FYTN11, ht13

Respondents: 9
Answer Count: 7
Answer Frequency: 77,78 %

General opinion

Give your opinion in the scale 1-5.

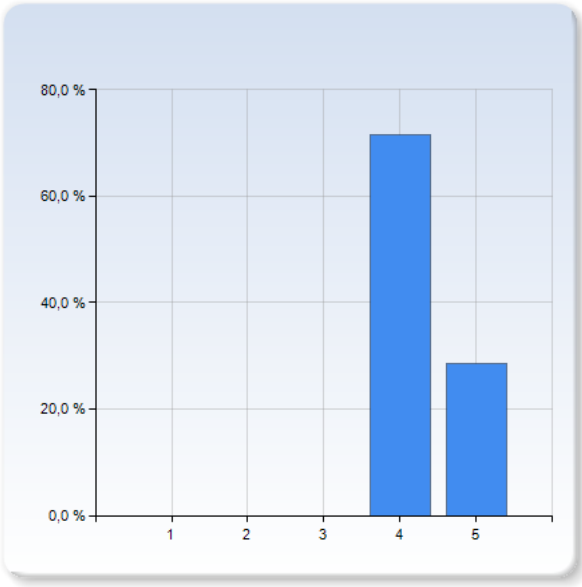
1 = very negative
2 = negative
3 = neutral
4 = positive
5 = very positive

Personal comments will be appreciated!

What is your general opinion of...

the course?

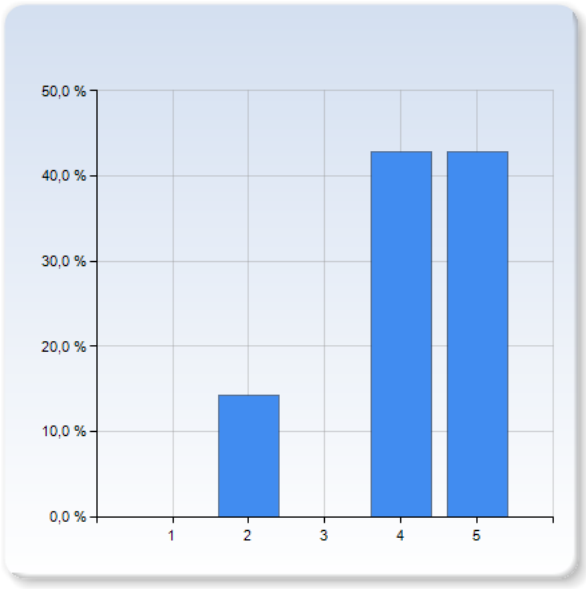
the course?	Number of Responses
1	0 (0,0%)
2	0 (0,0%)
3	0 (0,0%)
4	5 (71,4%)
5	2 (28,6%)
Total	7 (100,0%)



	Mean	Standard Deviation
the course?	4,3	0,5

the information about the course when it started?

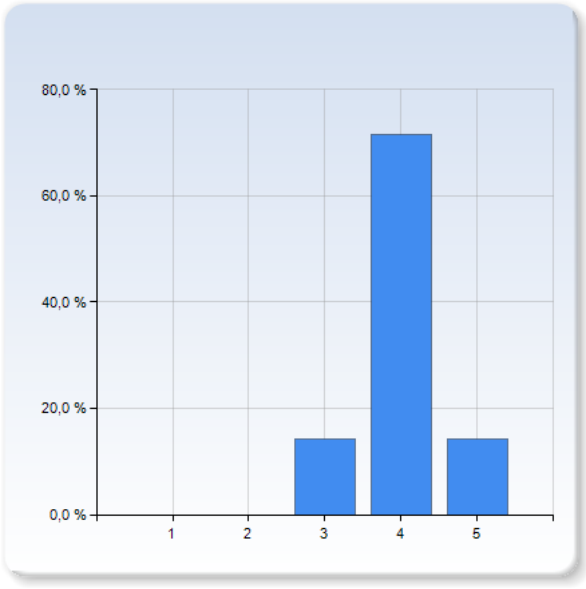
the information about the course when it started?	Number of Responses
1	0 (0,0%)
2	1 (14,3%)
3	0 (0,0%)
4	3 (42,9%)
5	3 (42,9%)
Total	7 (100,0%)



	Mean	Standard Deviation
the information about the course when it started?	4,1	1,1

the information about what was expected of you?

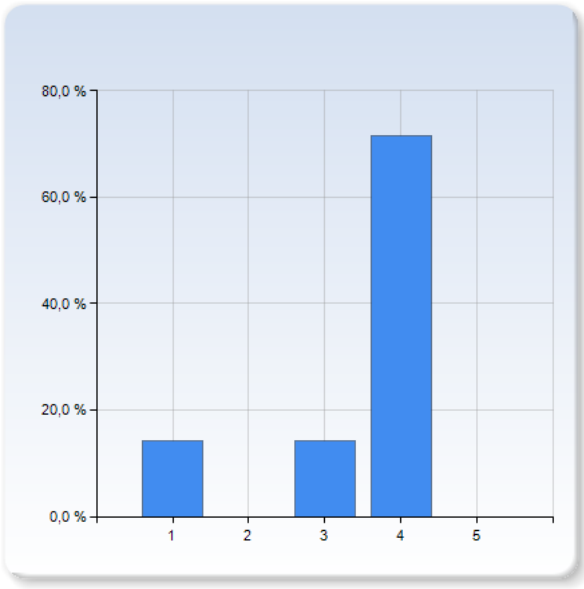
the information about what was expected of you?	Number of Responses
1	0 (0,0%)
2	0 (0,0%)
3	1 (14,3%)
4	5 (71,4%)
5	1 (14,3%)
Total	7 (100,0%)



	Mean	Standard Deviation
the information about what was expected of you?	4,0	0,6

Rubakov's book?

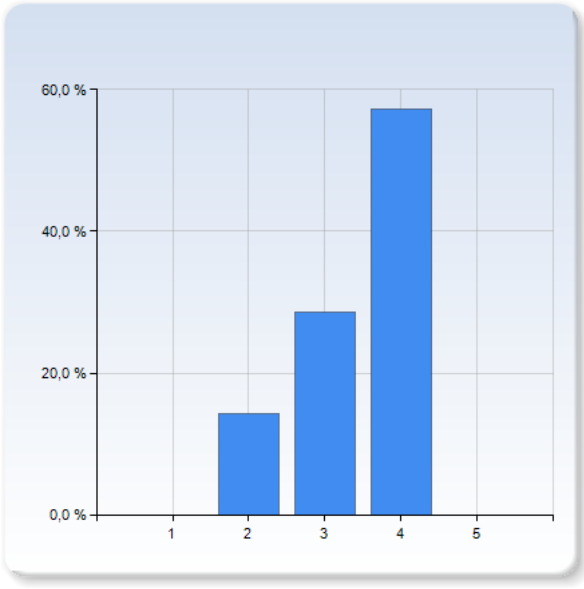
Rubakov's book?	Number of Responses
1	1 (14,3%)
2	0 (0,0%)
3	1 (14,3%)
4	5 (71,4%)
5	0 (0,0%)
Total	7 (100,0%)



	Mean	Standard Deviation
Rubakov's book?	3,4	1,1

the lectures with Roman Pasechnik?

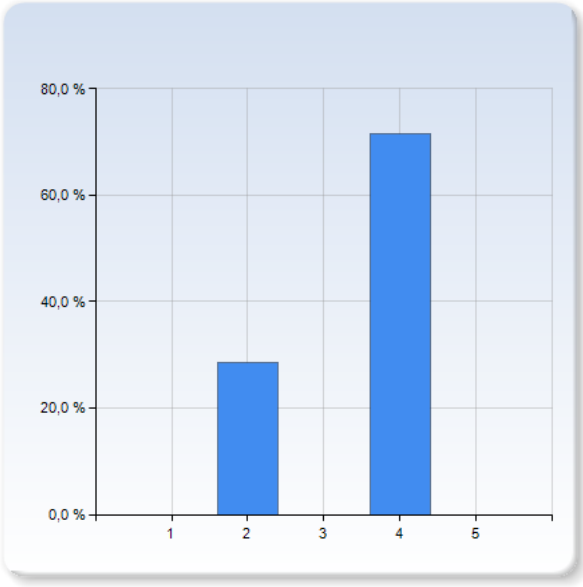
the lectures with Roman Pasechnik?	Number of Responses
1	0 (0,0%)
2	1 (14,3%)
3	2 (28,6%)
4	4 (57,1%)
5	0 (0,0%)
Total	7 (100,0%)



	Mean	Standard Deviation
the lectures with Roman Pasechnik?	3,4	0,8

the problem solving sessions?

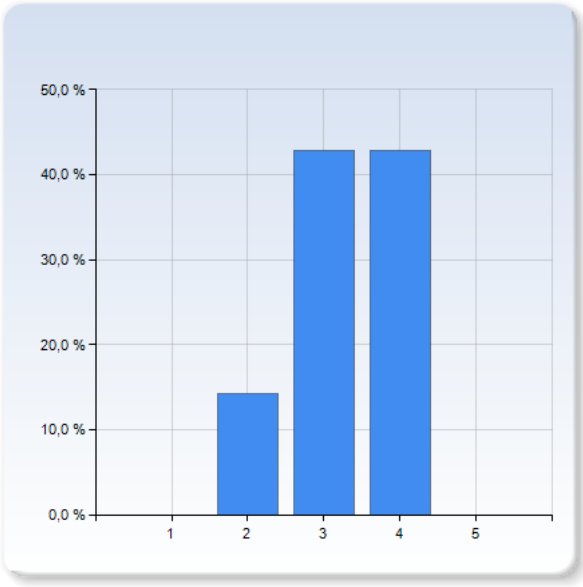
the problem solving sessions?	Number of Responses
1	0 (0,0%)
2	2 (28,6%)
3	0 (0,0%)
4	5 (71,4%)
5	0 (0,0%)
Total	7 (100,0%)



	Mean	Standard Deviation
the problem solving sessions?	3,4	1,0

the balance between lectures and problem-solving sessions?

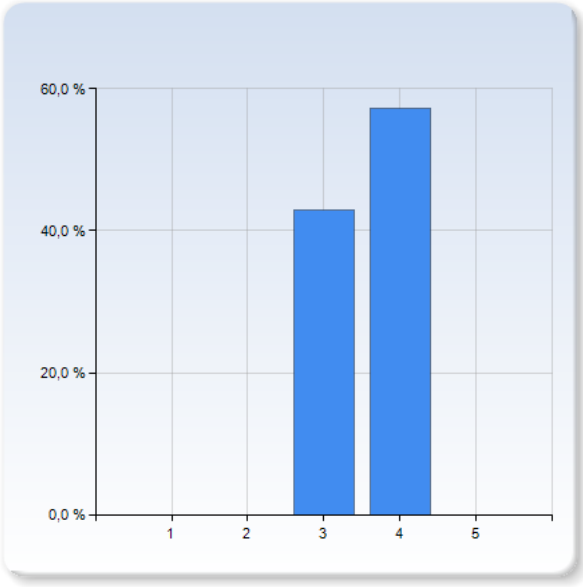
the balance between lectures and problem-solving sessions?	Number of Responses
1	0 (0,0%)
2	1 (14,3%)
3	3 (42,9%)
4	3 (42,9%)
5	0 (0,0%)
Total	7 (100,0%)



	Mean	Standard Deviation
the balance between lectures and problem-solving sessions?	3,3	0,8

the hand-in exercises?

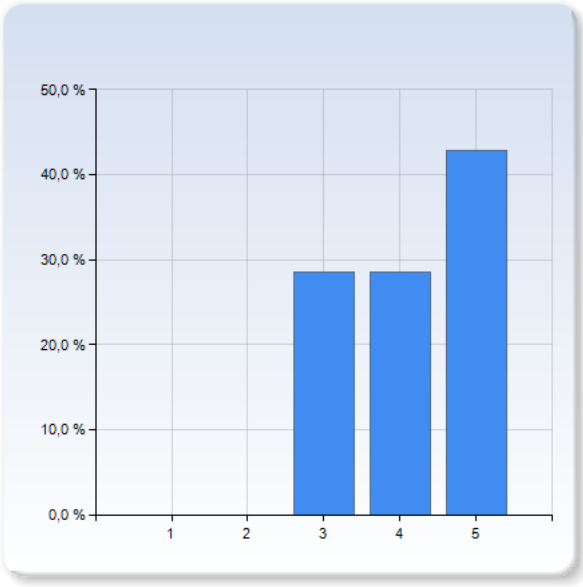
the hand-in exercises?	Number of Responses
1	0 (0,0%)
2	0 (0,0%)
3	3 (42,9%)
4	4 (57,1%)
5	0 (0,0%)
Total	7 (100,0%)



	Mean	Standard Deviation
the hand-in exercises?	3,6	0,5

the seminar assignment?

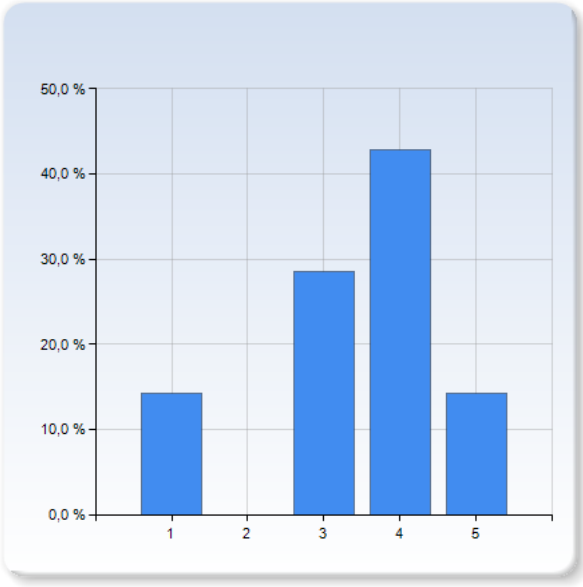
the seminar assignment?	Number of Responses
1	0 (0,0%)
2	0 (0,0%)
3	2 (28,6%)
4	2 (28,6%)
5	3 (42,9%)
Total	7 (100,0%)



	Mean	Standard Deviation
the seminar assignment?	4,1	0,9

the oral exam?

the oral exam?	Number of Responses
1	1 (14,3%)
2	0 (0,0%)
3	2 (28,6%)
4	3 (42,9%)
5	1 (14,3%)
Total	7 (100,0%)



	Mean	Standard Deviation
the oral exam?	3,4	1,3

Comment (*help us interpret your grades!*)
The only real feedback I could give is to consider correcting each hand-in as we complete them, instead of doing them all at the end of the course, as finding out about our errors/misunderstandings should be a priority.
Overall very good. But most lectures ran long, perhaps it would be better to put in a few more lectures so that they could end on time. Also, Roman was a very interesting lecturer, but had a tendency to stand in the way of what he had just written on the black board.
The lectures were often very similar to the corresponding text in the book. I think it would be better if Roman gave more of his own explanations instead of trying to follow the book in such detail.

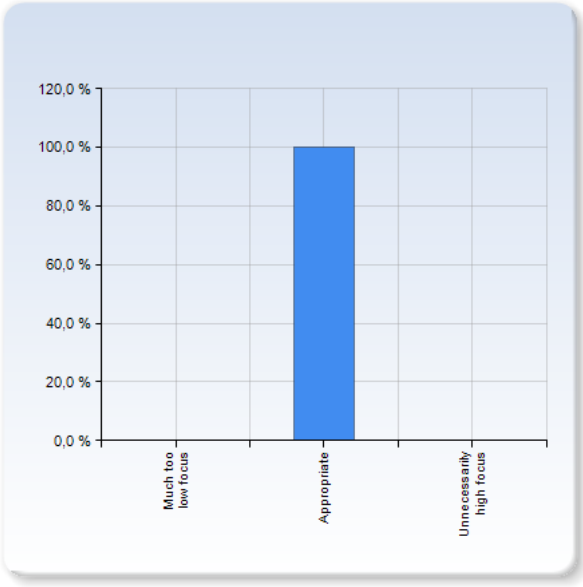
The focus of the course.

Below are learning goals from the course plan. Mark how much focus these goals got during the course, compared to what you feel would be needed.

"After completed course, the student..."

can explain the dynamics of cosmological expansion in the framework of Standard Cosmological Model, identify basic stages of the Universe evolution, their characteristics.

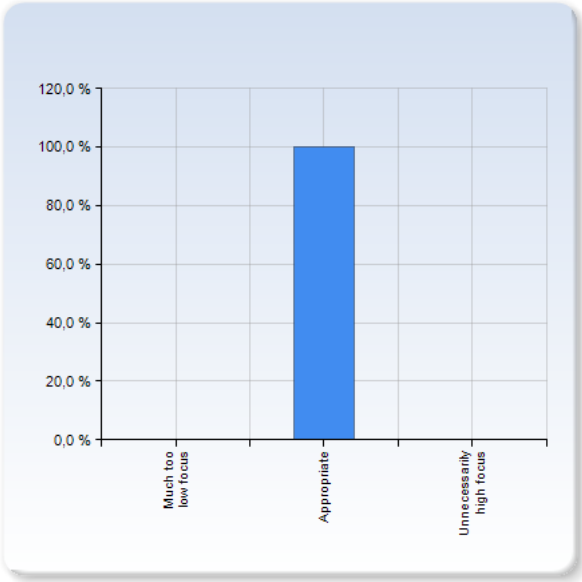
can explain the dynamics of cosmological expansion in the framework of Standard Cosmological Model, identify basic stages of the Universe evolution, their characteristics.	Number of Responses
Much too low focus	0 (0,0%)
	0 (0,0%)
Appropriate	7 (100,0%)
	0 (0,0%)
Unnecessarily high focus	0 (0,0%)
Total	7 (100,0%)



	Mean	Standard Deviation
can explain the dynamics of cosmological expansion in the framework of Standard Cosmological Model, identify basic stages of the Universe evolution, their characteristics.	3,0	0,0

can describe the properties and composition of the modern Universe, the basic features and dynamics of baryon matter, dark matter and dark energy.

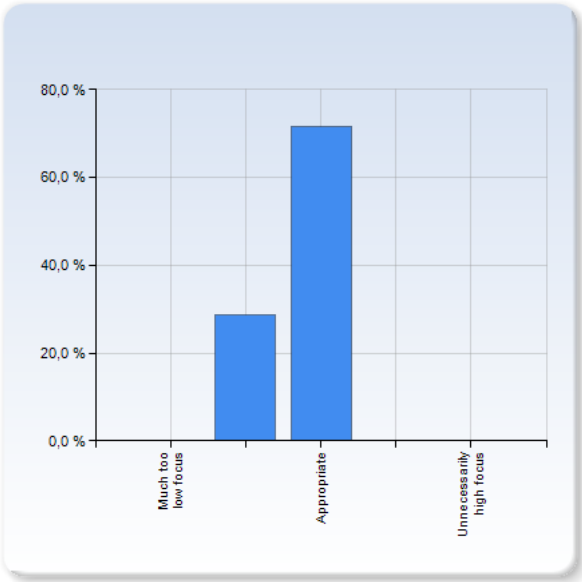
can describe the properties and composition of the modern Universe, the basic features and dynamics of baryon matter, dark matter and dark energy.	Number of Responses
Much too low focus	0 (0,0%)
	0 (0,0%)
Appropriate	7 (100,0%)
	0 (0,0%)
Unnecessarily high focus	0 (0,0%)
Total	7 (100,0%)



	Mean	Standard Deviation
can describe the properties and composition of the modern Universe, the basic features and dynamics of baryon matter, dark matter and dark energy.	3,0	0,0

can describe the connection between cosmology and high energy particle physics, and relate their properties to each other, in examples covered by the course content.

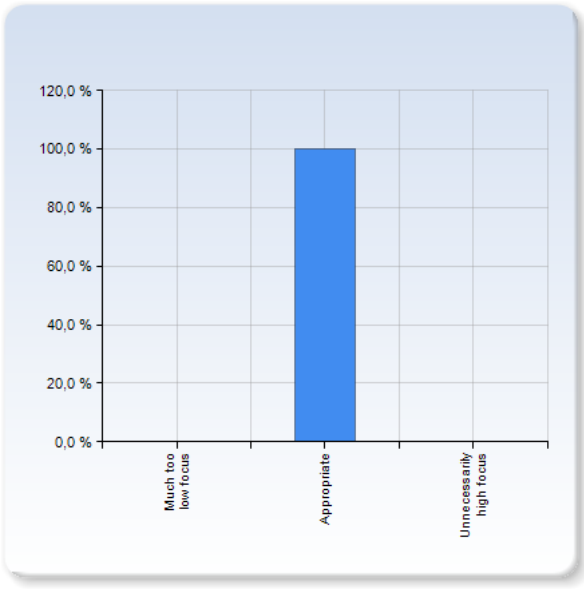
can describe the connection between cosmology and high energy particle physics, and relate their properties to each other, in examples covered by the course content.	Number of Responses
Much too low focus	0 (0,0%)
	2 (28,6%)
Appropriate	5 (71,4%)
	0 (0,0%)
Unnecessarily high focus	0 (0,0%)
Total	7 (100,0%)



	Mean	Standard Deviation
can describe the connection between cosmology and high energy particle physics, and relate their properties to each other, in examples covered by the course content.	2,7	0,5

can derive evolution equations of the Universe and cosmological solutions relevant for the course contents.

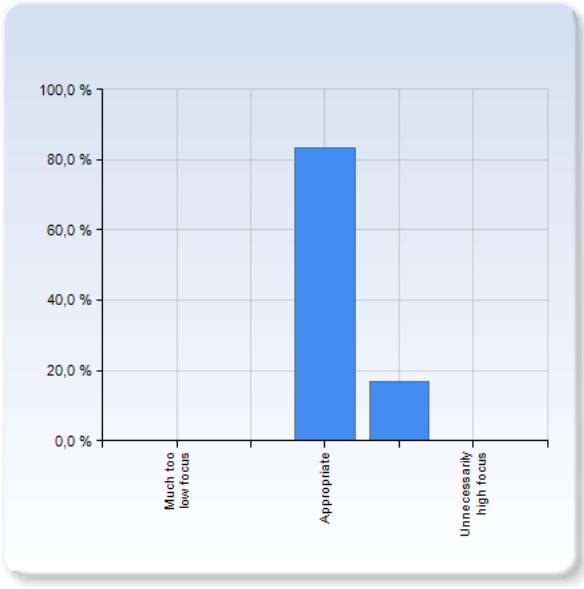
can derive evolution equations of the Universe and cosmological solutions relevant for the course contents.	Number of Responses
Much too low focus	0 (0,0%)
	0 (0,0%)
Appropriate	7 (100,0%)
	0 (0,0%)
Unnecessarily high focus	0 (0,0%)
Total	7 (100,0%)



	Mean	Standard Deviation
can derive evolution equations of the Universe and cosmological solutions relevant for the course contents.	3,0	0,0

can calculate properties of the Universe, such as age, horizon size, temperature and entropy density, at specified times during its evolution, assuming realistic conditions.

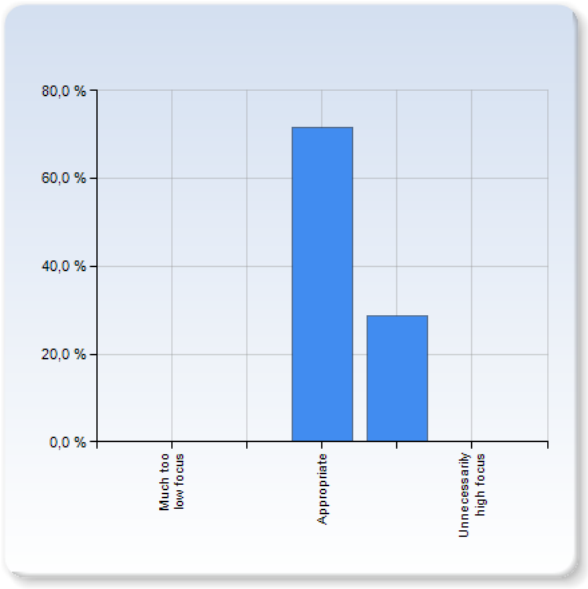
can calculate properties of the Universe, such as age, horizon size, temperature and entropy density, at specified times during its evolution, assuming realistic conditions.	Number of Responses
Much too low focus	0 (0,0%)
	0 (0,0%)
Appropriate	5 (83,3%)
	1 (16,7%)
Unnecessarily high focus	0 (0,0%)
Total	6 (100,0%)



	Mean	Standard Deviation
can calculate properties of the Universe, such as age, horizon size, temperature and entropy density, at specified times during its evolution, assuming realistic conditions.	3,2	0,4

can derive particle abundances (e.g. neutrino, WIMPs, baryons) and mass bounds based on properties of particle interactions in the hot cosmological plasma in a particular cosmological evolution scenario and current astrophysical data relevant for the course contents

can derive particle abundances (e.g. neutrino, WIMPs, baryons) and mass bounds based on properties of particle interactions in the hot cosmological plasma in a particular cosmological evolution scenario and current astrophysical data relevant for the course contents	Number of Responses
Much too low focus	0 (0,0%)
	0 (0,0%)
Appropriate	5 (71,4%)
	2 (28,6%)
Unnecessarily high focus	0 (0,0%)
Total	7 (100,0%)

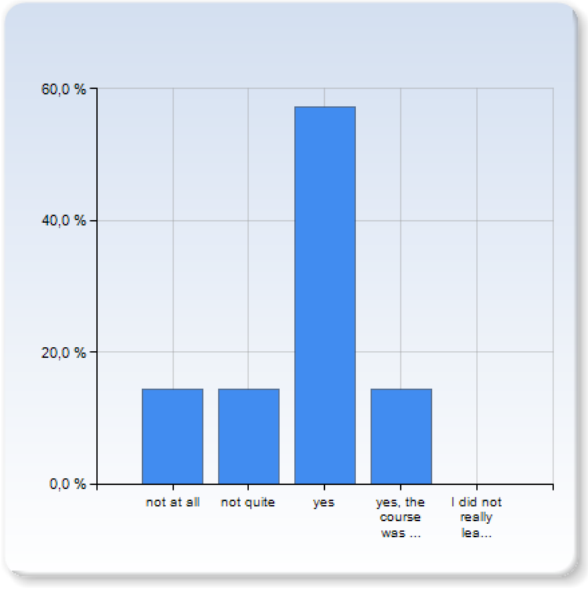


	Mean	Standard Deviation
can derive particle abundances (e.g. neutrino, WIMPs, baryons) and mass bounds based on properties of particle interactions in the hot cosmological plasma in a particular cosmological evolution scenario and current astrophysical data relevant for the course contents	3,3	0,5

Comment
There were very few examples to connect high energy particle physics, and how to detect these particles today, to the processes described in the course.
I would have liked to focus more on the particle physics and to go into more detail regarding models of DM/DE. I think we spent too much time calculating stuff with the Saha equation!

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 (14,3%)
not quite	1 (14,3%)
yes	4 (57,1%)
yes, the course was a bit easy	1 (14,3%)
I did not really learn anything new	0 (0,0%)
Total	7 (100,0%)



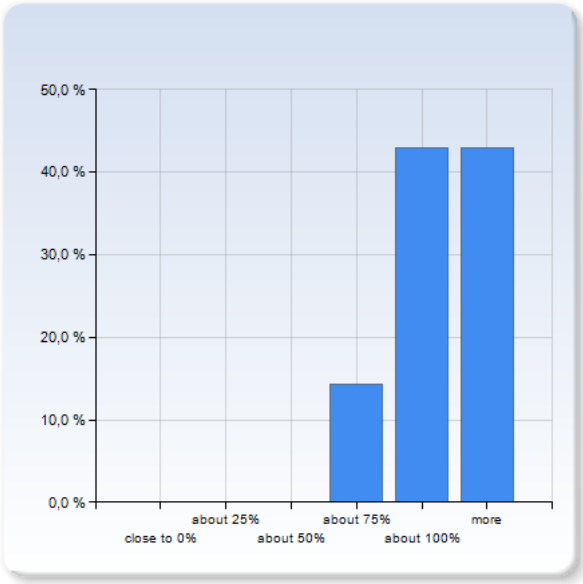
	Mean	Standard Deviation
Did you have enough prior knowledge for this course?	2,7	1,0

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 am on my first year of Master studies. I have taken Theoretical Particle Physics before, but not General Relativity. It would have been good to have the latter as well.

How much time have you spent on this course? (100% means 9-10 weeks, 20 hours per week, adding up to roughly 25 work-days)

How much time have you spent on this course? (100% means 9-10 weeks, 20 hours per week, adding up to roughly 25 work-days)	Number of Responses
close to 0%	0 (0,0%)
about 25%	0 (0,0%)
about 50%	0 (0,0%)
about 75%	1 (14,3%)
about 100%	3 (42,9%)
more	3 (42,9%)
Total	7 (100,0%)



	Mean	Standard Deviation
How much time have you spent on this course? (100% means 9-10 weeks, 20 hours per week, adding up to roughly 25 work-days)	5,3	0,8

Comment
Like every other course on Theoretical Physics.
I spent a lot of time on the course, partly because the course demanded it but mostly because the material is so interesting.

What did you particularly like with the course?

What did you particularly like with the course?
The course was interesting as many new topics were covered.
Roman's lectures.
Very interesting content. Roman seemed genuinely concerned that we learned, and wanted to teach us as best he could.
This is the first course in which I have seen how to do field theory in curved space time (eg. deriving the photon redshift starting from the action, quintesence, scalar field giving inflation...). That was really interesting! I also enjoyed all the seminars.

What in the course do you think could improve?

What in the course do you think could improve?
1. The lecture notes posted on the web were very-very rough. I don't think I shall ever look at it in the future. If it had been written in a SYSTEMATIC WAY on plain A4 paper, it would have been very useful. It didn't catch eye & that was disappointing. 2. Also, the lecture notes (on the web) & on the black board was merely what is written in the book. It would have been very useful if it had been simplified a little bit not leaving everything as self try. My most of the time goes on simplifying equations rather than focusing much on physics part. 3. The voice projection of lecturer was a little bit low. Sometimes, I missed at all many important points. 4. The idea of 3-HW sets, 3-exam sets, 1-mini lecture & 1-oral exam was good. However, for the oral exam, there was hardly enough time for revision. It would have been better, if the oral exam had been arranged 1 week after the last lecture. In each exam set, the time to think about the last 2 problems were not sufficient even though the exam questions were provided many days in advance. This is because the necessary lecture(s) to deal with such problems were held just 1 or 2 days before the last submission date.
Only really the previous comment about correcting the hand-ins. Not a big deal, though.
The lectures should not run long! People should be able to plan that the lecture ends at the given time. Also, Roman should step away from the black board he has written on when he is done.
The course could be improved for example by using PDG & Planck data in the calculations instead of just the numbers in the book.

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

Other comments (both positive and negative) on the course?
1. I was expecting some more advanced topics than that were presented because of the early announced prerequisite for the course e.g. knowledge of GR, particle physics, QFT etc. And that was my motivation for doing the course. However, I find that anybody with knowledge of tensor analysis and SCHOOL level knowledge of particle physics can also do this course. No prior knowledge of GR, QFT, Group theory, Particle Physics (in detail) is needed. 2. Others were good. The lecturer tried hard to convince the students during the course.
The course, in both material and execution, was excellent. Roman was accessible and friendly. As the class was quite small (~10), the atmosphere was nice. One small detail: A powerpoint presentation was given as the lecture on CRs, but this was never put up on the website like the usual lecture notes. Doing this would make it much easier to study for that section of the exam!
Nothing more than what is above mentioned.