

## FYTN08 vt16

Respondents: 26  
Answer Count: 13  
Answer Frequency: 50,00 %

### General opinion

Give your opinion in the scale 1-5.

1 = very negative

2 = negative

3 = neutral

4 = positive

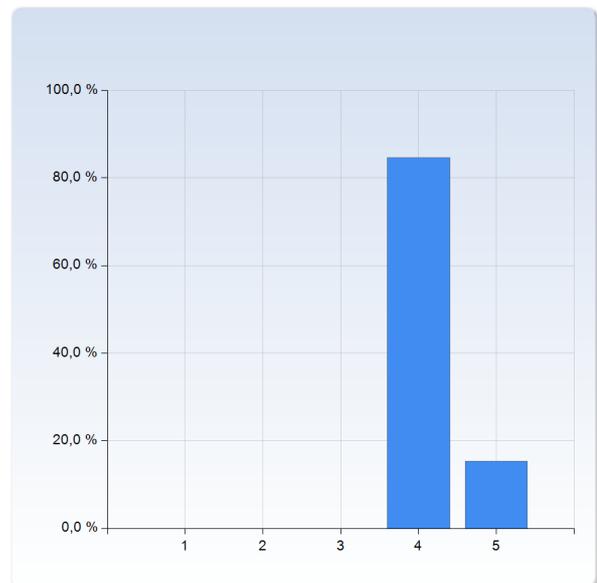
5 = very positive

***The comment field in the end is very important! It will help us understand what is to be kept when the grade is good, and what to change when the grade is poor.***

What is your general opinion of...

the course?

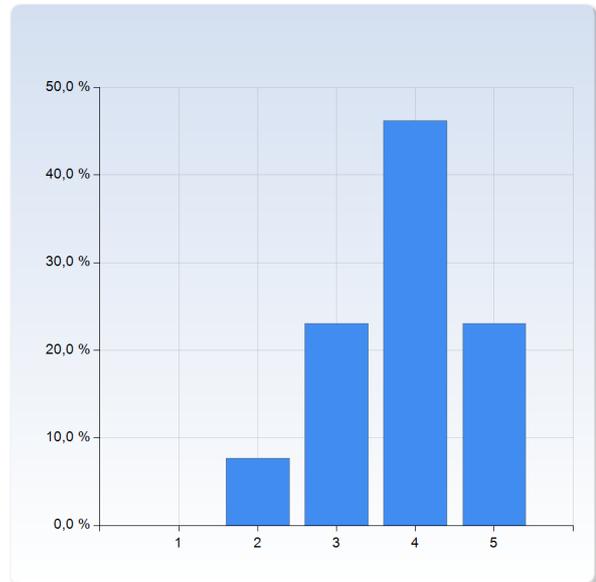
the course?	Number of Responses
1	0 (0,0%)
2	0 (0,0%)
3	0 (0,0%)
4	11 (84,6%)
5	2 (15,4%)
Total	13 (100,0%)



the course?	Mean	Standard Deviation
	4,2	0,4

### "A first course in general relativity" by B.F. Schutz?

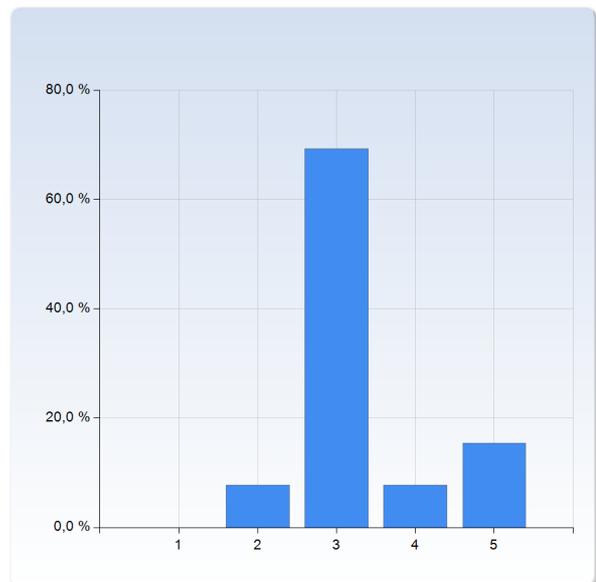
"A first course in general relativity" by B.F. Schutz?	Number of Responses
1	0 (0,0%)
2	1 (7,7%)
3	3 (23,1%)
4	6 (46,2%)
5	3 (23,1%)
Total	13 (100,0%)



	Mean	Standard Deviation
"A first course in general relativity" by B.F. Schutz?	3,8	0,9

### the extra material available on the course home page?

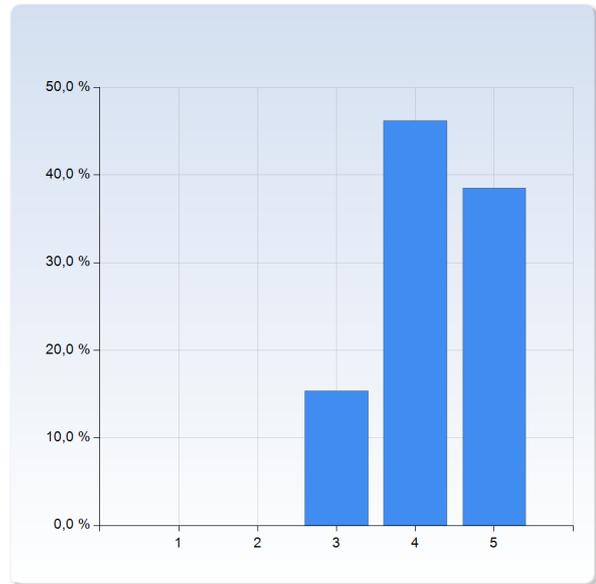
the extra material available on the course home page?	Number of Responses
1	0 (0,0%)
2	1 (7,7%)
3	9 (69,2%)
4	1 (7,7%)
5	2 (15,4%)
Total	13 (100,0%)



	Mean	Standard Deviation
the extra material available on the course home page?	3,3	0,9

### the information given when the course started?

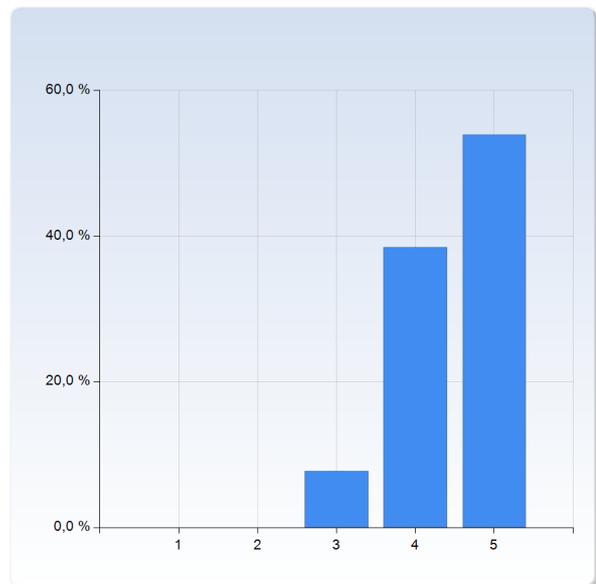
the information given when the course started?	Number of Responses
1	0 (0,0%)
2	0 (0,0%)
3	2 (15,4%)
4	6 (46,2%)
5	5 (38,5%)
Total	13 (100,0%)



the information given when the course started?	Mean	Standard Deviation
	4,2	0,7

### the information about what was expected of you?

the information about what was expected of you?	Number of Responses
1	0 (0,0%)
2	0 (0,0%)
3	1 (7,7%)
4	5 (38,5%)
5	7 (53,8%)
Total	13 (100,0%)



the information about what was expected of you?	Mean	Standard Deviation
	4,5	0,7

#### Comment (*help us interpret your grades!*)

The course in general was very interesting although difficult.

I did not really like the book. It contains everything we need to know but the derivations and the explanations are sometimes a bit short. The lectures really help to understand on this point.

I did not use that much the extra material.

Everything about the content and the expectations was completely clear.

Didn't really have enough time to dwell on different sources. Book along with lectures were marvelous, since I never needed to look up another source to gain a different insight. Pity I didn't have time to research around subjects for more fun stuff, as I was preoccupied with understanding the core content of the course.

The course description was clear, and the book and lectures were easy to follow. I did not have too much of a look at the extra material on the course home page.

## Lectures and problem solving sessions

Give your opinion in the scale 1-5.

1 = very negative

2 = negative

3 = neutral

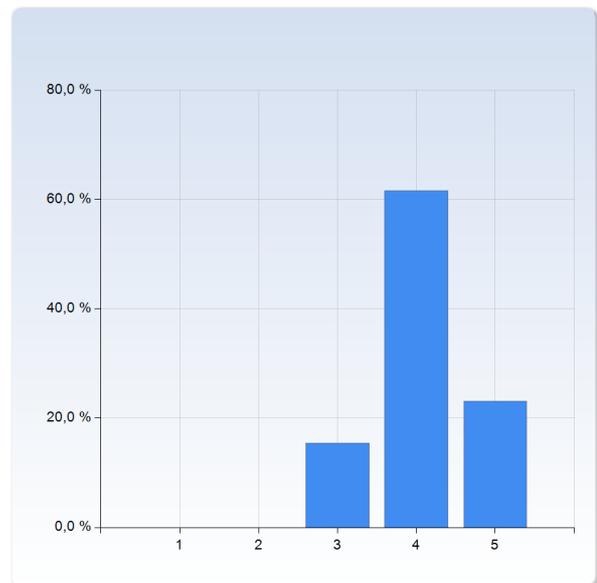
4 = positive

5 = very positive

What is your general opinion of...

the lectures?

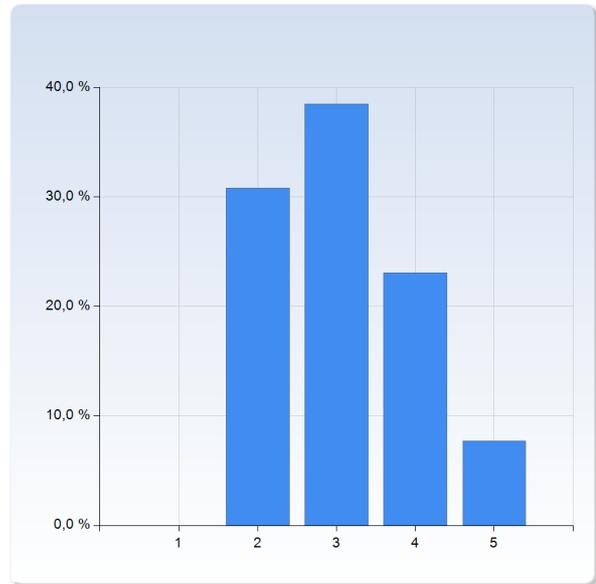
the lectures?	Number of Responses
1	0 (0,0%)
2	0 (0,0%)
3	2 (15,4%)
4	8 (61,5%)
5	3 (23,1%)
Total	13 (100,0%)



the lectures?	Mean	Standard Deviation
	4,1	0,6

### the problem solving sessions?

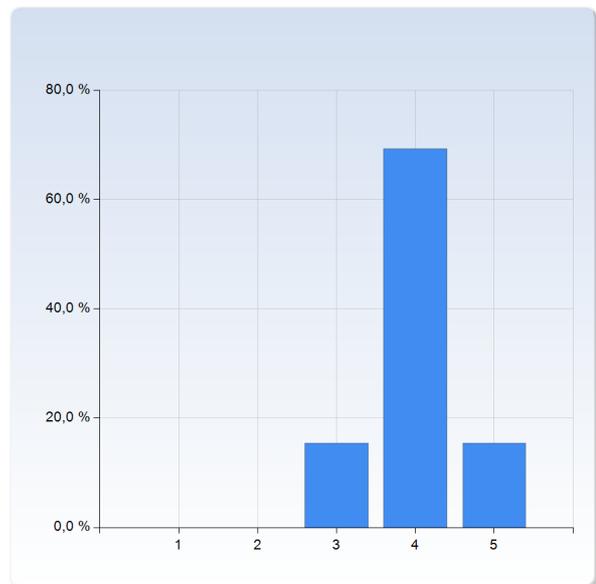
the problem solving sessions?	Number of Responses
1	0 (0,0%)
2	4 (30,8%)
3	5 (38,5%)
4	3 (23,1%)
5	1 (7,7%)
Total	13 (100,0%)



	Mean	Standard Deviation
the problem solving sessions?	3,1	1,0

### the balance between lectures and problem-solving sessions?

the balance between lectures and problem-solving sessions?	Number of Responses
1	0 (0,0%)
2	0 (0,0%)
3	2 (15,4%)
4	9 (69,2%)
5	2 (15,4%)
Total	13 (100,0%)



	Mean	Standard Deviation
the balance between lectures and problem-solving sessions?	4,0	0,6

#### Comment (help us interpret your grades!)

The lectures were very interesting and well presented but sometimes a bit fast.

The problem solving sessions were very good and full of useful remarks on each exercise.

I would have loved if exercises covered lectures more - they didn't cover enough for me. They did outline the most important, bonus for sneaking in some pedagogy in take-home-exam. But all of it made me wish we had done twice as much exercises. Some tensor gymnastics or curvature problems I ended up doing on my own, as not enough exercises were asked to be done. It was very well done for such a dense course otherwise, I myself would have tried to sneak in one more problem set at the very beginning.

Main problem (that is hard to solve) with the problem solving sessions is that the lectures are far ahead of the chapters we work on for the problem solving. It would be nice to get a few lectures then go work on the problems related to them.

I did not attend the exercise solving sessions due to time constraints. The lectures were just fine.

## Examination

Give your opinion in the scale 1-5.

1 = very negative

2 = negative

3 = neutral

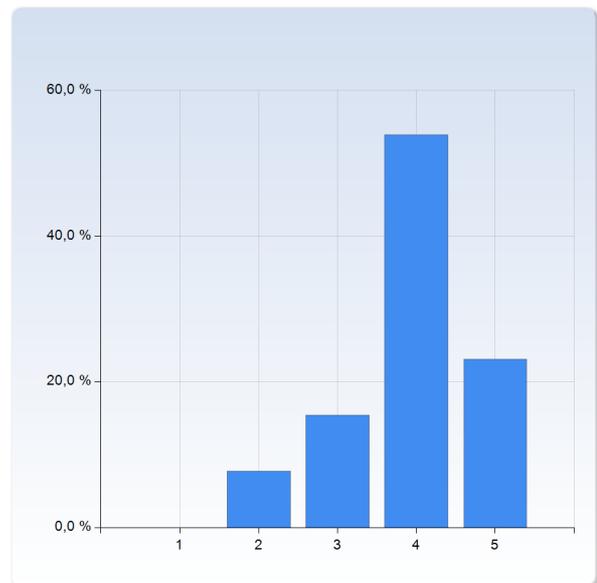
4 = positive

5 = very positive

What is your general opinion of...

the hand-in exercises?

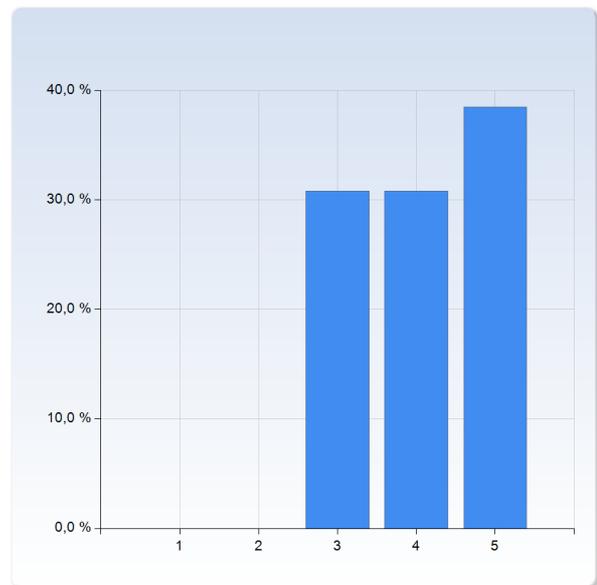
the hand-in exercises?	Number of Responses
1	0 (0,0%)
2	1 (7,7%)
3	2 (15,4%)
4	7 (53,8%)
5	3 (23,1%)
Total	13 (100,0%)



the hand-in exercises?	Mean	Standard Deviation
	3,9	0,9

### the presentations?

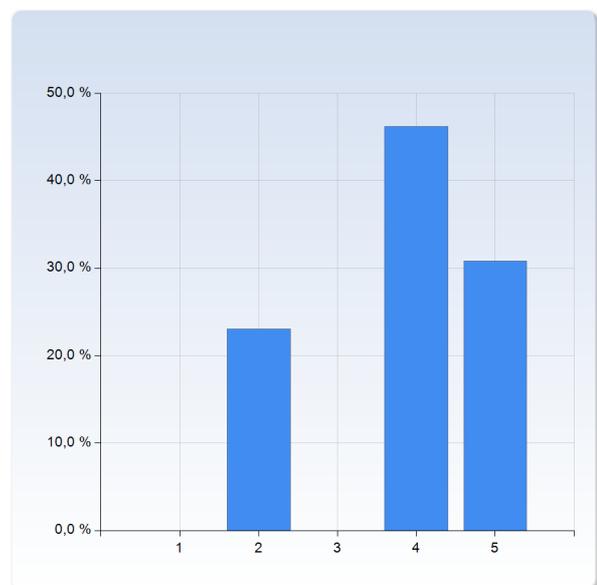
the presentations?	Number of Responses
1	0 (0,0%)
2	0 (0,0%)
3	4 (30,8%)
4	4 (30,8%)
5	5 (38,5%)
Total	13 (100,0%)



the presentations?	Mean	Standard Deviation
	4,1	0,9

### the oral exam?

the oral exam?	Number of Responses
1	0 (0,0%)
2	3 (23,1%)
3	0 (0,0%)
4	6 (46,2%)
5	4 (30,8%)
Total	13 (100,0%)



the oral exam?	Mean	Standard Deviation
	3,8	1,1

Comment (help us interpret your grades!)

Even though being able to explain orally and "on live" the understanding of the course is very important, the oral exam does not really measure the knowledge of the student. It measures the ability to explain their understanding. I admit it is very important, but I am not sure the main coefficient of the grading system should be on the oral exam. Do we want to answer the question "does the student know enough GR and are they able to use it?", or "Is the student able to communicate?" ? Both are important of course but I am not sure putting so much weight on the communication part is necessary in a GR exam.

The hand-in exercises constitute a very good preparation for the oral.

It was very interesting to look at some applications of GR through the presentations even if the preparation of this one takes time.

The oral exam is good in the sens that the difficulty suits the expectations.

Well timed presentations in course! It was really nice to understand that GR publications do not look that scary anymore. Oral was a neat pedagogical trick. Since course is meant as an introduction, preparations for oral really helped to see overview of the subject.

The hand in excursions, although very useful, were always really long and quite difficult. I often spent all week on them and still wasn't able to do them all in most cases. Additionally, in the homework sessions we sometimes didn't have time to fully go over them in detail or they were quickly done on the board without any real discussion or questions. It could have been beter!

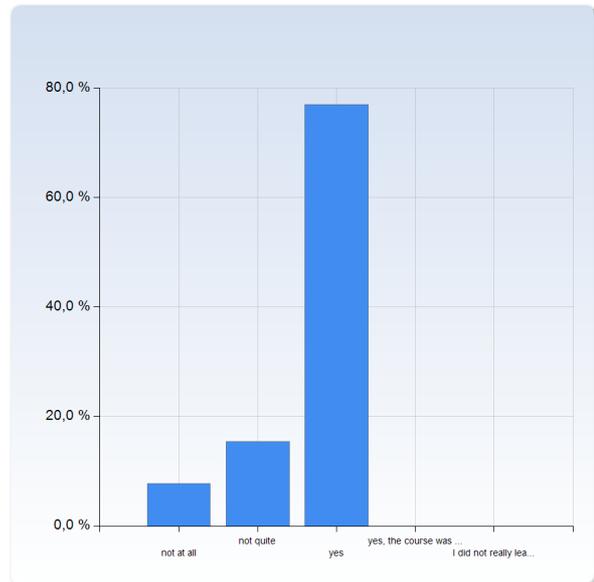
I liked the presentations, gave us some freedom. But it was hard to know how much was expected of us in them since we did not have much time to prepare for them. We knew about it in good time I mean more that we still had the other stuff in the course to work with at the same time aswell.

I rate the oral exam low not because it was bad in any way, but I fund it harder then expected, and felt like I was asked about a lot more in depth then I was prepared for.

The examination reflected the course contents well, and the hand-ins were at a very suitable level.

### Did you have enough prior knowledge for this course?

Did you have enough prior knowledge for this course?	Number of Responses
not at all	1 (7,7%)
not quite	2 (15,4%)
yes	10 (76,9%)
yes, the course was a bit easy	0 (0,0%)
I did not really learn anything new	0 (0,0%)
Total	13 (100,0%)



	Mean	Standard Deviation
Did you have enough prior knowledge for this course?	2,7	0,6

If your prior knowledge was not fairly appropriate, please comment!

What prior knowledge was missing/overlapping?

What is your background (year of higher education, relevant courses)?

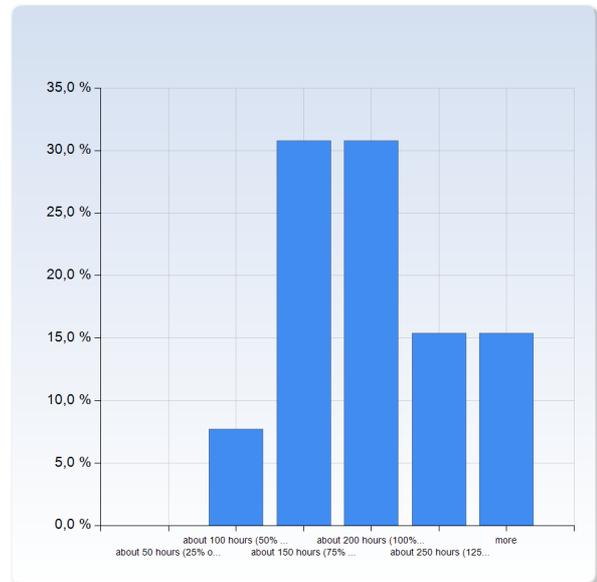
I was missing a differential geometry course so it was quite frustrating, but the course was understandable and the explanations in the course were sufficient.

Some knowledge in differential geometry helps for sure but is not a requirement at all.

I have a background in theoretical physics, but moved more into astrophysics after that. And this course was very math heavy and expected that you had a lot fresh in your mind. So even if my brain said "yes I have seen that before" that is not the same as instantly remembering all rules and tricks. And not top of that all the new math/notation/physics.

## How much time have you spent on the course? (In total you are supposed to spend about 200 hours or 25 work-days on a 7.5 hp course)

How much time have you spent on the course? (In total you are supposed to spend about 200 hours or 25 work-days on a 7.5 hp course)	Number of Responses
about 50 hours (25% of intended time)	0 (0,0%)
about 100 hours (50% of intended time)	1 (7,7%)
about 150 hours (75% of intended time)	4 (30,8%)
about 200 hours (100% of intended time)	4 (30,8%)
about 250 hours (125% of intended time)	2 (15,4%)
more	2 (15,4%)
Total	13 (100,0%)



	Mean	Standard Deviation
How much time have you spent on the course? (In total you are supposed to spend about 200 hours or 25 work-days on a 7.5 hp course)	4,0	1,2

Comments (for example on the distribution of the workload and whether you feel you have been able to perform at the level you wanted to)

The level of the course is quite high and it took me a lot of time to understand some concepts.

300 hours sounds more appropriate. A lot of time consumed reading a book. And I still wish I had time to reread it in detail...

250-300 hours. Did not feel doable with less time invested.

As I was a bit busy, I had to cut down time spent on lectures and exercises. However, for me it was enough to read the book and do some exercises to be able to acquire the course contents.

## Discrimination and harassment

**According to the Lund University *Policy for gender equality, equal treatment and diversity*, there is "zero tolerance of discrimination"**

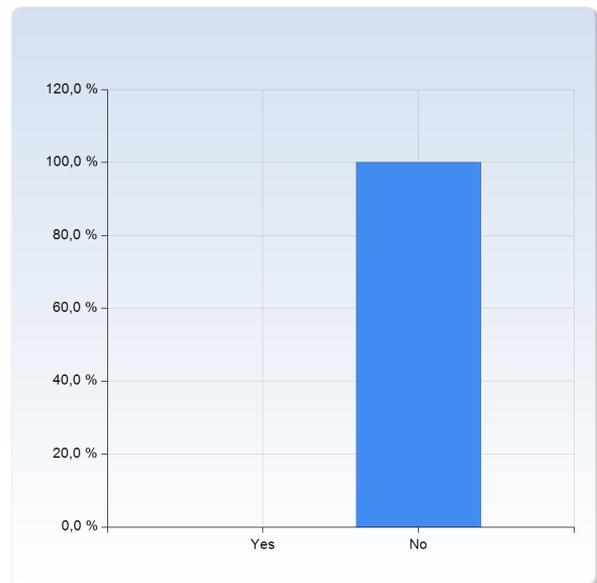
**Have you become aware of any cases of discrimination or harassment during the course?**

### Discrimination and harassment

According to the Lund University *Policy for gender equality, equal treatment and diversity*, there is "zero tolerance of discrimination"

Have you become aware of any cases of discrimination or harassment during the course?

	Number of Responses
Yes	0 (0,0%)
No	13 (100,0%)
Total	13 (100,0%)



	Mean	Standard Deviation
<b>Discrimination and harassment</b>		
According to the Lund University <i>Policy for gender equality, equal treatment and diversity</i> , there is "zero tolerance of discrimination"		
Have you become aware of any cases of discrimination or harassment during the course?	2,0	0,0

## Equal treatment

According to the Lund University *Policy for gender equality, equal treatment and diversity*, everyone has the right to be "treated with respect and consideration and being given the opportunity to develop on the basis of his or her personal circumstances".

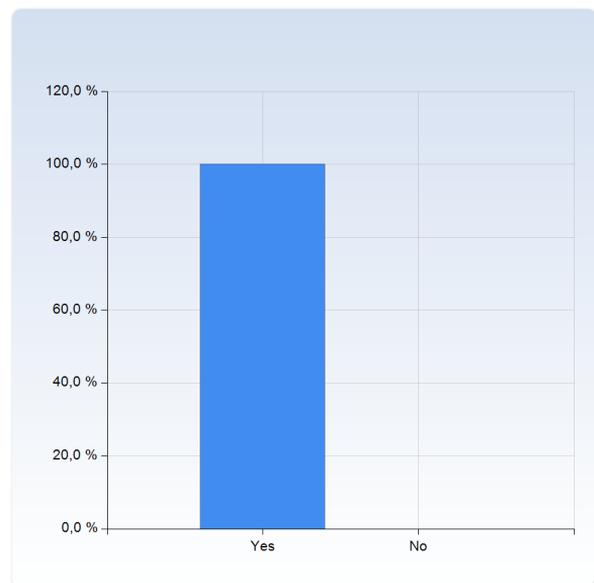
Do you think that everyone has been given equal opportunities during the course?

### Equal treatment

According to the Lund University *Policy for gender equality, equal treatment and diversity*, everyone has the right to be "treated with respect and consideration and being given the opportunity to develop on the basis of his or her personal circumstances".

Do you think that everyone has been given equal opportunities during the course?

	Number of Responses
Yes	13 (100,0%)
No	0 (0,0%)
Total	13 (100,0%)



	Mean	Standard Deviation
<b>Equal treatment</b>		
According to the Lund University <i>Policy for gender equality, equal treatment and diversity</i> , everyone has the right to be "treated with respect and consideration and being given the opportunity to develop on the basis of his or her personal circumstances".		
Do you think that everyone has been given equal opportunities during the course?	1,0	0,0

## What did you particularly like with the course?

What did you particularly like with the course?

I really liked the application of GR on black holes, and the whole course was in overall a lot of fun.

That mostly everything was new for me

The content was really interesting. The lectures and problem solving sessions were good. The presentation was interesting but took too much time in my case.

It was a very clear way to learn a rather complicated subject.

The book was OK. I actually didn't like it much until the very end because it's lengthy and it is very hard to find things easily.

The lecturer knows the subject well.

I liked the take-home exam and oral presentations are nice when kept on a motivational level (not graded).

## What in the course do you think could improve?

What in the course do you think could improve?

I think we could make some more links with analytical mechanics.

I more importantly note another difficulty: having worked with this subject (at least by teaching) for years, the teacher has a lot of distance with the topic of GR, which students do not. It is hence very difficult for the teacher to place himself in the mindset of the students to understand their questions or help answering. I saw the efforts were made, but there were still some problems in understanding "what the confused student does not understand".

I wanted more exercises.

Both the book and the lectures were a bit short on the fundamentals of general relativity and its mathematics (precise definitions). I would have liked to see more concrete (not in a hand-wavy physics kind of way) definitions of curved spaces and the objects defined on them. Also, the real meaning and properties of the objects that we were taught to manipulate in calculations were not always clear – for example, what do the coordinates used in a given metric (e.g. Kerr, Robertson–Walker) really mean? What (if any) observer do they correspond to?

This made understanding the fundamentals and interpreting results difficult, even if one could do "advanced" things like calculate orbits.

I think the excursive sessions could be better. The questions from the book were really useful to do, but they were just so long sometimes.

Often the lectures were also a bit difficult. I really liked having a good thorough summary of the previous lecture at the start of each just to recap on everything we did.

Ease up on something, the students can't breathe, it is a heavy course.

It was a bit difficult to know what was expected for the oral presentation (how detailed etc.).

## Other comments (both positive and negative) on the course?

Other comments (both positive and negative) on the course?

A lot of effort in such a dense course, and a lot of fun as well. Overall nice balance.

Thank you very much!