



LUND UNIVERSITY
Faculty of Science

Centre for Mathematical Sciences
Division of Mathematics and Numerical Analysis

Course Analysis for MATM20 Mathematical Modelling, VT 2024

Course Information

Lecturer: Joachim Hein

Teaching assistants: None

Number of students:

14 newly registered and 1 re-registered.

4 students answered the course evaluation, 4 of them are enrolled on Master's Programme in Mathematics

Examination

Project: 15 students passed.

Oral presentation: 15 students passed.

Oral examination: does not apply

Written examination: 14 students passed.

- Ordinary examination 30/05 2024: 13 students participated and 13 of them passed.

- Resit examination 22/08 2024: 2 students participated and 1 of them passed.

Final grades:

In all, 14 students, including 0 re-registered students, have got their final grade.

6 passed with distinction.

8 passed.

Course Evaluation

Summary of student's answers:

Four students took the time to provide valuable feedback on the course. While three responders expressed an overall satisfaction with the course of 4 points, one responder gave it a low score of 1. This results in an average rating of 3.2 for the overall satisfaction. Two questions in the generic skill section ("The course has increased my ability to read a mathematical text" and "As a result of this course, I feel confident about tackling unfamiliar problems") received a now average score of 2.5. The remaining questions in the survey got an aver score of 3.2 or better. The lectures received an average score of 3.5 and the seminars got an average score of 4.3.

Teachers' comments:

The course consisted out of lectures and seminars. All events were on campus in a classroom setting. For most parts the course followed a textbook. There were set exercises, which were discussed during the seminars in the following week. Students received Python programs and Excel sheets from the lecture demonstrations and sample solutions for the programming exercises. As stated in the course plan, there was a written exam and project work. For the project work students were allowed to work in pairs, though many students choose to work on the projects on their own. The students presented the results of their project work in an oral presentation.

I really appreciate the feedback provided by those which participated in the survey. I wish more students would have participated in the survey, to obtain a more complete picture.

Assessment of the computational aspects of the course is normally part of the project work. The computationally most interesting parts are taught towards the end of the course. Due to the holiday distribution the time between the last lectures and the end of term were unusually short this year, leaving not enough time to include the computational aspects into the second project. I understand that the second project and the exam felt quite similar.

Changes from the previous course realisation:

Compared to previous years where project groups consisted out of up to 3 members, this time participants were allowed to work in pairs, though many students choose to do the project on their own.

Suggestions for the next course realisation:

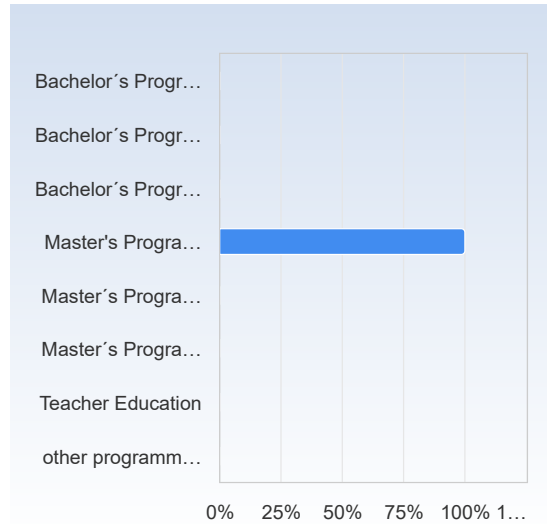
Participants will be more encouraged to do the project with a project partner. This should reduce the workload and improve the quality of the project submissions. We will aim to have more computational aspects in the second project.

Mathematical Modelling MATM20, VT 2024

Respondents: 16
Answer Count: 4
Answer Frequency: 25.00%

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	0 (0.0%)
Bachelor's Programme, other specialization	0 (0.0%)
Master's Programme in Mathematics	4 (100.0%)
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	4 (100.0%)

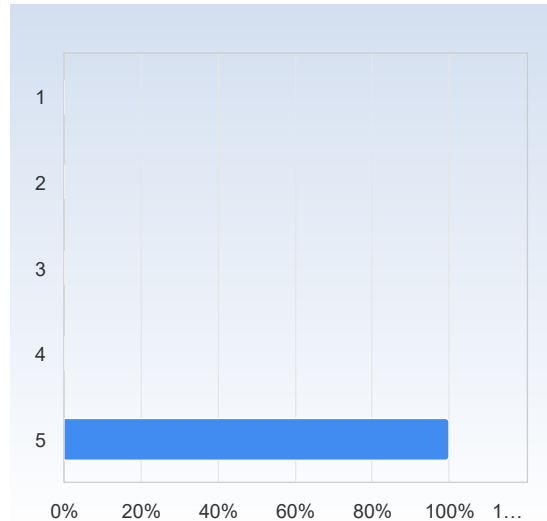


	Mean	Standard Deviation
I have studied this course as part of	4.0	0.0

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.

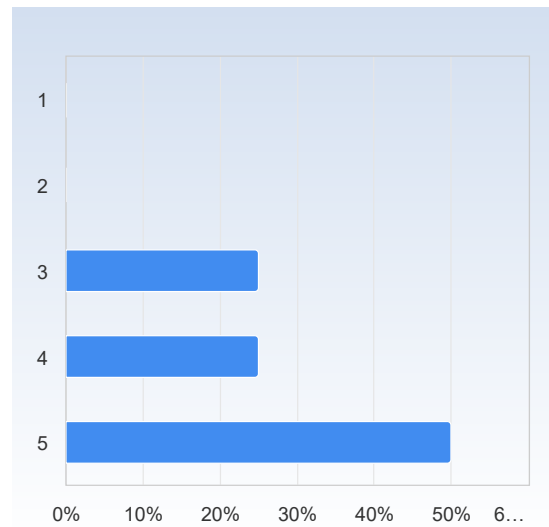
2. My prior knowledge has been sufficient to assimilate the contents of this course.	Number of responses
1	0 (0.0%)
2	0 (0.0%)
3	0 (0.0%)
4	0 (0.0%)
5	4 (100.0%)
Total	4 (100.0%)



	Mean	Standard Deviation
2. My prior knowledge has been sufficient to assimilate the contents of this course.	5.0	0.0

3. I have participated actively in the course.

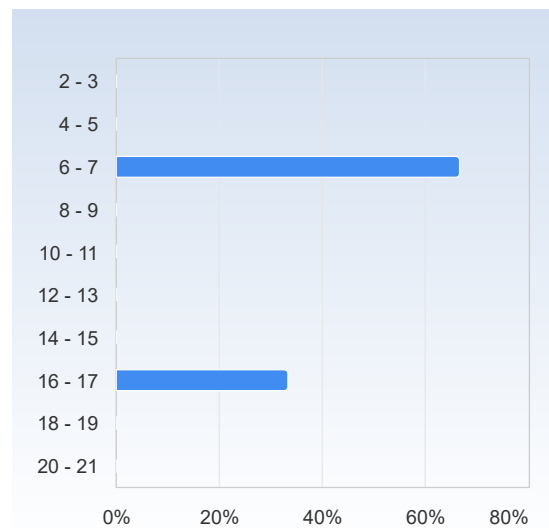
3. I have participated actively in the course.	Number of responses
1	0 (0.0%)
2	0 (0.0%)
3	1 (25.0%)
4	1 (25.0%)
5	2 (50.0%)
Total	4 (100.0%)



	Mean	Standard Deviation
3. I have participated actively in the course.	4.2	1.0

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 - 3	0 (0.0%)
4 - 5	0 (0.0%)
6 - 7	2 (66.7%)
8 - 9	0 (0.0%)
10 - 11	0 (0.0%)
12 - 13	0 (0.0%)
14 - 15	0 (0.0%)
16 - 17	1 (33.3%)
18 - 19	0 (0.0%)
20 - 21	0 (0.0%)
Total	3 (100.0%)



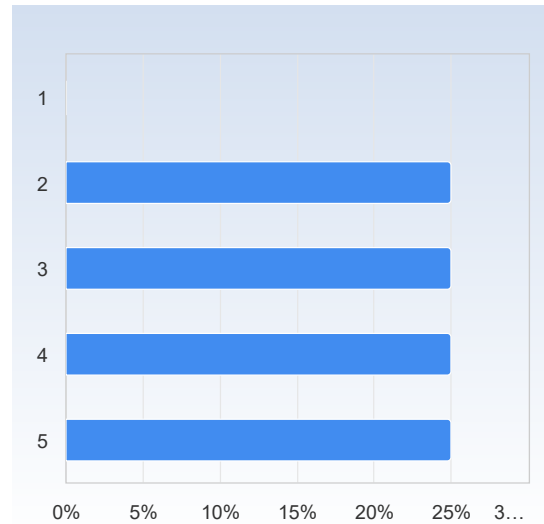
	Mean	Standard Deviation
Average number of hours spent in total on the course per week (including scheduled activities):	9.7	6.4

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.

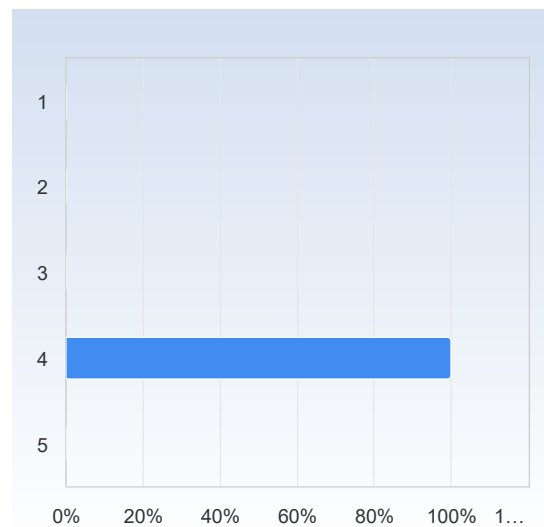
The way the course was taught and organised suited me.	Number of responses
1	0 (0.0%)
2	1 (25.0%)
3	1 (25.0%)
4	1 (25.0%)
5	1 (25.0%)
Total	4 (100.0%)



	Mean	Standard Deviation
The way the course was taught and organised suited me.	3.5	1.3

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

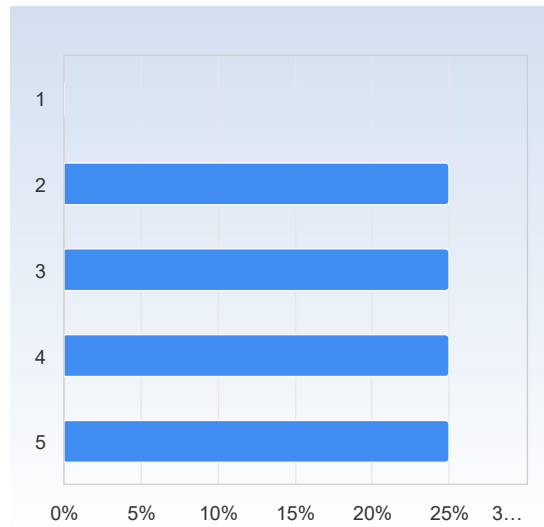
The number of teacher lead activities (lectures, seminars etc.) has been satisfactory.	Number of responses
1	0 (0.0%)
2	0 (0.0%)
3	0 (0.0%)
4	4 (100.0%)
5	0 (0.0%)
Total	4 (100.0%)



	Mean	Standard Deviation
The number of teacher lead activities (lectures, seminars etc.) has been satisfactory.	4.0	0.0

The lectures were valuable for my learning.

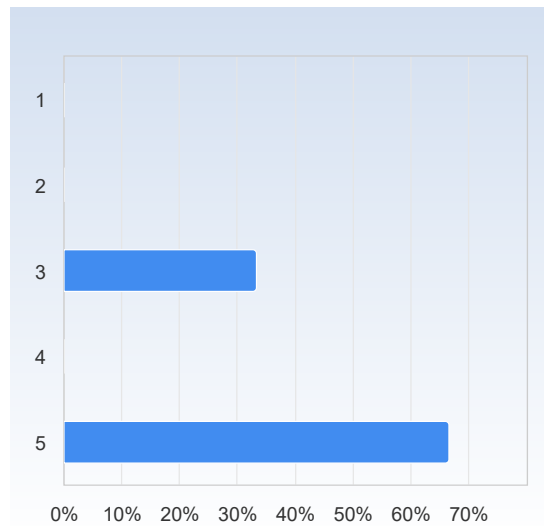
The lectures were valuable for my learning.	Number of responses
1	0 (0.0%)
2	1 (25.0%)
3	1 (25.0%)
4	1 (25.0%)
5	1 (25.0%)
Total	4 (100.0%)



	Mean	Standard Deviation
The lectures were valuable for my learning.	3.5	1.3

The seminars were valuable for my learning.

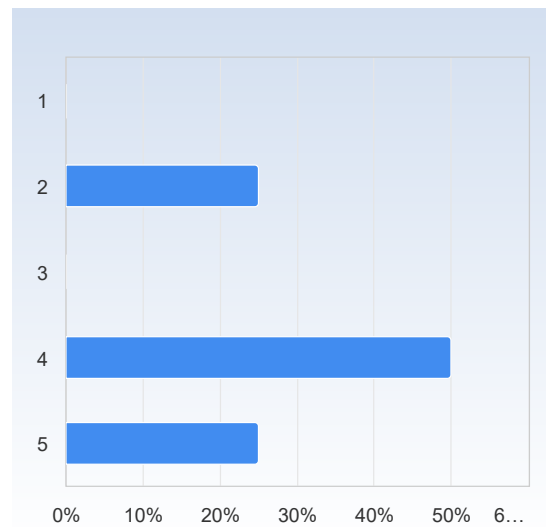
The seminars were valuable for my learning.	Number of responses
1	0 (0.0%)
2	0 (0.0%)
3	1 (33.3%)
4	0 (0.0%)
5	2 (66.7%)
Total	3 (100.0%)



	Mean	Standard Deviation
The seminars were valuable for my learning.	4.3	1.2

Studying on my own was valuable for my learning.

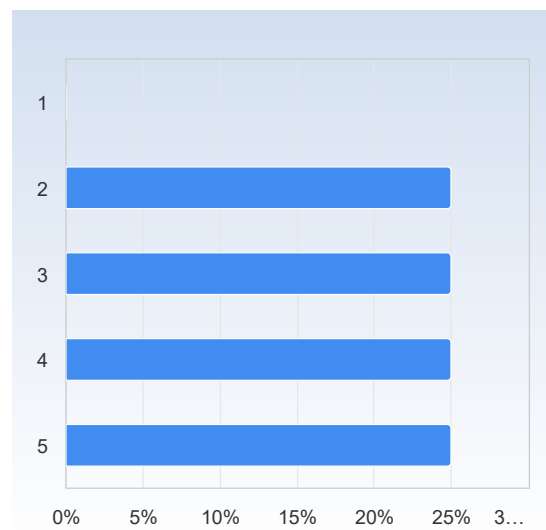
Studying on my own was valuable for my learning.	Number of responses
1	0 (0.0%)
2	1 (25.0%)
3	0 (0.0%)
4	2 (50.0%)
5	1 (25.0%)
Total	4 (100.0%)



	Mean	Standard Deviation
Studying on my own was valuable for my learning.	3.8	1.3

The course literature/material was a valuable learning resource.

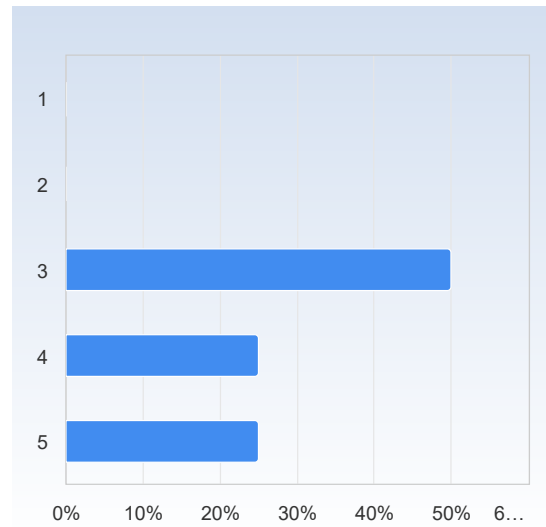
The course literature/material was a valuable learning resource.	Number of responses
1	0 (0.0%)
2	1 (25.0%)
3	1 (25.0%)
4	1 (25.0%)
5	1 (25.0%)
Total	4 (100.0%)



	Mean	Standard Deviation
The course literature/material was a valuable learning resource.	3.5	1.3

The information I received before the course start was satisfactory.

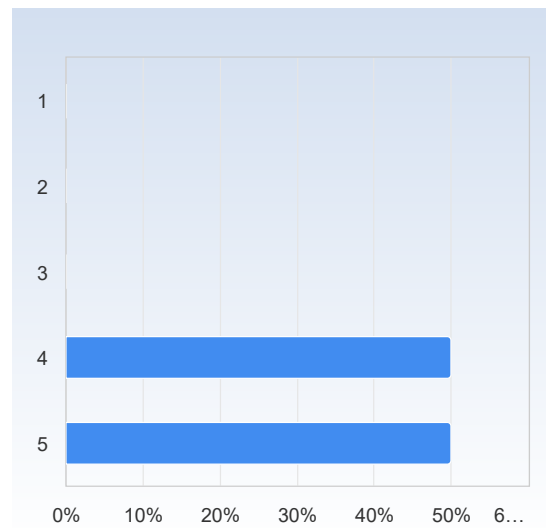
The information I received before the course start was satisfactory.	Number of responses
1	0 (0.0%)
2	0 (0.0%)
3	2 (50.0%)
4	1 (25.0%)
5	1 (25.0%)
Total	4 (100.0%)



	Mean	Standard Deviation
The information I received before the course start was satisfactory.	3.8	1.0

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

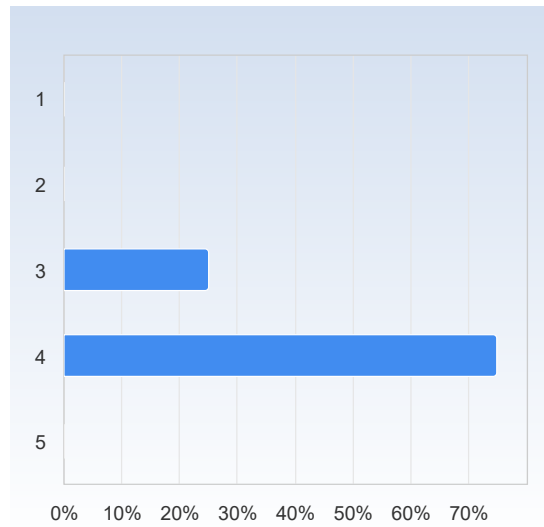
The communication with the teaching staff during the course was good.	Number of responses
1	0 (0.0%)
2	0 (0.0%)
3	0 (0.0%)
4	2 (50.0%)
5	2 (50.0%)
Total	4 (100.0%)



	Mean	Standard Deviation
The communication with the teaching staff during the course was good.	4.5	0.6

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

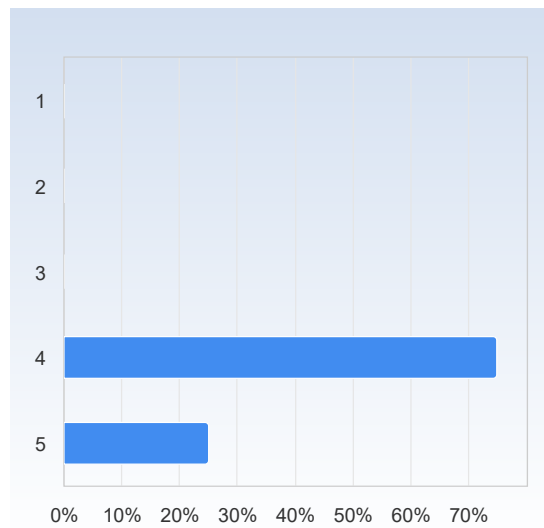
It was clear throughout the course what was expected of me.	Number of responses
1	0 (0.0%)
2	0 (0.0%)
3	1 (25.0%)
4	3 (75.0%)
5	0 (0.0%)
Total	4 (100.0%)



	Mean	Standard Deviation
It was clear throughout the course what was expected of me.	3.8	0.5

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

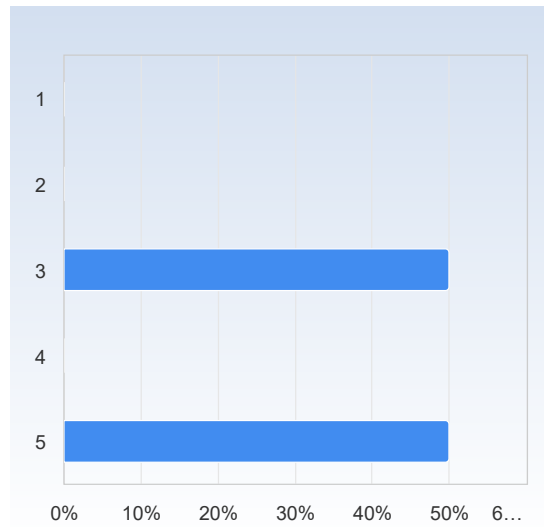
I have received valuable feedback from my teacher /teachers during the course.	Number of responses
1	0 (0.0%)
2	0 (0.0%)
3	0 (0.0%)
4	3 (75.0%)
5	1 (25.0%)
Total	4 (100.0%)



	Mean	Standard Deviation
I have received valuable feedback from my teacher/teachers during the course.	4.2	0.5

The course had a reasonable workload.

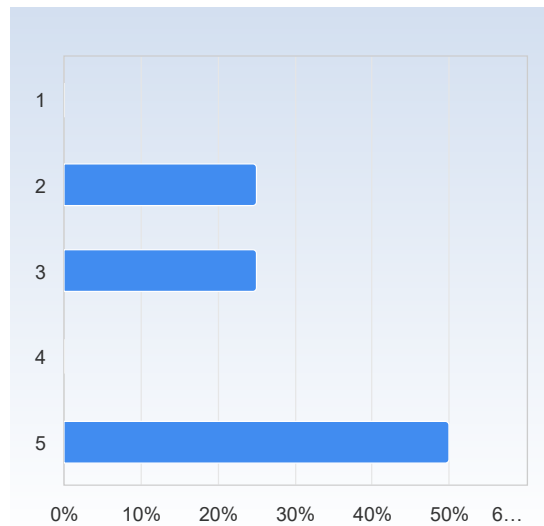
The course had a reasonable workload.	Number of responses
1	0 (0.0%)
2	0 (0.0%)
3	2 (50.0%)
4	0 (0.0%)
5	2 (50.0%)
Total	4 (100.0%)



	Mean	Standard Deviation
The course had a reasonable workload.	4.0	1.2

The workload was evenly distributed throughout the course.

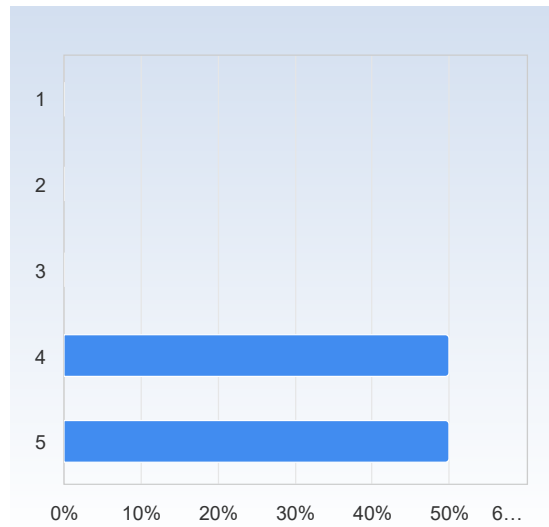
The workload was evenly distributed throughout the course.	Number of responses
1	0 (0.0%)
2	1 (25.0%)
3	1 (25.0%)
4	0 (0.0%)
5	2 (50.0%)
Total	4 (100.0%)



	Mean	Standard Deviation
The workload was evenly distributed throughout the course.	3.8	1.5

The examination matched the contents and level of the course.

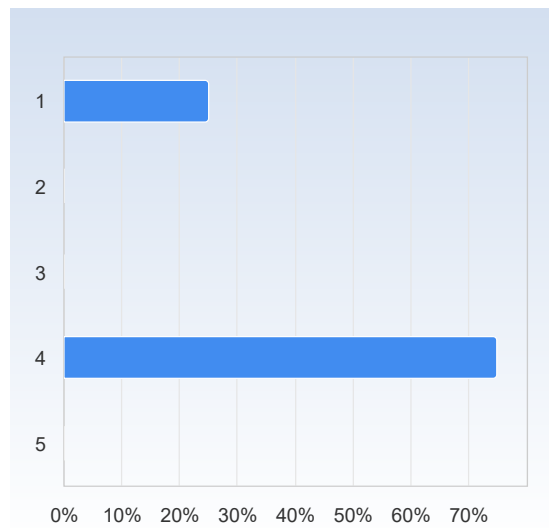
The examination matched the contents and level of the course.	Number of responses
1	0 (0.0%)
2	0 (0.0%)
3	0 (0.0%)
4	2 (50.0%)
5	2 (50.0%)
Total	4 (100.0%)



	Mean	Standard Deviation
The examination matched the contents and level of the course.	4.5	0.6

Overall, I am satisfied with the course.

Overall, I am satisfied with the course.	Number of responses
1	1 (25.0%)
2	0 (0.0%)
3	0 (0.0%)
4	3 (75.0%)
5	0 (0.0%)
Total	4 (100.0%)



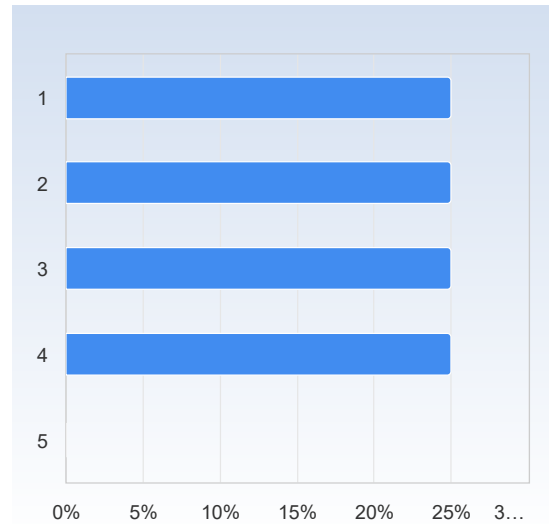
	Mean	Standard Deviation
Overall, I am satisfied with the course.	3.2	1.5

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.

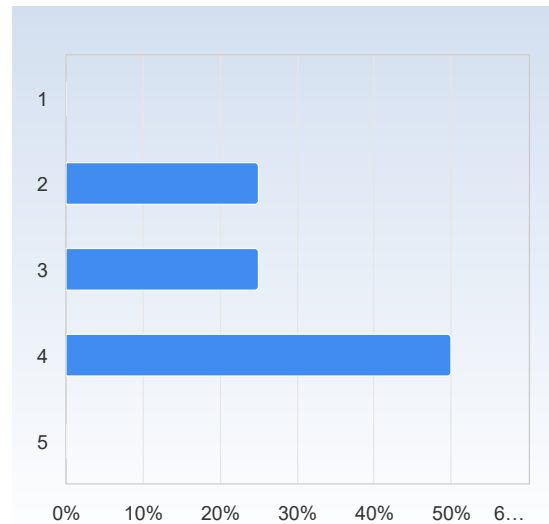
The course has increased my ability to read a mathematical text.	Number of responses
1	1 (25.0%)
2	1 (25.0%)
3	1 (25.0%)
4	1 (25.0%)
5	0 (0.0%)
Total	4 (100.0%)



	Mean	Standard Deviation
The course has increased my ability to read a mathematical text.	2.5	1.3

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

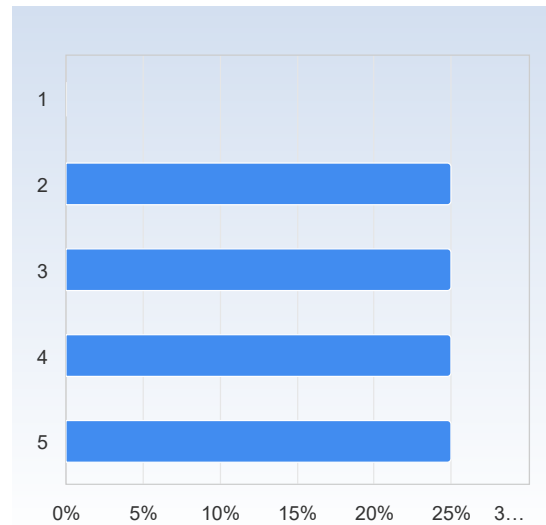
The course has increased my ability to communicate the subject in writing.	Number of responses
1	0 (0.0%)
2	1 (25.0%)
3	1 (25.0%)
4	2 (50.0%)
5	0 (0.0%)
Total	4 (100.0%)



	Mean	Standard Deviation
The course has increased my ability to communicate the subject in writing.	3.2	1.0

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

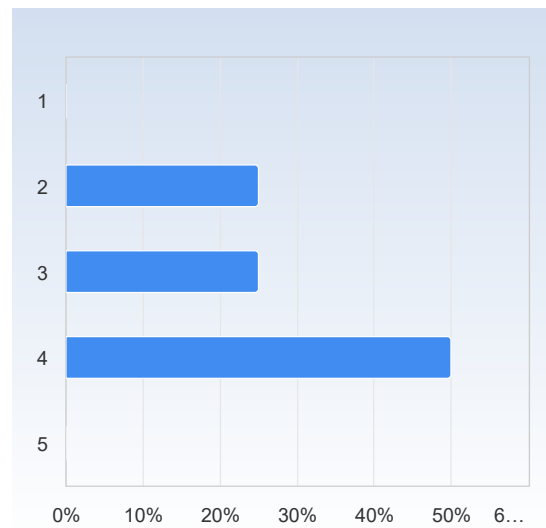
The course has increased my ability to communicate the subject orally.	Number of responses
1	0 (0.0%)
2	1 (25.0%)
3	1 (25.0%)
4	1 (25.0%)
5	1 (25.0%)
Total	4 (100.0%)



	Mean	Standard Deviation
The course has increased my ability to communicate the subject orally.	3.5	1.3

The course has increased my ability to cooperate.

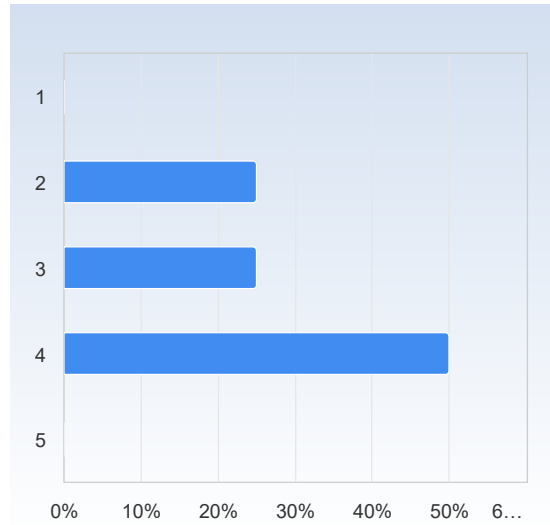
The course has increased my ability to cooperate.	Number of responses
1	0 (0.0%)
2	1 (25.0%)
3	1 (25.0%)
4	2 (50.0%)
5	0 (0.0%)
Total	4 (100.0%)



	Mean	Standard Deviation
The course has increased my ability to cooperate.	3.2	1.0

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

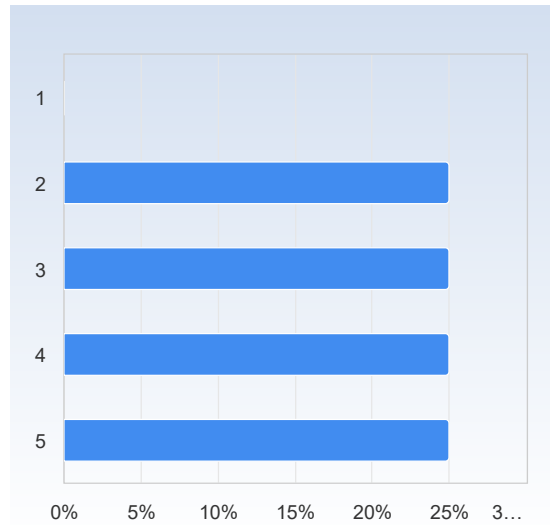
The course has increased my ability to search and process information.	Number of responses
1	0 (0.0%)
2	1 (25.0%)
3	1 (25.0%)
4	2 (50.0%)
5	0 (0.0%)
Total	4 (100.0%)



	Mean	Standard Deviation
The course has increased my ability to search and process information.	3.2	1.0

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

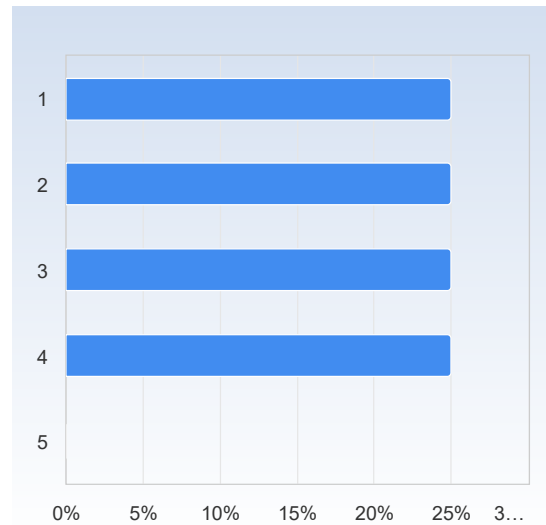
The course has increased my ability to analyze and solve problems.	Number of responses
1	0 (0.0%)
2	1 (25.0%)
3	1 (25.0%)
4	1 (25.0%)
5	1 (25.0%)
Total	4 (100.0%)



	Mean	Standard Deviation
The course has increased my ability to analyze and solve problems.	3.5	1.3

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 (25.0%)
2	1 (25.0%)
3	1 (25.0%)
4	1 (25.0%)
5	0 (0.0%)
Total	4 (100.0%)



	Mean	Standard Deviation
As a result of this course, I feel confident about tackling unfamiliar problems.	2.5	1.3

What did you appreciate most with the course?

What did you appreciate most with the course?

The canvas page was very complete and well structured.

The lectures and the seminars were very useful. The coding part was really fine and it was good also for someone who is not very familiar with Python or coding in general. The last day for revision was really useful. The last part was interesting and we were able to connect it to courses that we already took.

All the programming assignments.

What do you think should be improved?

What do you think should be improved?

It would be better to have a different book which have also the theory and not only examples, sometime it was hard to follow and I think that book gives a lot for granted. The project presentation was too near to the written examination, but I understand that it's useful to have it before the written examination to see if all the things are clear. It would be useful to have at least a seminar to discuss about Euler method.

I don't think that the calculator was much needed, if not for the first exercise. I noticed that in some past exams there were some hints that were very helpful to see if the calculation were right, but not this year. As the exam contains many calculation and it could be very long because of that, it would be helpful to have those hints.

I think this is a course where the written exam makes no much sense. The written exam was not so bad but Mathematical modeling without a computer, sorry to say but it is meaningless.

The course could be done a bit speedier / more in depth.

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.