



**LUND UNIVERSITY**  
Faculty of Science

Centre for Mathematical Sciences  
Division of Mathematics and Numerical Analysis

## Course Analysis for MATB21 Analysis in Several Variables 1, Spring 2023

### Course Information

**Lecturer:** Evgeniy Lokharu

**Teaching assistants:** Giang To, Evgeniy Lokharu

**Number of students:**

81

13 students answered the course evaluation, 13 of them are enrolled on program name.

### Examination

**Project:** 55 students passed.

**Written examination:** 49 students passed.

- Ordinary examination 20/03 2023: 62 students participated and 27 of them passed.
- Resit examination 22/04 2023: 37 students participated and 12 of them passed.
- Resit examination 14/08 2023: 25 students participated and 10 of them passed.

**Final grades:**

6 passed with distinction.

49 passed.

### Course Evaluation

**Summary of student's answers:**

Only 13 students answered the questionnaire. Overall it was mentioned that the course fit students well. The course literature was mentioned to be less useful. The initial information regarding the course was good. Very good communication with the teaching staff. Valuable feedback for most of the students answered the questionnaire. The examination matched well the course. Good overall satisfaction with the course. Many students feel that the theoretical part of the course is too far away from seminars. The course literature is to be improved.

**Teachers' comments:**

There were in average 2.5 lectures and seminars each week. During seminars students were offered to practice with problems from the previous lecture (same day). There was a book and hand-written lecture notes with all necessary material. Overall 50% students participated to lectures and seminars.

**Changes from the previous course realisation:**

The course was better organized than the previous realization. All exercises were available from the start.

**Suggestions for the next course realisation:**

This particular course is quite complicated both for students and the teachers. It is almost impossible to find a good balance between lectures (with more theoretical material, like proofs of

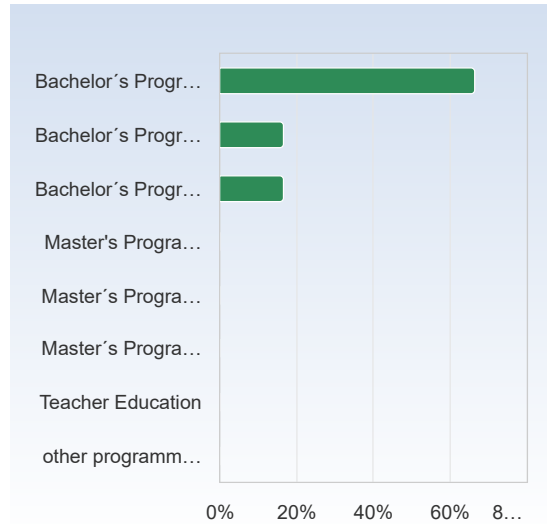
theorems) and seminars (where mainly computational problems are discussed). In order to improve the course one has to find a better book to follow, which seems a very hard task. More theoretical books lack practical problems and examples, while more applied books lack proofs. One solution is to prepare lecture notes from the department but this will require a significant time and many efforts.

## Course evaluation for MATB21 Spring 2023

Answer Count: 13

### I have studied this course as part of

I have studied this course as part of	Number of responses
Bachelor's Programme in Mathematics	8 (66.7%)
Bachelor's Programme in Physics, Theoretical Physics, Astronomy	2 (16.7%)
Bachelor's Programme, other specialization	2 (16.7%)
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	0 (0.0%)
Total	12 (100.0%)

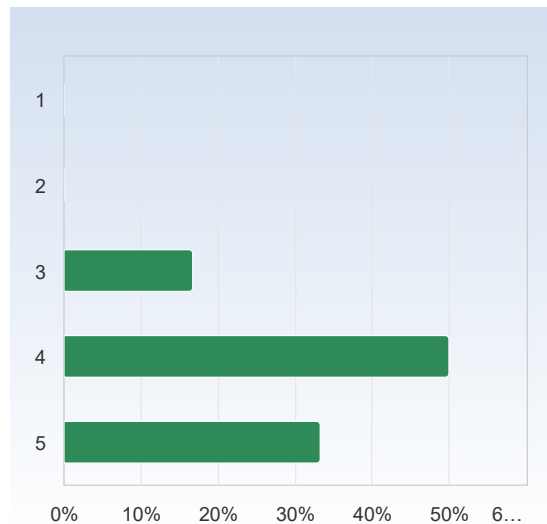


	Mean	Standard Deviation
I have studied this course as part of	1.5	0.8

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.

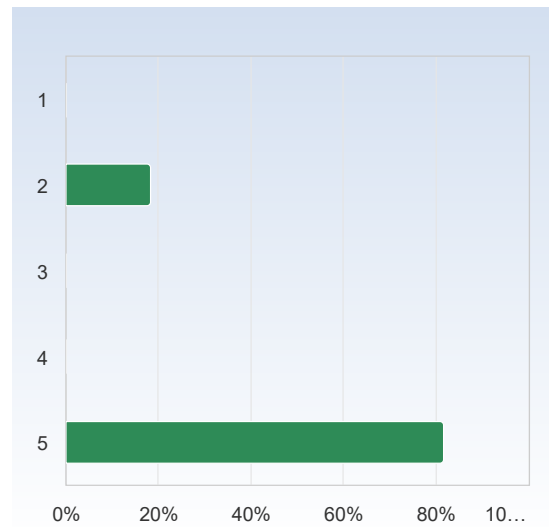
2. My prior knowledge has been sufficient to assimilate the contents of this course.	Number of responses
1	0 (0.0%)
2	0 (0.0%)
3	2 (16.7%)
4	6 (50.0%)
5	4 (33.3%)
Total	12 (100.0%)



	Mean	Standard Deviation
2. My prior knowledge has been sufficient to assimilate the contents of this course.	4.2	0.7

### 3. I have participated actively in the course.

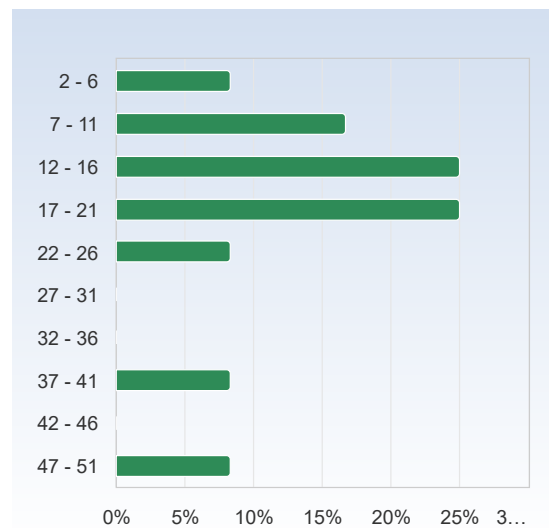
3. I have participated actively in the course.	Number of responses
1	0 (0.0%)
2	2 (18.2%)
3	0 (0.0%)
4	0 (0.0%)
5	9 (81.8%)
Total	11 (100.0%)



	Mean	Standard Deviation
3. I have participated actively in the course.	4.5	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
2 - 6	1 (8.3%)
7 - 11	2 (16.7%)
12 - 16	3 (25.0%)
17 - 21	3 (25.0%)
22 - 26	1 (8.3%)
27 - 31	0 (0.0%)
32 - 36	0 (0.0%)
37 - 41	1 (8.3%)
42 - 46	0 (0.0%)
47 - 51	1 (8.3%)
Total	12 (100.0%)



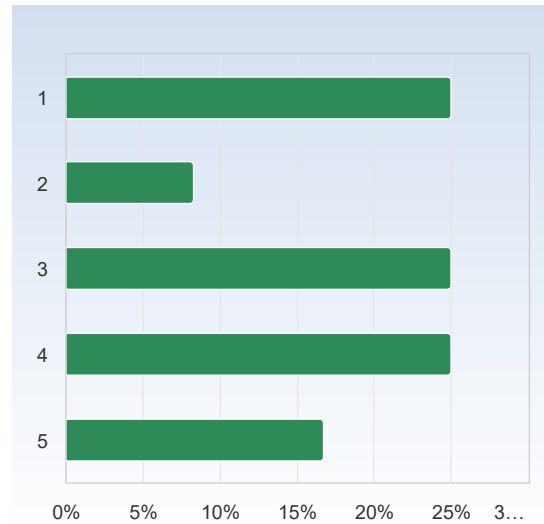
	Mean	Standard Deviation
Average number of hours spent in total on the course per week (including scheduled activities):	20.1	13.2

## 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.

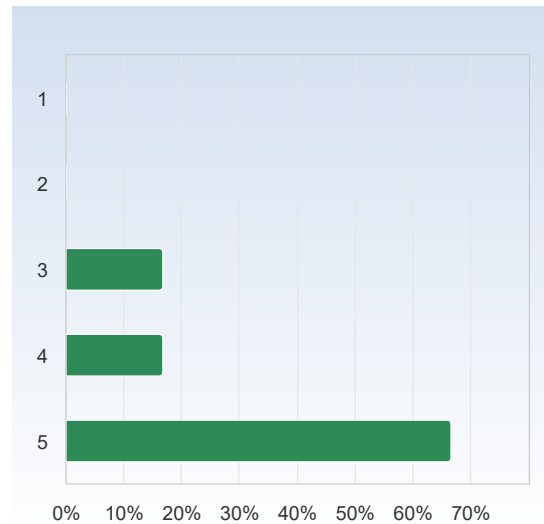
The way the course was taught and organised suited me.	Number of responses
1	3 (25.0%)
2	1 (8.3%)
3	3 (25.0%)
4	3 (25.0%)
5	2 (16.7%)
Total	12 (100.0%)



	Mean	Standard Deviation
The way the course was taught and organised suited me.	3.0	1.5

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

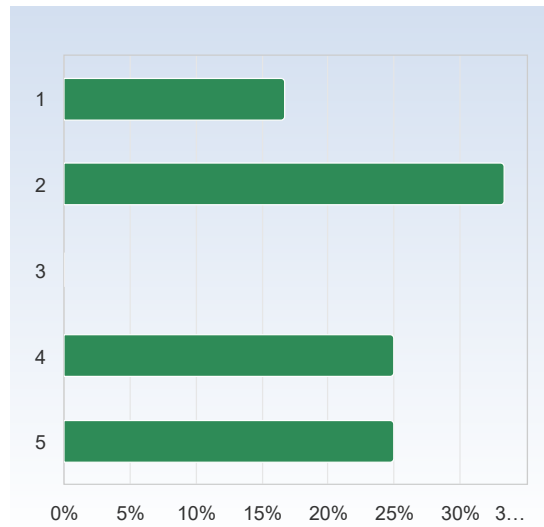
The number of teacher lead activities (lectures, seminars etc.) has been satisfactory.	Number of responses
1	0 (0.0%)
2	0 (0.0%)
3	2 (16.7%)
4	2 (16.7%)
5	8 (66.7%)
Total	12 (100.0%)



	Mean	Standard Deviation
The number of teacher lead activities (lectures, seminars etc.) has been satisfactory.	4.5	0.8

**The lectures were valuable for my learning.**

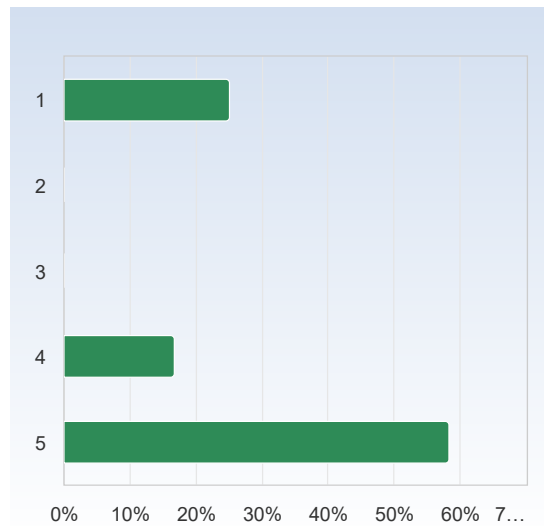
The lectures were valuable for my learning.	Number of responses
1	2 (16.7%)
2	4 (33.3%)
3	0 (0.0%)
4	3 (25.0%)
5	3 (25.0%)
Total	12 (100.0%)



	Mean	Standard Deviation
The lectures were valuable for my learning.	3.1	1.6

**The seminars were valuable for my learning.**

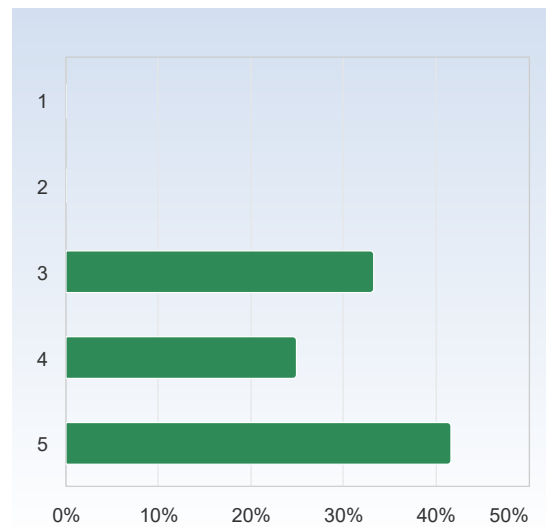
The seminars were valuable for my learning.	Number of responses
1	3 (25.0%)
2	0 (0.0%)
3	0 (0.0%)
4	2 (16.7%)
5	7 (58.3%)
Total	12 (100.0%)



	Mean	Standard Deviation
The seminars were valuable for my learning.	3.8	1.7

**Studying on my own was valuable for my learning.**

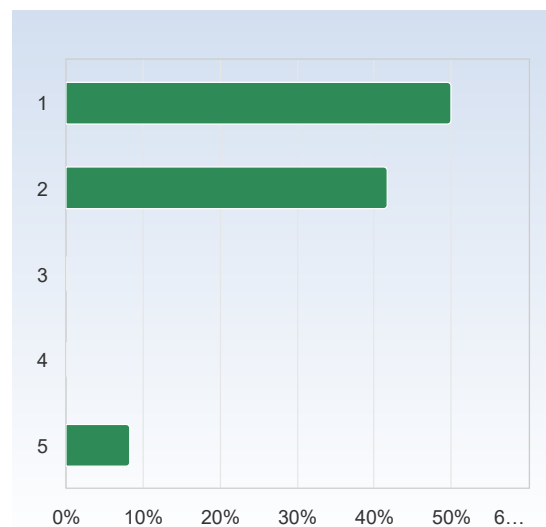
Studying on my own was valuable for my learning.	Number of responses
1	0 (0.0%)
2	0 (0.0%)
3	4 (33.3%)
4	3 (25.0%)
5	5 (41.7%)
Total	12 (100.0%)



	Mean	Standard Deviation
Studying on my own was valuable for my learning.	4.1	0.9

**The course literature/material was a valuable learning resource.**

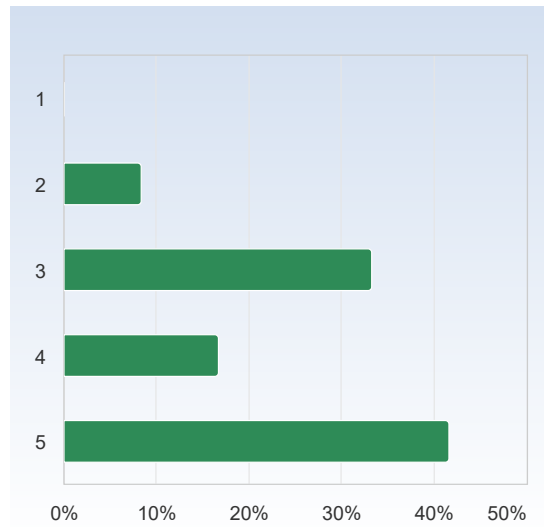
The course literature/material was a valuable learning resource.	Number of responses
1	6 (50.0%)
2	5 (41.7%)
3	0 (0.0%)
4	0 (0.0%)
5	1 (8.3%)
Total	12 (100.0%)



	Mean	Standard Deviation
The course literature/material was a valuable learning resource.	1.8	1.1

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

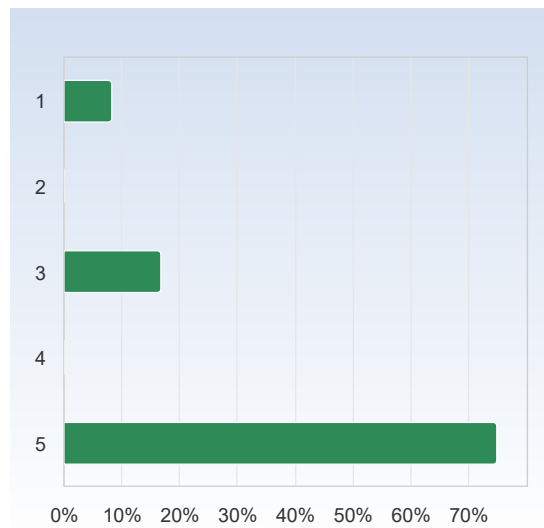
The information I received before the course start was satisfactory.	Number of responses
1	0 (0.0%)
2	1 (8.3%)
3	4 (33.3%)
4	2 (16.7%)
5	5 (41.7%)
Total	12 (100.0%)



	Mean	Standard Deviation
The information I received before the course start was satisfactory.	3.9	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	1 (8.3%)
2	0 (0.0%)
3	2 (16.7%)
4	0 (0.0%)
5	9 (75.0%)
Total	12 (100.0%)

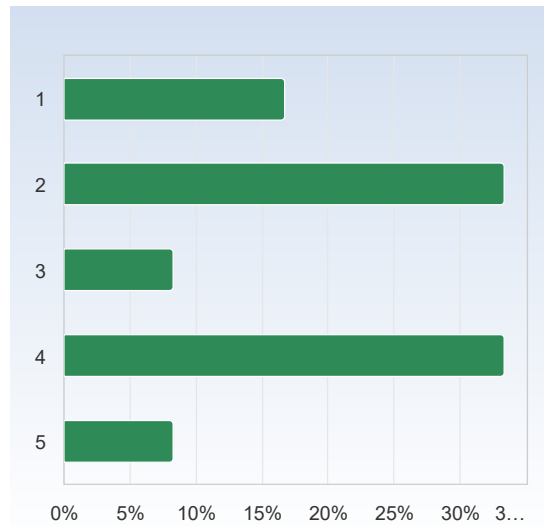


	Mean	Standard Deviation
The communication with the teaching staff during the course was good.	4.3	1.3



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

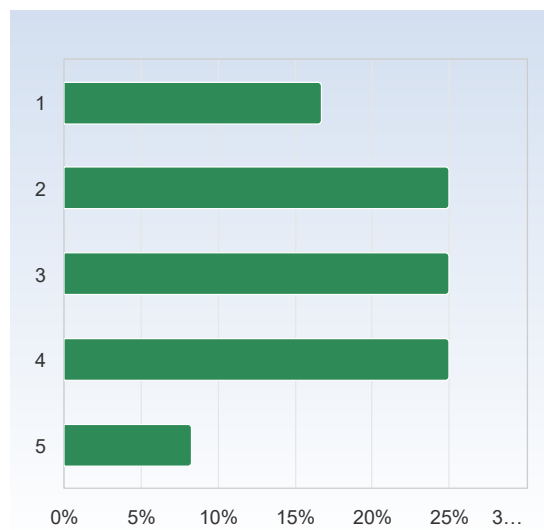
It was clear throughout the course what was expected of me.	Number of responses
1	2 (16.7%)
2	4 (33.3%)
3	1 (8.3%)
4	4 (33.3%)
5	1 (8.3%)
Total	12 (100.0%)



	Mean	Standard Deviation
It was clear throughout the course what was expected of me.	2.8	1.3

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

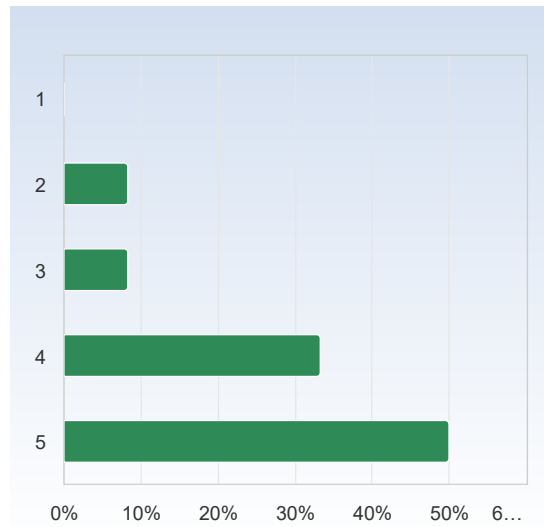
I have received valuable feedback from my teacher /teachers during the course.	Number of responses
1	2 (16.7%)
2	3 (25.0%)
3	3 (25.0%)
4	3 (25.0%)
5	1 (8.3%)
Total	12 (100.0%)



	Mean	Standard Deviation
I have received valuable feedback from my teacher/teachers during the course.	2.8	1.3

**The course had a reasonable workload.**

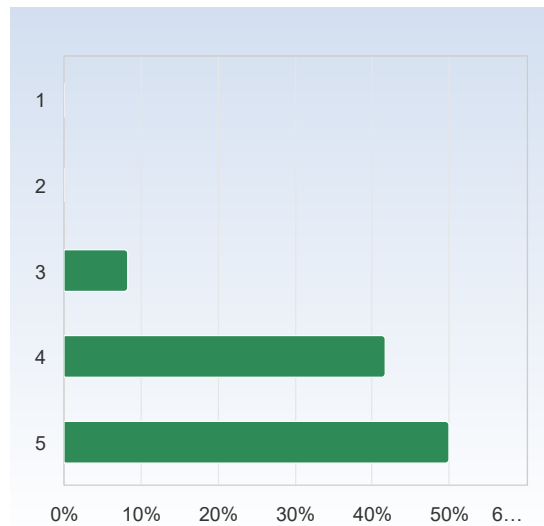
The course had a reasonable workload.	Number of responses
1	0 (0.0%)
2	1 (8.3%)
3	1 (8.3%)
4	4 (33.3%)
5	6 (50.0%)
Total	12 (100.0%)



	Mean	Standard Deviation
The course had a reasonable workload.	4.2	1.0

**The workload was evenly distributed throughout the course.**

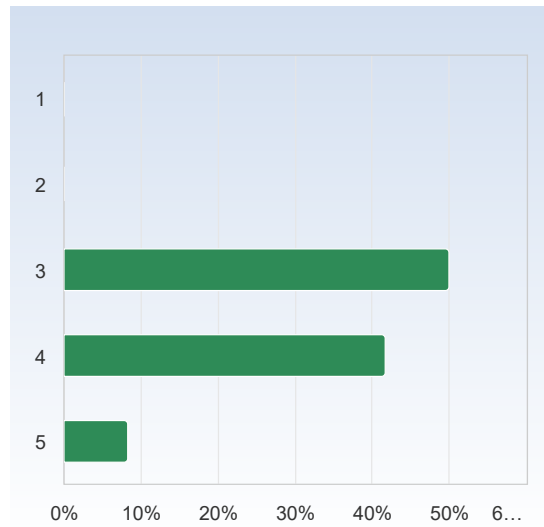
The workload was evenly distributed throughout the course.	Number of responses
1	0 (0.0%)
2	0 (0.0%)
3	1 (8.3%)
4	5 (41.7%)
5	6 (50.0%)
Total	12 (100.0%)



	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.**

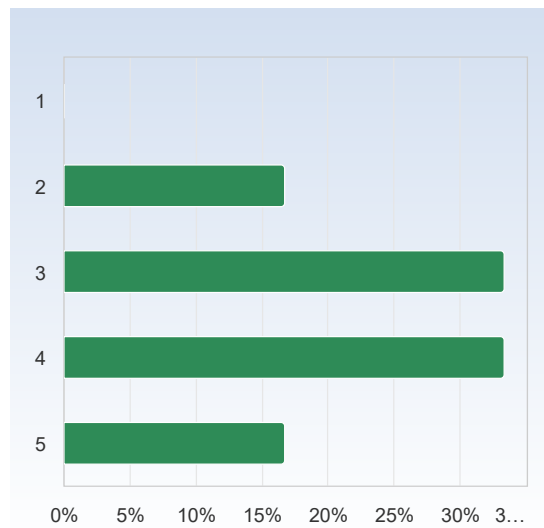
The examination matched the contents and level of the course.	Number of responses
1	0 (0.0%)
2	0 (0.0%)
3	6 (50.0%)
4	5 (41.7%)
5	1 (8.3%)
Total	12 (100.0%)



	Mean	Standard Deviation
The examination matched the contents and level of the course.	3.6	0.7

**Overall, I am satisfied with the course.**

Overall, I am satisfied with the course.	Number of responses
1	0 (0.0%)
2	2 (16.7%)
3	4 (33.3%)
4	4 (33.3%)
5	2 (16.7%)
Total	12 (100.0%)



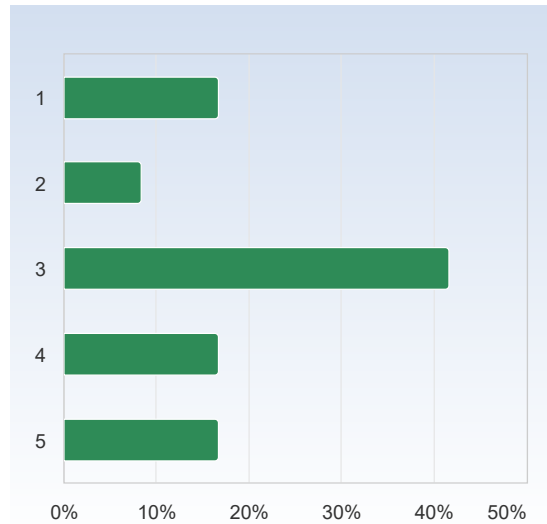
	Mean	Standard Deviation
Overall, I am satisfied with the course.	3.5	1.0

## 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.

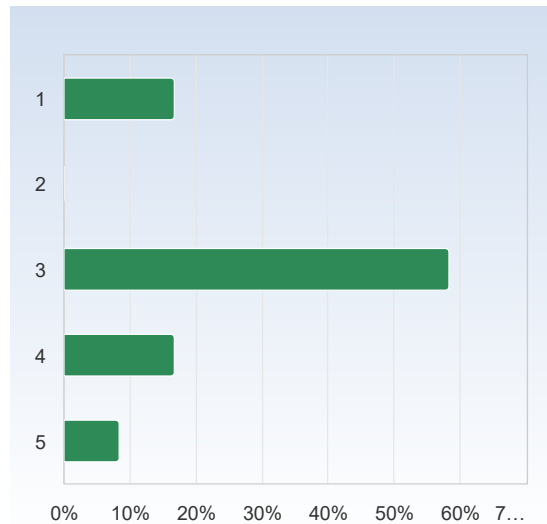
The course has increased my ability to read a mathematical text.	Number of responses
1	2 (16.7%)
2	1 (8.3%)
3	5 (41.7%)
4	2 (16.7%)
5	2 (16.7%)
Total	12 (100.0%)



	Mean	Standard Deviation
The course has increased my ability to read a mathematical text.	3.1	1.3

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

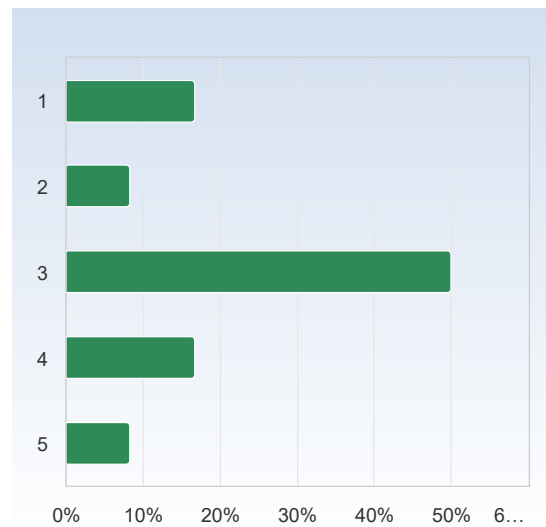
The course has increased my ability to communicate the subject in writing.	Number of responses
1	2 (16.7%)
2	0 (0.0%)
3	7 (58.3%)
4	2 (16.7%)
5	1 (8.3%)
Total	12 (100.0%)



	Mean	Standard Deviation
The course has increased my ability to communicate the subject in writing.	3.0	1.1

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

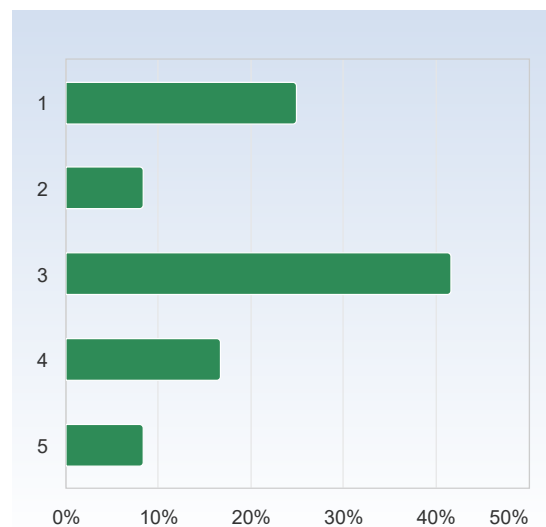
The course has increased my ability to communicate the subject orally.	Number of responses
1	2 (16.7%)
2	1 (8.3%)
3	6 (50.0%)
4	2 (16.7%)
5	1 (8.3%)
Total	12 (100.0%)



	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.**

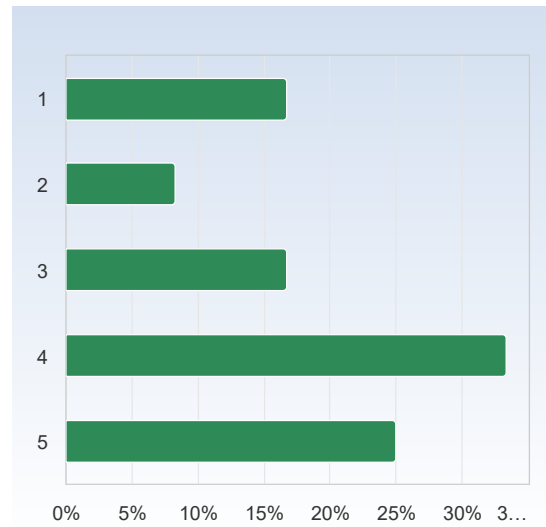
The course has increased my ability to cooperate.	Number of responses
1	3 (25.0%)
2	1 (8.3%)
3	5 (41.7%)
4	2 (16.7%)
5	1 (8.3%)
Total	12 (100.0%)



	Mean	Standard Deviation
The course has increased my ability to cooperate.	2.8	1.3

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

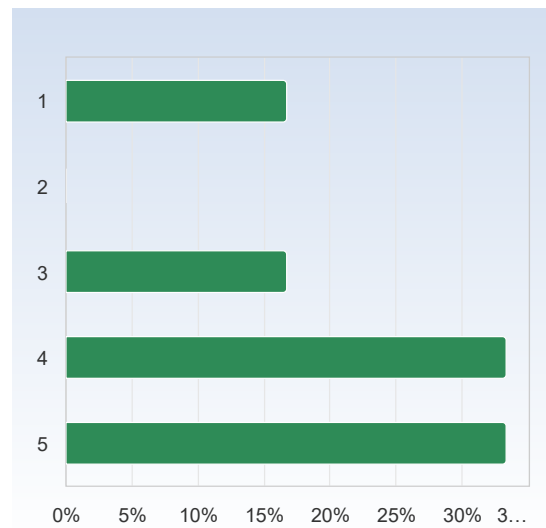
The course has increased my ability to search and process information.	Number of responses
1	2 (16.7%)
2	1 (8.3%)
3	2 (16.7%)
4	4 (33.3%)
5	3 (25.0%)
Total	12 (100.0%)



	Mean	Standard Deviation
The course has increased my ability to search and process information.	3.4	1.4

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

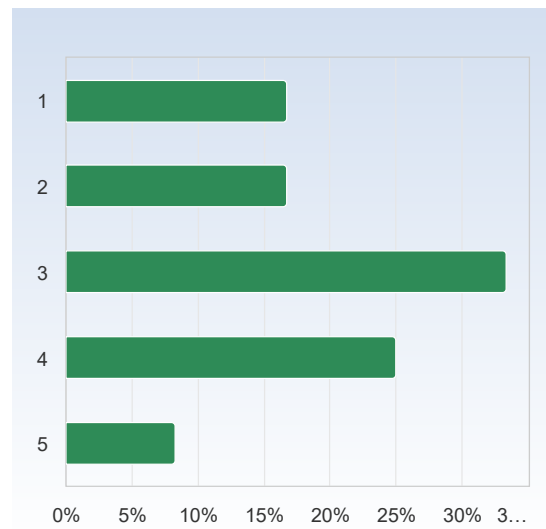
The course has increased my ability to analyze and solve problems.	Number of responses
1	2 (16.7%)
2	0 (0.0%)
3	2 (16.7%)
4	4 (33.3%)
5	4 (33.3%)
Total	12 (100.0%)



	Mean	Standard Deviation
The course has increased my ability to analyze and solve problems.	3.7	1.4

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

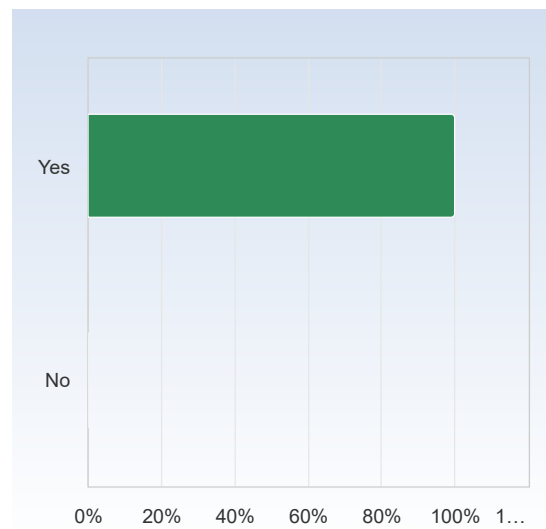
As a result of this course, I feel confident about tackling unfamiliar problems.	Number of responses
1	2 (16.7%)
2	2 (16.7%)
3	4 (33.3%)
4	3 (25.0%)
5	1 (8.3%)
Total	12 (100.0%)



	Mean	Standard Deviation
As a result of this course, I feel confident about tackling unfamiliar problems.	2.9	1.2

**Have you taken the examination?**

Have you taken the examination?	Number of responses
Yes	12 (100.0%)
No	0 (0.0%)
Total	12 (100.0%)



	Mean	Standard Deviation
Have you taken the examination?	1.0	0.0

## What did you appreciate most with the course?

What did you appreciate most with the course?

The seminar assistant Giang is the best thing God has every created. I love him with my whole heart. Jokes aside, the seminars were very nice. The lecturer was a very nice man aswell and he taught well.

The material.

The professor was very helpful.

The seminars! I was at first surprised with the concept of seminars being right after the lecture (the same day, covering the same topic we'd just went over in the lecture) but it turned out to work amazingly! I always left understanding the lecture content better after having tried solving problems right afterwards, and that very motivating in solving problems at home. Also, props to TA Giang who was amazing at explaining things at the seminar, and had lots of patience for us, as well as lecturer Evgeny whose calm and low-key enthusiastic attitude during lecturing makes the subject matter very approachable, in my opinion.

The teacher was supernice! Also the contents of the course were interesting.

The course contents were interesting.

The lecturer was very good. He explained a lot of the theory with intuitive examples and figures, making it easier to understand. The structure of the seminars was also great. Allowing us to work on our own for the first hour made it so you were able to become more comfortable with the theory, while still being able to ask questions. It was much better than the entire seminar just showing solutions.

I liked the structure of the seminars. It was nice being able to ask for help when solving the problems. Moreover, it definitely reduced the workload outside of scheduled activities compared to seminars where you solve the problems beforehand.

The seminars where we just got to sit and solve problems in silence.

Giang To.

## What do you think should be improved?

What do you think should be improved?

The lectures were too far off from the exercises. They didn't really help when tackling problems. And there was a bit too little time spent on integrals and how to think when solving integrals. I would have really liked a bit more focus on the exercises and especially integrals.

Also make some of the exercises more difficult, since the lecturer made the examination a bit more difficult.

The literature is not really useful to learn.

The course literature wasn't very useful, also more examples on the lectures and seminars would be appreciated.

One suggestion would be to write out the statements of definitions and theorems in "proper", long, strict wording on the board, since even though writing things shortly and maybe not with all the rigour that is given in the textbook is quicker (and the lecturer says the details out loud), I found myself grasping to scribble down all the extra details (which makes it harder to concentrate on what the lecturer is saying if one gets stuck a little bit behind), or adding them later at home, which was slightly annoying. It gave me the impression of the lecture going a bit too quickly on a few odd occasions during each session, which was in fact not the case (the pace was generally very good) — it was just that we all talk faster than we write, and the very "statement" of the theorem one is proving is the one thing one actually really "should" write down (if one is taking notes, that is).

The materials (the book covered different things than lectures/seminars, and it was unclear what I was expected to know/learn). In addition, the course could be in general more organised, i.e. the teacher could make it more clear what were should learn during the course, what things are important etc.

The teaching was unsatisfactory. I also disliked that we were supposed to do exercises at the seminars and thus no solutions were presented, especially because the answers provided were riddled with errors. Communication with the lecturer proved to be difficult. Our course book didn't correspond to what was taught in class. Also the course contents seem to have changed drastically compared to last year. Overall it was a huge disappointment.

The book did not feel very useful. It included all information needed but it was presented in a different way to how the lectures presented it, with different notations, examples, and definitions.

1. I found the course literature pretty much useless. It was often hard to read and follow. If I couldn't attend a lecture, catching up using the book was difficult.
2. It was difficult for me to connect the lectures to the seminars at times. The lectures were mostly very heavy on theory and then I often found myself having no idea how to apply the theory during the seminars. A few examples would have been beneficial, either during the lectures or at the very start of the seminars.
3. The fact that the answers to the exercises was incorrect as many times as they were correct was pretty bad. I understand that there might have been some reason as to why the answers weren't corrected during the course, but I hope that they are corrected before upcoming terms.

What to expect from the exam could be communicated more clearly. I felt like question 5 in particular tested us on an integration technique that we were never taught.

The lectures were incredibly confusing and without the seminars and lots of help from Giang To I never would've understood how to solve any of the exercises.

I think it would be better to have time to solve the exercises ourselves and then go through all of them during the seminars (instead of going through the questions straight away). This was you get to see all of the questions solved. But to be able to do this we would need to actually understand the lectures.

## 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.

Nope (as a gay person).

No.

No.

No.

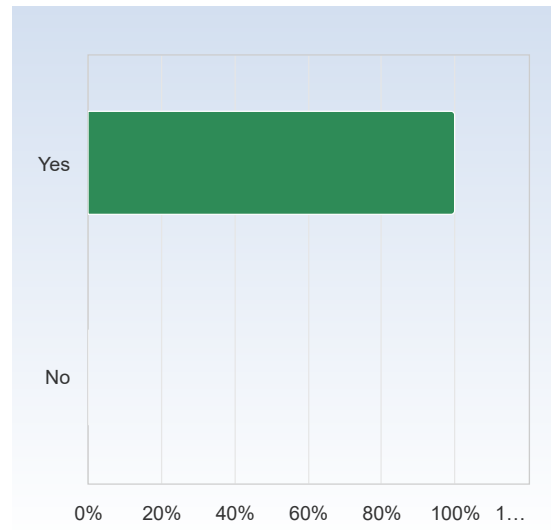
Nope

No.



## Have you taken the examination?

Have you taken the examination?	Number of responses
Yes	12 (100.0%)
No	0 (0.0%)
Total	12 (100.0%)



	Mean	Standard Deviation
Have you taken the examination?	1.0	0.0