LUND UNIVERSITY
Faculty of Science

Course Analysis for MATB23 Analysis in Several Variables 2, Spring 2022

Course Information

Lecturer: Anders Olofsson
Teaching assistants: Giang To
Number of students: 53
38 newly registered and 15 re-registered.
10 students answered the course evaluation.

Examination

Oral examination: 21 students passed.
Written examination: 21 students passed.

Final grades:
In all, 21 students, including 2 re-registered students, have got their final grade.

Course Evaluation

Summary of student's answers:
Overall positive response.

Teachers' comments:
The teacher lead activities (lectures & problem sessions) and examination (written & oral) were well received by students. Much of the course consisted in putting core material from the previous course "Analysis in several variables 1" on a more solid ground.

Changes from the previous course realisation:
None/slight modifications.

Suggestions for the next course realisation: A big course "Analysis in several variables" of 15 hp (as was the case previously) allows for a more coherent presentation of the course material. In the present setup of two smaller sub-courses of 7,5 hp each, the examples/applications and the theoretical developments become too separated. On a bigger scale the education becomes unnecessarily fragmented because of such reforms.

Analysis in Several Variables 2, Spring 2022

Answer Count: 10

I have studied this course as part of

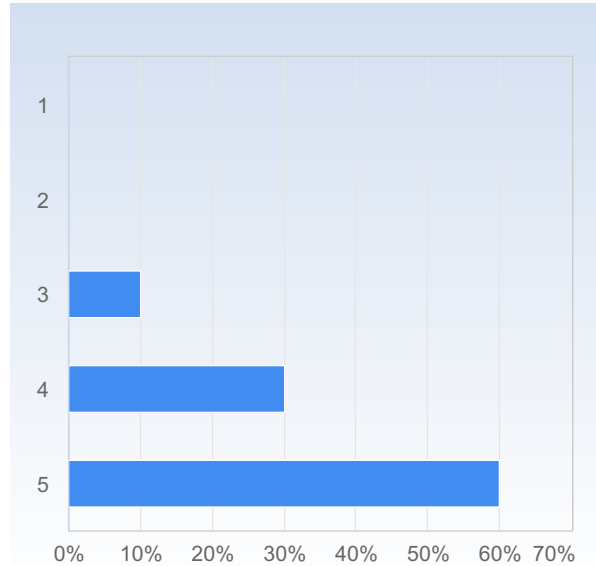| I have studied this course as part of	Number of responses
Bachelor´s Programme in Mathematics	7 (70,0%)
Bachelor´s Programme in Physics, Theoretical Physics, Astronomy	1 (10,0%)
Bachelor´s Programme, other specialization	0 (0,0%)
Master's Programme in Mathematics	0 (0,0%)
Master´s Programme in Mathematical Statistics	0 (0,0%)
Master´s Programme, other specialization	0 (0,0%)
Teacher Education	0 (0,0%)
other programme or as stand alone course	2 (20,0%)
Total	10 (100,0%)
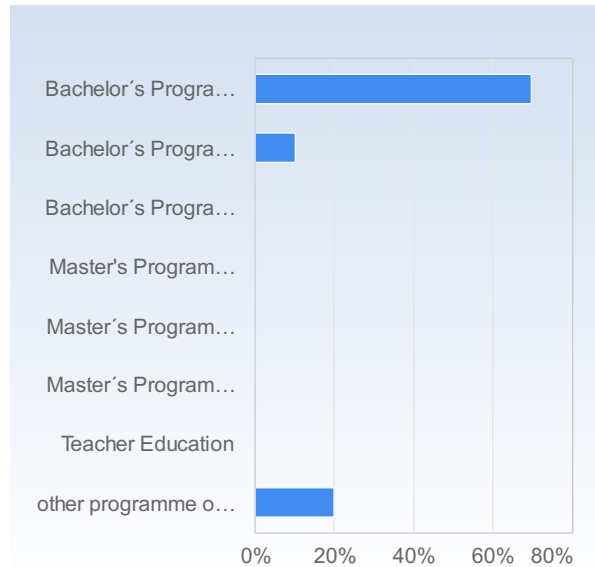
	Mean	Standard Deviation
I have studied this course as part of	2,5	2,9

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	0 (0,0%)
2	0 (0,0%)
3	1 (10,0%)
4	3 (30,0%)
5	6 (60,0%)
Total	10 (100,0%)

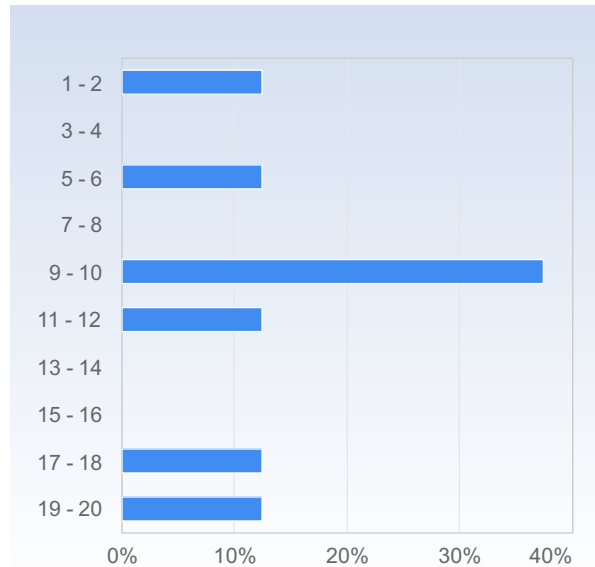|	Mean	Standard Deviation
2. My prior knowledge has been sufficient to assimilate the contents of this course.	4,5	0,7

3. I have participated actively in the course.

3. I have participated actively in the course.	Number of responses
1	1 (10,0%)
2	0 (0,0%)
3	4 (40,0%)
4	3 (30,0%)
5	2 (20,0%)
Total	10 (100,0%)
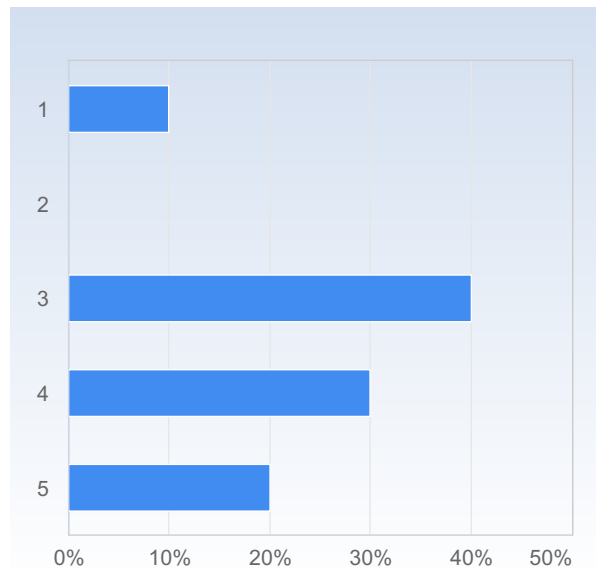
	Mean	Standard Deviation
3. I have participated actively in the course.	3,5	1,2

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 - 2	1 (12,5%)
3 - 4	0 (0,0%)
5 - 6	1 (12,5%)
7 - 8	0 (0,0%)
9 - 10	3 (37,5%)
11 - 12	1 (12,5%)
13 - 14	0 (0,0%)
15 - 16	0 (0,0%)
17 - 18	1 (12,5%)
19 - 20	1 (12,5%)
Total	8 (100,0%)

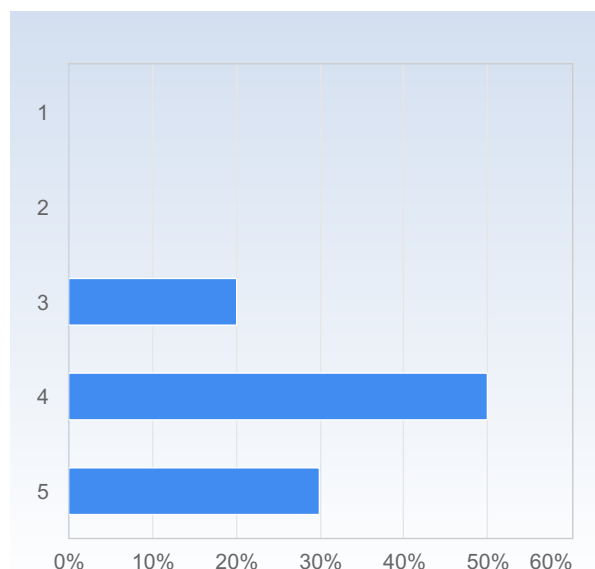|	Mean	Standard Deviation
Average number of hours spent in total on the course per week (including scheduled activities):	10,8	5,9

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
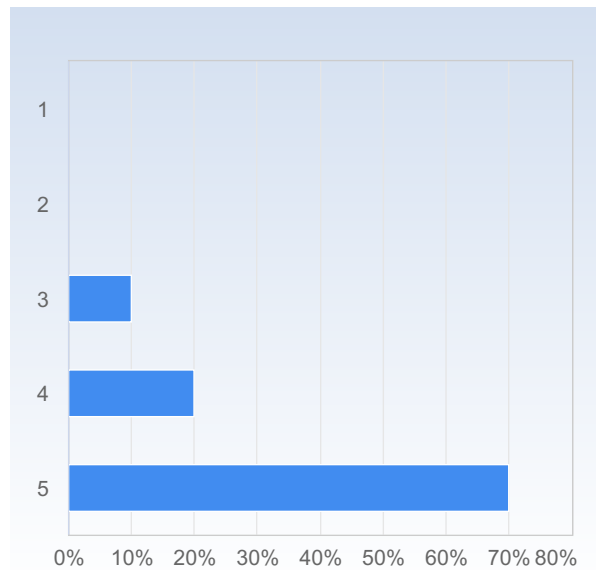
The way the course was taught and organised suited me.

The way the course was taught and organised suited me.	Number of responses
1	0 (0,0%)
2	0 (0,0%)
3	2 (20,0%)
4	5 (50,0%)
5	3 (30,0%)
Total	10 (100,0%)

	Mean	Standard Deviation
The way the course was taught and organised suited me.	4,1	0,7

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	1 (10,0%)
4	2 (20,0%)
5	7 (70,0%)
Total	10 (100,0%)

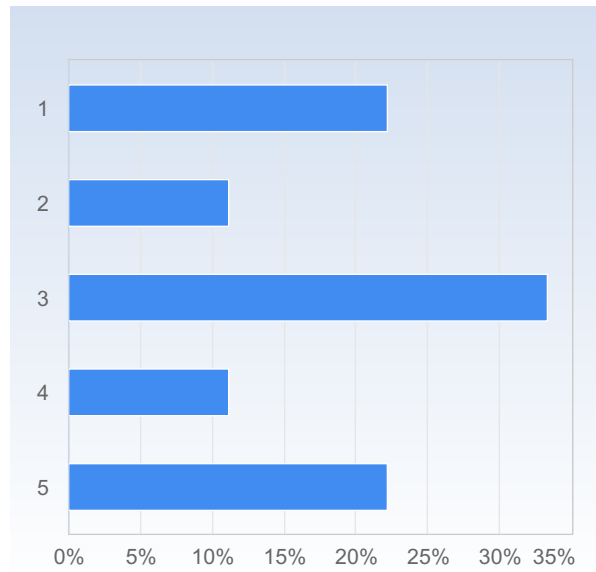|	Mean	Standard Deviation
The number of teacher lead activities (lectures, seminars etc.) has been satisfactory.	4,6	0,7

The lectures were valuable for my learning.

The lectures were valuable for my learning.	Number of responses
1	1 (10,0%)
2	0 (0,0%)
3	0 (0,0%)
4	1 (10,0%)
5	8 (80,0%)
Total	10 (100,0%)
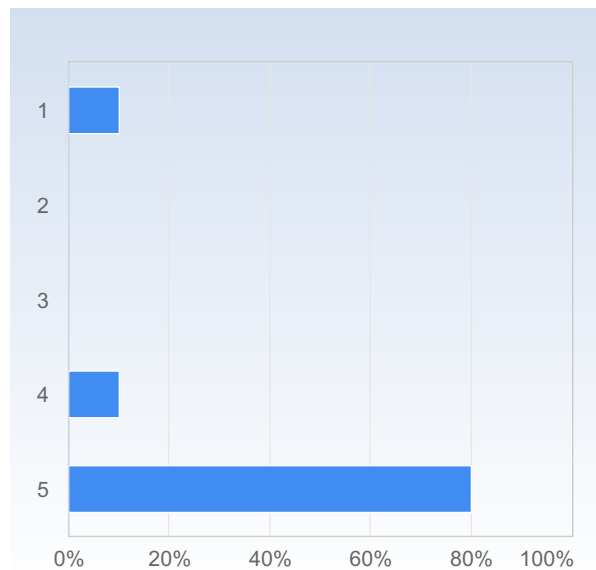
	Mean	Standard Deviation
The lectures were valuable for my learning.	4,5	1,3

The seminars were valuable for my learning.

The seminars were valuable for my learning.	Number of responses
1	2 (22,2%)
2	1 (11,1%)
3	3 (33,3%)
4	1 (11,1%)
5	2 (22,2%)
Total	9 (100,0%)

	Mean	Standard Deviation
The seminars were valuable for my learning.	3,0	1,5

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	1 (10,0%)
4	3 (30,0%)
5	6 (60,0%)
Total	10 (100,0%)
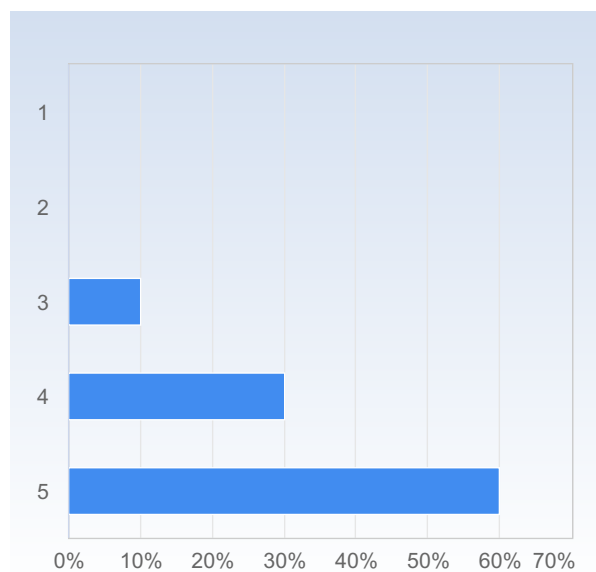
	Mean	Standard Deviation
Studying on my own was valuable for my learning.	4,5	0,7

The course literature/material was a valuable learning resource.

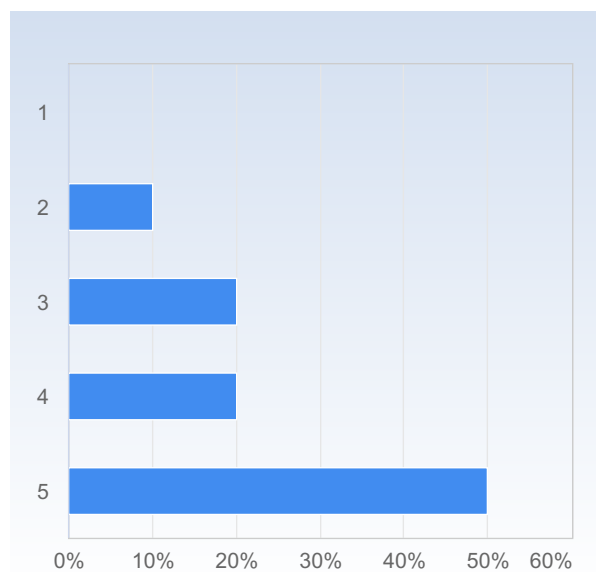| The course literature/material was a valuable learning resource.	Number of responses
1	2 (20,0%)
2	3 (30,0%)
3	3 (30,0%)
4	1 (10,0%)
5	1 (10,0%)
Total	10 (100,0%)
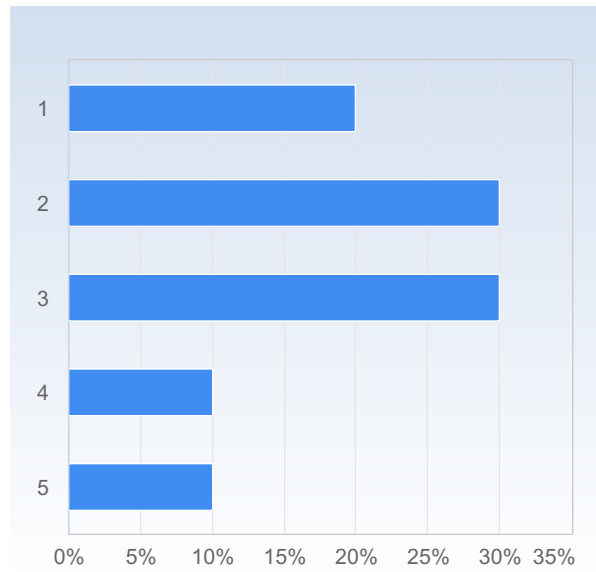
	Mean	Standard Deviation
The course literature/material was a valuable learning resource.	2,6	1,3

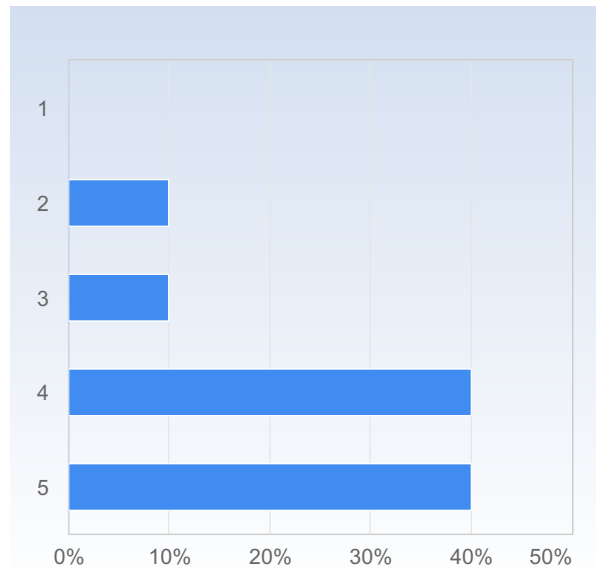## The information I received before the course start was satisfactory.

The information I received before the course start was satisfactory.	Number of responses
1	0 (0,0%)
2	1 (10,0%)
3	2 (20,0%)
4	2 (20,0%)
5	5 (50,0%)
Total	10 (100,0%)

	Mean	Standard Deviation
The information I received before the course start was satisfactory.	4,1	1,1

## 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	1 (10,0%)
3	1 (10,0%)
4	4 (40,0%)
5	4 (40,0%)
Total	10 (100,0%)

	Mean	Standard Deviation
The communication with the teaching staff during the course was good.	4,1	1,0

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	1 (10,0%)
3	3 (30,0%)
4	4 (40,0%)
5	2 (20,0%)
Total	10 (100,0%)
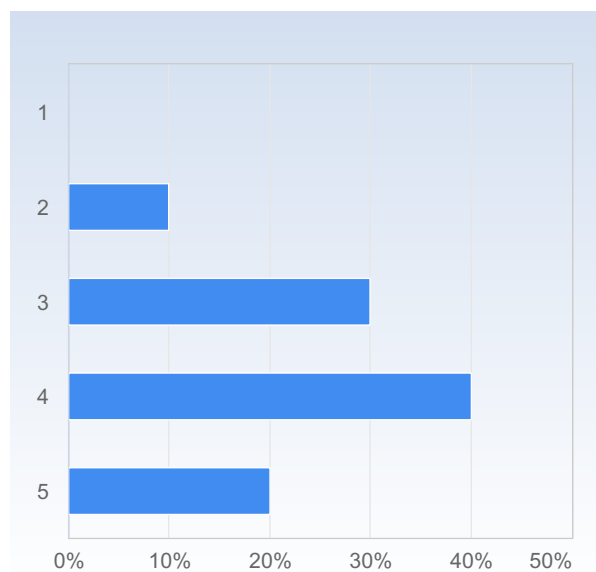
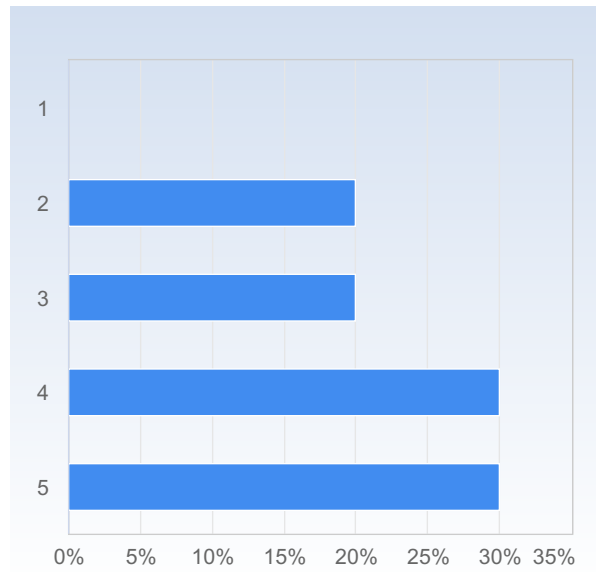|	Mean	Standard Deviation
It was clear throughout the course what was expected of me.	3,7	0,9

## 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	2 (20,0%)
3	2 (20,0%)
4	3 (30,0%)
5	3 (30,0%)
Total	10 (100,0%)

	Mean	Standard Deviation
I have received valuable feedback from my teacher/teachers during the course.	3,7	1,2

The course had a reasonable workload.

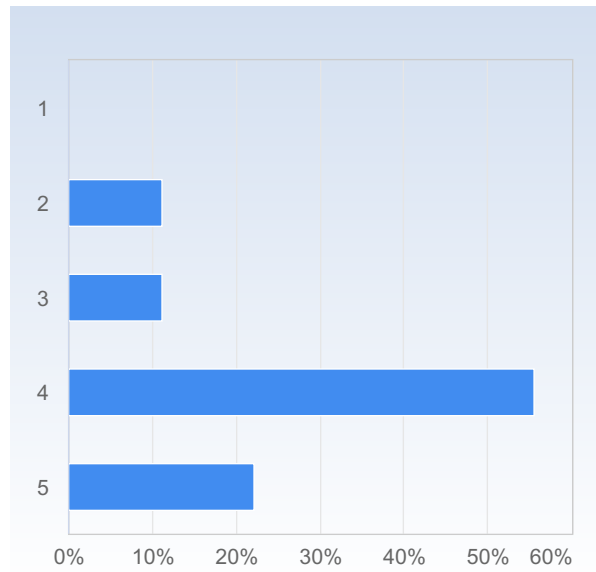| The course had a reasonable workload.	Number of responses
1	0 (0,0%)
2	0 (0,0%)
3	2 (20,0%)
4	5 (50,0%)
5	3 (30,0%)
Total	10 (100,0%)
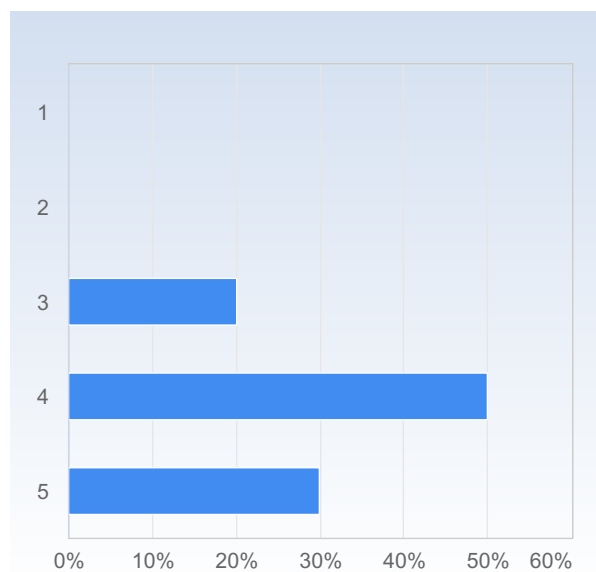
	Mean	Standard Deviation
The course had a reasonable workload.	4,1	0,7

The workload was evenly distributed throughout the course.

The workload was evenly distributed throughout the course.	Number of responses
1	0 (0,0%)
2	1 (11,1%)
3	1 (11,1%)
4	5 (55,6%)
5	2 (22,2%)
Total	9 (100,0%)

	Mean	Standard Deviation
The workload was evenly distributed throughout the course.	3,9	0,9

The examination matched the contents and level of the course.

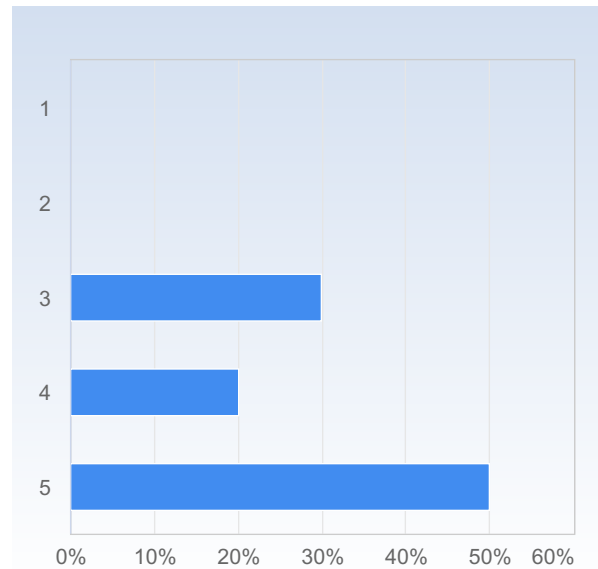| The examination matched the contents and level of the course.	Number of responses
1	0 (0,0%)
2	0 (0,0%)
3	2 (22,2%)
4	3 (33,3%)
5	4 (44,4%)
Total	9 (100,0%)
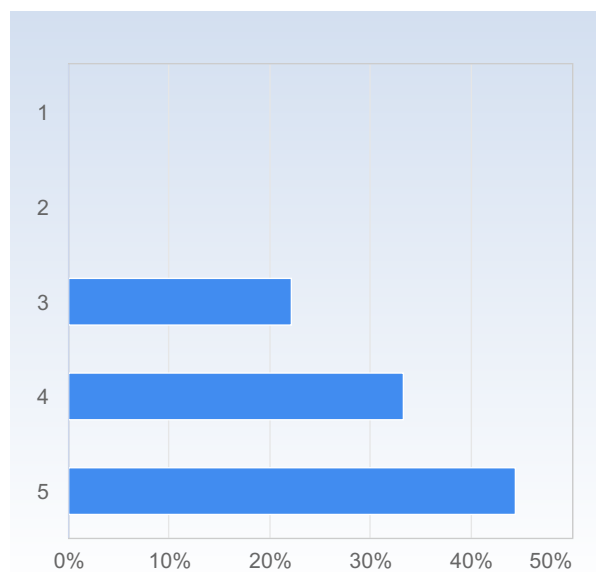
	Mean	Standard Deviation
The examination matched the contents and level of the course.	4,2	0,8

Overall, I am satisfied with the course.

Overall, I am satisfied with the course.	Number of responses
1	0 (0,0%)
2	0 (0,0%)
3	3 (30,0%)
4	2 (20,0%)
5	5 (50,0%)
Total	10 (100,0%)

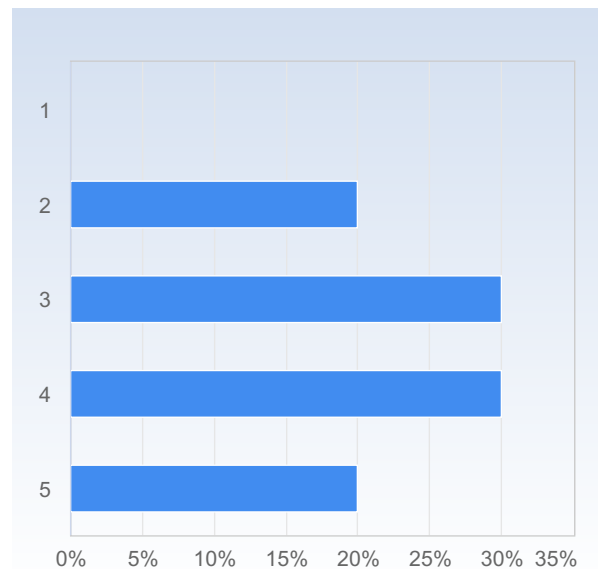|	Mean	Standard Deviation
Overall, I am satisfied with the course.	4,2	0,9

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	2 (20,0%)
3	3 (30,0%)
4	3 (30,0%)
5	2 (20,0%)
Total	10 (100,0%)

	Mean	Standard Deviation
The course has increased my ability to read a mathematical text.	3,5	1,1

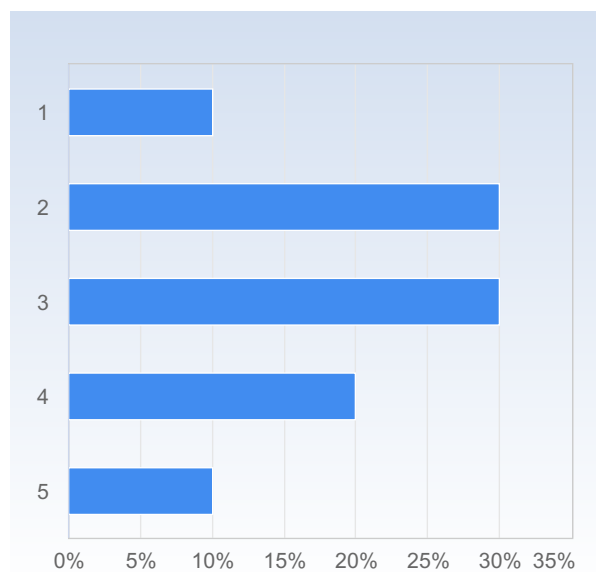## The course has increased my ability to communicate the subject in writing.

The course has increased my ability to communicate the subject in writing.	Number of responses
1	0 (0,0%)
2	2 (20,0%)
3	2 (20,0%)
4	5 (50,0%)
5	1 (10,0%)
Total	10 (100,0%)
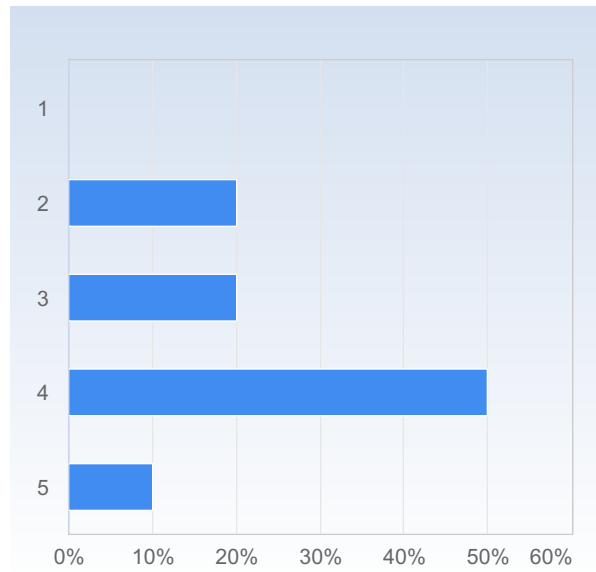
	Mean	Standard Deviation
The course has increased my ability to communicate the subject in writing.	3,5	1,0

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 (10,0%)
2	3 (30,0%)
3	3 (30,0%)
4	2 (20,0%)
5	1 (10,0%)
Total	10 (100,0%)

	Mean	Standard Deviation
The course has increased my ability to communicate the subject orally.	2,9	1,2

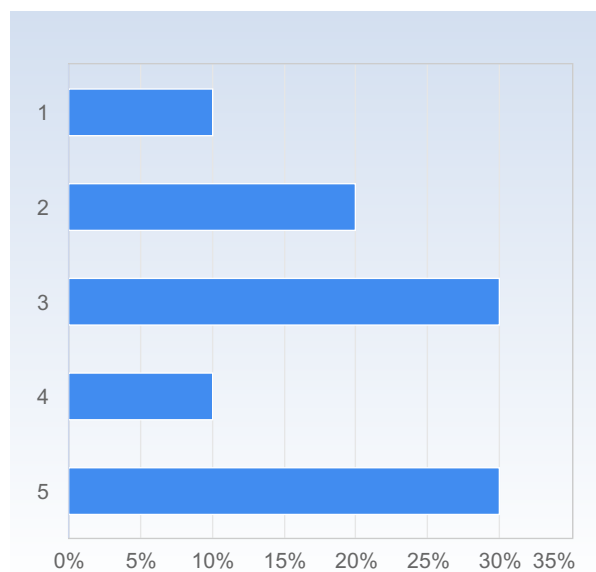## The course has increased my ability to cooperate.

The course has increased my ability to cooperate.	Number of responses
1	0 (0,0%)
2	5 (50,0%)
3	4 (40,0%)
4	0 (0,0%)
5	1 (10,0%)
Total	10 (100,0%)
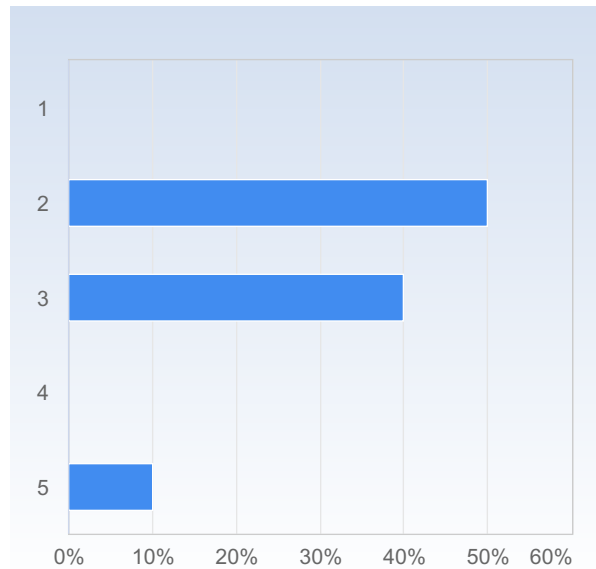
	Mean	Standard Deviation
The course has increased my ability to cooperate.	2,7	0,9

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 (10,0%)
2	2 (20,0%)
3	3 (30,0%)
4	1 (10,0%)
5	3 (30,0%)
Total	10 (100,0%)

	Mean	Standard Deviation
The course has increased my ability to search and process information.	3,3	1,4

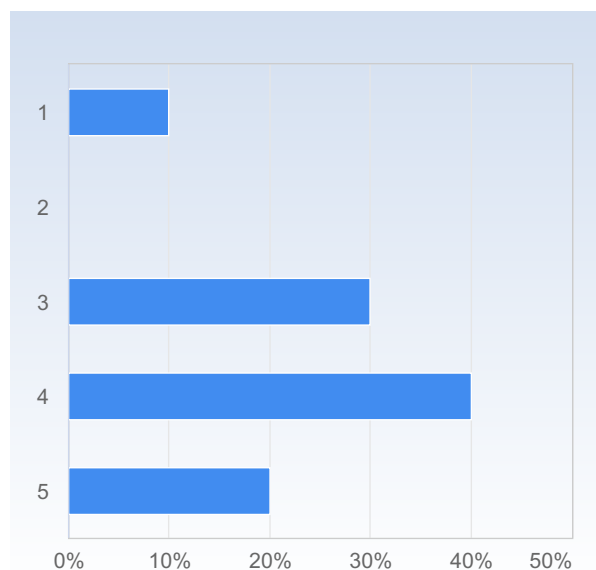## The course has increased my ability to analyze and solve problems.

The course has increased my ability to analyze and solve problems.	Number of responses
1	0 (0,0%)
2	1 (10,0%)
3	2 (20,0%)
4	4 (40,0%)
5	3 (30,0%)
Total	10 (100,0%)
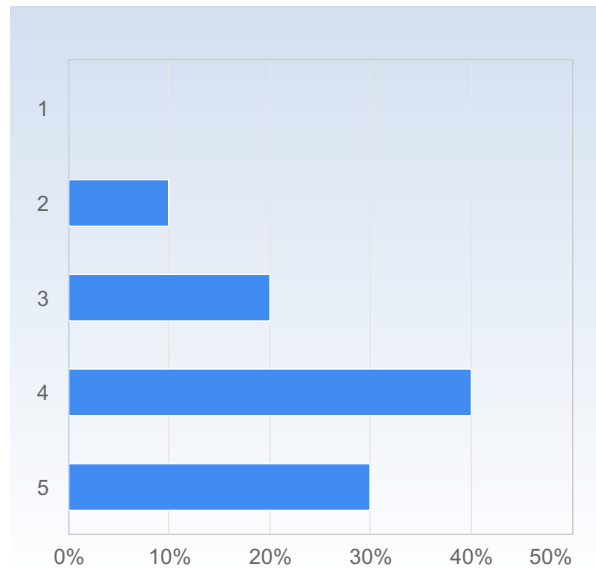
	Mean	Standard Deviation
The course has increased my ability to analyze and solve problems.	3,9	1,0

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	1 (10,0%)
2	0 (0,0%)
3	3 (30,0%)
4	4 (40,0%)
5	2 (20,0%)
Total	10 (100,0%)

	Mean	Standard Deviation
As a result of this course, I feel confident about tackling unfamiliar problems.	3,6	1,2

What did you appreciate most with the course?

What did you appreciate most with the course?
Superb lectures. Excellent choice of examples.
The lectures, I appreciated the lecturers effort to keep everyone on the same page and explain whatever question was thrown his way.
Giang To's seminars were really excellent.
Anders repeated the most important points enough to make you remember them and think about them and their consequences, but not to the point that it would become boring.
I think the lectures and seminar notes were very helpful
I think Anders is a good teacher.
I really liked the generalized definition of the Derivative, and how that intuitively leads to the chain rule.

What do you think should be improved?

What do you think should be improved?
Nothing.
sometimes it was unclear what would be relevant from the Adams book, one could tend to emphasis or spend a lot of time on reading something that would not be relevant to the course in the end.
The course literature felt a bit 'shoddy' and unclear, at least compared to other courses.
It would be nice with a few additional proofs for some of the unproven theorems.
I think the course literature should be improved. I did not gain neither theoretical understanding nor any useful intuition from reading Adams.
It would be great if the lectures could be held at 10 am instead of 8 am, but I completely understand it might not work with the schedules of the lecture hall and teacher
The literature! Adams book is no good.
I would like to have seen more proofs. It's possible that most of the theorems in the course are very hard to prove, but it felt like the only theorems we proved were easy ones you could come up with the proof yourself, and for the more difficult ones proofs were not given, with a lot of handwaving at most.

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.)?
No
No
No
No.
No
No.
No