

1 Evaluation Report

In the following report, you will gain a short overview of the results from the evaluation of course "Foundations of Mathematics" given by Michael Vrazitulis. For the survey, the **customized SET.UP questionnaire** was used. The lecturer was able to adjust the questionnaire regarding his/her learning methods and aims in advance. The short evaluation report only contains some of the aspects, which have been defined by the Zentrum für Qualitätsentwicklung in Lehre und Studium. 10 students have participated at the survey. That means the evaluation of the results is based on **10 student opinions**.

Learning aims defined by the lecturer:

- **Basic Knowledge (e.g. reproducing important concepts):** included
- **Specialized Knowledge (e.g. working through contradictions in the learning content):** included
- **Working Methods (e.g. looking more effectively for subject-related information):** not included
- **Presentation Skills (e.g. giving better presentations):** not included
- **Communication Skills (e.g. formulate more precise verbal statements):** not included
- **Cooperation Skills (e.g. contribute to the planning of the group work):** not included
- **Self-Responsible Working (e.g. setting better learning goals):** not included
- **Increased Interest in Subject (e.g. having learned things that I find exciting):** included
- **Combination of Practical and Theoretical Aspects:** included
- **Research:** not included
- **Teacher Training:** not included

2 Overall Assessment

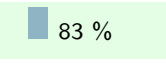

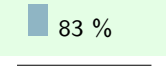

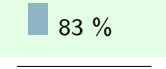

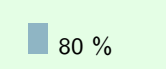

	very high (1)	rather high (2)	partly high, partly low (3)	rather low (4)	very low (5)	Amnt.	Avg.
My knowledge increase is ...	■ 50 %	■ 50 %	—	—	—	4	- *

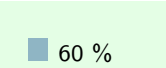





* No value is displayed because of too few respondents.

	very good (1)	rather good (2)	partly good, partly poor (3)	rather poor (4)	very poor (5)	Amnt.	Avg.
Altogether, I think this course is ...	■ 75 %	■ 25 %	—	—	—	4	- *

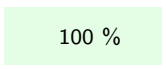
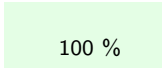
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3 Statements about Teaching Quality and Support

The lecturer ...	fully applies (1)	rather applies (2)	partly applies (3)	rather not applies (4)	does not apply at all (5)	Amnt.	Avg.
provided clear learning objectives.	 83 %	 17 %	–	–	–	6	1.2
structured the entire course well.	 83 %	 17 %	–	–	–	6	1.2
explained new terms and concepts in a precise manner.	 83 %	 17 %	–	–	–	6	1.2
gave illustrative examples that supported the comprehension of the course content.	 80 %	 20 %	–	–	–	5	1.2
gave helpful advice to tackle difficulties with comprehension.	100 %	–	–	–	–	6	1.0

The lecturer ...	fully applies (1)	rather applies (2)	partly applies (3)	rather not applies (4)	does not apply at all (5)	Amnt.	Avg.
gave students the opportunity to engage more deeply with topics interesting to them.	 60 %	 20 %	 20 %	–	–	5	1.6
used varied methods to deliver the course.	 25 %	 25 %	 50 %	–	–	4	- *

* No value is displayed because of too few respondents.

The lecturer ...	fully applies (1)	rather applies (2)	partly applies (3)	rather not applies (4)	does not apply at all (5)	not used	Amnt.	Avg.
was easily reachable for questions and concerns.	 100 %	–	–	–	–	–	5	1.0
took sufficient time for the individual concerns of the students.	 100 %	–	–	–	–	–	5	1.0

4 Statements about the Learning Atmosphere

In the context of the lecture, ...	occasionally					Amnt.	Avg.
	always (1)	often (2)	(3)	rarely (4)	never (5)		
course participants interacted respectfully with each other.	100 %	–	–	–	–	5	1.0
sufficient opportunities for the exchange with other students were offered.	80 %	–	20 %	–	–	5	1.4
I actively participated (questions, comments, discussions).	20 %	20 %	60 %	–	–	5	2.4

5 Statements about Hybrid Teaching

	fully agree	rather agree	partly agree	rather not	do not	Amnt.	Avg.
	(1)	(2)	(3)	agree (4)	agree at all (5)		
Communication and exchange between participants in presence and online work well.	100 %	–	–	–	–	1	- *
When I participate online, I feel considered enough.	100 %	–	–	–	–	1	- *
The technical equipment on site makes it possible that the online participants can be seen and understood well.	100 %	–	–	–	–	1	- *
The technical equipment on site makes it possible that the presence participants can be seen and understood well online.	100 %	–	–	–	–	1	- *
When I participate online, I have no disadvantages compared to presence participants.	100 %	–	–	–	–	1	- *

* No value is displayed because of too few respondents.

6 Statements about the Learning Material

Question text: How helpful were the following materials for your understanding of the course contents?

	very helpful (1)	rather helpful (2)	partly helpful (3)	less helpful (4)	not helpful at all (5)	no provision	Amnt.	Avg.
the media used for presenting the course content	80 %	20 %	–	–	–	–	5	1.2
the assignments/exercises provided	60 %	20 %	20 %	–	–	–	5	1.6
the scripts/texts provided	60 %	20 %	–	20 %	–	–	5	1.8
the recommended literature	–	50 %	25 %	–	–	25 %	4	- *

* No value is displayed because of too few respondents.

7 Competencies







7.1 Professional Knowledge

	fully applies (1)	rather applies (2)	partly applies (3)	rather not applies (4)	does not apply at all (5)	Amnt.	Avg.
I am able to give an overview of the course content.	40 %	60 %	–	–	–	5	1.6
I now feel able to tackle a typical problem within this course's field.	40 %	40 %	20 %	–	–	5	1.8
I am able to depict complex course matters.	20 %	40 %	20 %	20 %	–	5	2.4

7.2 Link between Theory and Practice

	fully applies (1)	rather applies (2)	partly applies (3)	rather not applies (4)	does not apply at all (5)	Amnt.	Avg.
Because of this course, I better understand the practical significance of topics discussed.	40 %	60 %	–	–	–	5	1.6
Because of this course, my ability to apply theoretical knowledge to practical problems/tasks has improved.	40 %	60 %	–	–	–	5	1.6

7.3 Interest in the Subject

	fully applies (1)	rather applies (2)	partly applies (3)	rather not applies (4)	does not apply at all (5)	<i>Amnt.</i>	<i>Avg.</i>
I enjoy solving the assignments given to me in this course.	–	 60 %	 20 %	–	 20 %	5	2.8
In this course, I have learned things that excite me.	 20 %	 20 %	–	 60 %	–	5	3.0

8 Open Comments

8.1 Which aspects have supported you the most while learning?

The students answered the open questions on a separate sheet of paper. These remain with the lecturer.

8.2 What has made learning more difficult? Do you have any advice of improvement?

The students answered the open questions on a separate sheet of paper. These remain with the lecturer.

9 Further Questions by the Lecturer

	fully applies (1)	rather applies (2)	partly applies (3)	rather not applies (4)	does not apply at all (5)	Amnt.	Avg.
I learned a lot from this course.	75 %	25 %	–	–	–	4	- *
I found the workload appropriate (expected workload is about 10 hours per week).	25 %	25 %	25 %	–	25 %	4	- *
The lectures and lecture materials were well-designed.	25 %	75 %	–	–	–	4	- *

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Table 1 – Frequencies:

9.1 What did you like about this course?

- I found the videos accompanying the course very well-made, and I feel like they explained the concepts well. I also liked that the lecturer was very friendly and approachable for any questions, and it felt like he genuinely enjoyed the subject matter. Finally, the workload was perfect for an introductory course (quantity-wise and difficulty-wise).
- It was very suitable for me to learn at my own pace with the provided videos for each topic. I frequently asked the lecturer about topics which were dif-

ficult for me or how I could improve or enhance my knowledge and skills on certain topics. His answers were always fast and thorough and helped me, besides the videos and exercises, to emerge myself deeply into the topic.

- The in-person meetings were super helpful, especially discussing some tasks. The lecture notes were of great help!
- The videos of the professor explaining the topics are well made, easy to follow and understand. For me, a person who

hated math and thought I would never connect my life with this, the course showed an absolutely different side of math - the exciting math. Besides, the professor was not forgetting to mention the names of specific signs and functions, or even was repeating them from time to time, it really helped to get the information better. Thanks to our lecturer, Michael, I stopped being afraid of math and actually found it interesting. His love to the field has spread on me too, and I now see why people connect their lives with it.

9.2 Do you have suggestions for improving this course?

- A lot of the lecture notes graphs are missing - I believe this was mentioned in class at some point as being done on purpose by the previous lecturer, but I feel like it might be useful having them actually printed out somewhere for reference. And, this might be a personal preference, but I did not like the switch to online teaching (this is in case there are plans for making it permanent). It might be more convenient, especially when it comes to a "flipped classroom" class, but at that point we might as well do only self-study for the whole thing. I think the course benefits from having an in-person Übung session.
- Some topics, such as integrals, seem to be needing a bit more time for the

explanation. The topic is indeed deep and difficult, that is why, especially for people not used to think in math terms in general, more time is needed. The main issue I faced: the last two videos on YouTube about the probability, especially the very last one have numerous advertisements. I do not pay for YouTube subscription and find it very annoying to have an add every two-two and a half minutes while watching a lecture which is already difficult to follow because of the topic.

- There were a few minor errors in the material, but I guess this will sort itself out over time. Or already has, because the lecturer nearly immediately took note of mistakes and corrected them.

- the examples that you went through in the videos were in absolutely no relation to the homework assignments. Especially tasks involving proofs took hours on end, with no real relation to the lecture content or my study program. It is frustrating beyond belief to have to do that each week over again, without seeing any real point in it. For in-person meetings, it would have been nice to focus on tasks more. Not just talking through the homework assignments, but doing some additional tasks (students by themselves, as groups, ... you name it). Again, I think this is due to the assignments just being a ridiculous great amount of work.

