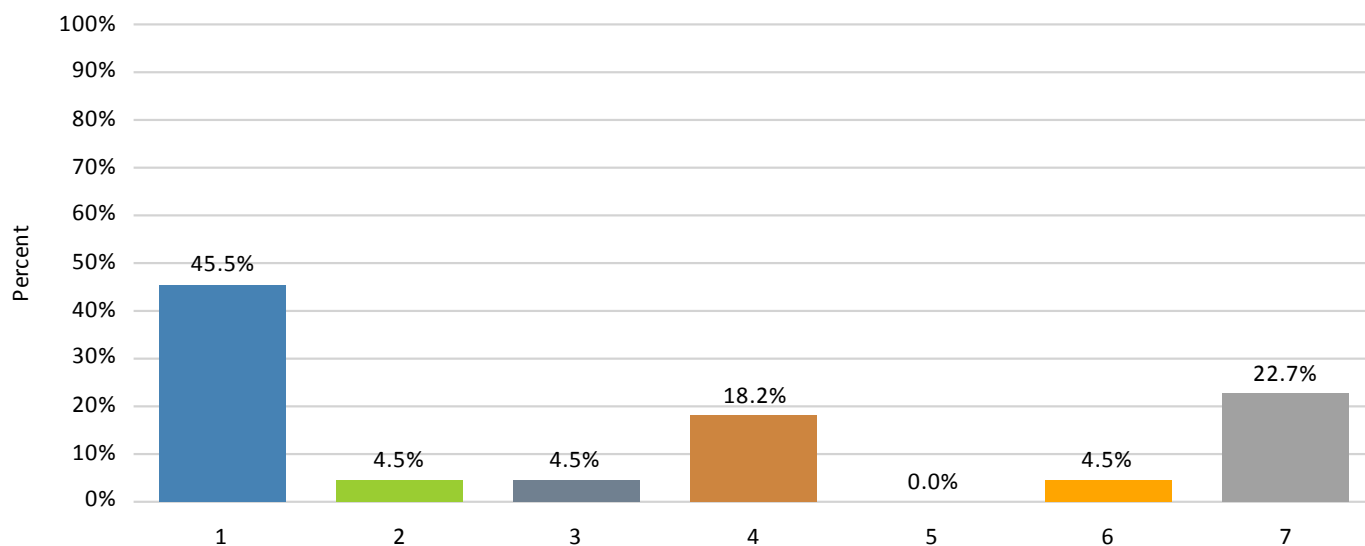


Evaluation of BIO-8603 (V2014)

1. What is your scientific background?



Name	
1	Biology
2	Economy
3	Social sciences
4	Physics and technology
5	Chemistry
6	Geology
7	Other, please specify

Name	Percent
Biology	45.5%
Economy	4.5%
Social sciences	4.5%
Physics and technology	18.2%
Chemistry	0.0%
Geology	4.5%
Other, please specify	22.7%
N	22

2. Scientific background - specified:

Medical

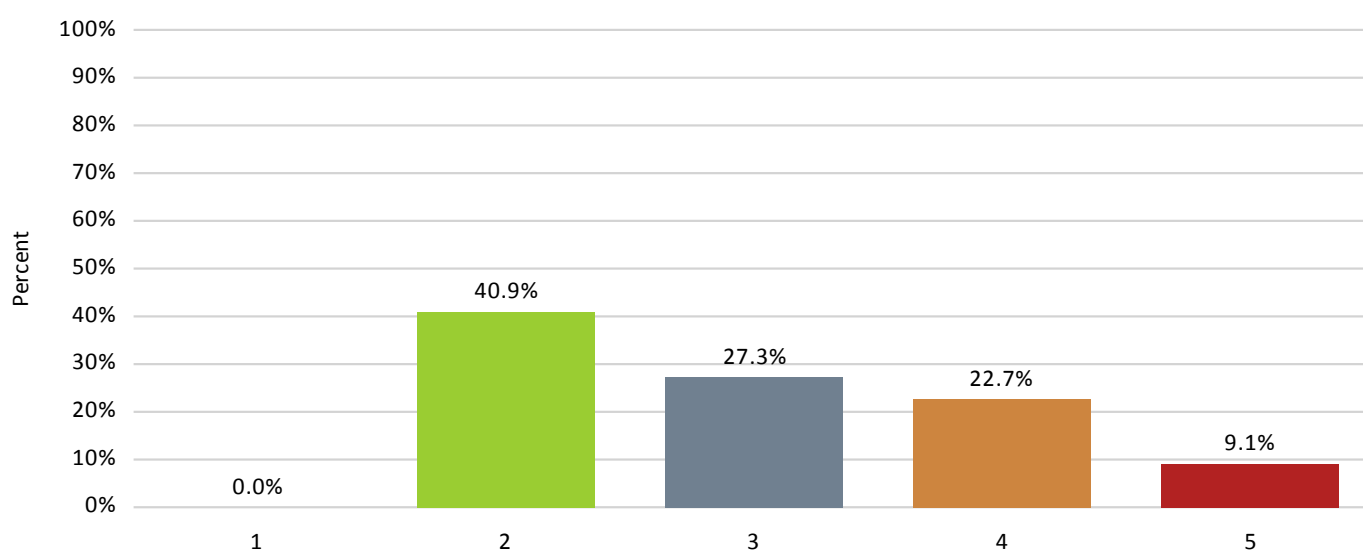
Entrepreneurships and innovation

mathematics

medicien

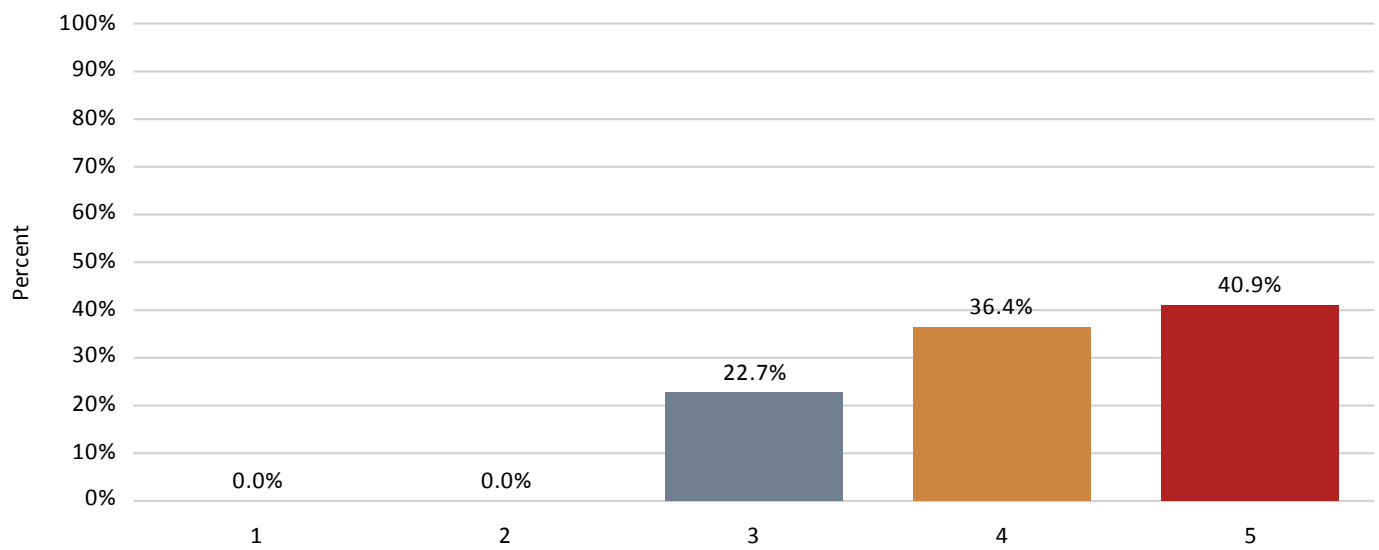
medicine

3. How much of the required readings had you read before the course started?



Name	
1	None
2	Less than 25 %
3	25 - 50 %
4	> 50 %
5	All/almost all

Name	Percent
None	0.0%
Less than 25 %	40.9%
25 - 50 %	27.3%
> 50 %	22.7%
All/almost all	9.1%
N	22

4. How much of the required readings had you read by the time the lectures and seminars ended?

Name	
1	None
2	Less than 25 %
3	25-50 %
4	> 50 %
5	all/almost all

Name	Percent
None	0.0%
Less than 25 %	0.0%
25-50 %	22.7%
> 50 %	36.4%
all/almost all	40.9%
N	22

5. In case your answer was not “all/almost all”, please explain why this was the case

Bad planning. Another course with slight overlap.

I did not attend a course in philosophy and ethics of science before, so I concentrated on reading the first part of the book "Understanding philosophy of science". The required literature list was in total too much and it was really hard to distinguish what was really important (e.g. ethical guidelines for research...) and what was not.

Priorities

my answer was "all/almost all"

fgfg

all/almost all...

Before the course the papers seemed to be difficult and ununderstandable.

When the course has started, I was more and more interested, and I read most of the papers with great pleasure. Unfortunately, it was not enough time to read them all.

I read the required reading before starting the class. one day free was quiet enough to read the articles

My answer was "all/almost all".

NA - my answer was all/almost all

not enough time due to other things I had to work on during the time of the course

I did not have the time to read everything

Too many reading are not so familiar to me , not easy get into it .

I read the required reading the day before it was a scheduled

Mostly because at the time the course was given I did have too much workload, related to my PhD thesis, that could not be laid aside.

Some of the texts were rather long (e.g. Popper's and Kuhn's work) and these I briefly looked through before the lectures. I prioritised to read the papers we were presenting.

lack of time

Some of the readings were covered in the seminars

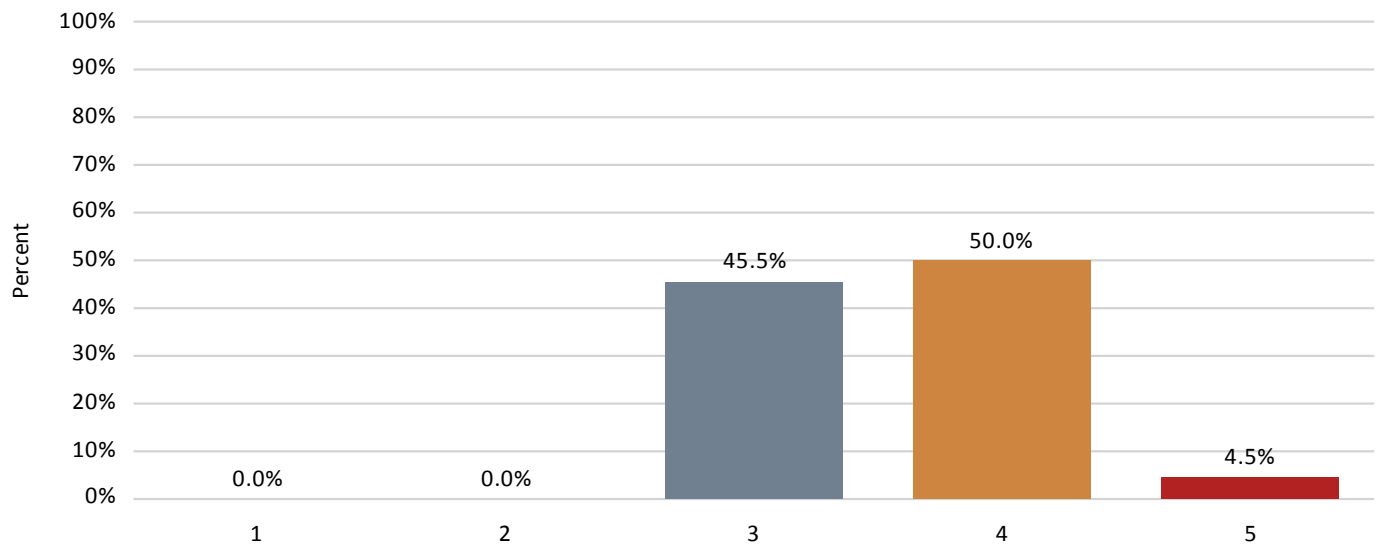
I have been busy with my other course work and research. Beside, the reading list is a lot.

Was really busy with research stuff.

lack of time

I didn't have enough time to read through all the articles.

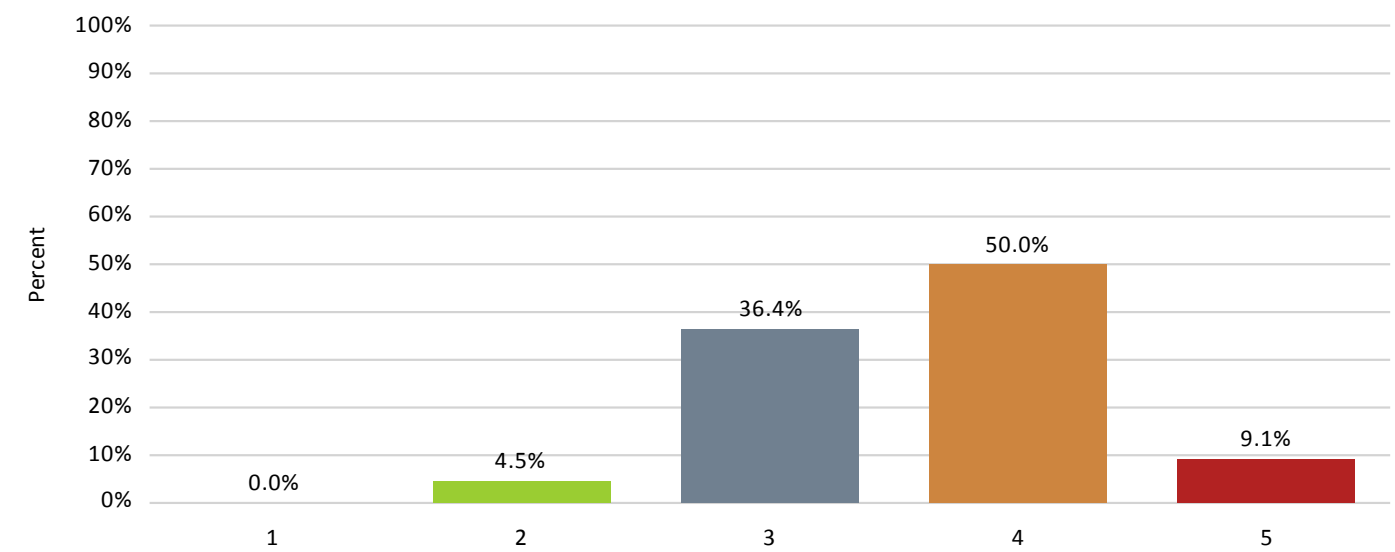
6. How will you evaluate your own contribution (i.e. course attendance, reading literature, preparing for lectures, active participation during seminars) in order to gain new knowledge during the course?



Name	
1	1 (low)
2	2
3	3
4	4
5	5 (very high)

Name	Percent
1 (low)	0.0%
2	0.0%
3	45.5%
4	50.0%
5 (very high)	4.5%
N	22

7. How satisfied are you with the course in general? (1 = not satisfied, 5 = very satisfied)



Name	
1	1
2	2
3	3
4	4
5	5

Name	Percent
1	0.0%
2	4.5%
3	36.4%
4	50.0%
5	9.1%
N	22

8. Please state the three most important things that you have learned as a result of participating in this course:

Refreshed knowledge of philosophy of science.

New views on a lot of topics.

A more structured view of ethics.

- better reflection and awareness of own results

- better background about history of science/ what science is (or might be)

- new approaches to look at my project (for example to develop a small theory)

The role for philosophy in science

Terminology and conceptual world

Ethical overview and approaches

- Building of Scientific Theory

- Inference and uncertainty and how it relates to commonly used statistics

- Awareness about ethical issues in science

Causal inference and causation.

Value in itself and instrumental value.

Ethical considerations in research.

- that the p-value problem is a philosophical issue

- quantitative/qualitative research

- issues about industry involved in research

1. Multicultural and multidisciplinary groups work more efficient and creative.

2. Ethic guidelines in research (Michaelas lecture was awesome and USEFUL even though we could not have enough time to discuss some of the relevant questions)

3. Rauls scheme on theory, experiment, truth etc, that we used during the seminars to talk about our own research. It was helpful.

3.

1. why qualitative and quantitative studies are important.

2. why modeling is important.

3. some other advices related to our PhD life.

1. I should be more careful when using the p-value.

2. There are few falsification and few replication studies that are published today.

3. Several things connected to supervisor-student issues that was mentioned towards the end of the last lecture.

1) Better understanding of what is and is not science and the scientific method

2) Important to reflect on ethical issues in most aspects of the academic career

3) Important to be aware of the limitations of models and what the p value does and does not tell you

- there are ethical guidelines for research

- there is now right an wrong in philosophy

- terms like: demarcation problem, epistemology, qualitative and quantitative research...

- Got a better idea of how people from other disciplines think and work.

- Got a broader view on what science is.

- Got some knowlegde of the history of scince

To understand the ethic issue and the PhD student rights is the most helpful infomation, and remine me that I am a scientist not just a proffesional worker.

ethical theory, scientific modeling and

relationship between quantitative and qualitative research

To learn the importance of thinking about aspects that go beyond the particular scope of your PhD topic.

To learn about different fields and hence the importance of a multidisciplinary approach to solve some basic aspects to mt thesis.

The basic ethical principles in order to do good science.

See my own research project/data in a wider perspective (in regards to "why do we do science?" and ethics)

Ability to discuss philosophy of science

Knowledge about the scientific method

Probability reflection

Ethics

scientific theories

What is science and scientific thinking.

How to think critically in regards to statistics and how it is used in science.

Some of the ethical issues scientists may face when interpreting and publishing results.

1. It is important to look science critically

2. There are several uncertainty in science that look perfect from out side.

3. Better knowledge of research ethics

cant think of three things, sorry! Maybe Ethics!

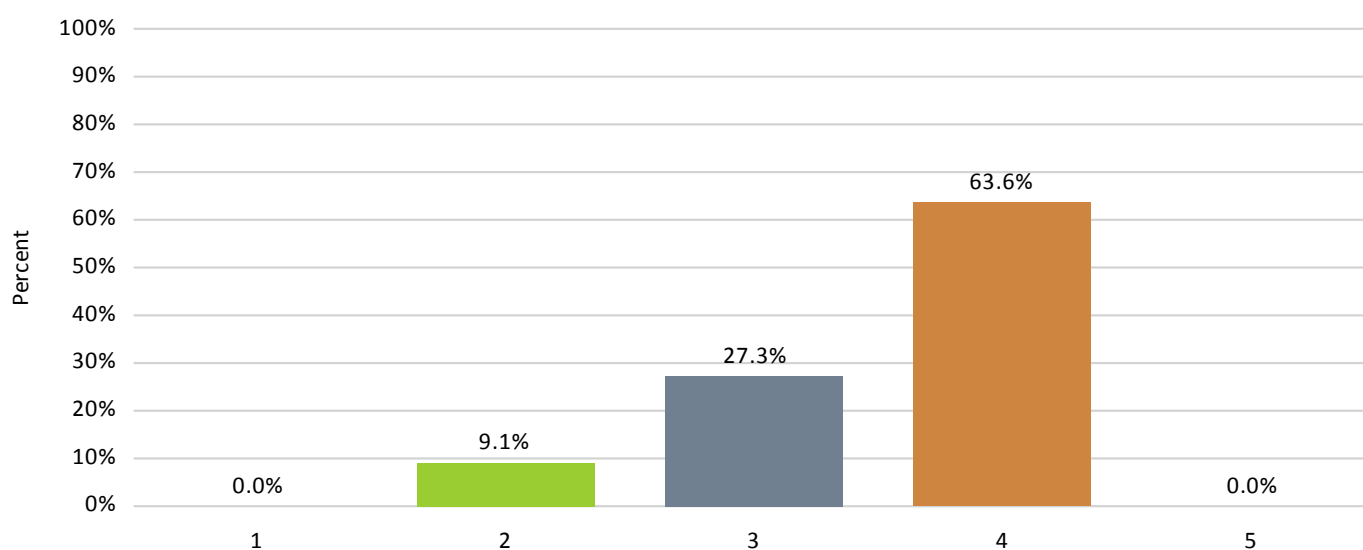
there is a lot of science and theories that explain what the research community is doing every day.

Theoretic and experimental model

Causal inference under uncertainty

Modelling in basic and applied science

9. How satisfied are you with the lectures in general? (1 = not satisfied at all, 5 = very satisfied)



Name

1	1
2	2
3	3
4	4
5	5

Name Percent

1	0.0%
2	9.1%
3	27.3%
4	63.6%
5	0.0%
N	22

10. Please explain why you were satisfied/not satisfied.

Clear and structured lectures most of the time. Some topics could be made more fun, by using other examples than fish(it does not have to be from any particular field of science, variety is important).

most of the lectures were well prepared. Lectures were given by specialists, but still they tried to make everything well understandable. Interesting mix of different topics, and that why not boring. Enough breaks in between. Some lecturers speaking a bit fast. Very few were not prepared.

Most presentations were targeted and highly relevant. The best outcome was obtained from the lectures where the powerpoint slides were handed out in advance.

- I had the impression that some of the lectures were not well structured. It was more about plain discussion without drawing a conclusion out of it.

It is difficult to get an philosophical discussion when you are restricted to english, which are not my mothertongue.

The lecturer has a difficult task in engaging us students. Maybe we should have the opportunity to choose between norwegian /english in some aspects of the course.

I was not satisfied with the lecturer who talked about Ethics in Nature. I was looking forward to this topic, but I really couldn't take anything home from it. Sigurd and Michaela's lecture were very good, clear to understand, also the talk of Andras Sziget. Raul Primicerio and Nigel Yoccoz were sometimes a little bit too much input (or very fast given in case of Raul), but they were very interesting indeed.

Some of the topics were repeated. It was difficult to follow some of the teachers.

I liked that all the lecturers seemed to be genuinely interested in what they were talking about. However, I thought it was too much repetition. I think too much time was spent on Popper and Kuhn. I spent a lot of time discussing Popper and Kuhn when I took Ex.Phil. As we were told during the first lecture that around 50% of those attending the course had taken a philosophy course before I assume that Popper and Kuhn's theories were known for most of us. Therefore I think we could benefit from spending less time on this topic, and spent more time on something else. Also, I felt that some of the lectures during the first week were too similar, and for a two week intensive course I think it is not necessary to repeat so much.

- Most of the lectures were very good and interesting to listen to

- the ethics lecture on Wednesday afternoon was not good - it did not seem to be well prepared and lacked structure and important, clear take-home messages

- in general I thought there was a lot of repetition in lectures - especially in the first week. While this repetition was not uninteresting, cutting it out would be a very easy way to cover more topics

- almost all lecturers were very well prepared and enthusiastic about their own topic

The lectures were interesting, but not too advanced.

I am not interested in all the lectures

The lectures were really well performed, and speakers were well prepared.

However, I think it was a very high level and very complicated sometimes with a bit narrow examples within biology.

Even though in general all the presentations were performed very well, though, sometimes I could appreciate some repetitions between lectures therefore turning a bit confusing or difficult to follow the general topic.

On the other hand, to be honest, I think some lectures were a bit out of place considering the general scope of this course. So I think that would be necessary to define more precisely the course topics.

The lectures were given by people who obviously knew what they were talking about.

It was a good course but there could have been a little more focus on ethics in science

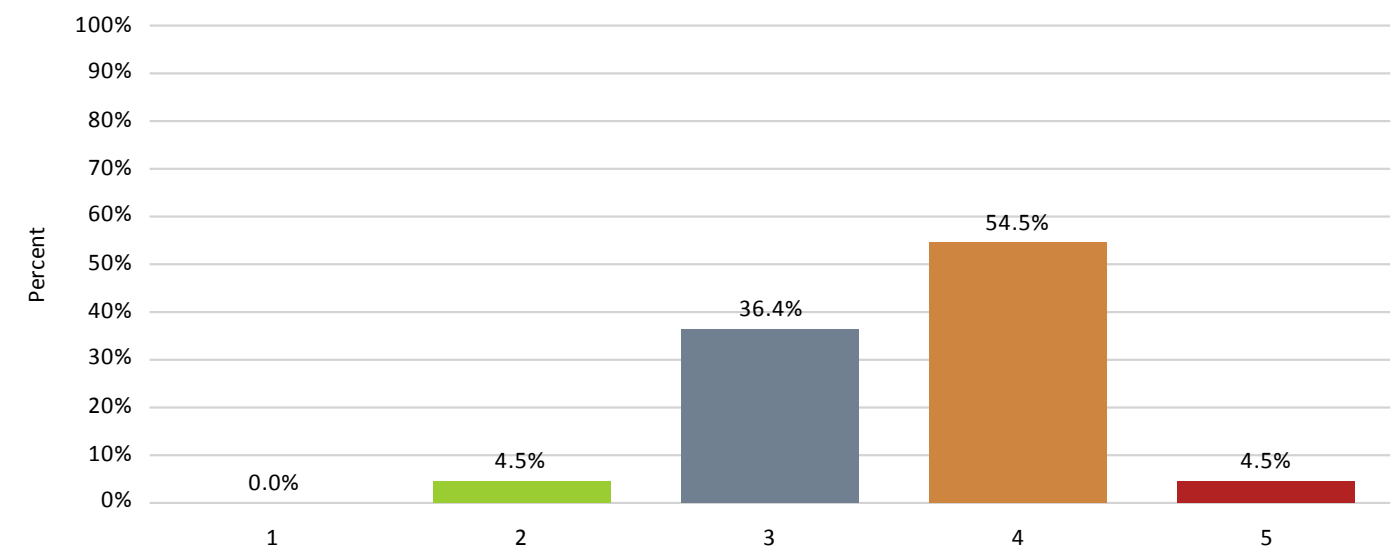
I am satisfied because:

1. The lectures were given by the people who are actively working on the topic
2. properly organized reading list

Nothing was new! Maybe I already have a masters in technical management where scientific writing was one of the main focuses.

Different subjects are presented and discussed

11. How satisfied are you with the seminars in general? (1 = not satisfied, 5 = very satisfied)



Name	
1	1
2	2
3	3
4	4
5	5

Name	Percent
1	0.0%
2	4.5%
3	36.4%
4	54.5%
5	4.5%
N	22

12. Please explain why you were satisfied/not satisfied with the seminars.

Strange group dynamic. People(probably including myself) not very good at discussing the particular problem. People not very good at relating things to their own fields besides very concrete examples that is very hard to generalize.

It was interesting to have the view points of candidates from different disciplines. On one hand it was good to have a mentor, but mostly dialogues were between mentor and PhD candidate who was presenting paper, and few discussions of all attendees. There were really calm persons in the group and it was sometimes hard to start discussions.

The seminar groups, being fixed during the course, was actually the best part of the course.

However, our discussion tended to be too loose, and I recommend a plenary presentation of the groups discussion at the end of the day. The course program was not too compressed, leaving good time for such an activity.

The groups had a nice dynamic, but we did not always manage to relate the papers we read to questions we got. There you wanted to peak towards certain Philosophical issues I think and I think we did not always go the right way here. A supervisor during the discussions is absolutely necessary.

It went very well. people participated in a good and useful way.

I would like to have the seminar questions in beforehand, so it is easier to prepare. Then you can read the papers and take care what you should look at.

More supervision is needed. It could be better to have different supervisors with different background visiting different seminar groups.

I was satisfied because sharing the information is important to clarify things related to lecture.

It was good to have 'not fresh' PhD students because they have more experience than me, they are better to explain things with examples.

I liked all the people in my seminar group. Sometimes when our group were supervised, I think the supervisors were too dominant. Although the supervisors clearly had a lot of good input, they might have controlled the group a bit too much and I think that did it more difficult for me to contribute to the discussions. I felt it was more easier for me to join in the discussions when the supervisors were not present.

- the seminars led to some very interesting discussions among the participants. I felt there could have been a more careful selection of papers that were more general. Although most were biology or medicine students, the ones who were not did not really participate in the discussions in the seminars that were based on biology/medical papers

-There was also quite some repetition in the seminar questions. If we had discussed a topic in-depth two days before, there was not a lot of will to discuss it in-depth again

- I found it hard to contribute during the seminars because we got sidetracked very easily

- I have a hard time discussing things when it seems the only goal is to discuss because there is no answer anyway

- a little more guidance from the seminar leader would have been helpful

I think they were okay.

Talk to people with in different field is always good.

The seminar groups was ok, and it was a nice place to discuss themes in a smaller group. But I think we spent too much time within the seminar group.

Seminars were undoubtedly very helpful in order to understand not only some of the lectures but the global scope of the course.

Besides, due to the high diversity of fields in the groups, it was also very good to understand the importance of an interdisciplinary approach.

It was good to have the seminars in order to discuss the topics of the lectures in more depth

the seminars led to dialog and discussions

There were many good discussions but I think some of the groups need some help from the teachers getting started, so a little more supervision and make sure that all the different supervisors make it to all the different groups

It was nice to hear opinions from other fields perspective.

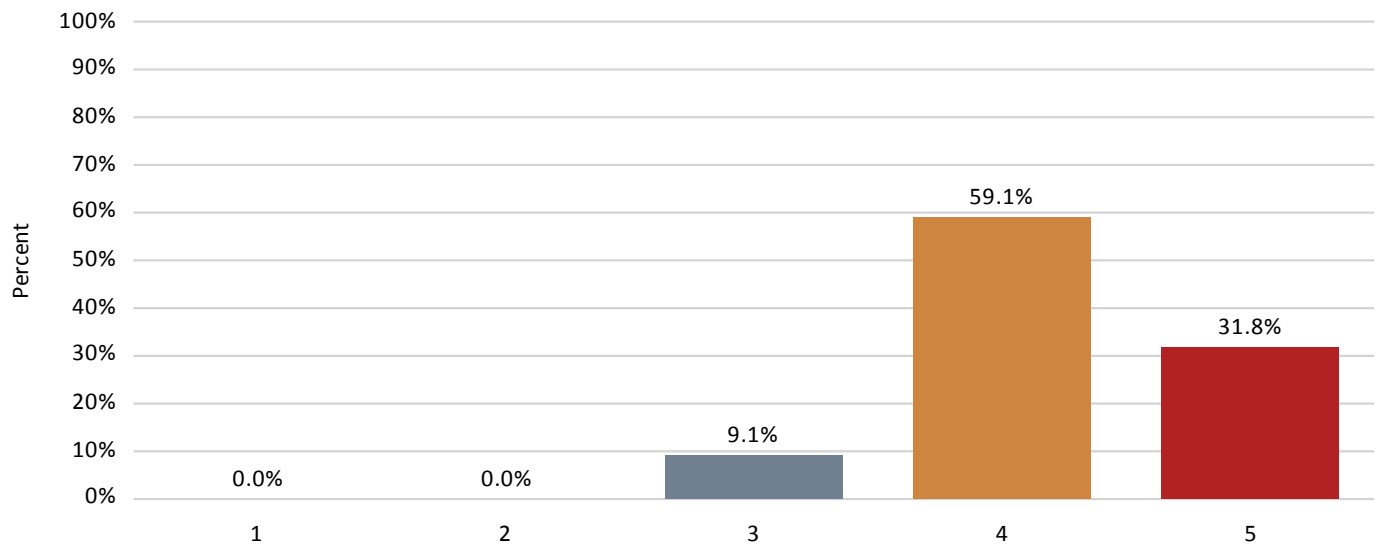
The prepared discussion topics were useful to structure the seminars.

they were ok!

I wish we had more guidance during the seminars and possibly with different teachers.

all participants in the seminar group were discussing and problematized the theme/issue

13. How satisfied are you with the information provided before and during the course? (1 = not satisfied, 5 = very satisfied)



Name	
1	1
2	2
3	3
4	4
5	5

Name	Percent
1	0.0%
2	0.0%
3	9.1%
4	59.1%
5	31.8%
N	22

14. What could have been done differently?

I felt that there were conflicting messages on what was "mandatory" to read, and what was not. Otherwise everything was pretty clear, and hard to misunderstand.

questions for seminars could have been given out before in order to prepare these a bit better. We were flooded with literature, and it was not really realistic that we would read all of it, so it would have been good to distinguish relevant papers from not so relevant, and maybe to have a more questions that would refer to these papers.

Generally ok, very nice to get a lot of literature "served" on Fronter!

Why is the question on supervision on essay following this one divided into 6 alternatives? I can not respond to this as no supervision has been provided yet.

as mentioned before...give seminar questions before as handout, more and better Ethics in Nature/Science information

We were very good informed about the course.

Some of the lectures could be uploaded on Fronter one day before. It is easy to take notes when you have printed slides before the lecture starts.

1. Less repetition, both from lectures given earlier the same weeks, and from previous courses such as ex.phil.

2. I felt that there were too much examples from biosciences and medicine compared to examples from other fields.

-The lectures and schedule were given out well in advance which was very helpful

-There could have been more information about the essay subject on the first day. If we would have known more about it from the beginning, we could have identified more potential essay topics while listening to the lectures and participating in the seminars

- information about the essay earlier during the course, so we have more time during the course to think about a topic and possibly discuss

Some handouts were not on Fronter before the lecture took part, and it would have been nice to have the handouts to take notes on during the lectures.

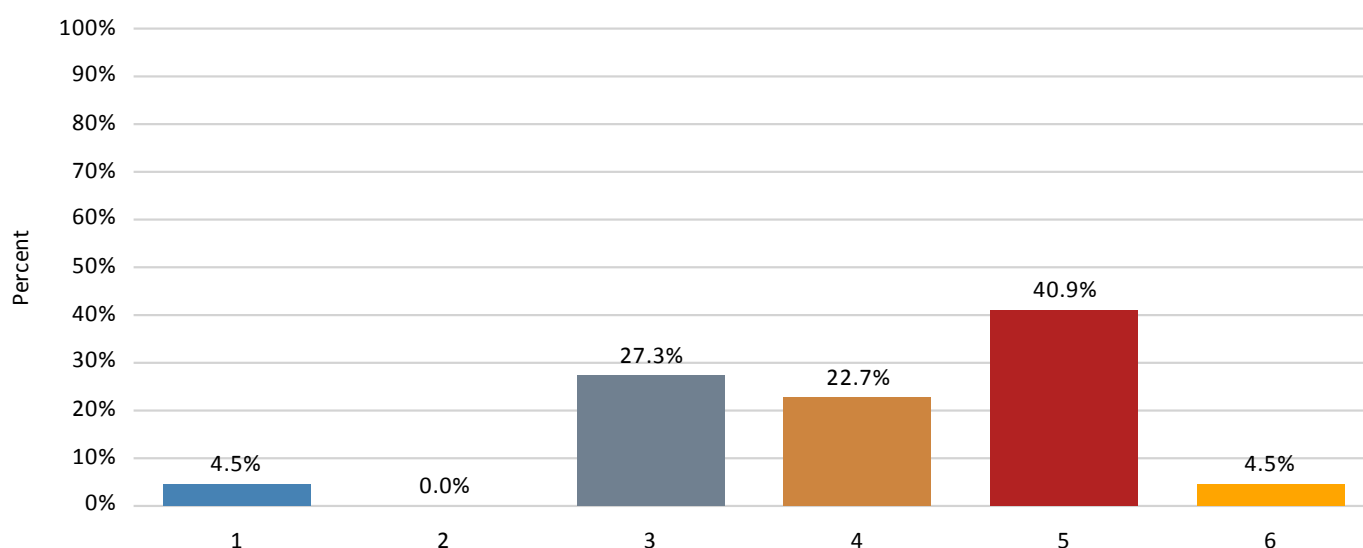
More example from other research fields. Sometimes, it is not easy to relate what is said with my research area.

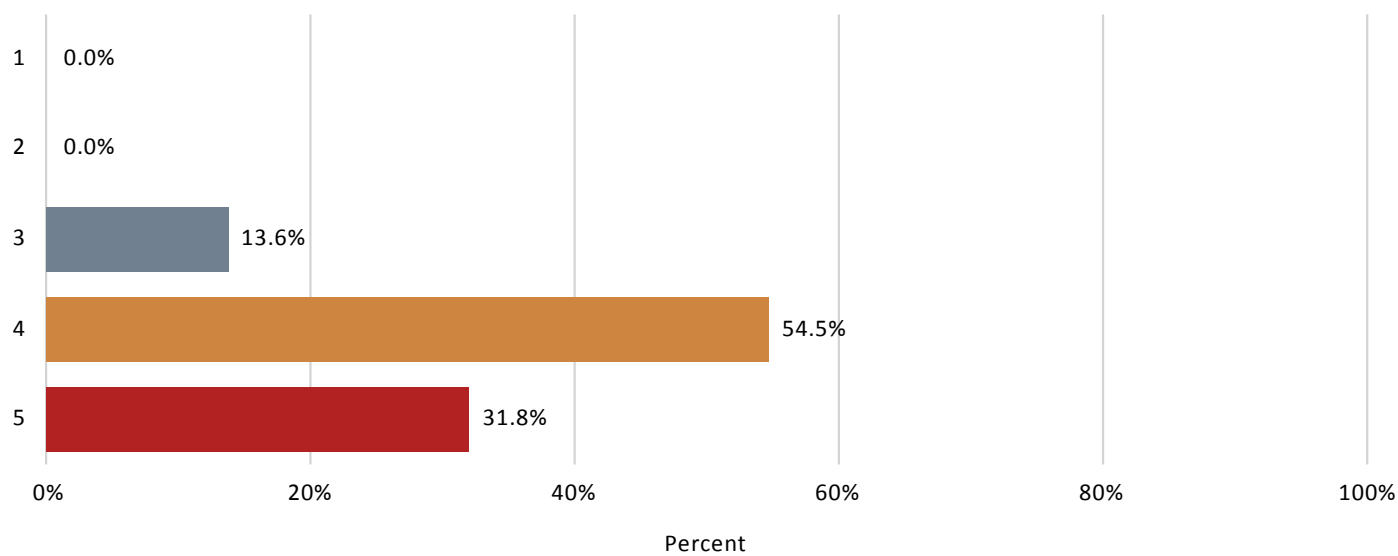
Instead of asking us to read papers from the fields which does not interest us all, we might have given the choice to select the papers from the available pool.

....

no suggestions

15. How satisfied are you with the supervision given in connection with the assignments and the essay? (1 = not satisfied, 5 = very satisfied)



26. Michaela Aschan

Name	
1	1
2	2
3	3
4	4
5	5

Name	Percent
1	0.0%
2	0.0%
3	13.6%
4	54.5%
5	31.8%
N	22

27. In case you were not satisfied with some of the lecturers, please explain why

I was very tired during the last hour when the poor danish person was talking about research and policy making. A topic that should have been emphasized more, and earlier that day. The lecture on "statistics of groups" (I don't remember the exact title) started very well, but then went on too far when the point was made. A lot of weird discussions emerged. I am not saying discussions should be oppressed, but I simply found it not relevant at all.

Svein Anders Noer Lie was still thinking about is concepts while he was talking: he seemed to be very confused, he did not prepare a good background for a discussion, he did not give clear examples. I did not really understand what the whole problem was, we were talking about.

The lecture by Svein Anders was just too far out for me.

I am sure Primicerio is a good reasearcher, but too many words and slides for me a simple man living near the icepole.

Sorry, I can't remember what Kåre was talking about... so i gave him a 3 since i have to fill out something...

I stated earlier why i was not satisfied with Svein Anders Noer Lie, he didn't really get to a point and seemed not to have the background for what he was teaching

Svein has no structure in his lecture, he said he wanted to finish his book, and I felt that he needed inspiration and new ideas from us. Nothing was useful.

Nigels lecture was difficult to understand.

Raul has quite fast speaking tempo, but he spoke loudly that helps us to pay attention. Two of his lectures (45 min each) were3 repetition of each other. WE DO REMEMBER WHAT WE LEARNED 2 DAYS AGO.

It was difficult to understand Sigurd due to too many definitions, and he could not explain them quite well. Andraz - what has hard cases to do with research???? This lecture supposed to be for the student studing law.

To be honest, I did not attend Michael and Kåre own lectures, but I had to choose a scale (but I heard from students that they were good)

-Svein: His lecture lacked structure and he did not seem to be well prepared. Clear, take-home messages were also lacking from his messages.

-Michaela: If you know that you need more time than the two hours, it would be useful if you put a third hour for the topic on the schedule

-Melania: We were a bit confused during the seminar on the topic. Clear differentiation on what is qualitative or quantitative subjects vs methods would have been helpful

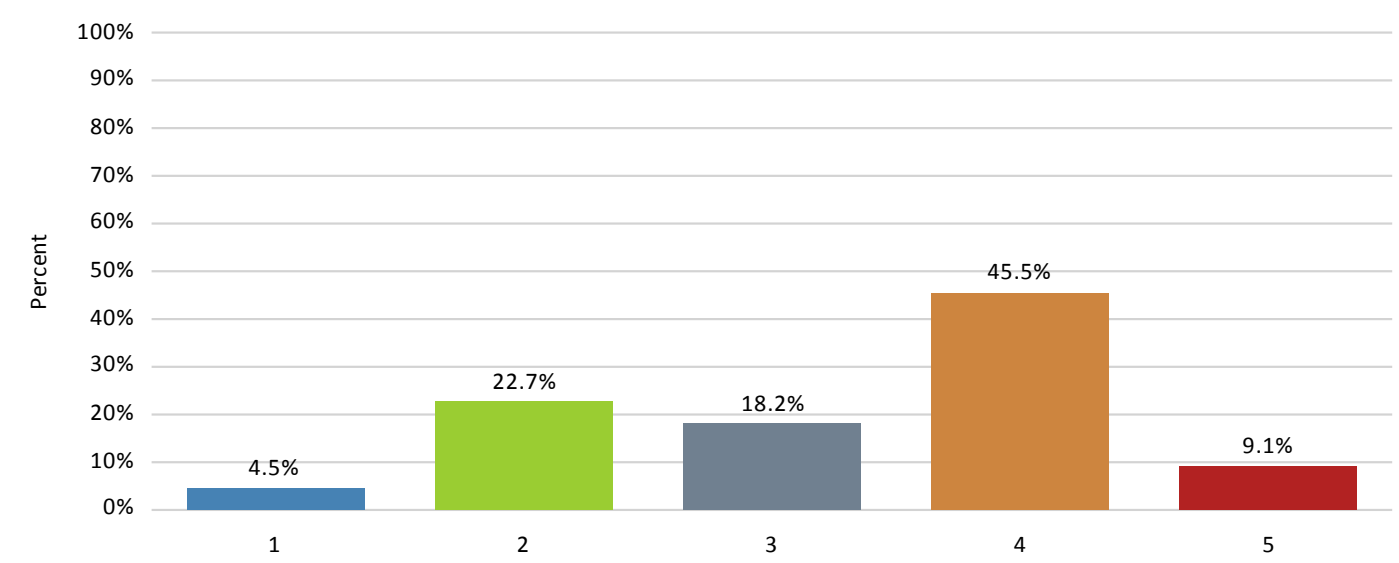
-In general: less repetition. Especially in the first week there was a lot of repetition, with different lecturers repeating the same thing as those before.

Svein Anders Noer Lie seemed not to be well prepared, the lecture was lacking structure and it was quite hard to follow

Not easy to understand

I understand that some topic has a more philosophical approach, but it was to inchoherent

28. Was the course content relevant to your work? (1 = not relevant at all, 5 = very relevant)



Name	
1	1
2	2
3	3
4	4
5	5

Name	Percent
1	4.5%
2	22.7%
3	18.2%
4	45.5%
5	9.1%
N	22

29. How can relevance and applicability be improved?

Sorry, I have no idea! I found every topic interesting, but most of it boils down to things I have encountered before. Still it is good to formalize and refresh knowledge, but a direct application I cannot see at the moment.

maybe by splitting the group into the different disciplines for one afternoon, to discuss discipline related problems.

teaching a "mixed audience" is always a challenge (different disciplines and varying degree of progress in the PhD projects). I encourage more cross-working group activity by a summary/presentation of the group discussions at the end of the day. Ordinary working hours are from 8 - 16, and lunch 30 min, meaning that there should be sufficient time to strengthen this element in future courses.

The relevance and applicability was good.

These scientific /philosophical topics could maybe be improved if the course was stretched over a longer timespan?

a bit more ethics would have been more interesting for me

It was very interesting and resulted in reflection on topics I had not even thought of before. I would have liked more lectures on ethics though.

not sure it can be improved, I found the topics interesting, but I don't think I will go back working at my PhD and do things different

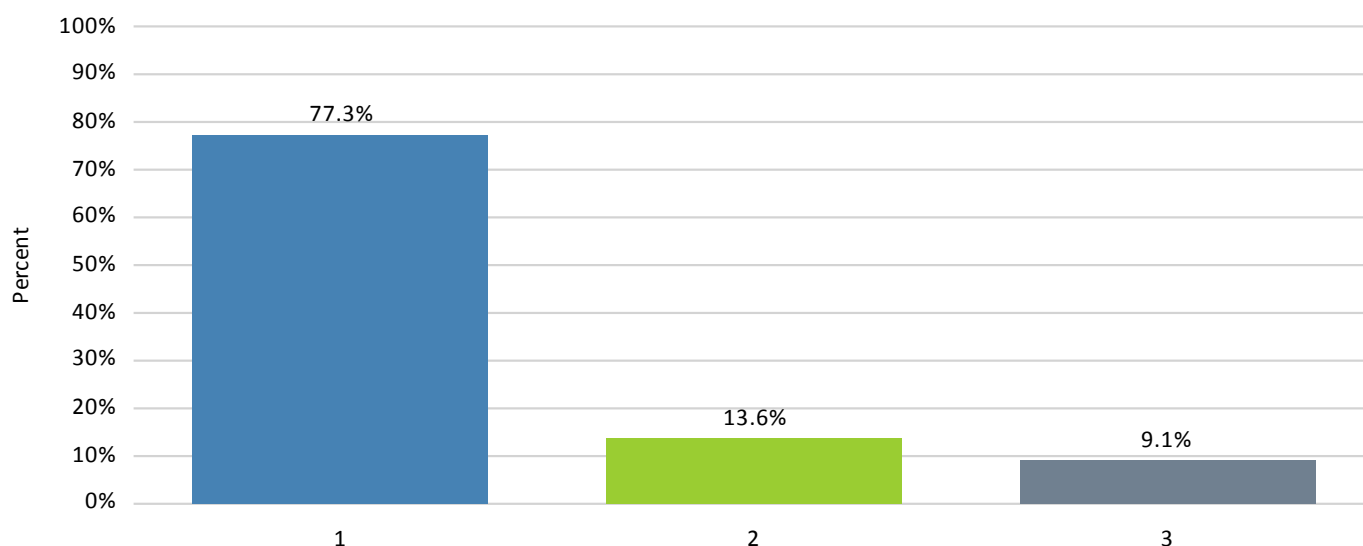
I think this course was very good, but not so relevant to my work as a scientist. I hoped for more practical learning as applying research projects, writing and judging REK, learning about laws in science and not so much about the very old history of science.

The main problem is that, nowadays, PhDs are mainly focused on topics very restricted to a specific problem(s). Therefore, general scopes are most of the times neglected because of the lack of apparent relevance. In my opinion, I think it is very difficult to increase the applicability without affecting the overall scope of the course.

student maybe given a little bit more freedom what he wants to study and focus on.

no suggestions

30. In your opinion, is approximately six weeks for writing the essay...



Name

- | | |
|---|-----------------|
| 1 | sufficient time |
| 2 | too short time |
| 3 | too much time |

Name	Percent
sufficient time	77.3%
too short time	13.6%
too much time	9.1%
N	22

31. Do you have other suggestions for improving the course?

Perhaps include a day or two more during the two weeks, and by that cutting some of the days shorter. Some of the lectures from 14-16 was quite slow and the audience was very unresponsive..

involving the supervisors, that changes in the way of thinking can realized in the end. I ticked of "yes" if the supervisor consider the course useful but actually I do not know. Include "I do not know" as an option to answer in the next survey...

Supervision during seminars!

mentioned earlier... ethics, question...

and for this side of evaluation...you should enter also numbers... useful 1-5... cause I can't they that i think the course was not useful or it was.. it s more something in the middle...parts yes other parts not... there is not just black and white...

It would be nice to have more time to write the essay. I currently have a lot to do, and having more time to write the essay would allow me to manage my time better and perhaps write the essay at a time when I am not as busy as now.

- I found the quite large amount of people who came late quite disruptive and dis-respectful. Maybe it is possible to emphasize the importance of punctuality on the first day.

-Maybe when discussing ethical issues in the seminars it would have been interesting to have some case-studies/example scenarios, with a what would you do in this situation question.

-More time given to the ethics component

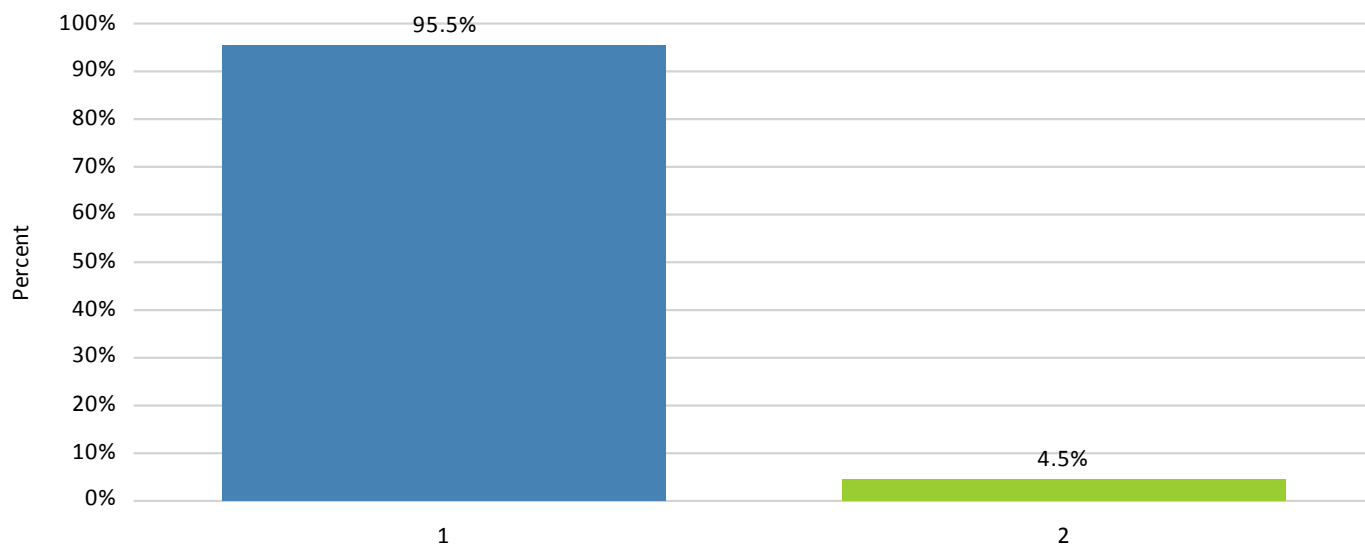
Just a comment to one of the question about supervision on the essay: there has not been any supervision yet, and there were no fields for comments on that. Also it was a mandatory question.

One suggestion for the next course: Do NOT start to introduce social science as a pseudo science! The first day of the course psychology was listed up on the board together with astrology and homopaty. Due to this view on social science during the whole time of the course I will not recomend this course to my fellows, but rather recomend them to wait for the upcoming corse at the facuty of health science.

As I mentioned before, delimiting more precisely the course scope could be a good starting point.

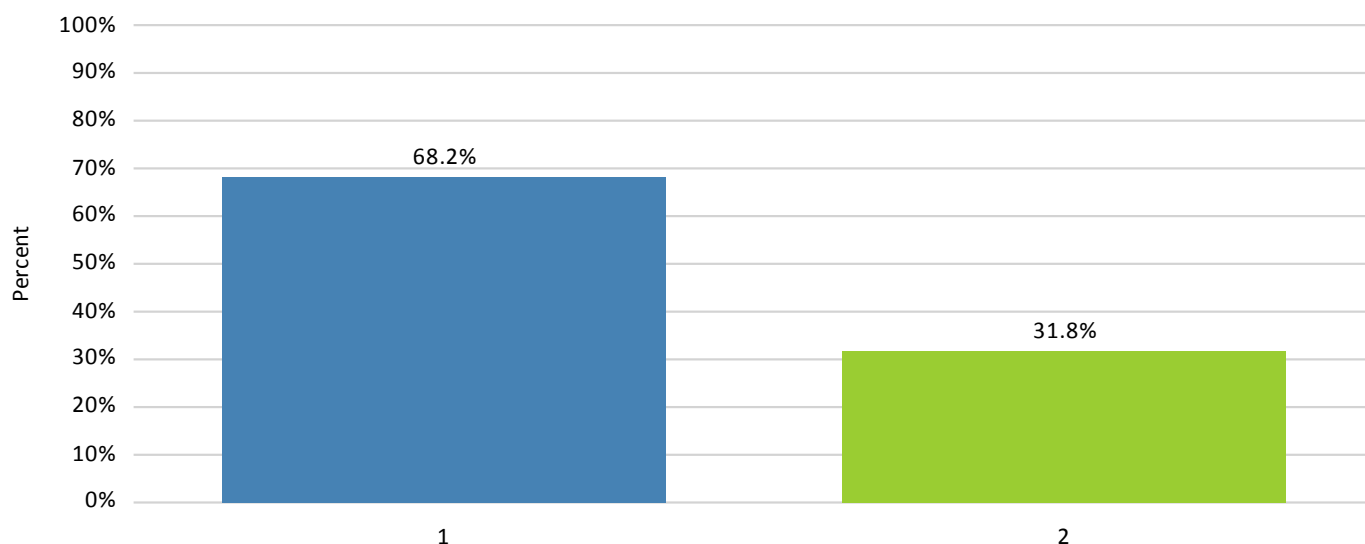
Everyone who is doing PhD should already know how to write, in my views! So one possibility is to offer more consultations hours than to force the students to sit and kill the time. In that way a student can bring his own ideas and discuss with the assigned supervisor.

no

32. Do you consider this course useful for you as a PhD student?

Name	
1	Yes
2	No

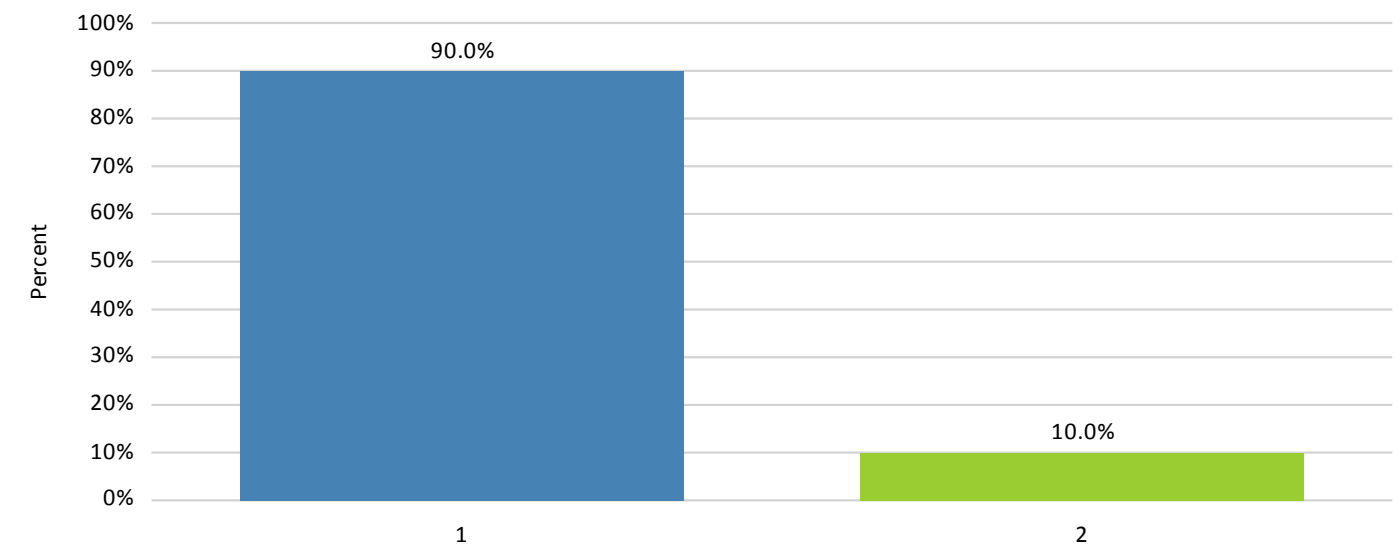
Name	Percent
Yes	95.5%
No	4.5%
N	22

33. Do you consider this course useful for your own PhD project?

Name	
1	Yes
2	No

Name	Percent
Yes	68.2%
No	31.8%
N	22

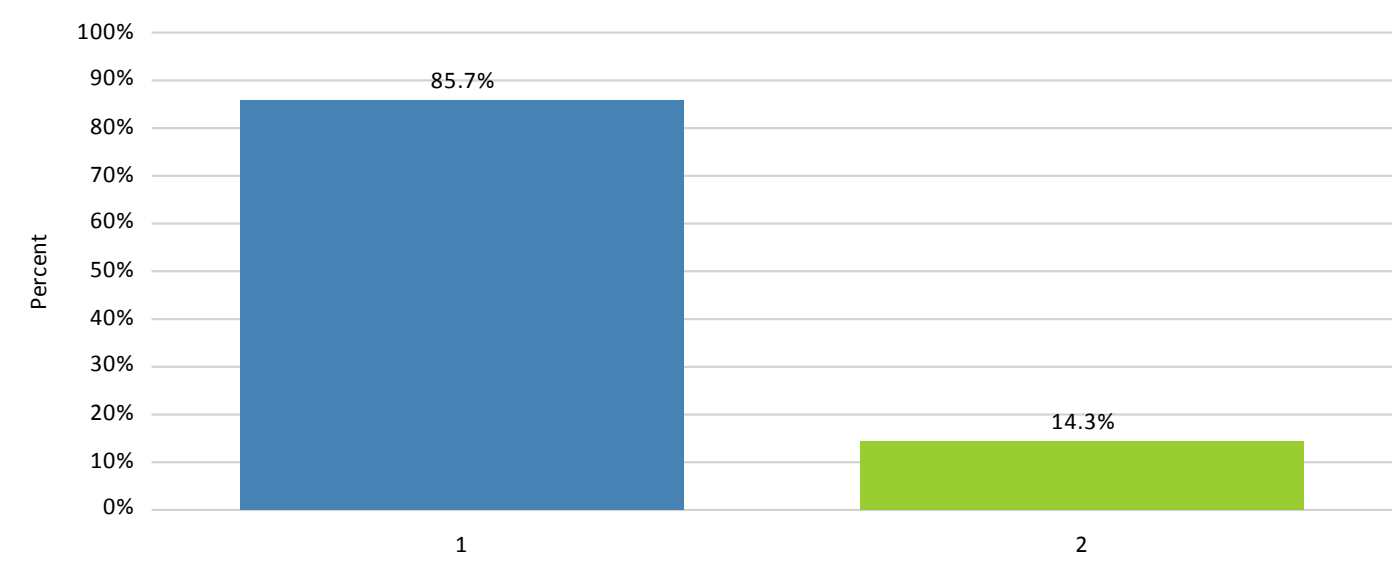
34. Does your supervisor consider this course useful for your PhD?



	Name
1	Yes
2	No

Name	Percent
Yes	90.0%
No	10.0%
N	20

35. Would you recommend this course to others?



Name	
1	Yes
2	No

Name	Percent
Yes	85.7%
No	14.3%
N	21