



LUND UNIVERSITY  
Faculty of Science

Centre for Mathematical Sciences  
Division of Mathematics and Numerical Analysis

## Course Analysis for MATM37 Ordinary Differential Equations 2, Spring Semester 2022

### Course Information

**Lecturer:** Stefano Pasquali  
**Teaching assistants:** none  
**Number of students:**  
13 newly registered  
4 students answered the course evaluation

### Examination

**Written Assignment:** 8 students passed.  
**Oral examination:** 8 students passed.  
**Written examination:** 8 students passed.

- Ordinary examination 18/03 2022: 7 students participated and 6 of them passed.
- Resit examination 22/04 2022: 2 students participated and 2 of them passed.

**Final grades:**  
In all, 8 students have got their final grade.  
6 passed with distinction.  
2 passed.

### Course Evaluation

**Summary of student's answers:**

*Brief summary:* Since the number of respondents was low, one should be a bit careful drawing any conclusions. There is a big risk that the ones who answered were the ones who followed the course to the end, and that the answers from those who dropped out are missing. The respondents were overall satisfied (grade 5 out of 5 in response to the statements “The way the course was taught and organised suited me”, “The number of teacher lead activities has been satisfactory”, “The communication with the teaching staff during the course was good”, “The examination matched the contents and level of the course). In particular, the respondents appreciated the course material, and felt good at studying on their own with the course material.

The students found that the difficulty of the course is very well balanced, and that the textbook was good and easy to understand. However, some of them felt that the schedule was a bit tight. They also suggested that the presentation of the material during the lectures could have been done better.

**Teachers' comments:**

The course has been given through lectures on campus (except for a week of distance learning). The lecture notes were uploaded after every lecture. Exercises from the textbook were

assigned every week, and some of them (chosen by the students) were corrected the week after.

The examination consisted in a written assignment at the half of the course, and both a written examination and an oral examination at the end of the course.

I thought that the course went well overall. In future courses I will work a bit more on my presentation skills, in order to present the course material (especially the more quantitative ones) in a more fluid and captivating way.

**Changes from the previous course realisation:**

The textbook and the programme were the same compared to the last time the course was given. Only some minor adjustments of the material covered in the course were made, like a more detailed description of phase portraits of 1-dimensional autonomous systems.

**Suggestions for the next course realisation:**

One problem with the course is that both bachelor and master students are following the course. Students in the first category usually find the course more challenging, whereas master students usually would like to see more material. One common reaction of the students is that they find that the first part of the course (which deals with boundary value problems and is more quantitative) and the second part (which deals with autonomous systems and is more qualitative) have quite a different flavour. Personally I would suggest to expand the part about autonomous systems, introducing more detailed description of Lagrangian/Hamiltonian systems and hyperbolic systems (in connection to chaos) in order to have a more coherent course, and to shift the more quantitative first part of the course in another course.

2022-07-26, compiled by Stefano Pasquali.

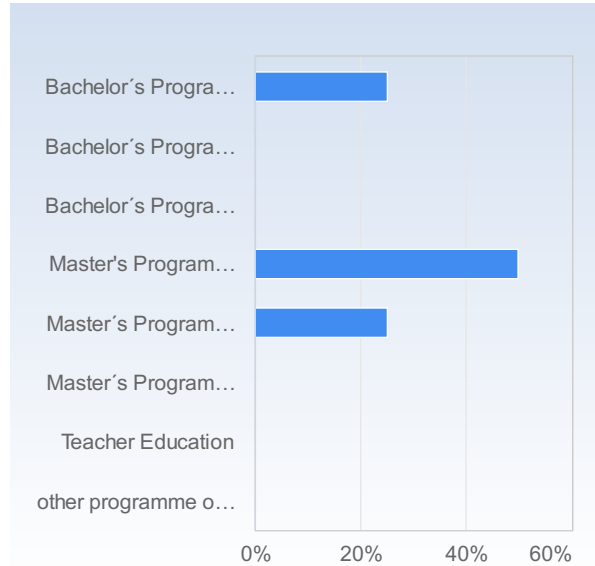
There was unfortunately no student representative to discuss the course evaluation with.

# Ordinary Differential Equations 2 (MATM37), Spring 2022

Answer Count: 4

## I have studied this course as part of

| I have studied this course as part of                           | Number of responses |
|---|---------------------|
| Bachelor's Programme in Mathematics                             | 1 (25.0%)           |
| Bachelor's Programme in Physics, Theoretical Physics, Astronomy | 0 (0.0%)            |
| Bachelor's Programme, other specialization                      | 0 (0.0%)            |
| Master's Programme in Mathematics                               | 2 (50.0%)           |
| Master's Programme in Mathematical Statistics                   | 1 (25.0%)           |
| Master's Programme, other specialization                        | 0 (0.0%)            |
| Teacher Education   | 0 (0.0%)            |
| other programme or as stand alone course                        | 0 (0.0%)            |
| <b>Total</b>  | <b>4 (100.0%)</b>   |

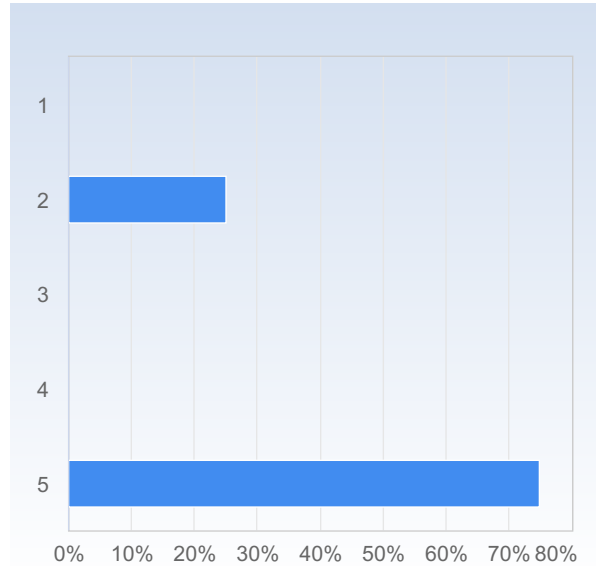


| I have studied this course as part of | Mean | Standard Deviation |
|---------------------------------------|------|--------------------|
| I have studied this course as part of | 3.5  | 1.7                |

**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.**

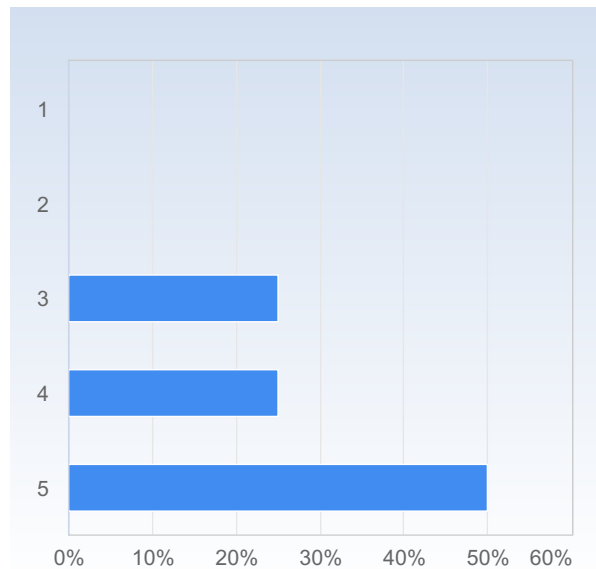
| 2. My prior knowledge has been sufficient to assimilate the contents of this course. | Number of responses |
|--|---------------------|
| 1  | 0 (0.0%)            |
| 2  | 1 (25.0%)           |
| 3  | 0 (0.0%)            |
| 4  | 0 (0.0%)            |
| 5  | 3 (75.0%)           |
| Total  | 4 (100.0%)          |



| 2. My prior knowledge has been sufficient to assimilate the contents of this course. | Mean | Standard Deviation |
|--|------|--------------------|
|  | 4.2  | 1.5                |

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

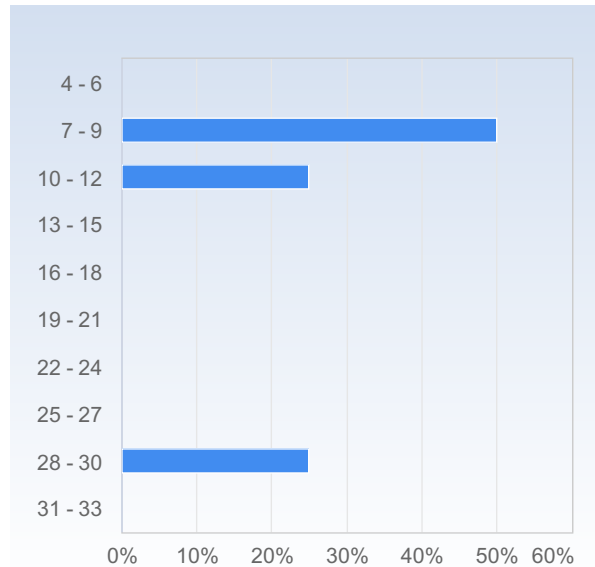
| 3. I have participated actively in the course. | Number of responses |
|--|---------------------|
| 1  | 0 (0.0%)            |
| 2  | 0 (0.0%)            |
| 3  | 1 (25.0%)           |
| 4  | 1 (25.0%)           |
| 5  | 2 (50.0%)           |
| Total  | 4 (100.0%)          |



| 3. I have participated actively in the course. | Mean | Standard Deviation |
|--|------|--------------------|
|  | 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 |
|---|---------------------|
| 4 - 6   | 0 (0.0%)            |
| 7 - 9   | 2 (50.0%)           |
| 10 - 12   | 1 (25.0%)           |
| 13 - 15   | 0 (0.0%)            |
| 16 - 18   | 0 (0.0%)            |
| 19 - 21   | 0 (0.0%)            |
| 22 - 24   | 0 (0.0%)            |
| 25 - 27   | 0 (0.0%)            |
| 28 - 30   | 1 (25.0%)           |
| 31 - 33   | 0 (0.0%)            |
| Total   | 4 (100.0%)          |



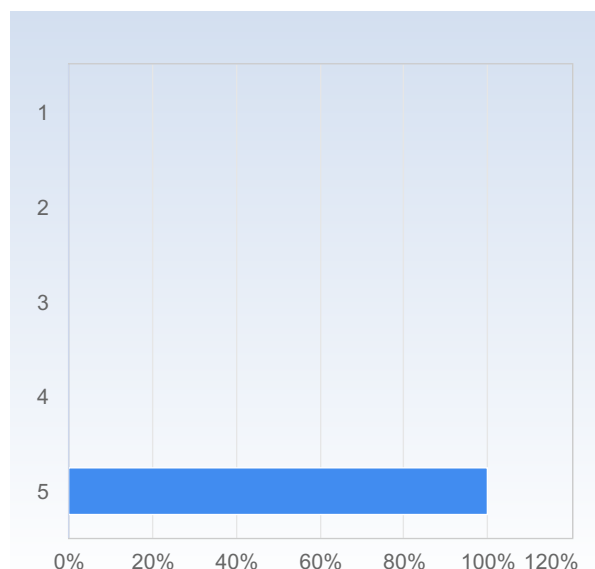
|   | Mean | Standard Deviation |
|---|------|--------------------|
| Average number of hours spent in total on the course per week (including scheduled activities): | 13.8 | 10.9               |

## 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.

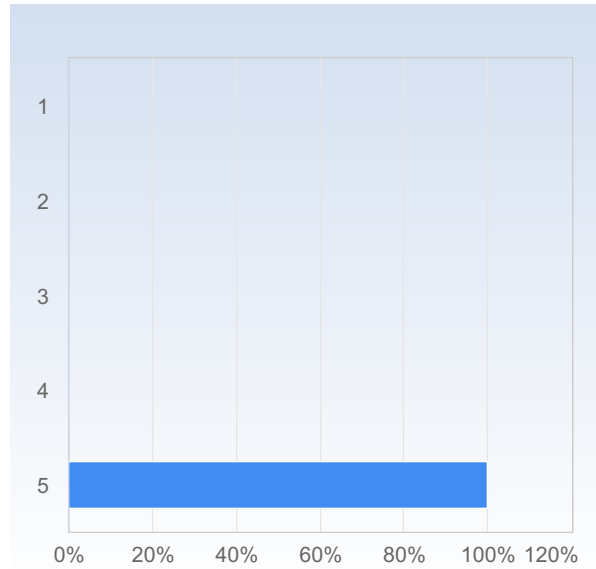
| The way the course was taught and organised suited me. | Number of responses |
|--|---------------------|
| 1  | 0 (0.0%)            |
| 2  | 0 (0.0%)            |
| 3  | 0 (0.0%)            |
| 4  | 0 (0.0%)            |
| 5  | 4 (100.0%)          |
| Total  | 4 (100.0%)          |



|  | Mean | Standard Deviation |
|--|------|--------------------|
| The way the course was taught and organised suited me. | 5.0  | 0.0                |

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

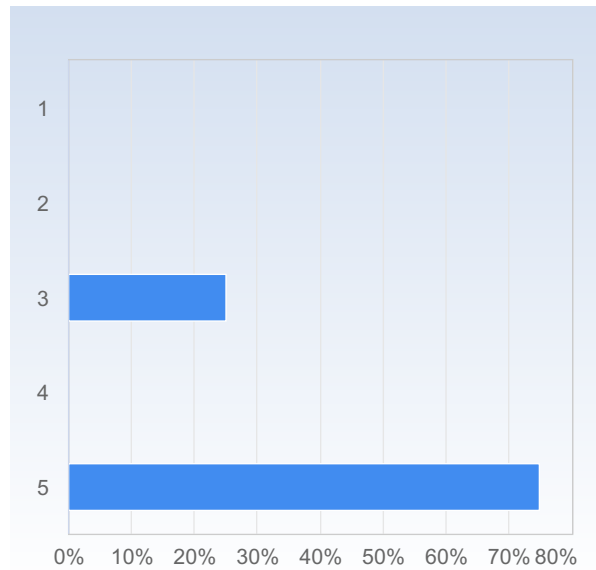
| The number of teacher lead activities (lectures, seminars etc.) has been satisfactory. | Number of responses |
|--|---------------------|
| 1  | 0 (0.0%)            |
| 2  | 0 (0.0%)            |
| 3  | 0 (0.0%)            |
| 4  | 0 (0.0%)            |
| 5  | 4 (100.0%)          |
| Total  | 4 (100.0%)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



|  | Mean | Standard Deviation |
|--|------|--------------------|
| The number of teacher lead activities (lectures, seminars etc.) has been satisfactory. | 5.0  | 0.0                |

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

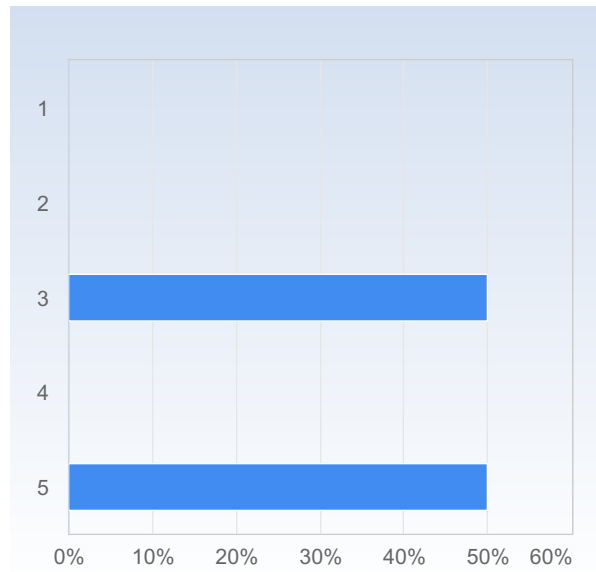
| The lectures were valuable for my learning. | Number of responses |
|---|---------------------|
| 1   | 0 (0.0%)            |
| 2   | 0 (0.0%)            |
| 3   | 1 (25.0%)           |
| 4   | 0 (0.0%)            |
| 5   | 3 (75.0%)           |
| Total                                       | 4 (100.0%)          |



|   | Mean | Standard Deviation |
|---|------|--------------------|
| The lectures were valuable for my learning. | 4.5  | 1.0                |

### The seminars were valuable for my learning.

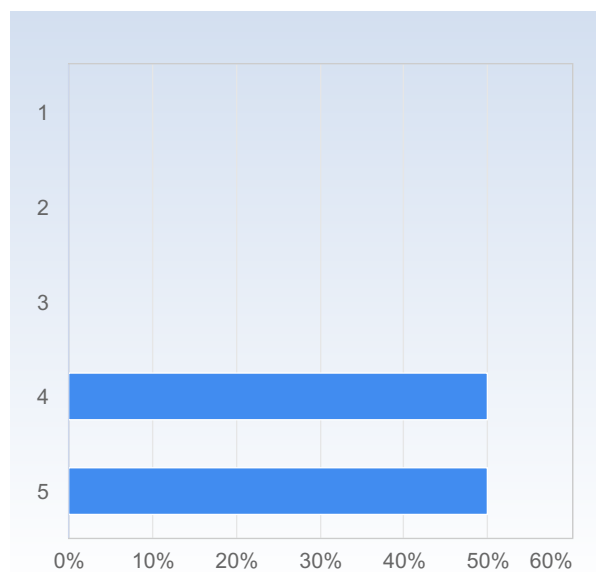
| The seminars were valuable for my learning. | Number of responses |
|---|---------------------|
| 1   | 0 (0.0%)            |
| 2   | 0 (0.0%)            |
| 3   | 2 (50.0%)           |
| 4   | 0 (0.0%)            |
| 5   | 2 (50.0%)           |
| Total                                       | 4 (100.0%)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



|   | Mean | Standard Deviation |
|---|------|--------------------|
| The seminars were valuable for my learning. | 4.0  | 1.2                |

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

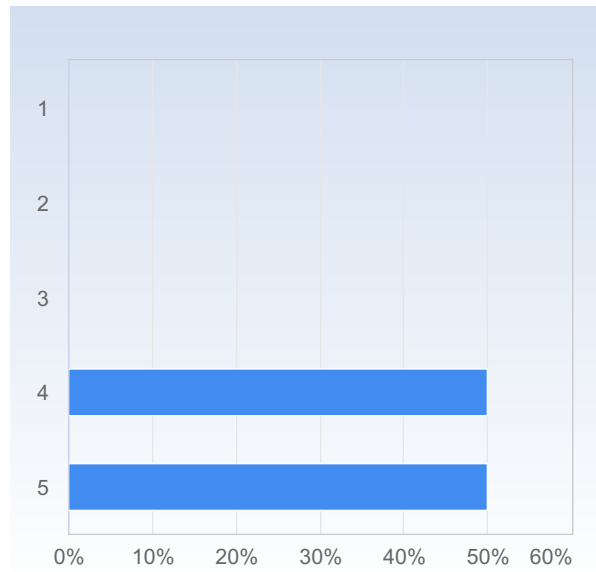
| Studying on my own was valuable for my learning. | Number of responses |
|--|---------------------|
| 1  | 0 (0.0%)            |
| 2  | 0 (0.0%)            |
| 3  | 0 (0.0%)            |
| 4  | 2 (50.0%)           |
| 5  | 2 (50.0%)           |
| Total  | 4 (100.0%)          |



|  | Mean | Standard Deviation |
|--|------|--------------------|
| Studying on my own was valuable for my learning. | 4.5  | 0.6                |

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

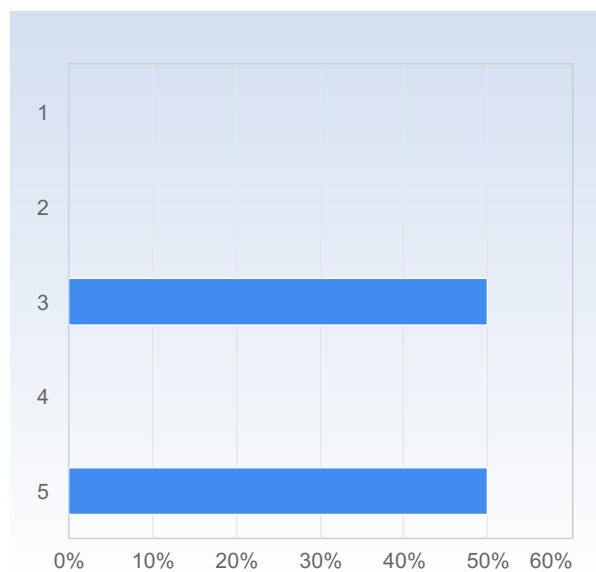
| The course literature/material was a valuable learning resource. | Number of responses |
|--|---------------------|
| 1  | 0 (0.0%)            |
| 2  | 0 (0.0%)            |
| 3  | 0 (0.0%)            |
| 4  | 2 (50.0%)           |
| 5  | 2 (50.0%)           |
| Total  | 4 (100.0%)          |



|  | Mean | Standard Deviation |
|--|------|--------------------|
| The course literature/material was a valuable learning resource. | 4.5  | 0.6                |

### 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  | 0 (0.0%)            |
| 5  | 2 (50.0%)           |
| Total  | 4 (100.0%)          |

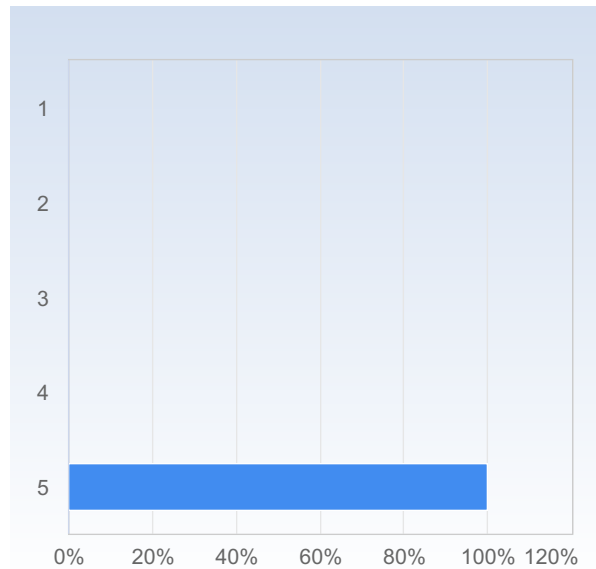


|  | Mean | Standard Deviation |
|--|------|--------------------|
| The information I received before the course start was satisfactory. | 4.0  | 1.2                |



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

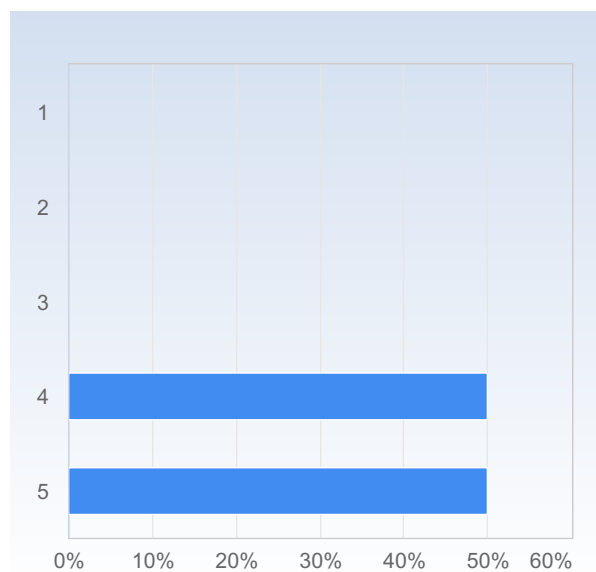
| The communication with the teaching staff during the course was good. | Number of responses |
|---|---------------------|
| 1   | 0 (0.0%)            |
| 2   | 0 (0.0%)            |
| 3   | 0 (0.0%)            |
| 4   | 0 (0.0%)            |
| 5   | 4 (100.0%)          |
| Total   | 4 (100.0%)    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



|   | Mean | Standard Deviation |
|---|------|--------------------|
| The communication with the teaching staff during the course was good. | 5.0  | 0.0                |

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

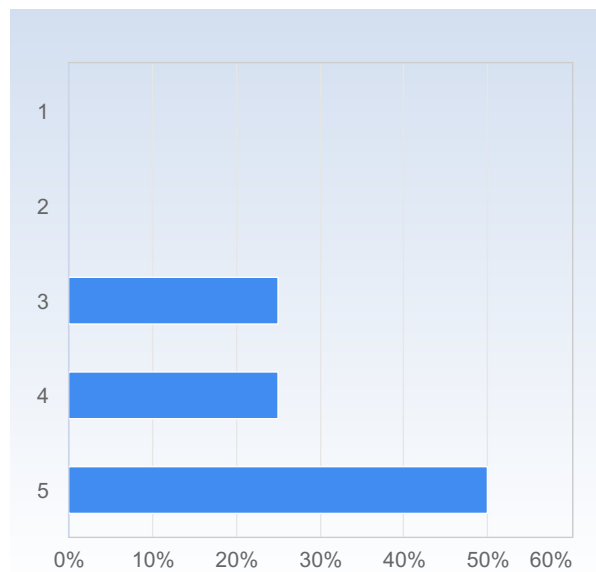
| It was clear throughout the course what was expected of me. | Number of responses |
|---|---------------------|
| 1   | 0 (0.0%)            |
| 2   | 0 (0.0%)            |
| 3   | 0 (0.0%)            |
| 4   | 2 (50.0%)           |
| 5   | 2 (50.0%)           |
| Total   | 4 (100.0%)          |



|   | Mean | Standard Deviation |
|---|------|--------------------|
| It was clear throughout the course what was expected of me. | 4.5  | 0.6                |

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

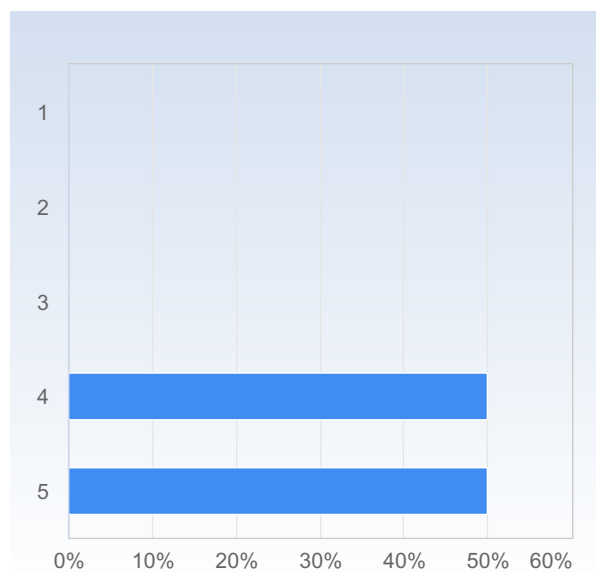
| I have received valuable feedback from my teacher/teachers during the course. | Number of responses |
|---|---------------------|
| 1   | 0 (0.0%)            |
| 2   | 0 (0.0%)            |
| 3   | 1 (25.0%)           |
| 4   | 1 (25.0%)           |
| 5   | 2 (50.0%)           |
| Total   | 4 (100.0%)          |



| I have received valuable feedback from my teacher/teachers during the course. | Mean | Standard Deviation |
|---|------|--------------------|
|   | 4.2  | 1.0                |

### The course had a reasonable workload.

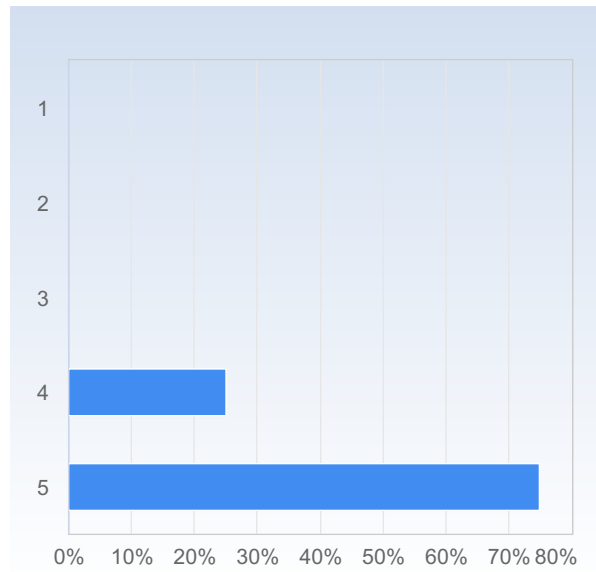
| The course had a reasonable workload. | Number of responses |
|---------------------------------------|---------------------|
| 1                                     | 0 (0.0%)            |
| 2                                     | 0 (0.0%)            |
| 3                                     | 0 (0.0%)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



| The course had a reasonable workload. | Mean | Standard Deviation |
|---------------------------------------|------|--------------------|
|                                       | 4.5  | 0.6                |

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

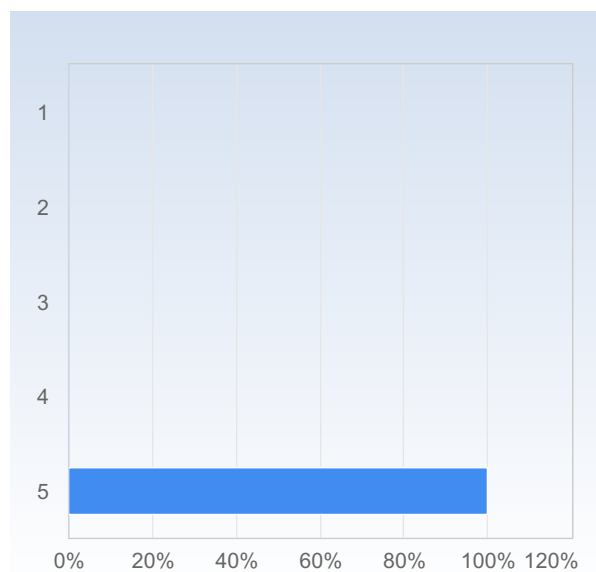
| The workload was evenly distributed throughout the course. | Number of responses |
|--|---------------------|
| 1  | 0 (0.0%)            |
| 2  | 0 (0.0%)            |
| 3  | 0 (0.0%)            |
| 4  | 1 (25.0%)           |
| 5  | 3 (75.0%)           |
| Total  | 4 (100.0%)          |



|  | Mean | Standard Deviation |
|--|------|--------------------|
| The workload was evenly distributed throughout the course. | 4.8  | 0.5                |

### The examination matched the contents and level of the course.

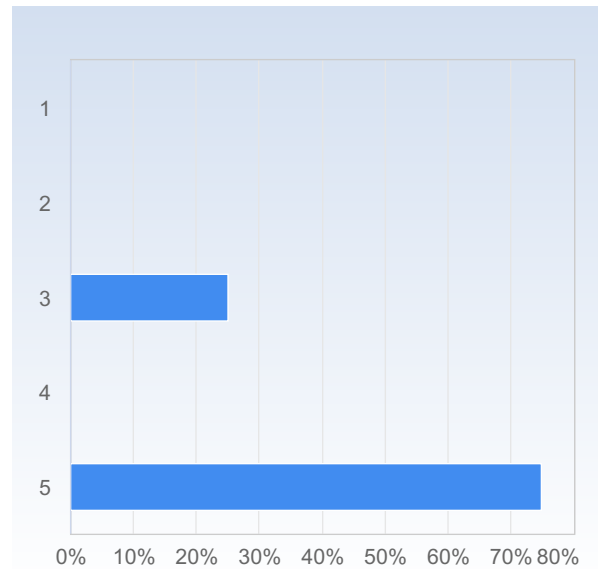
| The examination matched the contents and level of the course. | Number of responses |
|---|---------------------|
| 1   | 0 (0.0%)            |
| 2   | 0 (0.0%)            |
| 3   | 0 (0.0%)            |
| 4   | 0 (0.0%)            |
| 5   | 4 (100.0%)          |
| Total   | 4 (100.0%)          |



|   | Mean | Standard Deviation |
|---|------|--------------------|
| The examination matched the contents and level of the course. | 5.0  | 0.0                |

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



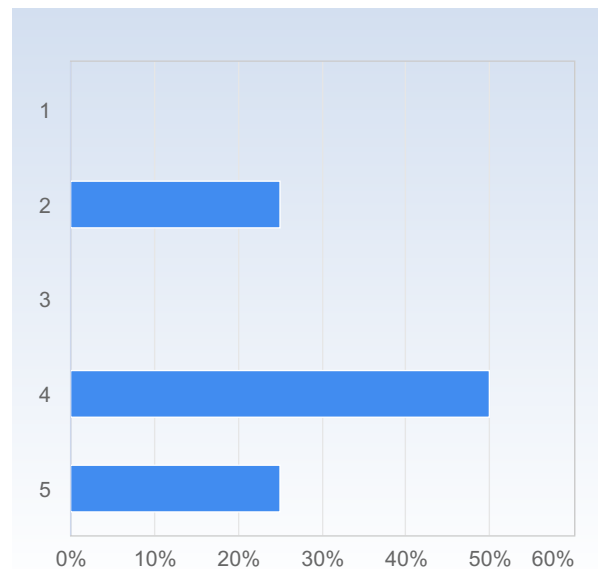
|  | Mean | Standard Deviation |
|--|------|--------------------|
| Overall, I am satisfied with the course. | 4.5  | 1.0                |

### 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.

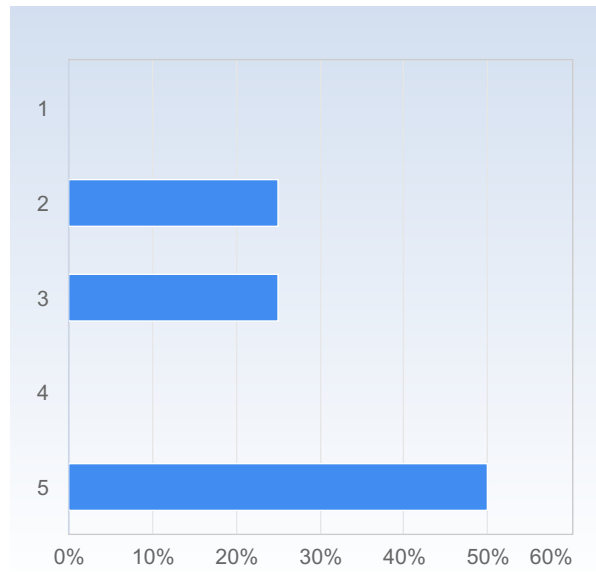
| The course has increased my ability to read a mathematical text. | Number of responses |
|--|---------------------|
| 1  | 0 (0.0%)            |
| 2  | 1 (25.0%)           |
| 3  | 0 (0.0%)            |
| 4  | 2 (50.0%)           |
| 5  | 1 (25.0%)           |
| Total  | 4 (100.0%)          |



|  | Mean | Standard Deviation |
|--|------|--------------------|
| The course has increased my ability to read a mathematical text. | 3.8  | 1.3                |

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

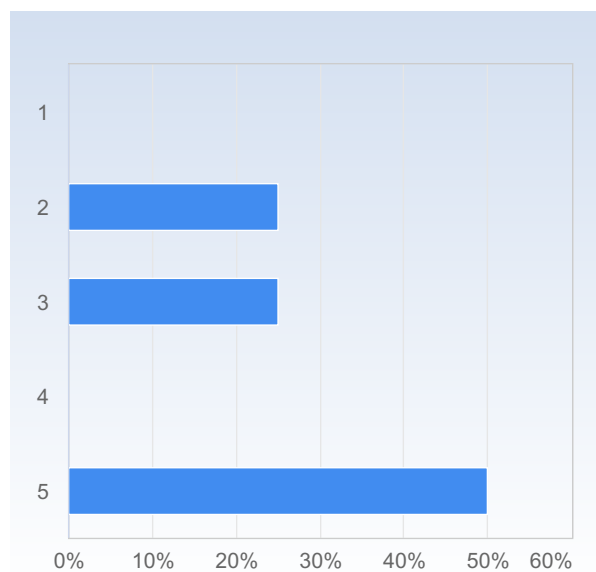
| The course has increased my ability to communicate the subject in writing. | Number of responses |
|--|---------------------|
| 1  | 0 (0.0%)            |
| 2  | 1 (25.0%)           |
| 3  | 1 (25.0%)           |
| 4  | 0 (0.0%)            |
| 5  | 2 (50.0%)           |
| Total  | 4 (100.0%)      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



|  | Mean | Standard Deviation |
|--|------|--------------------|
| The course has increased my ability to communicate the subject in writing. | 3.8  | 1.5                |

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

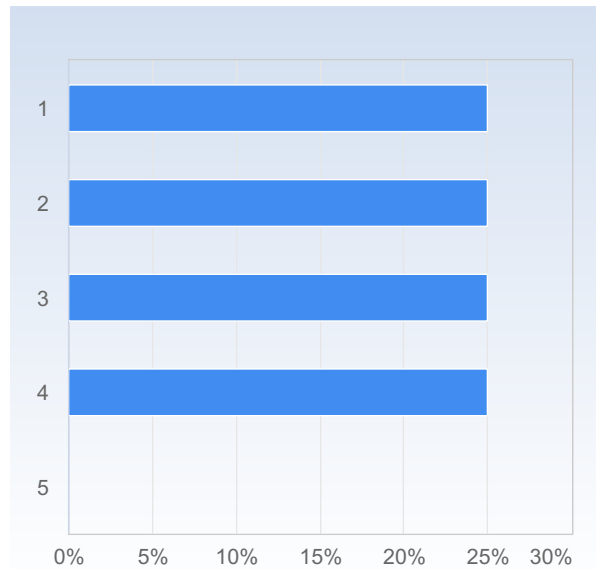
| The course has increased my ability to communicate the subject orally. | Number of responses |
|--|---------------------|
| 1  | 0 (0.0%)            |
| 2  | 1 (25.0%)           |
| 3  | 1 (25.0%)           |
| 4  | 0 (0.0%)            |
| 5  | 2 (50.0%)           |
| Total  | 4 (100.0%)          |



|  | Mean | Standard Deviation |
|--|------|--------------------|
| The course has increased my ability to communicate the subject orally. | 3.8  | 1.5                |

### The course has increased my ability to cooperate.

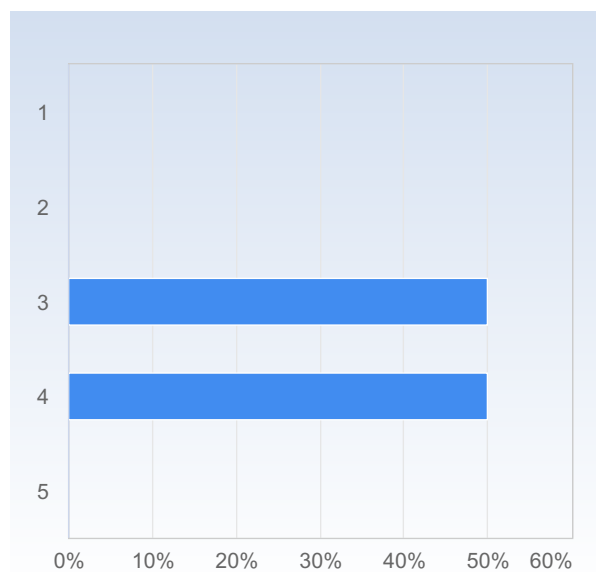
| The course has increased my ability to cooperate. | Number of responses |
|---|---------------------|
| 1   | 1 (25.0%)           |
| 2   | 1 (25.0%)           |
| 3   | 1 (25.0%)           |
| 4   | 1 (25.0%)           |
| 5   | 0 (0.0%)            |
| Total   | 4 (100.0%)          |



|   | Mean | Standard Deviation |
|---|------|--------------------|
| The course has increased my ability to cooperate. | 2.5  | 1.3                |

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

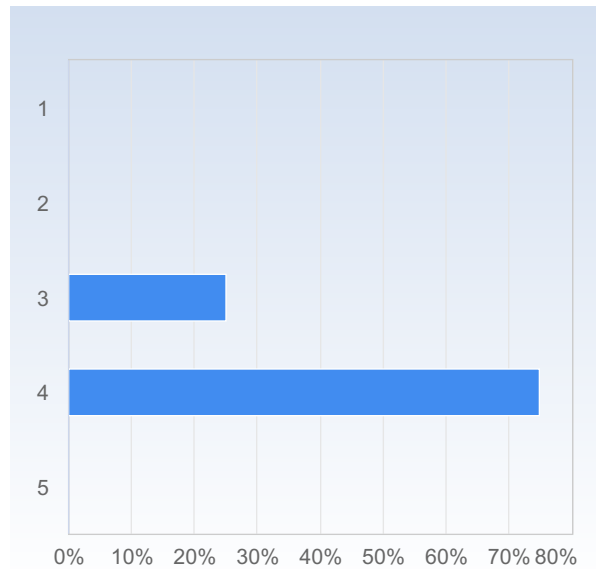
| The course has increased my ability to search and process information. | Number of responses |
|--|---------------------|
| 1  | 0 (0.0%)            |
| 2  | 0 (0.0%)            |
| 3  | 2 (50.0%)           |
| 4  | 2 (50.0%)           |
| 5  | 0 (0.0%)            |
| Total  | 4 (100.0%)          |



|  | Mean | Standard Deviation |
|--|------|--------------------|
| The course has increased my ability to search and process information. | 3.5  | 0.6                |

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

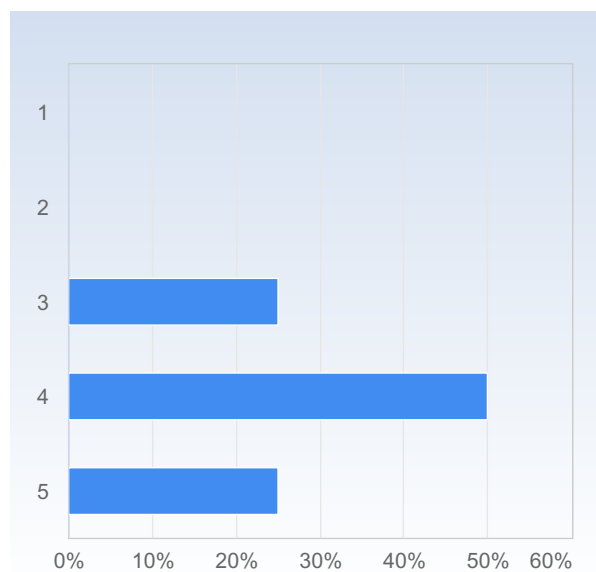
| The course has increased my ability to analyze and solve problems. | Number of responses |
|--|---------------------|
| 1  | 0 (0.0%)            |
| 2  | 0 (0.0%)            |
| 3  | 1 (25.0%)           |
| 4  | 3 (75.0%)           |
| 5  | 0 (0.0%)            |
| Total  | 4 (100.0%)          |



|  | Mean | Standard Deviation |
|--|------|--------------------|
| The course has increased my ability to analyze and solve problems. | 3.8  | 0.5                |

## 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  | 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 |
|--|------|--------------------|
| As a result of this course, I feel confident about tackling unfamiliar problems. | 4.0  | 0.8                |

## What did you appreciate most with the course?

What did you appreciate most with the course?

I participated this course 3 years ago right after ODE1 and I quited after two weeks. I think the change in literature has really made the course a natural follow-up for ODE1 nowadays. The difficulty is very well balanced in sacrifice of some generality, but I still think it is better nowadays than before.

The book was good and easy to understand.

## What do you think should be improved?

What do you think should be improved?

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The schedule feels a bit tight.

The teacher didn't seem to be 100% confident/ familiar in all the material we did. I know this is complaining on a high level and it was not often, but still a bit surprising for me and a bit under the expectations I have on a professor.

The presentation skills (eye contact with the students, presentation with looking less on the sheets,...) could be improved as well from my subjective point of view.

## 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.)?

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No

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