LUND UNIVERSITY
Faculty of Science

Centre for Mathematical Sciences
Division of Mathematics and Numerical Analysis

Course Analysis for MATA23 Foundation of Algebra, Spring 2024

Course Information

Lecturer: Dag Nilsson

Number of students:
71 newly registered and 6 re-registered.
18 students answered the course evaluation, 9 of them are enrolled on Bachelor's Programme in Mathematics, 2 of them on Bachelor's Programme in Physics and 3 on Teacher Education Programme.

Examination

Project: 55 students passed.
Written examination: 52 students passed.

- Ordinary examination 24/5 2024: 50 students participated and 42 of them passed.
- Resit examination 21/8 2024: 12 students participated and 9 of them passed.

Final grades:
In all, 47 students, including 2 re-registered students, have got their final grade.
24 passed with distinction.
23 passed.

Course Evaluation

Summary of student's answers:
The response frequency was 16.67%. Overall the answers indicate that the students were satisfied with the course, on the question "Overall, I am satisfied with the course" 77.8% gave the answer 5 on a 1-5 scale.

Teachers' comments:

- The teaching consisted of lectures and seminars which were both carried out on campus. The teaching was structured in the following way: Every week a schedule was published on Canvas with information about what we were covering the next week. This information consisted of what material we were covering on the lectures and what exercises we were working with on the seminars.
- There were three homework assignments in the course.
- The course literature consisted of the book "Foundations of algebra" by Elfström.
- The attendance on the lectures was overall high throughout the course. In the beginning of the course the attendance on the seminars was high as well, but dropped off somewhat towards the end of the course.

The examination of the course consisted of a written exam and an oral exam.

Changes from the previous course realisation:

This was the first time I gave this course, and so I followed the plan of the previous course realization fairly close.

Suggestions for the next course realisation:
In the course evaluation, the answers that stood out the most where "The course has increased my ability to communicate the subject orally" for which 37% answered 3 and "The course has increased my ability to cooperate" for which 43.8% answered 3 and 31.2% answered 2. In the seminars the students have the option to present their solutions to the exercises. This is not obligatory and therefore some students do this actively throughout the course while some never do it. It may be good to give students more of an incentive to present exercises, such as give them extra credits on the exam.

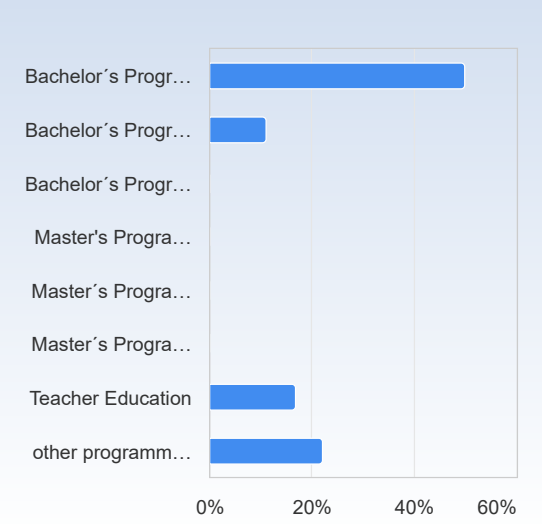
The response to the second question mentioned above is not very surprising in hindsight as there are no obligatory cooperative moments in the course. One could remedy this by adding a group project in addition to the three homework assigments.

Foundations of Algebra MATA23, Spring 2024

Respondents: 108
Answer Count: 18
Answer Frequency: 16.67%

I have studied this course as part of

I have studied this course as part of	Number of responses
Bachelor´s Programme in Mathematics	9 (50.0%)
Bachelor´s Programme in Physics, Theoretical Physics, Astronomy	2 (11.1%)
Bachelor´s Programme, other specialization	0 (0.0%)
Master's Programme in Mathematics	0 (0.0%)
Master´s Programme in Mathematical Statistics	0 (0.0%)
Master´s Programme, other specialization	0 (0.0%)
Teacher Education	3 (16.7%)
other programme or as stand alone course	4 (22.2%)
Total	18 (100.0%)

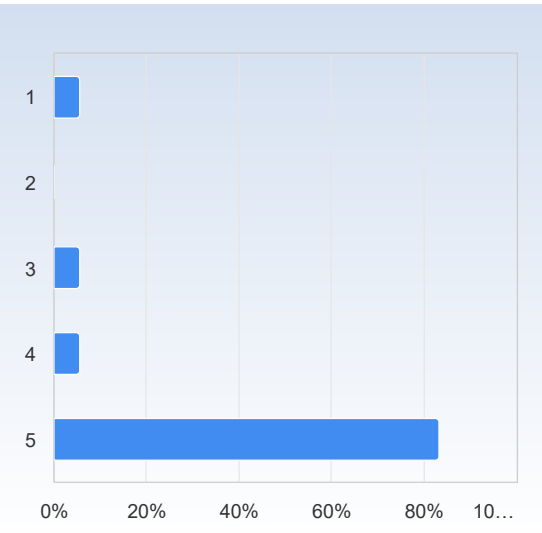


	Mean	Standard Deviation
I have studied this course as part of	3.7	3.2

On the scale 1-5 select the option that best matches your opinion: 1= disagree completely → 3= partly agree → 5= agree completely

2. My prior knowledge has been sufficient to assimilate the contents of this course.

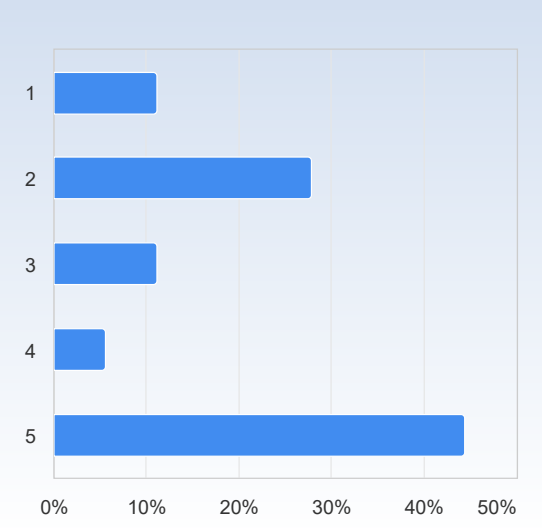
2. My prior knowledge has been sufficient to assimilate the contents of this course.	Number of responses
1	1 (5.6%)
2	0 (0.0%)
3	1 (5.6%)
4	1 (5.6%)
5	15 (83.3%)
Total	18 (100.0%)



	Mean	Standard Deviation
2.My prior knowledge has been sufficient to assimilate the contents of this course.	4.6	1.0

3.I have participated actively in the course.

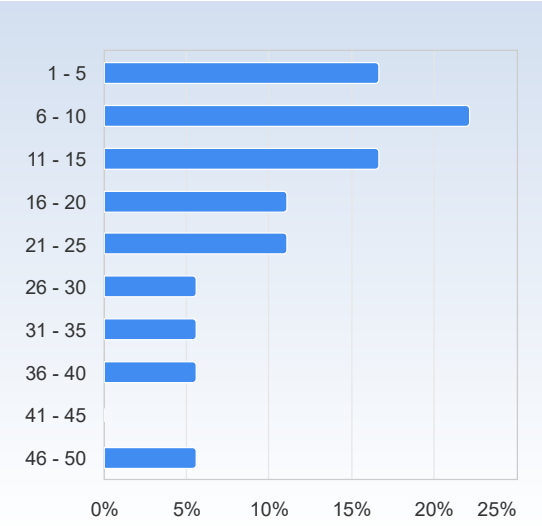
3.I have participated actively in the course.	Number of responses
1	2 (11.1%)
2	5 (27.8%)
3	2 (11.1%)
4	1 (5.6%)
5	8 (44.4%)
Total	18 (100.0%)



	Mean	Standard Deviation
3.I have participated actively in the course.	3.4	1.6

Average number of hours spent in total on the course per week (including scheduled activities):

Average number of hours spent in total on the course per week (including scheduled activities):	Number of responses
1 - 5	3 (16.7%)
6 - 10	4 (22.2%)
11 - 15	3 (16.7%)
16 - 20	2 (11.1%)
21 - 25	2 (11.1%)
26 - 30	1 (5.6%)
31 - 35	1 (5.6%)
36 - 40	1 (5.6%)
41 - 45	0 (0.0%)
46 - 50	1 (5.6%)
Total	18 (100.0%)



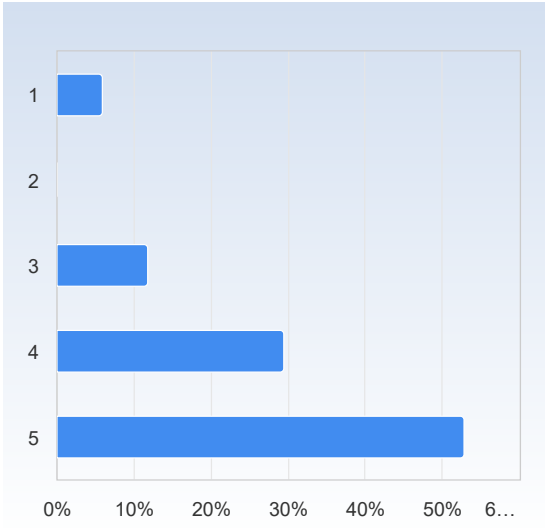
	Mean	Standard Deviation
Average number of hours spent in total on the course per week (including scheduled activities):	18.1	13.7

The course in general

On the scale 1-5 select the option that best matches your opinion: 1= disagree completely → 3= partly agree → 5= agree completely

The way the course was taught and organised suited me.

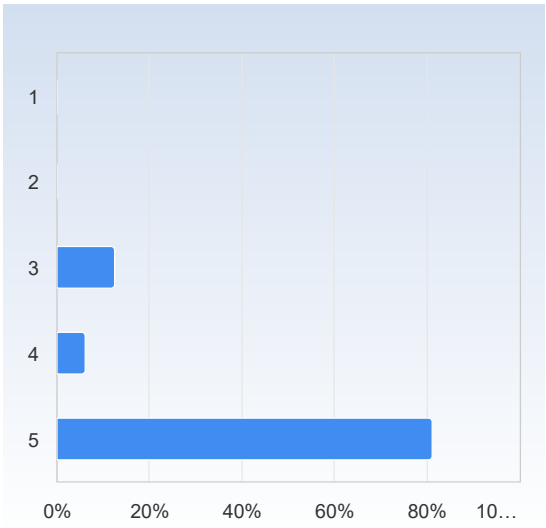
The way the course was taught and organised suited me.	Number of responses
1	1 (5.9%)
2	0 (0.0%)
3	2 (11.8%)
4	5 (29.4%)
5	9 (52.9%)
Total	17 (100.0%)



	Mean	Standard Deviation
The way the course was taught and organised suited me.	4.2	1.1

The number of teacher lead activities (lectures, seminars etc.) has been satisfactory.

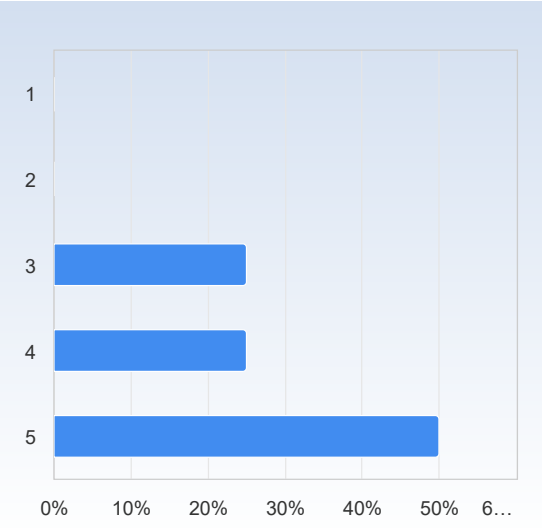
The number of teacher lead activities (lectures, seminars etc.) has been satisfactory.	Number of responses
1	0 (0.0%)
2	0 (0.0%)
3	2 (12.5%)
4	1 (6.2%)
5	13 (81.2%)
Total	16 (100.0%)



	Mean	Standard Deviation
The number of teacher lead activities (lectures, seminars etc.) has been satisfactory.	4.7	0.7

The lectures were valuable for my learning.

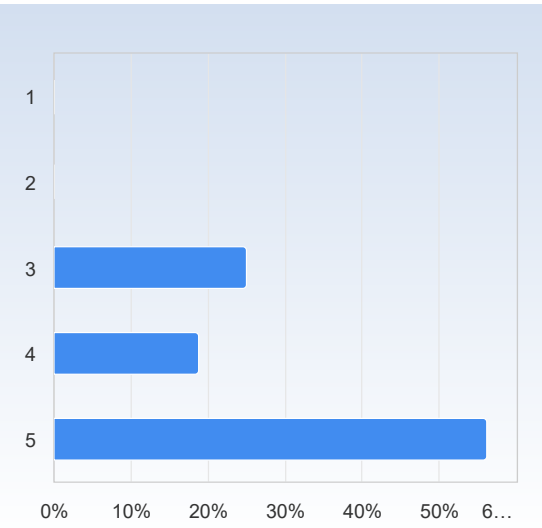
The lectures were valuable for my learning.	Number of responses
1	0 (0.0%)
2	0 (0.0%)
3	4 (25.0%)
4	4 (25.0%)
5	8 (50.0%)
Total	16 (100.0%)



	Mean	Standard Deviation
The lectures were valuable for my learning.	4.2	0.9

The seminars were valuable for my learning.

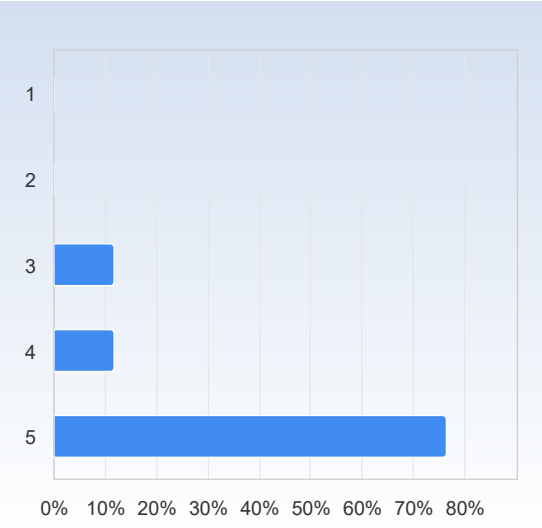
The seminars were valuable for my learning.	Number of responses
1	0 (0.0%)
2	0 (0.0%)
3	4 (25.0%)
4	3 (18.8%)
5	9 (56.2%)
Total	16 (100.0%)



	Mean	Standard Deviation
The seminars were valuable for my learning.	4.3	0.9

Studying on my own was valuable for my learning.

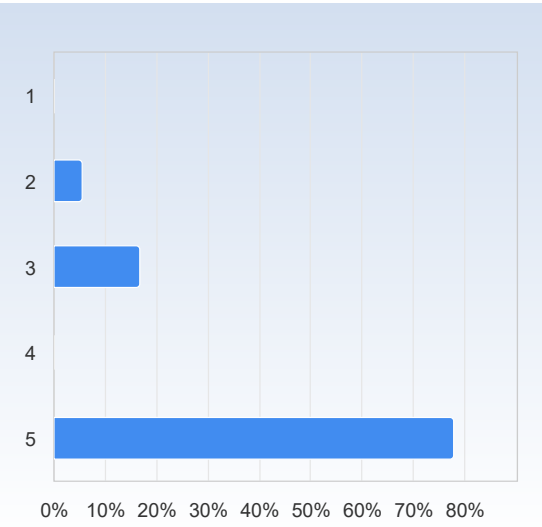
Studying on my own was valuable for my learning.	Number of responses
1	0 (0.0%)
2	0 (0.0%)
3	2 (11.8%)
4	2 (11.8%)
5	13 (76.5%)
Total	17 (100.0%)



	Mean	Standard Deviation
Studying on my own was valuable for my learning.	4.6	0.7

The course literature/material was a valuable learning resource.

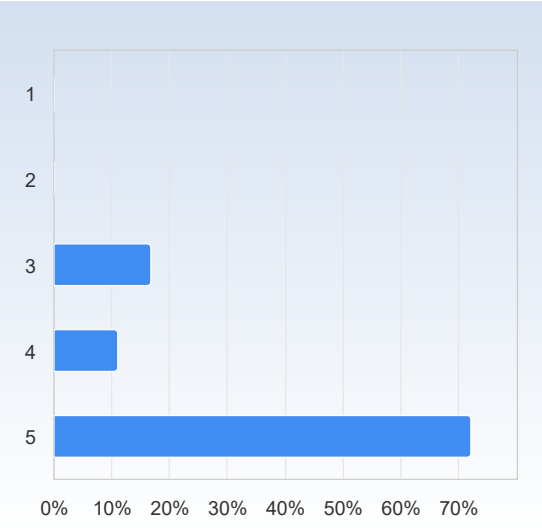
The course literature/material was a valuable learning resource.	Number of responses
1	0 (0.0%)
2	1 (5.6%)
3	3 (16.7%)
4	0 (0.0%)
5	14 (77.8%)
Total	18 (100.0%)



	Mean	Standard Deviation
The course literature/material was a valuable learning resource.	4.5	1.0

The information I received before the course start was satisfactory.

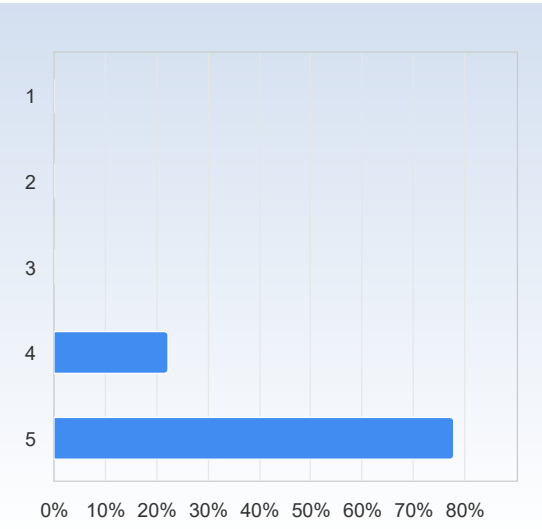
The information I received before the course start was satisfactory.	Number of responses
1	0 (0.0%)
2	0 (0.0%)
3	3 (16.7%)
4	2 (11.1%)
5	13 (72.2%)
Total	18 (100.0%)



	Mean	Standard Deviation
The information I received before the course start was satisfactory.	4.6	0.8

The communication with the teaching staff during the course was good.

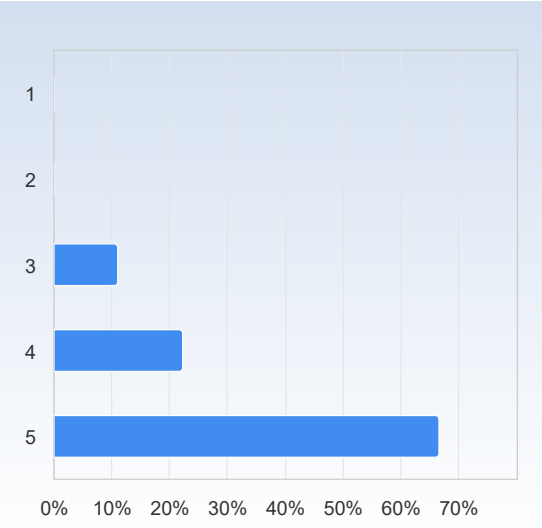
The communication with the teaching staff during the course was good.	Number of responses
1	0 (0.0%)
2	0 (0.0%)
3	0 (0.0%)
4	4 (22.2%)
5	14 (77.8%)
Total	18 (100.0%)



	Mean	Standard Deviation
The communication with the teaching staff during the course was good.	4.8	0.4

It was clear throughout the course what was expected of me.

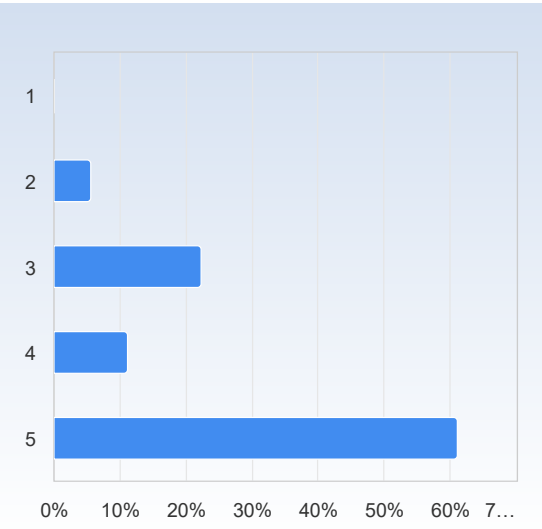
It was clear throughout the course what was expected of me.	Number of responses
1	0 (0.0%)
2	0 (0.0%)
3	2 (11.1%)
4	4 (22.2%)
5	12 (66.7%)
Total	18 (100.0%)



	Mean	Standard Deviation
It was clear throughout the course what was expected of me.	4.6	0.7

I have received valuable feedback from my teacher/teachers during the course.

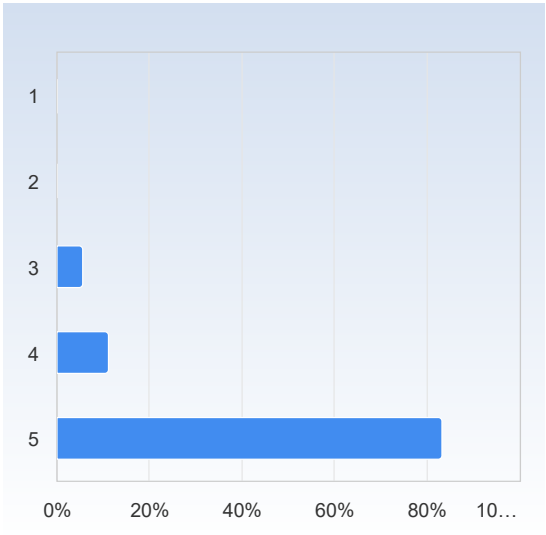
I have received valuable feedback from my teacher /teachers during the course.	Number of responses
1	0 (0.0%)
2	1 (5.6%)
3	4 (22.2%)
4	2 (11.1%)
5	11 (61.1%)
Total	18 (100.0%)



	Mean	Standard Deviation
I have received valuable feedback from my teacher/teachers during the course.	4.3	1.0

The course had a reasonable workload.

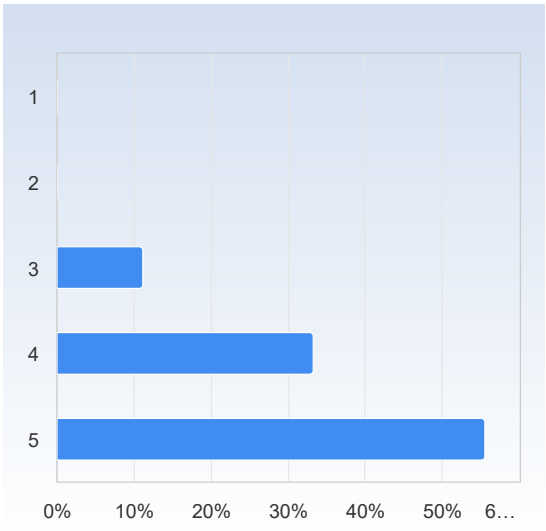
The course had a reasonable workload.	Number of responses
1	0 (0.0%)
2	0 (0.0%)
3	1 (5.6%)
4	2 (11.1%)
5	15 (83.3%)
Total	18 (100.0%)



	Mean	Standard Deviation
The course had a reasonable workload.	4.8	0.5

The workload was evenly distributed throughout the course.

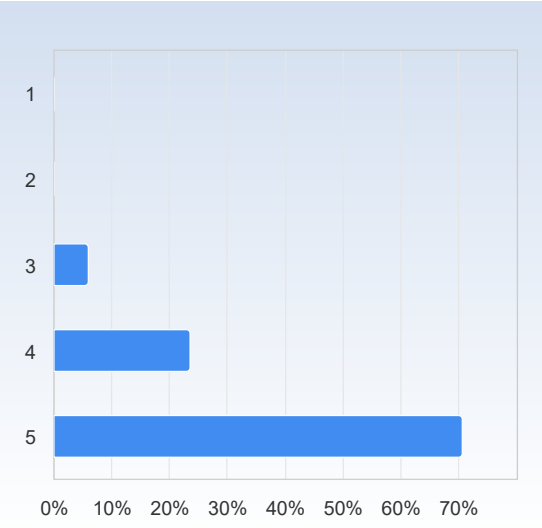
The workload was evenly distributed throughout the course.	Number of responses
1	0 (0.0%)
2	0 (0.0%)
3	2 (11.1%)
4	6 (33.3%)
5	10 (55.6%)
Total	18 (100.0%)



	Mean	Standard Deviation
The workload was evenly distributed throughout the course.	4.4	0.7

The examination matched the contents and level of the course.

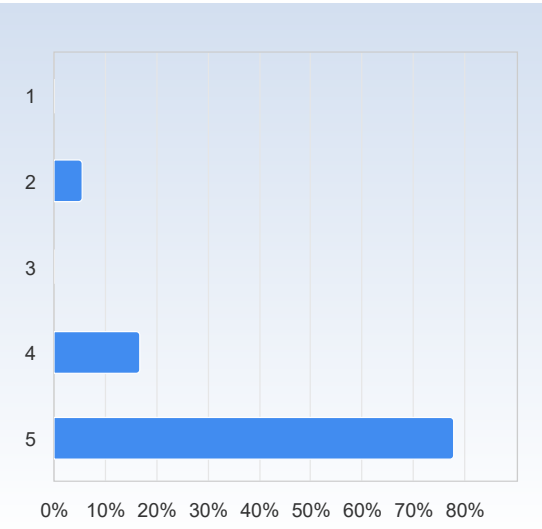
The examination matched the contents and level of the course.	Number of responses
1	0 (0.0%)
2	0 (0.0%)
3	1 (5.9%)
4	4 (23.5%)
5	12 (70.6%)
Total	17 (100.0%)



	Mean	Standard Deviation
The examination matched the contents and level of the course.	4.6	0.6

Overall, I am satisfied with the course.

Overall, I am satisfied with the course.	Number of responses
1	0 (0.0%)
2	1 (5.6%)
3	0 (0.0%)
4	3 (16.7%)
5	14 (77.8%)
Total	18 (100.0%)



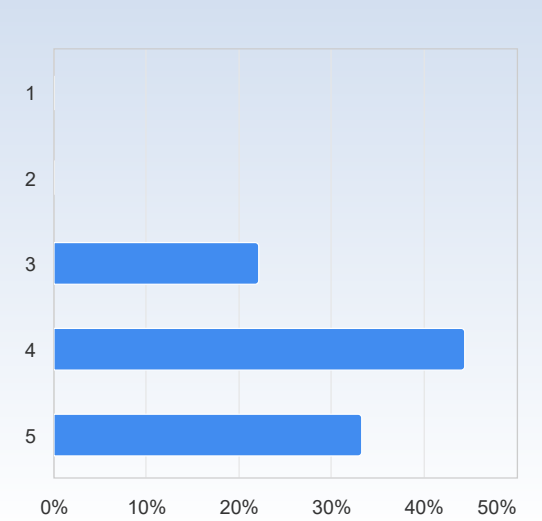
	Mean	Standard Deviation
Overall, I am satisfied with the course.	4.7	0.8

On the development of generic skills

On a scale 1-5 select the option that best matches your opinion: 1= disagree completely → 3= partly agree → 5= agree completely

The course has increased my ability to read a mathematical text.

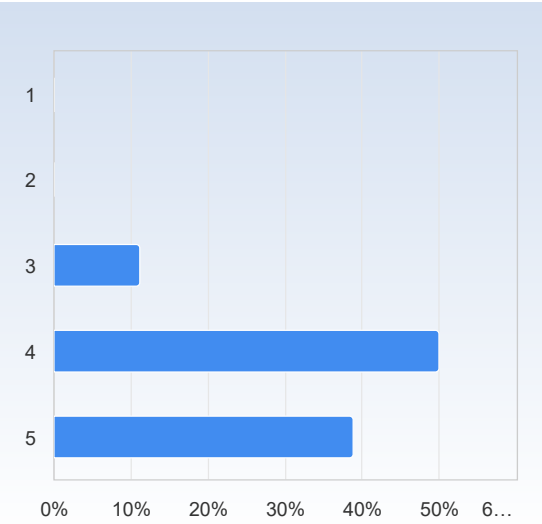
The course has increased my ability to read a mathematical text.	Number of responses
1	0 (0.0%)
2	0 (0.0%)
3	4 (22.2%)
4	8 (44.4%)
5	6 (33.3%)
Total	18 (100.0%)



	Mean	Standard Deviation
The course has increased my ability to read a mathematical text.	4.1	0.8

The course has increased my ability to communicate the subject in writing.

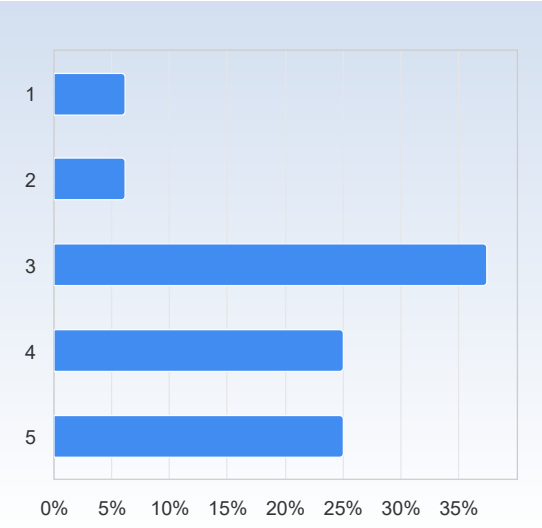
The course has increased my ability to communicate the subject in writing.	Number of responses
1	0 (0.0%)
2	0 (0.0%)
3	2 (11.1%)
4	9 (50.0%)
5	7 (38.9%)
Total	18 (100.0%)



	Mean	Standard Deviation
The course has increased my ability to communicate the subject in writing.	4.3	0.7

The course has increased my ability to communicate the subject orally.

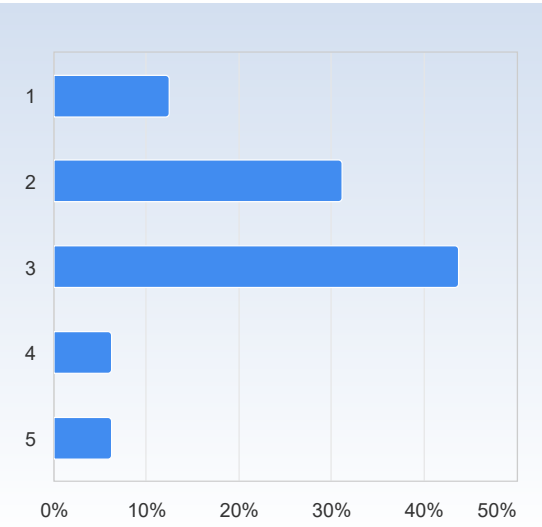
The course has increased my ability to communicate the subject orally.	Number of responses
1	1 (6.2%)
2	1 (6.2%)
3	6 (37.5%)
4	4 (25.0%)
5	4 (25.0%)
Total	16 (100.0%)



	Mean	Standard Deviation
The course has increased my ability to communicate the subject orally.	3.6	1.2

The course has increased my ability to cooperate.

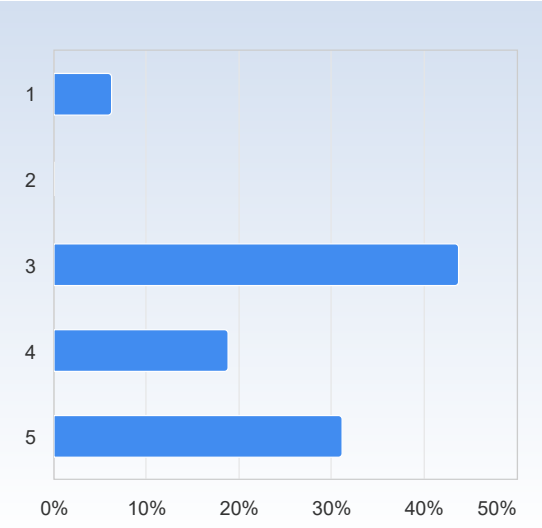
The course has increased my ability to cooperate.	Number of responses
1	2 (12.5%)
2	5 (31.2%)
3	7 (43.8%)
4	1 (6.2%)
5	1 (6.2%)
Total	16 (100.0%)



	Mean	Standard Deviation
The course has increased my ability to cooperate.	2.6	1.0

The course has increased my ability to search and process information.

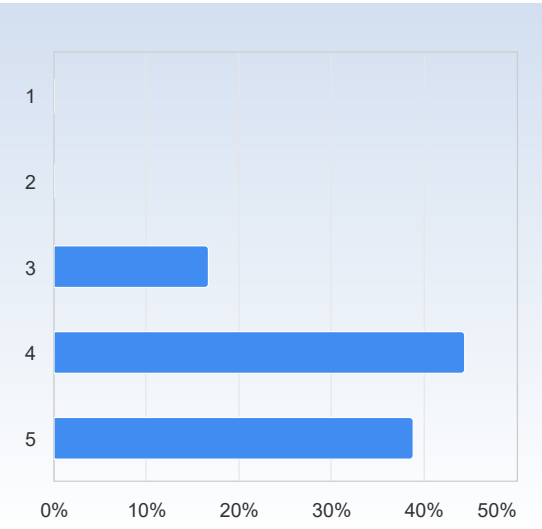
The course has increased my ability to search and process information.	Number of responses
1	1 (6.2%)
2	0 (0.0%)
3	7 (43.8%)
4	3 (18.8%)
5	5 (31.2%)
Total	16 (100.0%)



	Mean	Standard Deviation
The course has increased my ability to search and process information.	3.7	1.1

The course has increased my ability to analyze and solve problems.

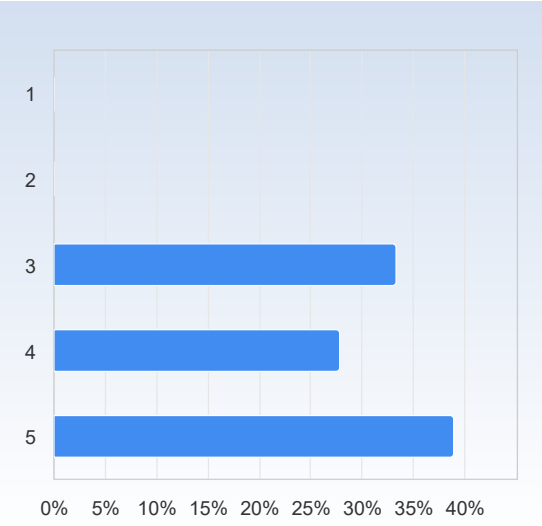
The course has increased my ability to analyze and solve problems.	Number of responses
1	0 (0.0%)
2	0 (0.0%)
3	3 (16.7%)
4	8 (44.4%)
5	7 (38.9%)
Total	18 (100.0%)



	Mean	Standard Deviation
The course has increased my ability to analyze and solve problems.	4.2	0.7

As a result of this course, I feel confident about tackling unfamiliar problems.

As a result of this course, I feel confident about tackling unfamiliar problems.	Number of responses
1	0 (0.0%)
2	0 (0.0%)
3	6 (33.3%)
4	5 (27.8%)
5	7 (38.9%)
Total	18 (100.0%)



	Mean	Standard Deviation
As a result of this course, I feel confident about tackling unfamiliar problems.	4.1	0.9

What did you appreciate most with the course?

What did you appreciate most with the course?
Bra och tydlig information
Tom's seminars are really good. He's very encouraging and makes it easy to feel comfortable making mistakes and presenting.
Seminars were great as usual...
lecturer and TA are really patient
I feel like this course really did what it set out to do: give me a more fundamental understanding of math. It also made me realize connections between areas of math that i previously saw as very different.
The pace and structure
I liked the content of the course, this was kind of the first course that I thought was really needed to become a teacher. A lot of people said that it was "too easy" but for us teacher-students it was a good repetition and example of how you can teach this stuff. I also appreciated the literatur and the way the lecturer used it. The lecturer followed the book the whole time so if you missed a lecture, you could just read the book to get the information (but of course with a bit less explanation). Also, Dag was the first lecturer at the university that I've met that is somewhat pedagogical! That was appreciated A LOT!
The connection between number theory and polynomials The number of available past exams
Dag's teaching.
The subject matter and the teachers engagement.
The course gives a wide and good base for further learning of mathematics. Fun examples and a good course book. Good communication with lecturer and informative, concise feedback on assignments.
It was a really cosy course!

What do you think should be improved?

What do you think should be improved?
I think a lot of the course material is too easy. This course would've been good last semester.
Course should be earlier in the programme
I don't have anything to complain about
More time should be allotted to number theory.
mandatory seminars (at least some, not all, so I'm forced to do something)
I think just having higher level highschool mathematics was not at all enough to enter this course. There's a big gap between the two levels of math. I struggled a lot to grasp concepts that were mentioned during lectures as it they were a well known fact. As you can imagine it was quite tough for me to carry on without knowing these "basic" concepts.
Nothing, I really liked this course!
the part about real numbers should be covered within the analysis one variable course the seminar questions can be more challenging, oriented more towards theory the theorems and proofs about the base (number theory) are very technical and hard to follow, it would be nice if the motivation behind each proof were explained beforehand
-
Dedicate some time to solve the same or similar problems using different methods. Example could be using sets and predicate logic for some counting problem and later on in the course defining the counting problem in terms of a series and using induction.
A lot of information was not communicated to the teacher students. For exemple in the beginning If we had to do the inlämningsuppgifter or not. And the fact that we should also not do the oral exam and that we can only get VG in this couse If we also get VG in flervariabelsanalys 2, was not communicated to us.

Have you during this course experienced course literature, staff or teaching methods to be discriminatory in any way (gender, ethnicity, etc.)?

Have you during this course experienced course literature, staff or teaching methods to be discriminatory in any way (gender, ethnicity, etc.)?
nope
No
No
No.
no
no
No.
no
no