



LUND UNIVERSITY  
Faculty of Science

Centre for Mathematical Sciences  
Division of Mathematics and Numerical  
Analysis

## Course Analysis for NUMA41 Numerical Analysis, Basic Course, HT 2023

### Course Information

**Lecturer:** Claus Führer

**Teaching assistants:** Melanie Fournier, Paulina Ibek

**Number of students:**

39 newly registered and 8 re-registered.

xx students answered the course evaluation, xx of them are enrolled on programme name.

### Examination

**Project:** 26 students passed.

**Oral examination:** 30 students passed.

**Final grades:**

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

19 passed with distinction.

2 passed.

### Course Evaluation

**Summary of student's answers:**

6 students answered the survey. The overall reception of the course was very positive.

The students seems to be satisfied with the overall structure of the course, although one comment suggested that it might be better to ODE 1 before this course. The participation in the training exercises is unsatisfactory, all students replied that they did not participate because it was not mandatory.

**Teachers' comments:**

The lectures were given on campus using mostly the blackboard and sometimes slides. The participation in lectures was satisfactory but the participation in the training exercises was to low. To obtain a grade the students have to submit a written report for the final project which is then discussed in an oral exam.

**Changes from the previous course realization:**

Compared to the previous course realization, only minor changes in course material and replacement of one lecture had been made.

**Suggestions for the next course realization:** There is an ongoing discussion about making the training exercises mandatory which might be realized for the next course instance.



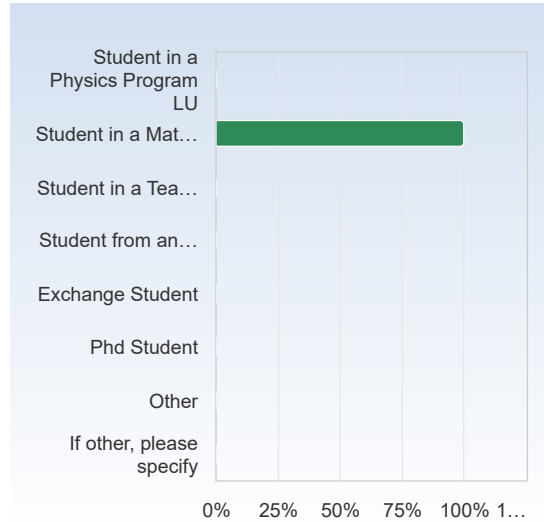
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### NUMA41 Numerical Analysis, Basic Course

Respondents: 47  
Answer Count: 6  
Answer Frequency: 12.77%

#### Your role in the course?

Your role in the course?	Number of responses
Student in a Physics Program LU	0 (0.0%)
Student in a Mathematics Program LU	6 (100.0%)
Student in a Teacher's Program LU	0 (0.0%)
Student from another Swedish university	0 (0.0%)
Exchange Student	0 (0.0%)
Phd Student	0 (0.0%)
Other	0 (0.0%)
If other, please specify	0 (0.0%)
Total	6 (100.0%)



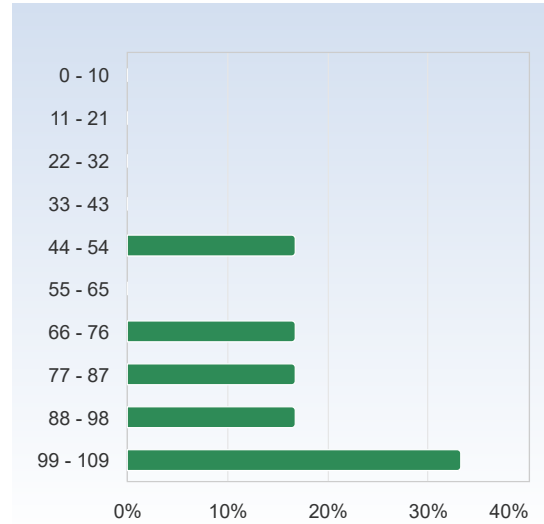
Your role in the course?	Mean	Standard Deviation
Your role in the course?	2.0	0.0



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### Your participation in the lectures.

Your participation in the lectures.	Number of responses
0 - 10	0 (0.0%)
11 - 21	0 (0.0%)
22 - 32	0 (0.0%)
33 - 43	0 (0.0%)
44 - 54	1 (16.7%)
55 - 65	0 (0.0%)
66 - 76	1 (16.7%)
77 - 87	1 (16.7%)
88 - 98	1 (16.7%)
99 - 109	2 (33.3%)
Total	6 (100.0%)



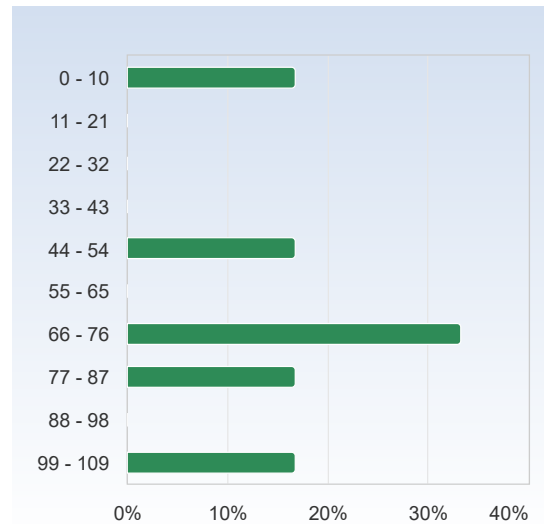
	Mean	Standard Deviation
Your participation in the lectures.	81.7	19.4

#### Comment

Had to leave at 16 on Mondays

### Your participation in the training exercises.

Your participation in the training exercises.	Number of responses
0 - 10	1 (16.7%)
11 - 21	0 (0.0%)
22 - 32	0 (0.0%)
33 - 43	0 (0.0%)
44 - 54	1 (16.7%)
55 - 65	0 (0.0%)
66 - 76	2 (33.3%)
77 - 87	1 (16.7%)
88 - 98	0 (0.0%)
99 - 109	1 (16.7%)
Total	6 (100.0%)



	Mean	Standard Deviation
Your participation in the training exercises.	64.2	31.1

#### Comment

I didn't submit the assignments, but I did them for my own sake. I found them really fun.

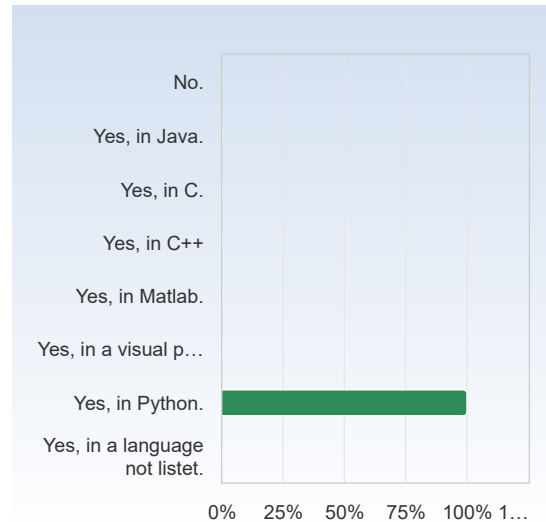
I assume this means the sessions we could book to discuss assignment solutions.



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**Have you ever have written a computer program before the course start? (Please give the most relevant answer)**

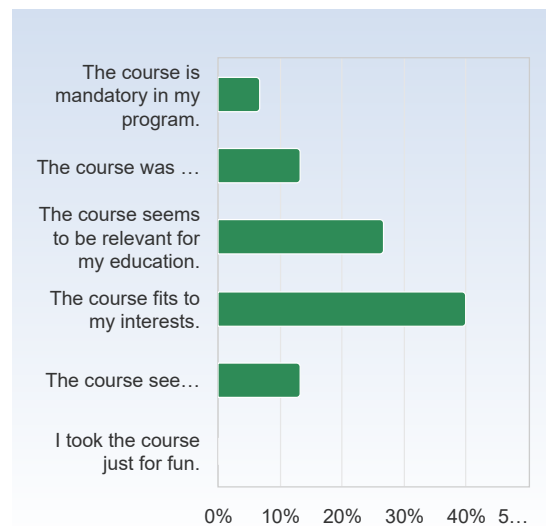
Have you ever have written a computer program before the course start? (Please give the most relevant answer)	Number of responses
No.	0 (0.0%)
Yes, in Java.	0 (0.0%)
Yes, in C.	0 (0.0%)
Yes, in C++	0 (0.0%)
Yes, in Matlab.	0 (0.0%)
Yes, in a visual programming language, like Snap! .	0 (0.0%)
Yes, in Python.	6 (100.0%)
Yes, in a language not listet.	0 (0.0%)
Total	6 (100.0%)



	Mean	Standard Deviation
Have you ever have written a computer program before the course start? (Please give the most relevant answer)	7.0	0.0

**Why did you sign up for the course? (several answers possible)**

Why did you sign up for the course? (several answers possible)	Number of responses
The course is mandatory in my program.	1 (16.7%)
The course was strongly recommended in my program.	2 (33.3%)
The course seems to be relevant for my education.	4 (66.7%)
The course fits to my interests.	6 (100.0%)
The course seems to improve my chances on the work market.	2 (33.3%)
I took the course just for fun.	0 (0.0%)
Total	15 (250.0%)



	Mean	Standard Deviation
Why did you sign up for the course? (several answers possible)	3.4	1.1

**Comment**

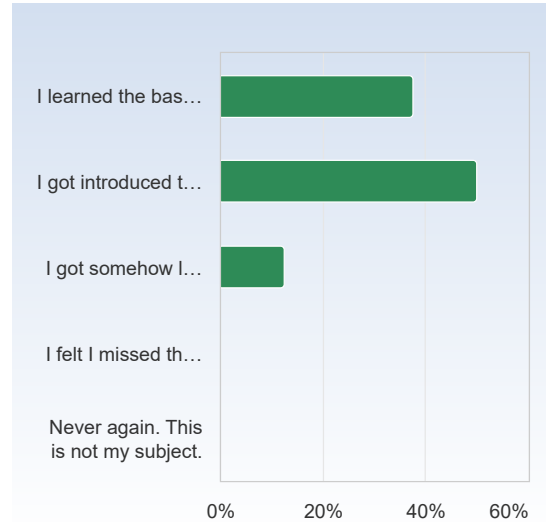
A strong motivation was that the course is mandatory for NUMK11.



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**Now that the lectures are done, my impression is.....**

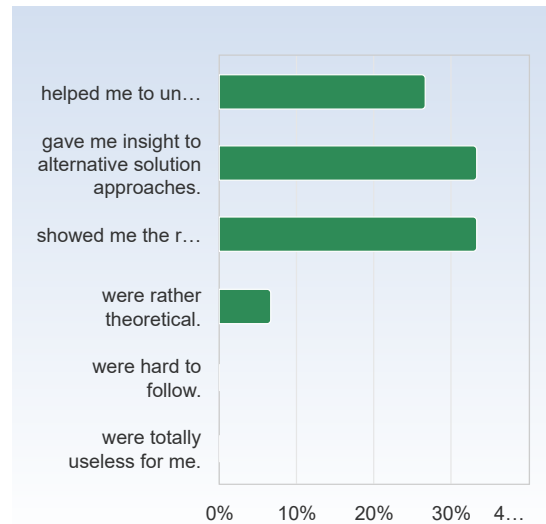
Now that the lectures are done, my impression is.....	Number of responses
I learned the basics of numerical analysis and I feel I can manage to apply this knowledge in mathematics and physics.	3 (50.0%)
I got introduced to the topic of numerical analysis but I need to dive deeper into the subject to fully understand all content of the course.	4 (66.7%)
I got somehow lost during the course, but I think I will catch up.	1 (16.7%)
I felt I missed the point with this course and will retake it.	0 (0.0%)
Never again. This is not my subject.	0 (0.0%)
<b>Total</b>	<b>8 (133.3%)</b>



	Mean	Standard Deviation
Now that the lectures are done, my impression is.....	1.8	0.7

**The lectures ....**

The lectures ....	Number of responses
helped me to understand concepts and details.	4 (66.7%)
gave me insight to alternative solution approaches.	5 (83.3%)
showed me the relevance of numerical mathematics and programming in mathematics /physics.	5 (83.3%)
were rather theoretical.	1 (16.7%)
were hard to follow.	0 (0.0%)
were totally useless for me.	0 (0.0%)
<b>Total</b>	<b>15 (250.0%)</b>



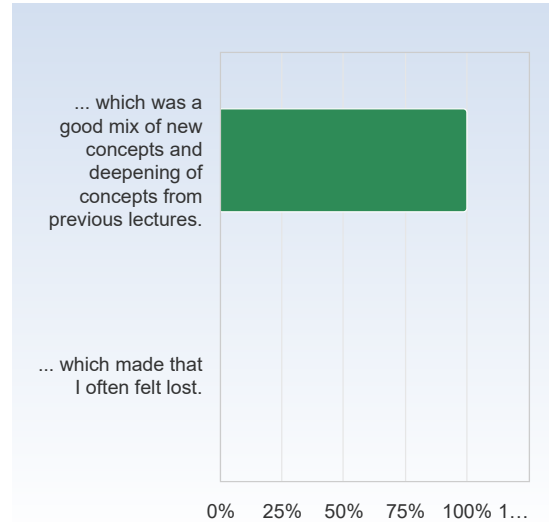
	Mean	Standard Deviation
The lectures ....	2.2	0.9



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### The material used during lectures was ordered in a way ...

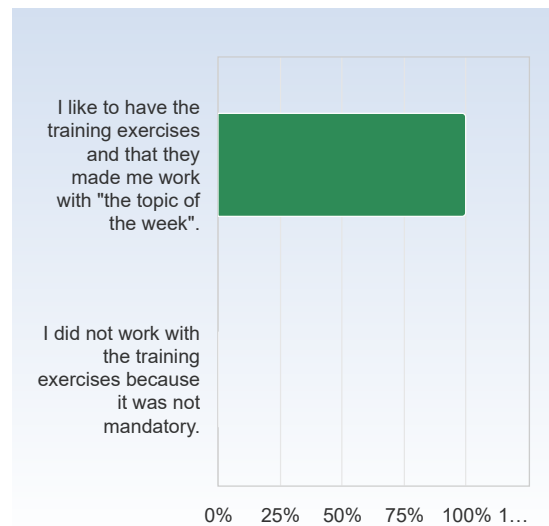
The material used during lectures was ordered in a way ...	Number of responses
... which was a good mix of new concepts and deepening of concepts from previous lectures.	6 (100.0%)
... which made that I often felt lost.	0 (0.0%)
Total	6 (100.0%)



	Mean	Standard Deviation
The material used during lectures was ordered in a way ...	1.0	0.0

### Trainings exercises

Trainings exercises	Number of responses
I like to have the training exercises and that they made me work with "the topic of the week".	4 (100.0%)
I did not work with the training exercises because it was not mandatory.	0 (0.0%)
Total	4 (100.0%)



	Mean	Standard Deviation
Trainings exercises	1.0	0.0

#### Comment

I'm assuming this refers to the assignments.

Hard to prioritize if you have other mandatory assignments at the same time. Also we had to hand them in before a certain time to get to discuss them but the discussion was a week later so if you hadn't finished/try all different things you wanted to keep working on the old assignment after handing it in before the meeting was and then not do the new one, also if you did the new one instead it was sort of hard to remember what you did not do what you were confused about for the old assignment in the meeting because now you were confused about the new one more recently



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## Support

Support	Number of responses
The support and comments for submitted training exercises were very helpful.	2 (33.3%)
Sometimes the support and comments for submitted training exercises were helpful.	1 (16.7%)
I struggled with the training exercises even after I got support.	1 (16.7%)
If other, please specify	2 (33.3%)
Total	6 (100.0%)



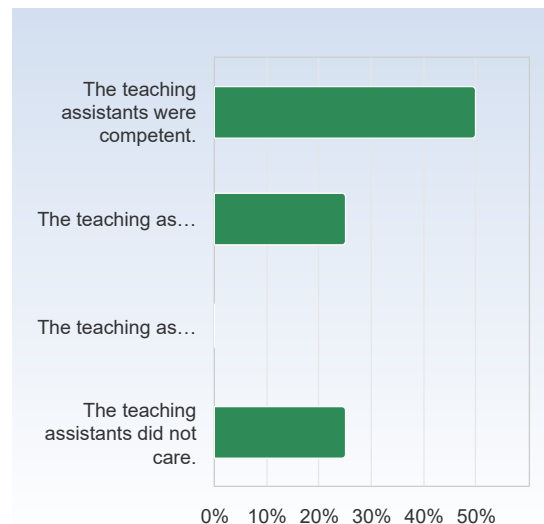
	Mean	Standard Deviation
Support	2.5	1.4

### If other, please specify

The support was helpful when it was clear to you what you were confused about. If you were just sort of a little confused in general but thought maybe you got the things you were supposed to and didn't have any clear questions the were not as helpful. I think it would be a good idea to prepare some questions for the meetings that the TA can ask that you try to answer that way it's easier to understand both what you are supposed to learn and what you have understood/misunderstood, if you don't have any clear questions to begin with

## Competence

Competence	Number of responses
The teaching assistants were competent.	2 (50.0%)
The teaching assistant sometimes could not answer but found another one to help.	1 (25.0%)
The teaching assistants tried there best but gave me often wrong answers.	0 (0.0%)
The teaching assistants did not care.	1 (25.0%)
Total	4 (100.0%)



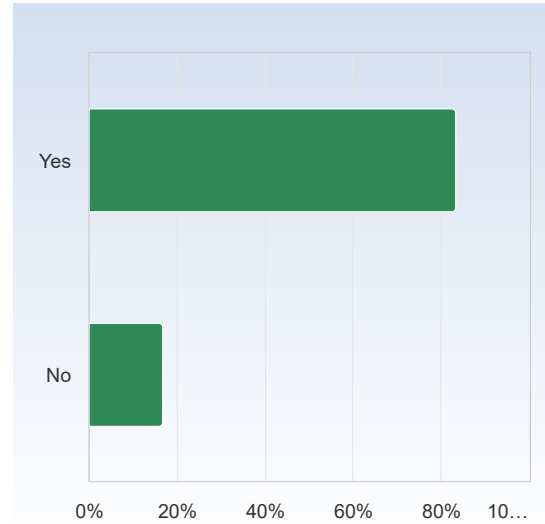
	Mean	Standard Deviation
Competence	2.0	1.4



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### Taining exercises. I worked in a group.

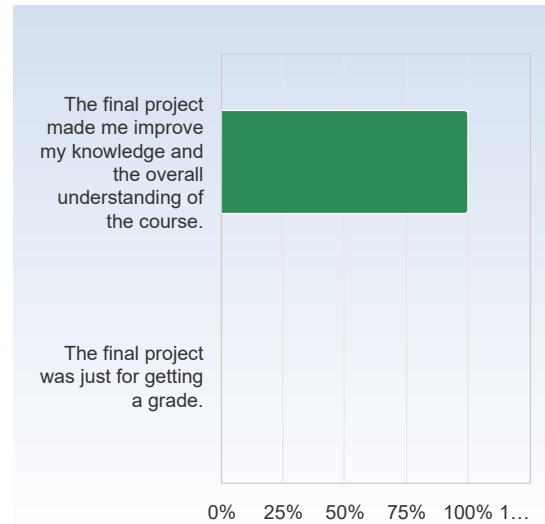
Taining exercises. I worked in a group.	Number of responses
Yes	5 (83.3%)
No	1 (16.7%)
Total	6 (100.0%)



	Mean	Standard Deviation
Taining exercises. I worked in a group.	1.2	0.4

### Final project

Final project	Number of responses
The final project made me improve my knowledge and the overall understanding of the course.	6 (100.0%)
The final project was just for getting a grade.	0 (0.0%)
Total	6 (100.0%)



	Mean	Standard Deviation
Final project	1.0	0.0

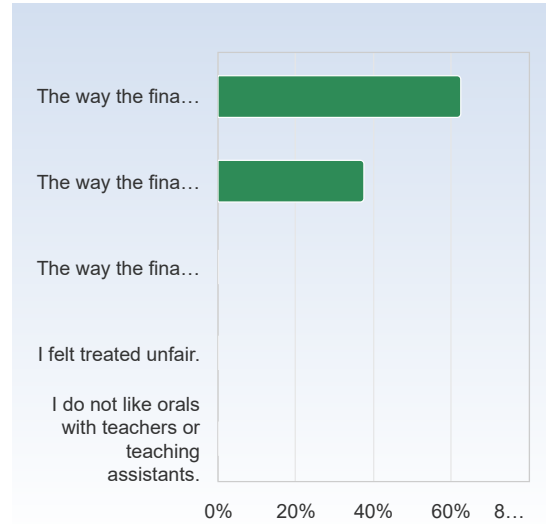




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### The project presentation.

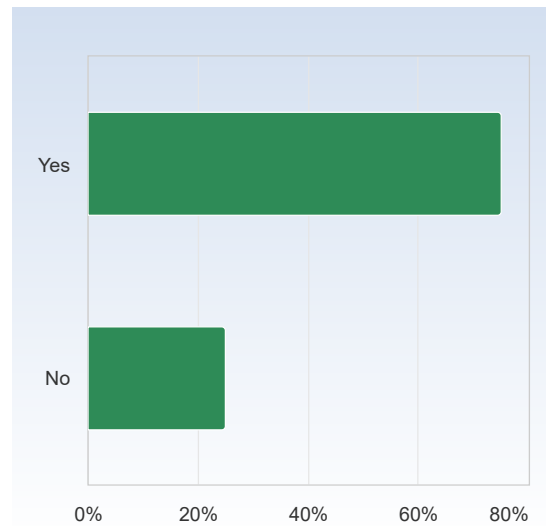
The project presentation.	Number of responses
The way the final project was presented gave me a chance to get extra feedback.	5 (100.0%)
The way the final project was presented gave me a chance to show and test my knowledge.	3 (60.0%)
The way the final project was presented did not match to my effort I put into this work.	0 (0.0%)
I felt treated unfair.	0 (0.0%)
I do not like orals with teachers or teaching assistants.	0 (0.0%)
<b>Total</b>	<b>8 (160.0%)</b>



	Mean	Standard Deviation
The project presentation.	1.4	0.5

### I found it helpful to work in groups for the training exercises and final project

I found it helpful to work in groups for the training exercises and final project	Number of responses
Yes	3 (75.0%)
No	1 (25.0%)
<b>Total</b>	<b>4 (100.0%)</b>



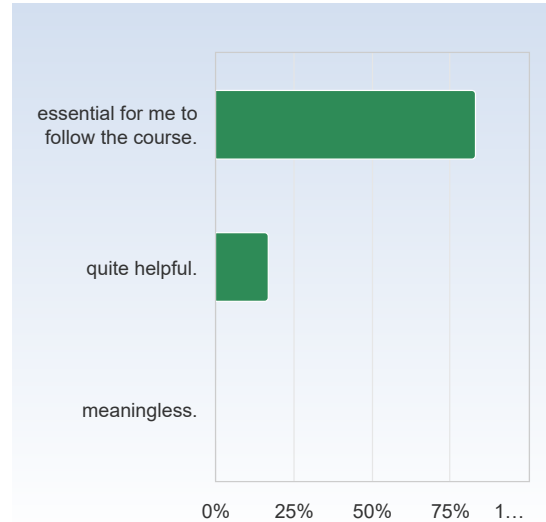
	Mean	Standard Deviation
I found it helpful to work in groups for the training exercises and final project	1.2	0.5



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### Course material. Blackboard presentation and slides...

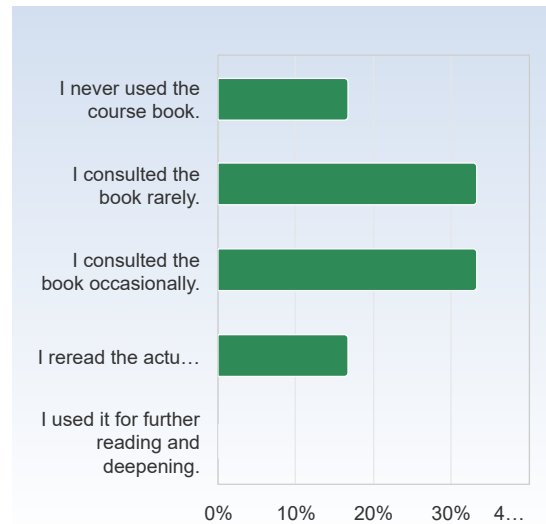
Course material. Blackboard presentation and slides...	Number of responses
essential for me to follow the course.	5 (83.3%)
quite helpful.	1 (16.7%)
meaningless.	0 (0.0%)
<b>Total</b>	<b>6 (100.0%)</b>



	Mean	Standard Deviation
Course material. Blackboard presentation and slides...	1.2	0.4

### The course book.

The course book.	Number of responses
I never used the course book.	1 (16.7%)
I consulted the book rarely.	2 (33.3%)
I consulted the book occasionally.	2 (33.3%)
I reread the actual sections of the lecture in the course book.	1 (16.7%)
I used it for further reading and deepening.	0 (0.0%)
<b>Total</b>	<b>6 (100.0%)</b>



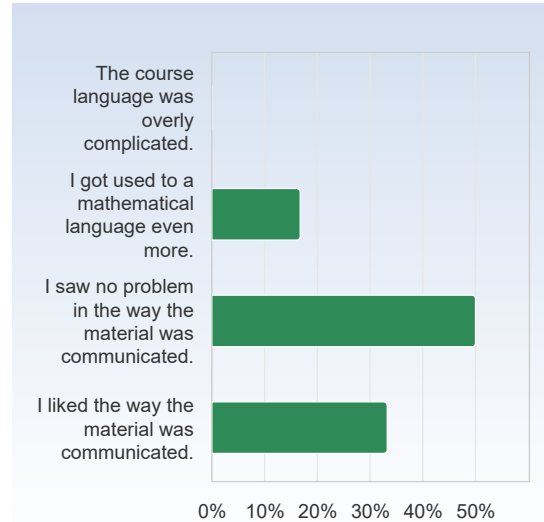
	Mean	Standard Deviation
The course book.	2.5	1.0



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### Course style and language

Course style and language	Number of responses
The course language was overly complicated.	0 (0.0%)
I got used to a mathematical language even more.	1 (16.7%)
I saw no problem in the way the material was communicated.	3 (50.0%)
I liked the way the material was communicated.	2 (33.3%)
<b>Total</b>	<b>6 (100.0%)</b>



	Mean	Standard Deviation
Course style and language	3.2	0.8

### Here you can give final and summarizing comments, if you like

Here you can give final and summarizing comments, if you like

Really fun course! I got a lot out of it, especially the section about simulating differential equations. I had a lot of fun with the final project as well, and I wrote a lot more than what was really necessary. I think numerical analysis will be my focus in the future of my studies!

It might be good if the syllabus listed recommended courses that are useful (but not required) to do before this one. Based on the comments during the lectures, it seems like it makes more sense to do Ordinary Differential Equations 1 and then this course, than to do these the other way around, for example.

The overall structure of the course was good. Group work made it a lot more smooth to approach the assignments. Potentially an area to improve is to help students find a group, even though I did not struggle with this I could see how this is a challenge

Hard to prepare for oral when you don't know what type of questions to expect