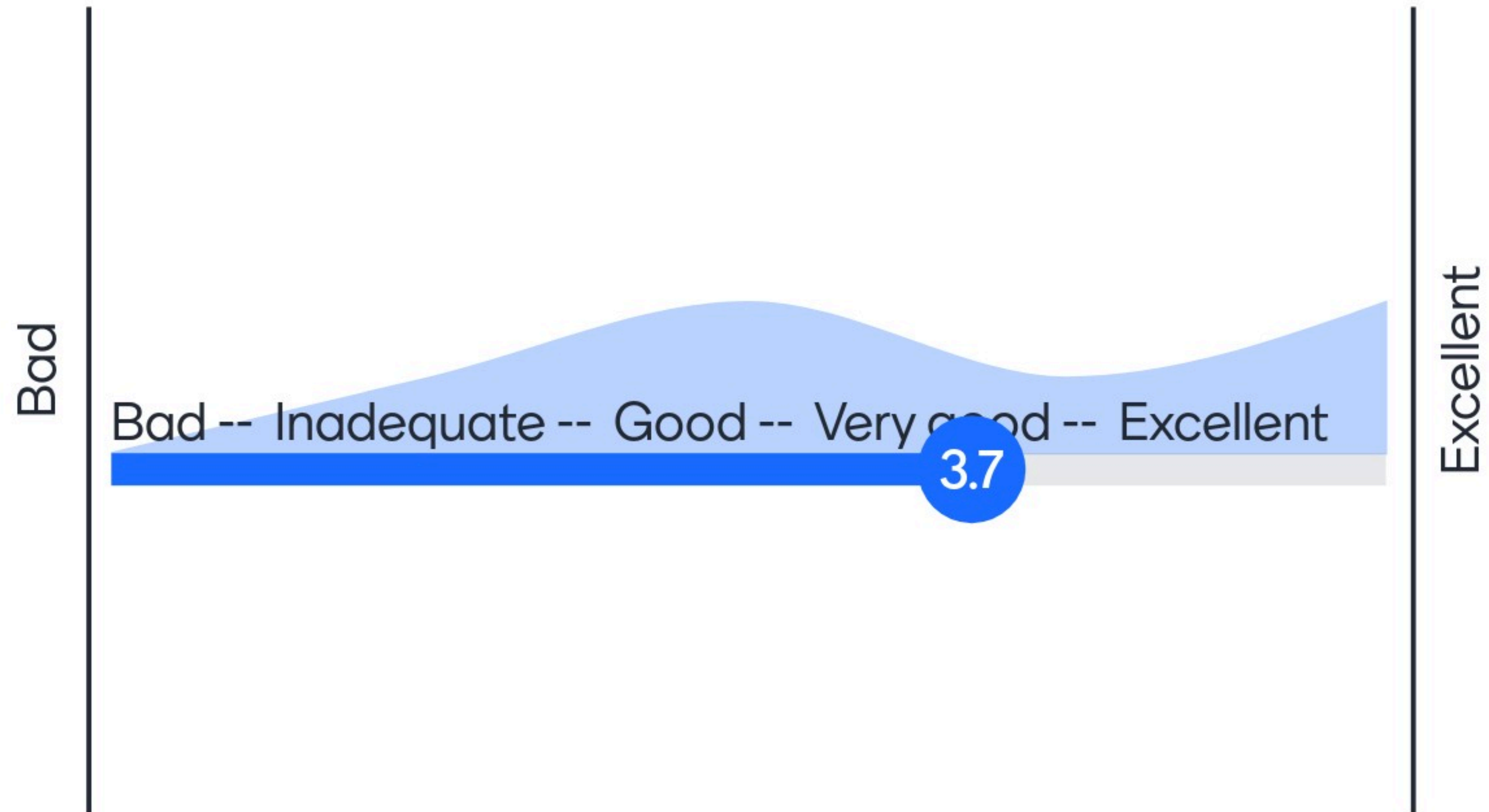




# How would you assess the quality of the workshops, on a scale from 1-5!

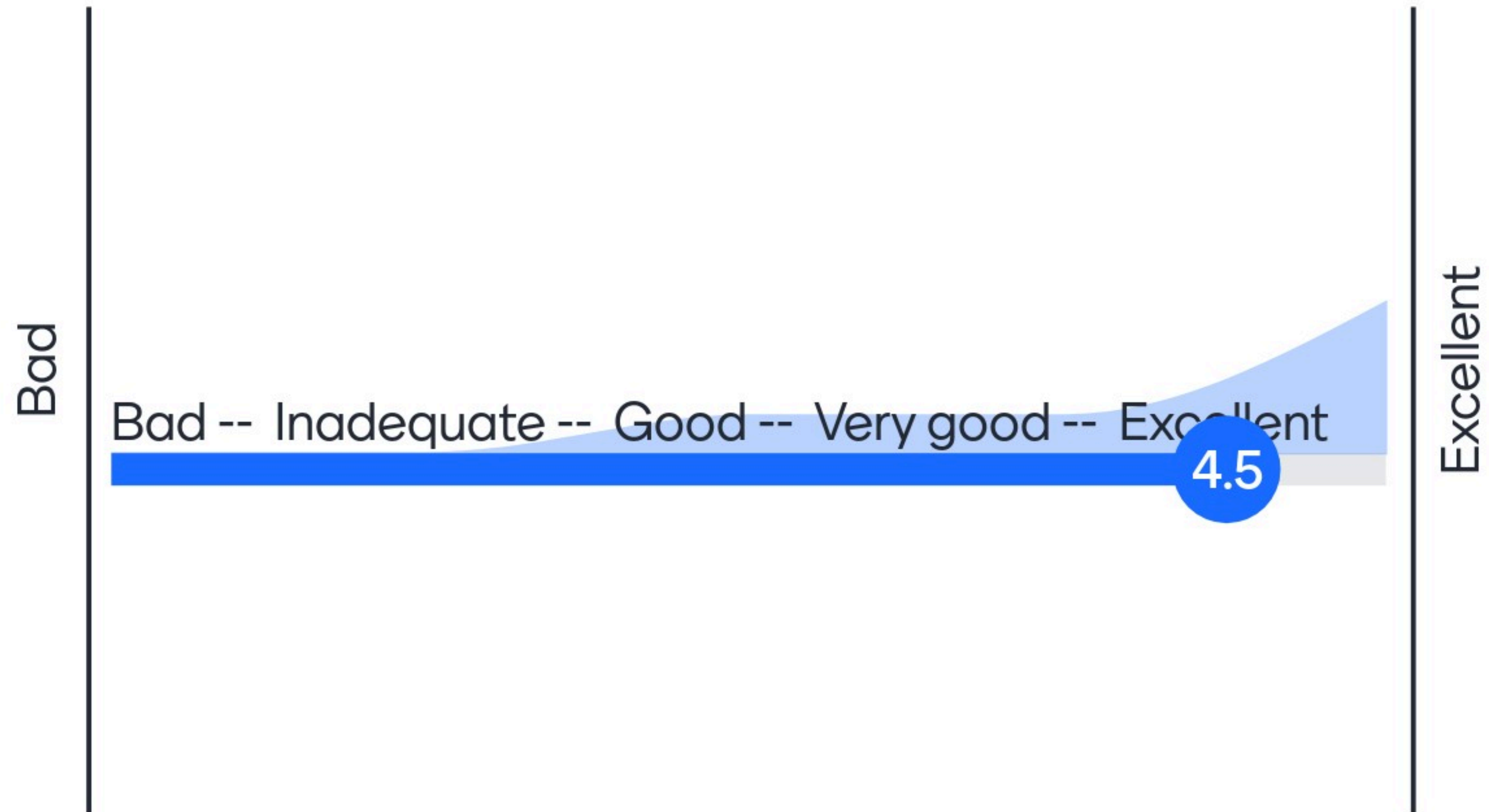


# How would you assess the quality of the exercises, on a scale from 1-5!

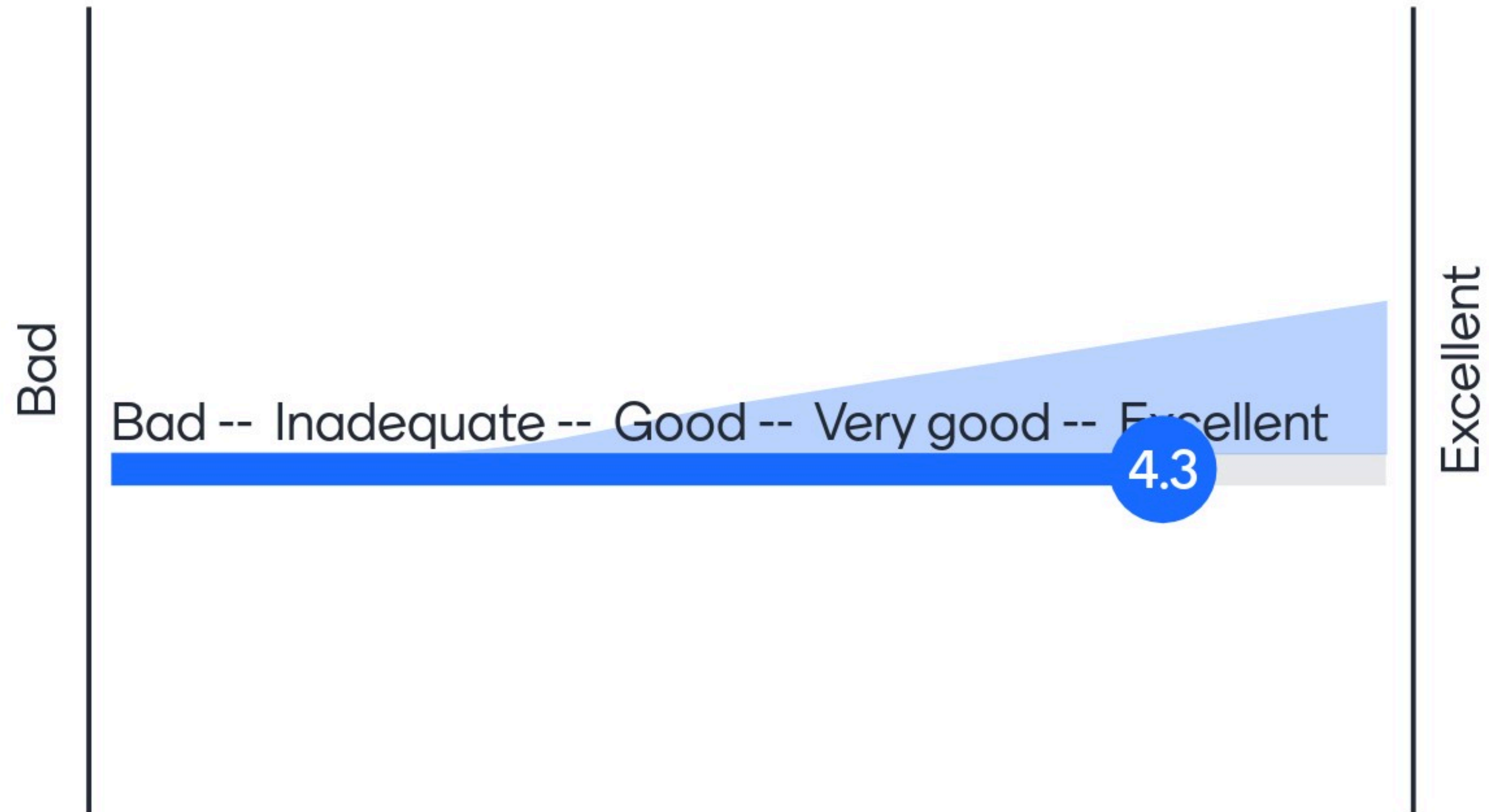




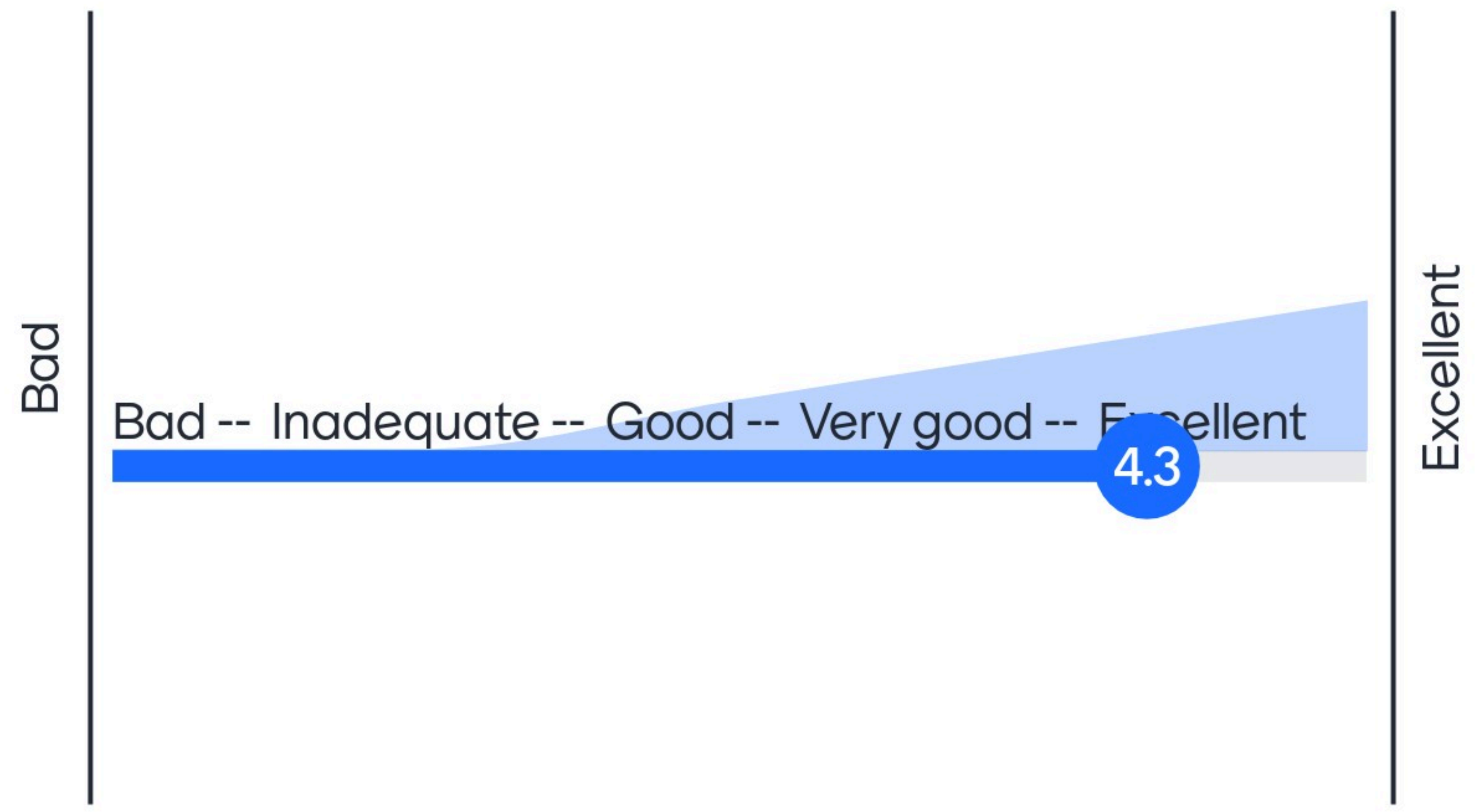
# How would you assess the quality of the labs, on a scale from 1-5!



# How would you assess the quality of the literature, on a scale from 1-5!



# How well did the exam reflect the overall course content? On a scale from 1-5!





# Could you give three reasons why you would recommend the course to other students.

- If the student is interested in the "water issue" and in understanding this essential element- A whole lab week is also THE point that makes me recommend this class- ?

Interesting and relevant application of chemistry, fun labs and good study material

Comitted lecturers that discusses the topics in the course in an interesting and fun way. You get a deeper understanding of the importance that minerals, humic and pH etc. have for the transportation and speciation of metals in water. Labs!

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Interesting fun and usefull

# Could you give three reasons why you would not recommend the course to other students.

- Not very entertaining calculation exercises/sessions - A lot of work needs to be provided-

No.

No, I really liked it and I think everyone who likes chemistry should know this stuff.



# Do you have any other final comments about the course you would like to share?

Nothing

Great adjustment to corona restrictions with the online lectures!

I think the lectures that are focused on the book should be more focused around the study questions. I also would have loved a summary of all the topics covered and combined.