



LUND UNIVERSITY
Faculty of Science

Centre for Mathematical Sciences
Division of Mathematics and Numerical Analysis

Analysis in Several Variables 1 MATB21, Autumn 2023

Course Information

Lecturer: Yacin Ameur

Teaching assistants: Joakim Cronvall, Jonathan Holmquist

Number of students:

73 newly registered and 18 re-registered.

33 students answered the course evaluation, 31 of them are enrolled on the Bachelor's Programme in Physics.

Examination

Project: 75 students passed.

Written examination: 50 students passed.

- Ordinary examination 27/10 2023: 72 students participated and 34 of them passed.

- Resit examination 18/11 2023: 39 students participated and 16 of them passed.

Final grades:

In all, 34 students, including 1 re-registered student, have got their final grade.

4 passed with distinction.

30 passed.

Course Evaluation

Summary of student's answers:

See attached report.

Teachers' comments:

The course consists of an exam 6 HP, plus a numerical project 1.5 HP. The education consists of on campus lectures and seminars, and participation is voluntary. (We do not keep track of how many students attend the education, but I would guess that around 30-35 students followed almost everything, while others supposedly tried to study by themselves.) The results would most likely be better if the course were prolonged by a few weeks, and especially the fact that the linear algebra course is examined in parallel creates some stress.

Changes from the previous course realization:

We revert to the old course literature (Adams), which has the advantage of being consistent with what is used in the follow up course MATB23.

Suggestions for the next course realization:

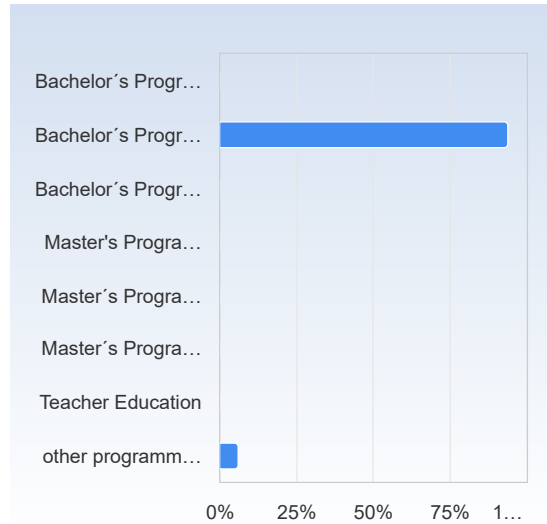
I suggest to start using Spivak's calculus book as a side reading, as a source for more rigorous analysis which is also useful beyond MATB21. Otherwise, I suggest no major changes. (Rather I think consistency is a goal in itself.)

MATB21 HT23

Answer Count: 33

I have studied this course as part of

I have studied this course as part of	Number of responses
Bachelor's Programme in Mathematics	0 (0.0%)
Bachelor's Programme in Physics, Theoretical Physics, Astronomy	31 (93.9%)
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 (6.1%)
Total	33 (100.0%)

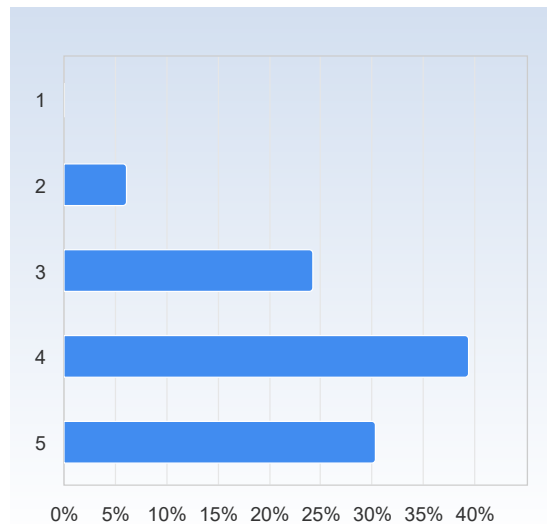


	Mean	Standard Deviation
I have studied this course as part of	2.4	1.5

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.

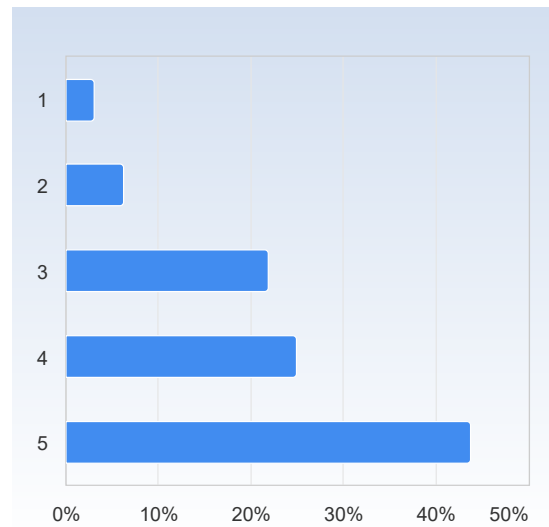
2. My prior knowledge has been sufficient to assimilate the contents of this course.	Number of responses
1	0 (0.0%)
2	2 (6.1%)
3	8 (24.2%)
4	13 (39.4%)
5	10 (30.3%)
Total	33 (100.0%)



	Mean	Standard Deviation
2. My prior knowledge has been sufficient to assimilate the contents of this course.	3.9	0.9

3. I have participated actively in the course.

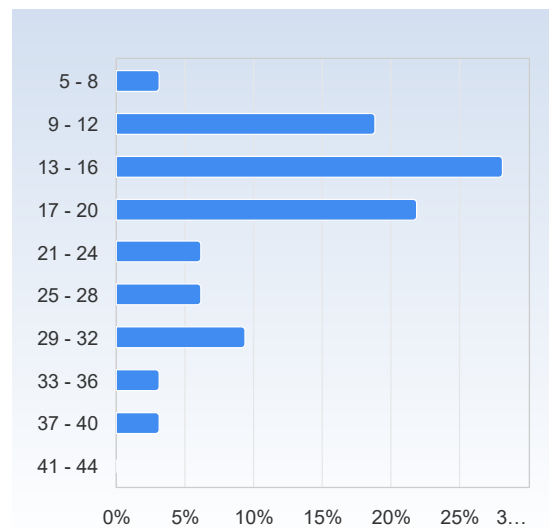
3. I have participated actively in the course.	Number of responses
1	1 (3.1%)
2	2 (6.2%)
3	7 (21.9%)
4	8 (25.0%)
5	14 (43.8%)
Total	32 (100.0%)



	Mean	Standard Deviation
3. I have participated actively in the course.	4.0	1.1

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
5 - 8	1 (3.1%)
9 - 12	6 (18.8%)
13 - 16	9 (28.1%)
17 - 20	7 (21.9%)
21 - 24	2 (6.2%)
25 - 28	2 (6.2%)
29 - 32	3 (9.4%)
33 - 36	1 (3.1%)
37 - 40	1 (3.1%)
41 - 44	0 (0.0%)
Total	32 (100.0%)



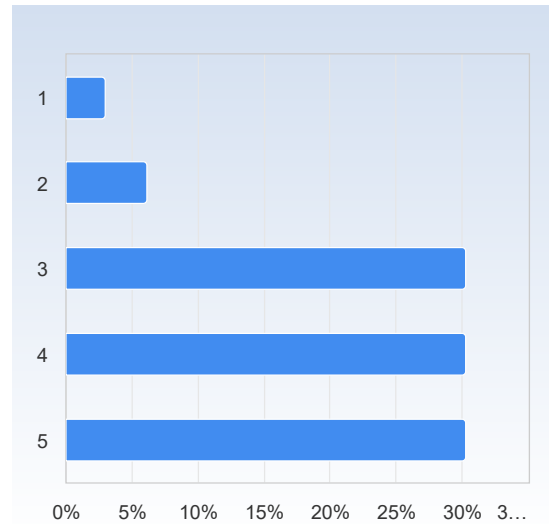
	Mean	Standard Deviation
Average number of hours spent in total on the course per week (including scheduled activities):	19.0	7.8

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.

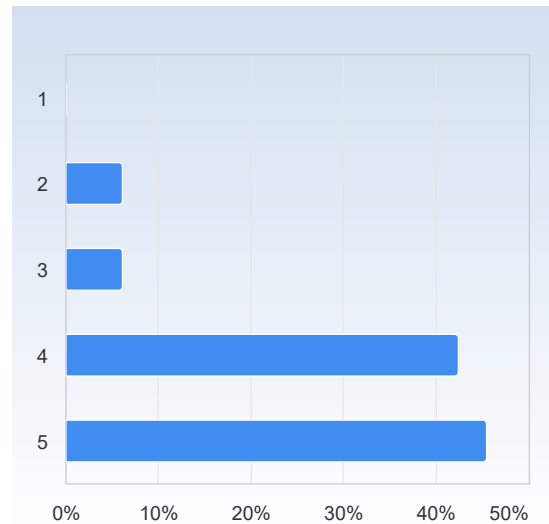
The way the course was taught and organised suited me.	Number of responses
1	1 (3.0%)
2	2 (6.1%)
3	10 (30.3%)
4	10 (30.3%)
5	10 (30.3%)
Total	33 (100.0%)



	Mean	Standard Deviation
The way the course was taught and organised suited me.	3.8	1.1

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

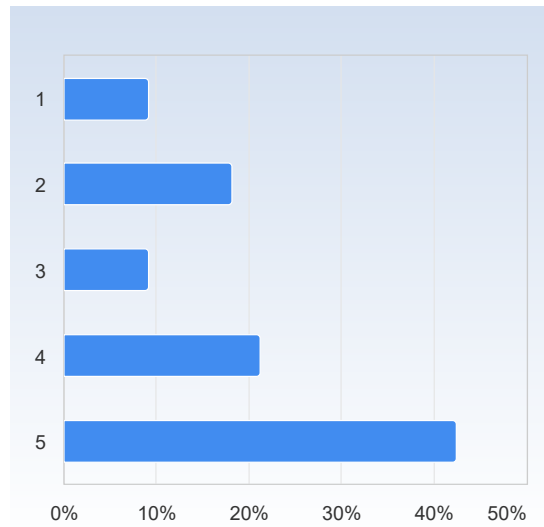
The number of teacher lead activities (lectures, seminars etc.) has been satisfactory.	Number of responses
1	0 (0.0%)
2	2 (6.1%)
3	2 (6.1%)
4	14 (42.4%)
5	15 (45.5%)
Total	33 (100.0%)



	Mean	Standard Deviation
The number of teacher lead activities (lectures, seminars etc.) has been satisfactory.	4.3	0.8

The lectures were valuable for my learning.

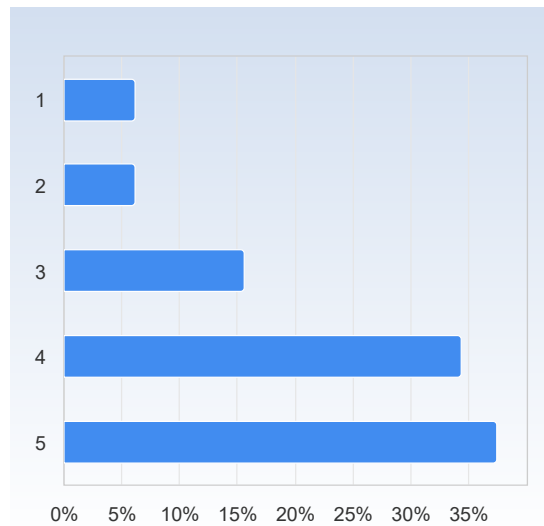
The lectures were valuable for my learning.	Number of responses
1	3 (9.1%)
2	6 (18.2%)
3	3 (9.1%)
4	7 (21.2%)
5	14 (42.4%)
Total	33 (100.0%)



	Mean	Standard Deviation
The lectures were valuable for my learning.	3.7	1.4

The seminars were valuable for my learning.

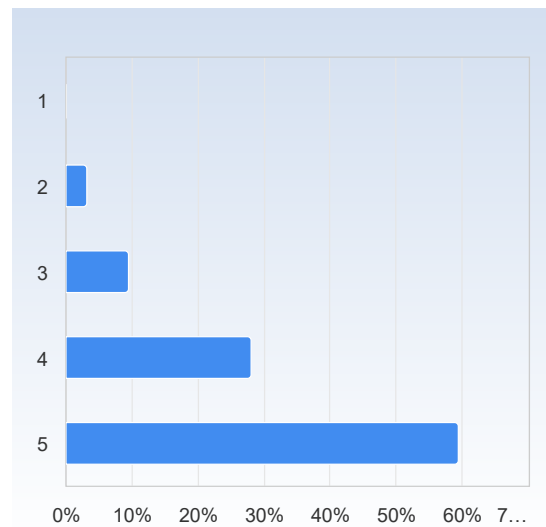
The seminars were valuable for my learning.	Number of responses
1	2 (6.2%)
2	2 (6.2%)
3	5 (15.6%)
4	11 (34.4%)
5	12 (37.5%)
Total	32 (100.0%)



	Mean	Standard Deviation
The seminars were valuable for my learning.	3.9	1.2

Studying on my own was valuable for my learning.

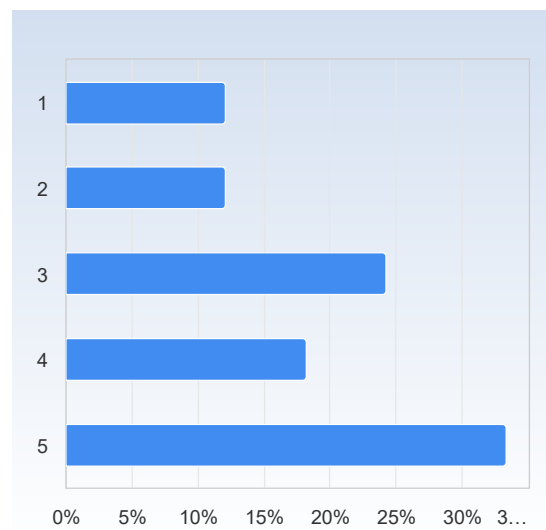
Studying on my own was valuable for my learning.	Number of responses
1	0 (0.0%)
2	1 (3.1%)
3	3 (9.4%)
4	9 (28.1%)
5	19 (59.4%)
Total	32 (100.0%)



	Mean	Standard Deviation
Studying on my own was valuable for my learning.	4.4	0.8

The course literature/material was a valuable learning resource.

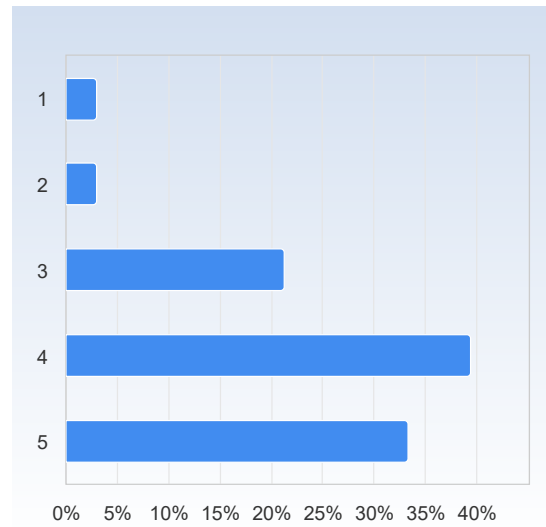
The course literature/material was a valuable learning resource.	Number of responses
1	4 (12.1%)
2	4 (12.1%)
3	8 (24.2%)
4	6 (18.2%)
5	11 (33.3%)
Total	33 (100.0%)



	Mean	Standard Deviation
The course literature/material was a valuable learning resource.	3.5	1.4

The information I received before the course start was satisfactory.

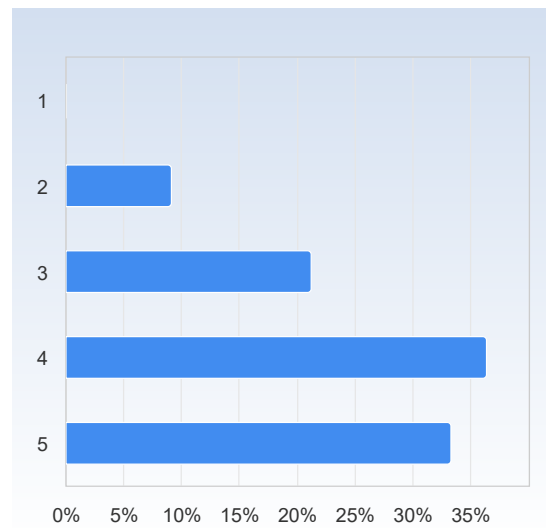
The information I received before the course start was satisfactory.	Number of responses
1	1 (3.0%)
2	1 (3.0%)
3	7 (21.2%)
4	13 (39.4%)
5	11 (33.3%)
Total	33 (100.0%)



	Mean	Standard Deviation
The information I received before the course start was satisfactory.	4.0	1.0

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

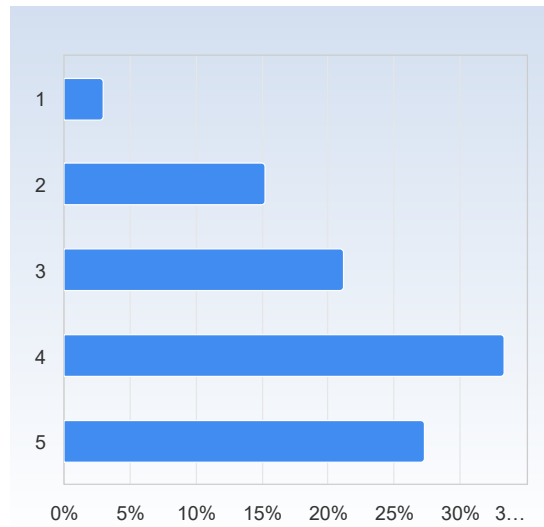
The communication with the teaching staff during the course was good.	Number of responses
1	0 (0.0%)
2	3 (9.1%)
3	7 (21.2%)
4	12 (36.4%)
5	11 (33.3%)
Total	33 (100.0%)



	Mean	Standard Deviation
The communication with the teaching staff during the course was good.	3.9	1.0

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

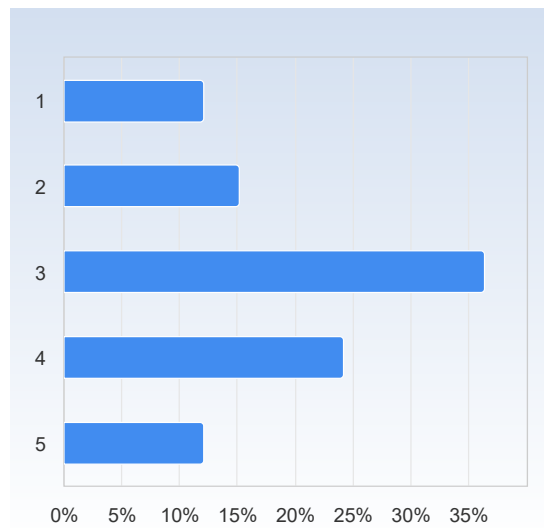
It was clear throughout the course what was expected of me.	Number of responses
1	1 (3.0%)
2	5 (15.2%)
3	7 (21.2%)
4	11 (33.3%)
5	9 (27.3%)
Total	33 (100.0%)



	Mean	Standard Deviation
It was clear throughout the course what was expected of me.	3.7	1.1

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

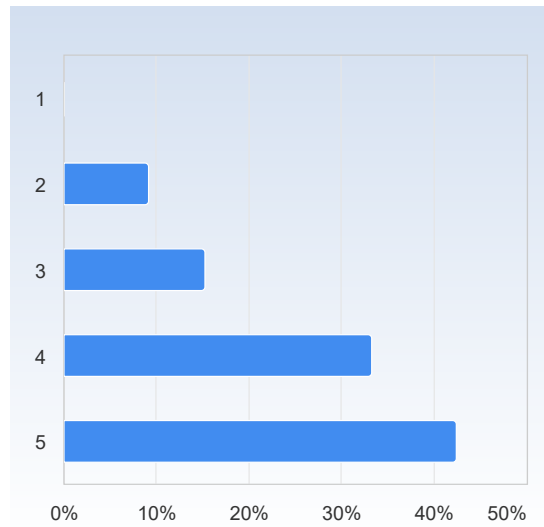
I have received valuable feedback from my teacher /teachers during the course.	Number of responses
1	4 (12.1%)
2	5 (15.2%)
3	12 (36.4%)
4	8 (24.2%)
5	4 (12.1%)
Total	33 (100.0%)



	Mean	Standard Deviation
I have received valuable feedback from my teacher/teachers during the course.	3.1	1.2

The course had a reasonable workload.

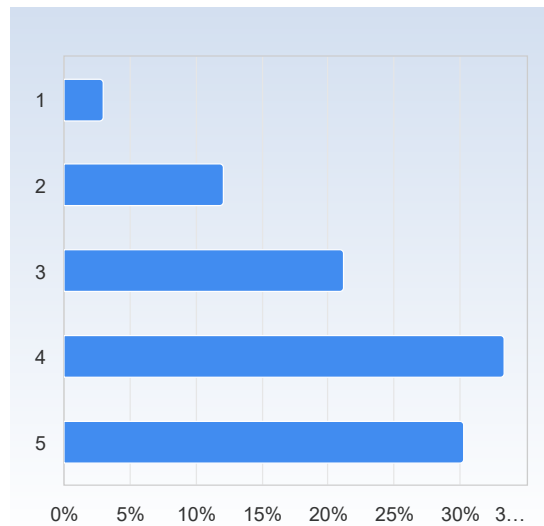
The course had a reasonable workload.	Number of responses
1	0 (0.0%)
2	3 (9.1%)
3	5 (15.2%)
4	11 (33.3%)
5	14 (42.4%)
Total	33 (100.0%)



	Mean	Standard Deviation
The course had a reasonable workload.	4.1	1.0

The workload was evenly distributed throughout the course.

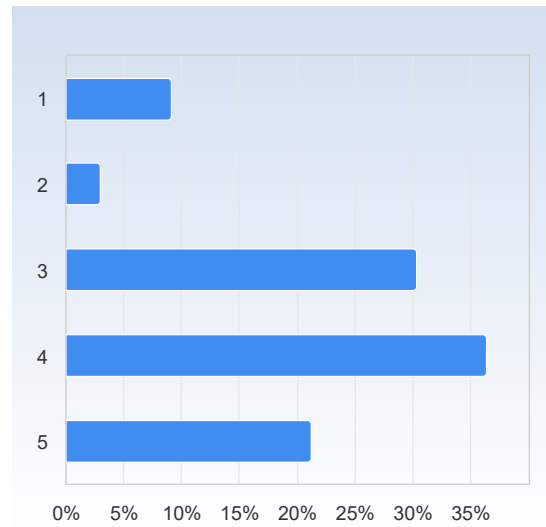
The workload was evenly distributed throughout the course.	Number of responses
1	1 (3.0%)
2	4 (12.1%)
3	7 (21.2%)
4	11 (33.3%)
5	10 (30.3%)
Total	33 (100.0%)



	Mean	Standard Deviation
The workload was evenly distributed throughout the course.	3.8	1.1

The examination matched the contents and level of the course.

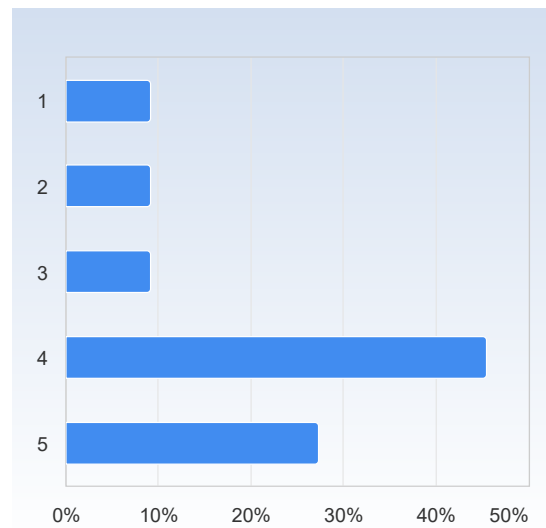
The examination matched the contents and level of the course.	Number of responses
1	3 (9.1%)
2	1 (3.0%)
3	10 (30.3%)
4	12 (36.4%)
5	7 (21.2%)
Total	33 (100.0%)



	Mean	Standard Deviation
The examination matched the contents and level of the course.	3.6	1.1

Overall, I am satisfied with the course.

Overall, I am satisfied with the course.	Number of responses
1	3 (9.1%)
2	3 (9.1%)
3	3 (9.1%)
4	15 (45.5%)
5	9 (27.3%)
Total	33 (100.0%)



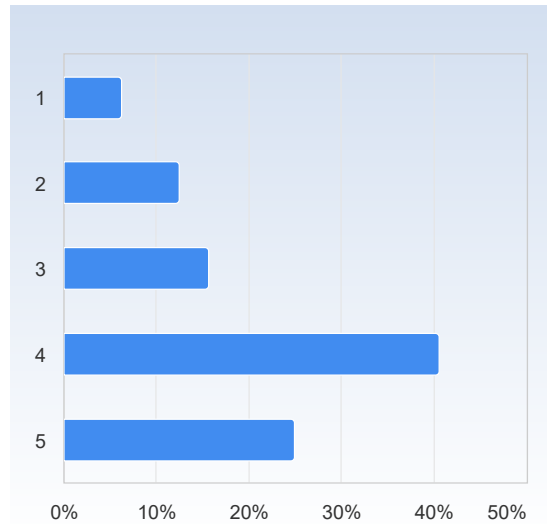
	Mean	Standard Deviation
Overall, I am satisfied with the course.	3.7	1.2

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.

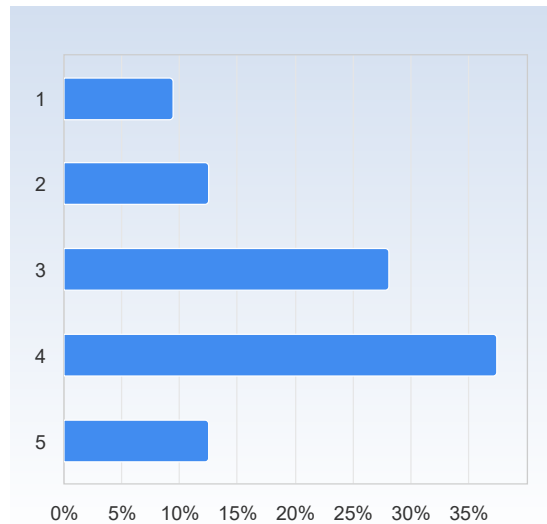
The course has increased my ability to read a mathematical text.	Number of responses
1	2 (6.2%)
2	4 (12.5%)
3	5 (15.6%)
4	13 (40.6%)
5	8 (25.0%)
Total	32 (100.0%)



	Mean	Standard Deviation
The course has increased my ability to read a mathematical text.	3.7	1.2

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

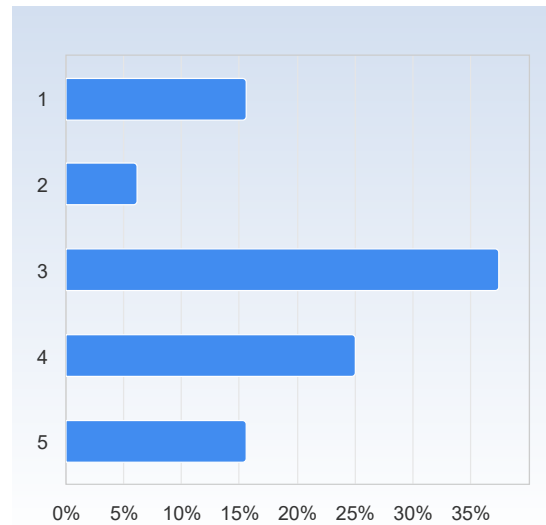
The course has increased my ability to communicate the subject in writing.	Number of responses
1	3 (9.4%)
2	4 (12.5%)
3	9 (28.1%)
4	12 (37.5%)
5	4 (12.5%)
Total	32 (100.0%)



	Mean	Standard Deviation
The course has increased my ability to communicate the subject in writing.	3.3	1.1

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

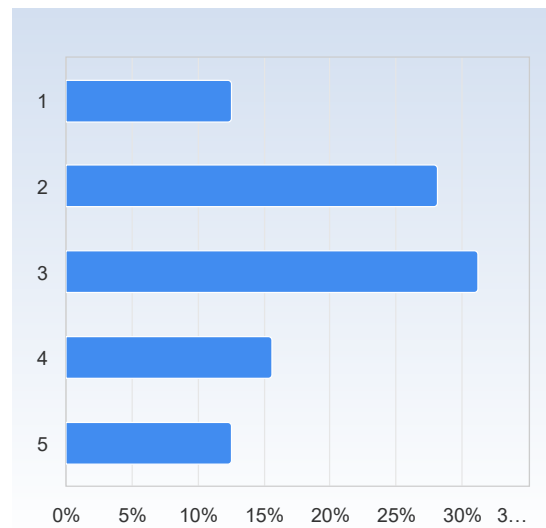
The course has increased my ability to communicate the subject orally.	Number of responses
1	5 (15.6%)
2	2 (6.2%)
3	12 (37.5%)
4	8 (25.0%)
5	5 (15.6%)
Total	32 (100.0%)



	Mean	Standard Deviation
The course has increased my ability to communicate the subject orally.	3.2	1.3

The course has increased my ability to cooperate.

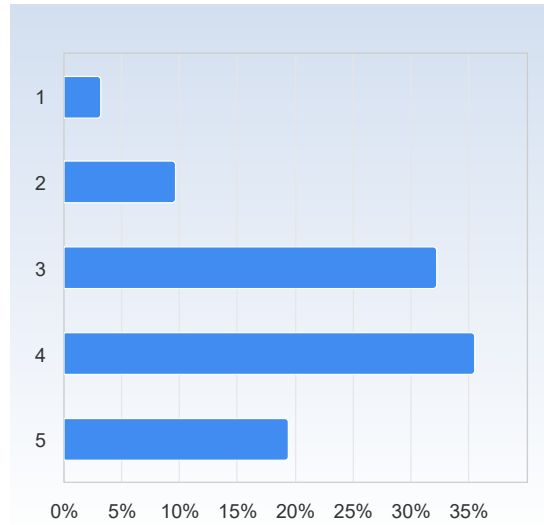
The course has increased my ability to cooperate.	Number of responses
1	4 (12.5%)
2	9 (28.1%)
3	10 (31.2%)
4	5 (15.6%)
5	4 (12.5%)
Total	32 (100.0%)



	Mean	Standard Deviation
The course has increased my ability to cooperate.	2.9	1.2

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

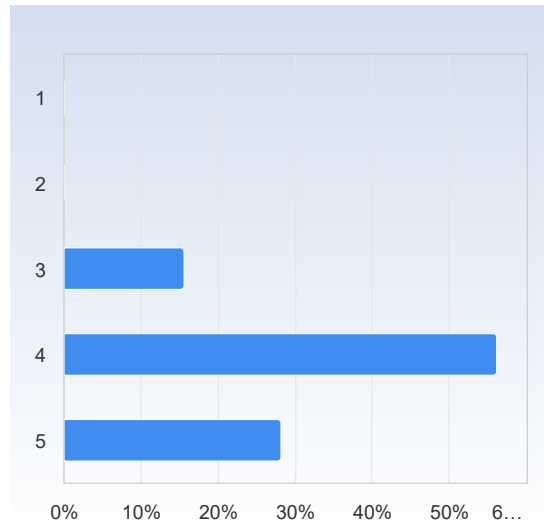
The course has increased my ability to search and process information.	Number of responses
1	1 (3.2%)
2	3 (9.7%)
3	10 (32.3%)
4	11 (35.5%)
5	6 (19.4%)
Total	31 (100.0%)



	Mean	Standard Deviation
The course has increased my ability to search and process information.	3.6	1.0

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

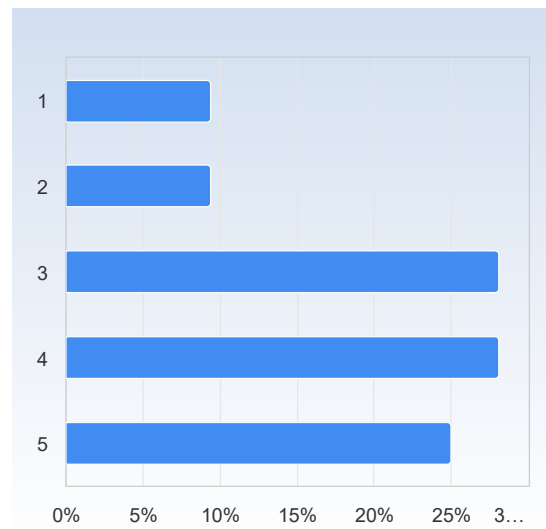
The course has increased my ability to analyze and solve problems.	Number of responses
1	0 (0.0%)
2	0 (0.0%)
3	5 (15.6%)
4	18 (56.2%)
5	9 (28.1%)
Total	32 (100.0%)



	Mean	Standard Deviation
The course has increased my ability to analyze and solve problems.	4.1	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	3 (9.4%)
2	3 (9.4%)
3	9 (28.1%)
4	9 (28.1%)
5	8 (25.0%)
Total	32 (100.0%)



	Mean	Standard Deviation
As a result of this course, I feel confident about tackling unfamiliar problems.	3.5	1.2