



LUND UNIVERSITY
Faculty of Science

Centre for Mathematical Sciences
Division of Mathematics and Numerical Analysis

Course Analysis for BERN07 *Uncertainty Quantification and Data-Driven Modelling*, VT 2025

Course Information

Lecturer: Mengwu Guo

Number of students:

9 newly registered within BERN07 (6 additional doctoral students within NMA015F).

4 students answered the course evaluation, among which 2 of them are enrolled in the master's programme in Computational Science, while the other 2 are doctoral students.

Examination

Project: 5 students passed within BERN07.

Oral examination: 5 students passed within BERN07.

Final grades:

5 students within BERN07 have got their final grade. 4 passed with distinction, and 1 passed.

Course Evaluation

Summary of student's answers:

Overall, the survey respondents expressed satisfaction with the course's organization and materials.

Teachers' comments:

Fourteen on-campus lectures were held, scheduled at a pace of two per week. Both whiteboard and slides were used during the lectures. A set of lecture notes (slides) was prepared to closely align with the material presented throughout the course. Nearly all registered students attended most of the lectures. Four tutorial sessions were integrated into the regular lecture schedule. The course examination consisted of an oral exam and a project involving literature review, analysis, and implementation.

Changes from the previous course realisation:

Not available. The course was newly created, and this was the first course realisation.

Suggestions for the next course realisation:

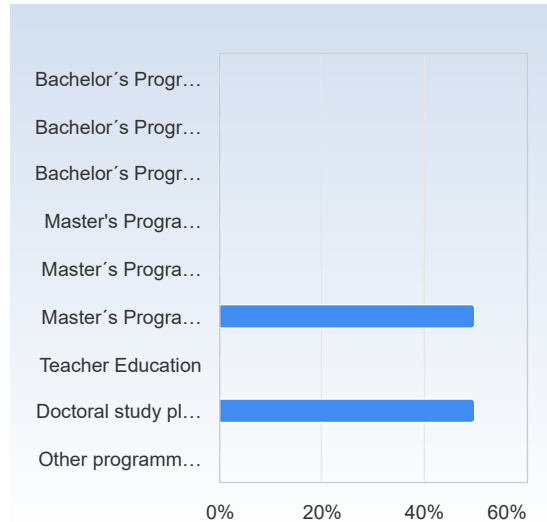
There is still room for minor refinements to the lecture notes. In particular, the overview of the course structure and the connections between different components will be further clarified in the introductory chapter. It would also be beneficial to provide notes of the tutorial discussions. During the lectures, special attention will be given to balancing the differing needs of master's and doctoral students.

BERN07NMA015FVT25 Uncertainty Quantification and Data-driven Modelling

Respondents: 23
Answer Count: 4
Answer Frequency: 17.39%

I have studied this course as part of

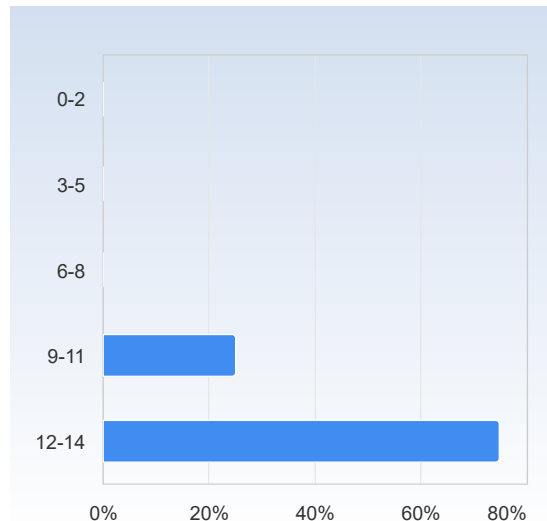
I have studied this course as part of	Number of responses
Bachelor's Programme in Mathematics	0 (0.0%)
Bachelor's Programme in Physics, Theoretical Physics, Astronomy	0 (0.0%)
Bachelor's Programme, other specialization	0 (0.0%)
Master's Programme in Mathematics	0 (0.0%)
Master's Programme in Mathematical Statistics	0 (0.0%)
Master's Programme, other specialization	2 (50.0%)
Teacher Education	0 (0.0%)
Doctoral study plan	2 (50.0%)
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	7.5	1.7

How many lectures did you attend? (Note: the whole survey is strictly anonymous.)

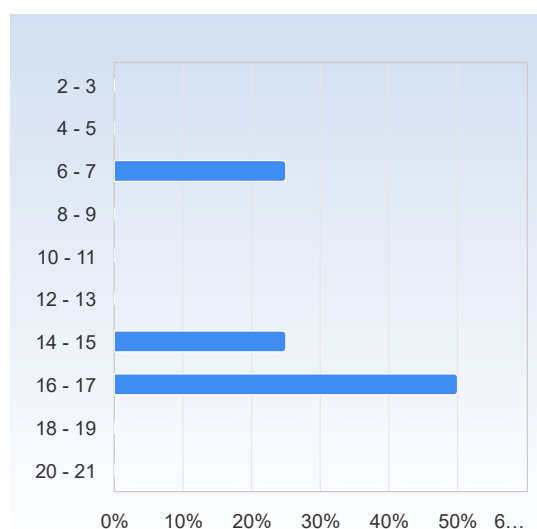
How many lectures did you attend? (Note: the whole survey is strictly anonymous.)	Number of responses
0-2	0 (0.0%)
3-5	0 (0.0%)
6-8	0 (0.0%)
9-11	1 (25.0%)
12-14	3 (75.0%)
Total	4 (100.0%)



	Mean	Standard Deviation
How many lectures did you attend? (Note: the whole survey is strictly anonymous.)	12.2	1.5

Average number of hours spent in total on the course per week (including scheduled activities):

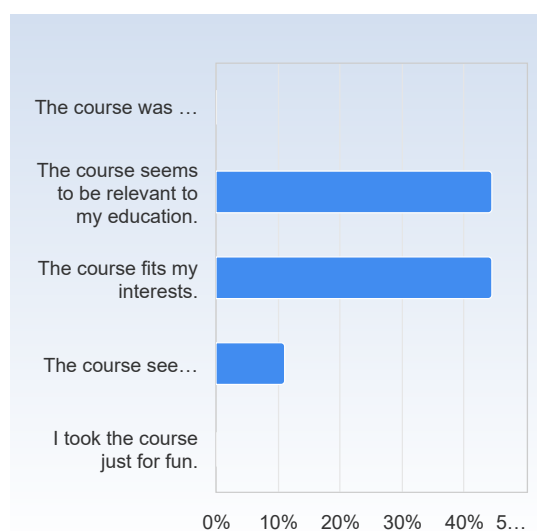
Average number of hours spent in total on the course per week (including scheduled activities):	Number of responses
2 - 3	0 (0.0%)
4 - 5	0 (0.0%)
6 - 7	1 (25.0%)
8 - 9	0 (0.0%)
10 - 11	0 (0.0%)
12 - 13	0 (0.0%)
14 - 15	1 (25.0%)
16 - 17	2 (50.0%)
18 - 19	0 (0.0%)
20 - 21	0 (0.0%)
Total	4 (100.0%)



	Mean	Standard Deviation
Average number of hours spent in total on the course per week (including scheduled activities):	13.2	4.9

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

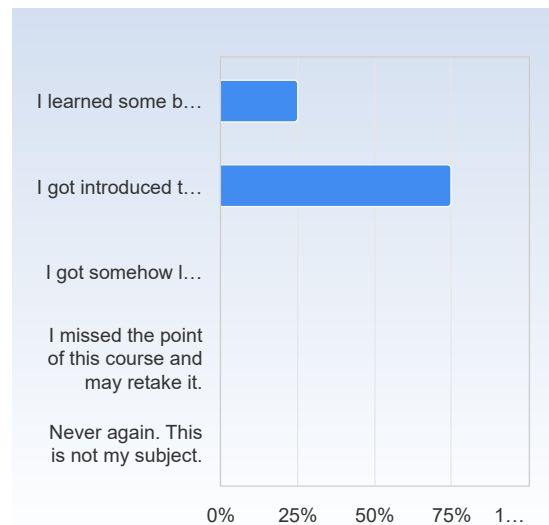
Why did you sign up for the course? (Multiple answers possible)	Number of responses
The course was strongly recommended in my program /specialization.	0 (0.0%)
The course seems to be relevant to my education.	4 (100.0%)
The course fits my interests.	4 (100.0%)
The course seems to improve my chances on the job market.	1 (25.0%)
I took the course just for fun.	0 (0.0%)
Total	9 (225.0%)



	Mean	Standard Deviation
Why did you sign up for the course? (Multiple answers possible)	3.7	0.7

Now that the course is concluded, my impression is that...

Now that the course is concluded, my impression is that...	Number of responses
I learned some basics of uncertainty quantification, and I am able to apply this knowledge to computational tasks.	1 (25.0%)
I got introduced to topics in uncertainty quantification, but I need to dive deeper to fully understand all contents of the course.	3 (75.0%)
I got somehow lost during the course, but I think I will catch up.	0 (0.0%)
I missed the point of this course and may retake it.	0 (0.0%)
Never again. This is not my subject.	0 (0.0%)
Total	4 (100.0%)



	Mean	Standard Deviation
Now that the course is concluded, my impression is that...	1.8	0.5

The lectures (Multiple answers possible)

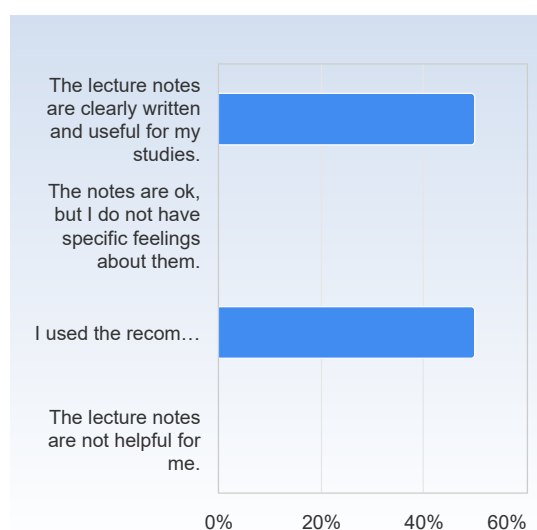
The lectures (Multiple answers possible)	Number of responses
helped me understand mathematical concepts and details.	2 (50.0%)
helped me understand the connections among relevant concepts and methods.	3 (75.0%)
gave me insight into alternative interpretations and intuitions.	4 (100.0%)
were rather theoretical.	2 (50.0%)
were not helpful for me.	0 (0.0%)
should be more challenging to meet my expectations.	1 (25.0%)
Total	12 (300.0%)



	Mean	Standard Deviation
The lectures (Multiple answers possible)	2.8	1.4

What do you think about the lecture notes? (Multiple answers possible)

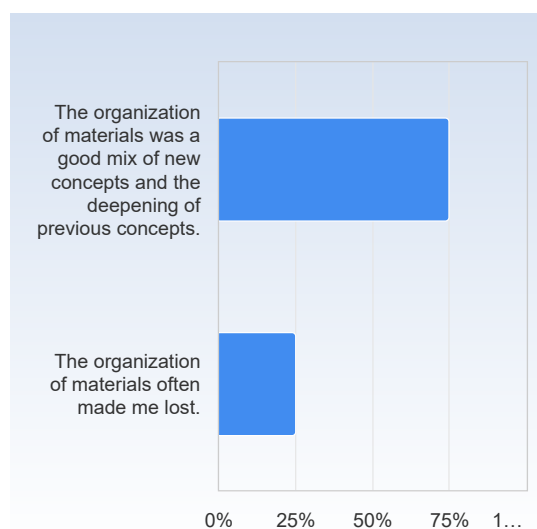
What do you think about the lecture notes? (Multiple answers possible)	Number of responses
The lecture notes are clearly written and useful for my studies.	3 (75.0%)
The notes are ok, but I do not have specific feelings about them.	0 (0.0%)
I used the recommended books /literature more than the lecture notes.	3 (75.0%)
The lecture notes are not helpful for me.	0 (0.0%)
Total	6 (150.0%)



	Mean	Standard Deviation
What do you think about the lecture notes? (Multiple answers possible)	5.0	1.1

What do you think about the organization of course materials?

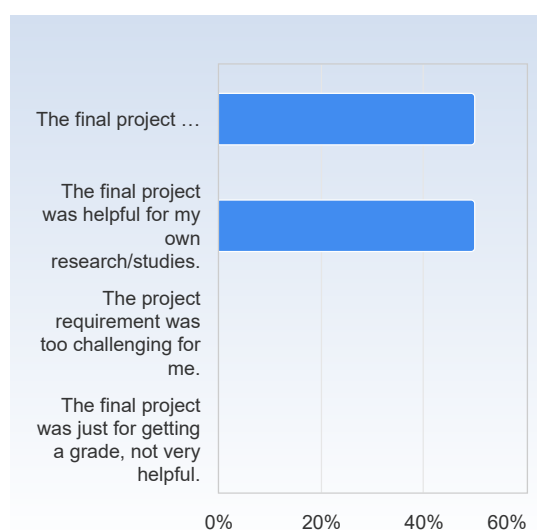
What do you think about the organization of course materials?	Number of responses
The organization of materials was a good mix of new concepts and the deepening of previous concepts.	3 (75.0%)
The organization of materials often made me lost.	1 (25.0%)
Total	4 (100.0%)



	Mean	Standard Deviation
What do you think about the organization of course materials?	1.2	0.5

What do you think about the final project? (Multiple answers possible)

What do you think about the final project? (Multiple answers possible)	Number of responses
The final project helped me get a taste of frontier research topics in this area.	4 (100.0%)
The final project was helpful for my own research/studies.	4 (100.0%)
The project requirement was too challenging for me.	0 (0.0%)
The final project was just for getting a grade, not very helpful.	0 (0.0%)
Total	8 (200.0%)



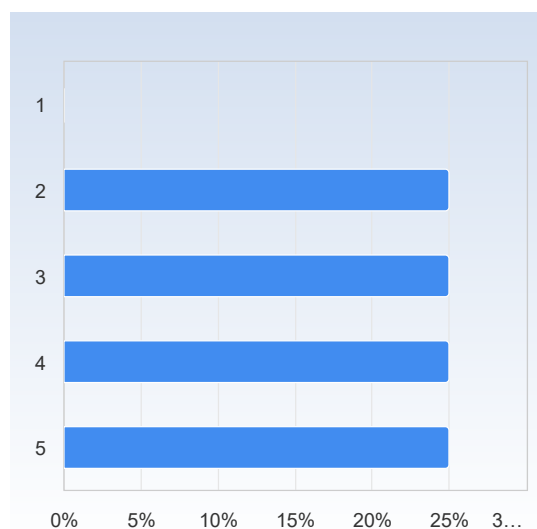
	Mean	Standard Deviation
What do you think about the final project? (Multiple answers possible)	2.0	1.1

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.

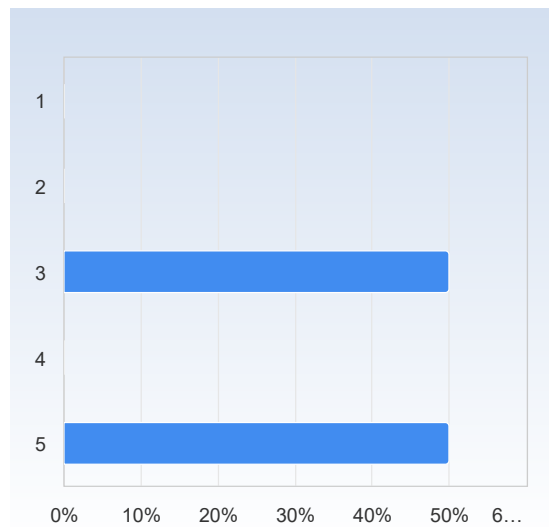
The way the course was taught and organised suited me.	Number of responses
1	0 (0.0%)
2	1 (25.0%)
3	1 (25.0%)
4	1 (25.0%)
5	1 (25.0%)
Total	4 (100.0%)



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

The lectures were valuable for my learning.

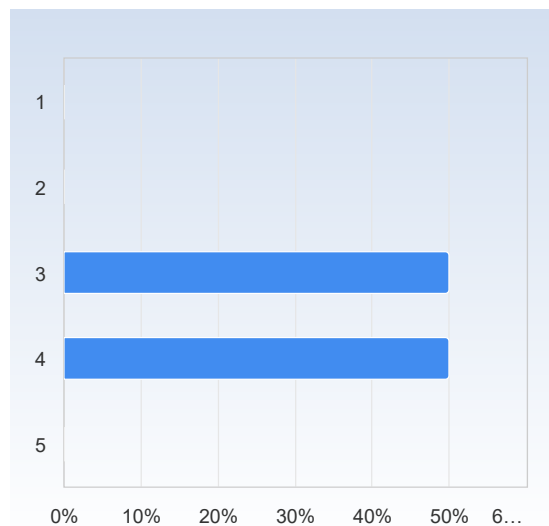
The lectures were valuable for my learning.	Number of responses
1	0 (0.0%)
2	0 (0.0%)
3	2 (50.0%)
4	0 (0.0%)
5	2 (50.0%)
Total	4 (100.0%)



	Mean	Standard Deviation
The lectures were valuable for my learning.	4.0	1.2

The lecture notes were a valuable learning resource.

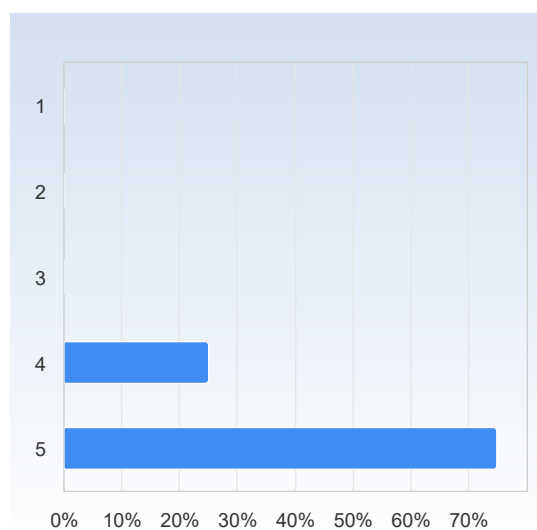
The lecture notes were a valuable learning resource.	Number of responses
1	0 (0.0%)
2	0 (0.0%)
3	2 (50.0%)
4	2 (50.0%)
5	0 (0.0%)
Total	4 (100.0%)



	Mean	Standard Deviation
The lecture notes were a valuable learning resource.	3.5	0.6

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

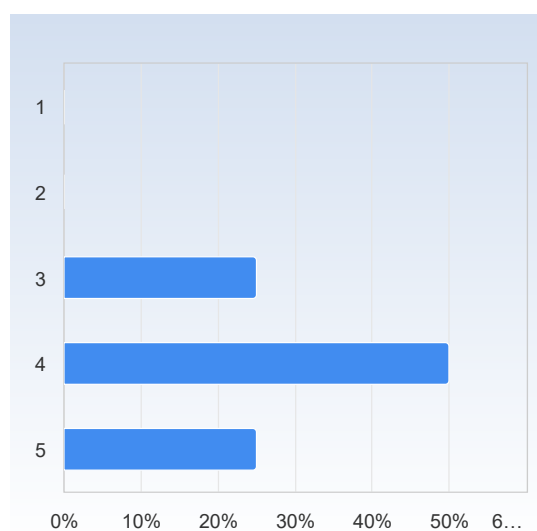
The communication with the teaching staff during the course was good.	Number of responses
1	0 (0.0%)
2	0 (0.0%)
3	0 (0.0%)
4	1 (25.0%)
5	3 (75.0%)
Total	4 (100.0%)



	Mean	Standard Deviation
The communication with the teaching staff during the course was good.	4.8	0.5

The course had a reasonable workload.

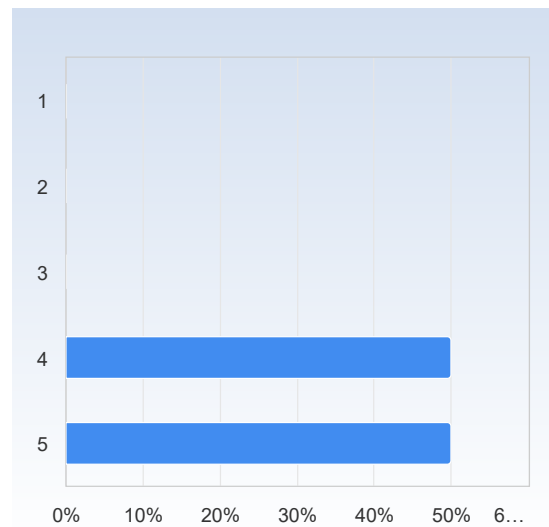
The course had a reasonable workload.	Number of responses
1	0 (0.0%)
2	0 (0.0%)
3	1 (25.0%)
4	2 (50.0%)
5	1 (25.0%)
Total	4 (100.0%)



	Mean	Standard Deviation
The course had a reasonable workload.	4.0	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	0 (0.0%)
4	2 (50.0%)
5	2 (50.0%)
Total	4 (100.0%)



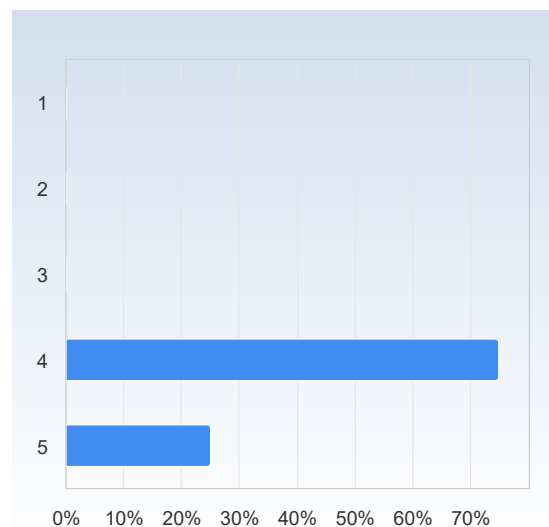
	Mean	Standard Deviation
Overall, I am satisfied with the course.	4.5	0.6

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 communicate mathematics orally and/or in writing.

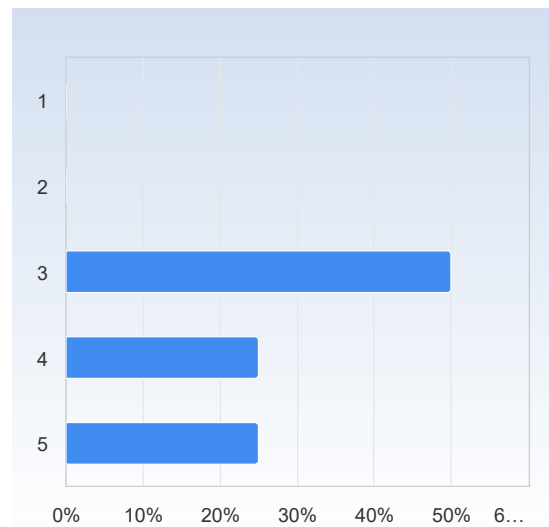
The course has increased my ability to communicate mathematics orally and/or in writing.	Number of responses
1	0 (0.0%)
2	0 (0.0%)
3	0 (0.0%)
4	3 (75.0%)
5	1 (25.0%)
Total	4 (100.0%)



	Mean	Standard Deviation
The course has increased my ability to communicate mathematics orally and/or in writing.	4.2	0.5

The course has increased my ability to collaborate with peers.

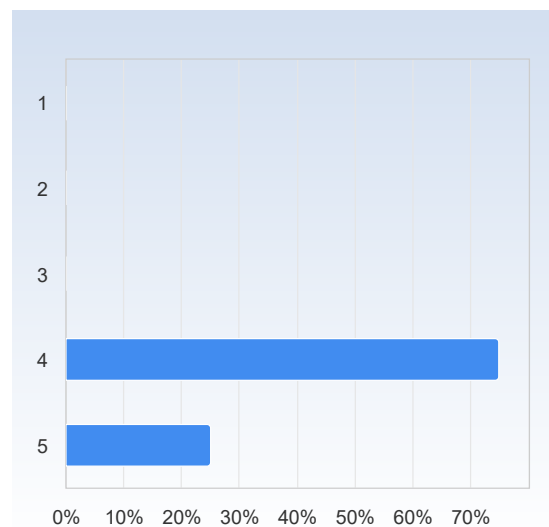
The course has increased my ability to collaborate with peers.	Number of responses
1	0 (0.0%)
2	0 (0.0%)
3	2 (50.0%)
4	1 (25.0%)
5	1 (25.0%)
Total	4 (100.0%)



	Mean	Standard Deviation
The course has increased my ability to collaborate with peers.	3.8	1.0

The course has increased my ability to process information.

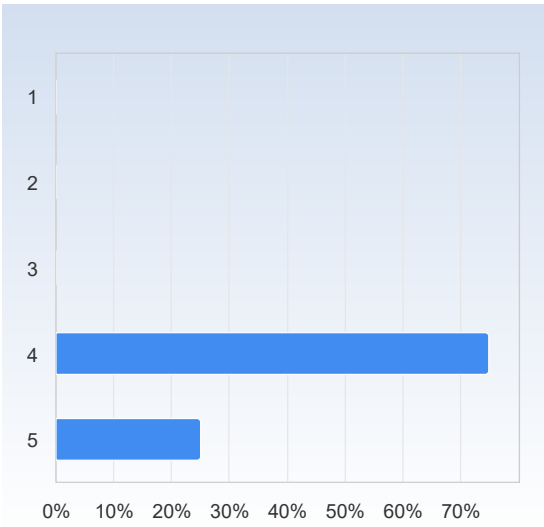
The course has increased my ability to process information.	Number of responses
1	0 (0.0%)
2	0 (0.0%)
3	0 (0.0%)
4	3 (75.0%)
5	1 (25.0%)
Total	4 (100.0%)



	Mean	Standard Deviation
The course has increased my ability to process information.	4.2	0.5

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	0 (0.0%)
4	3 (75.0%)
5	1 (25.0%)
Total	4 (100.0%)



	Mean	Standard Deviation
The course has increased my ability to analyze and solve problems.	4.2	0.5