# Infosheet Mathematics I, Winter Semester 2025/2026

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How is the modul organized? Each week, we will have lectures in Analysis and Linear Algebra. The tutorials as well as the group exercises and homeworks will alternate these two topics on a weekly basis. A detailed schedule is shown in the following:

Week	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	W12	W13
	20.10	27.10	03.11	10.11	17.11	24.11	01.12	08.12	15.12	05.01	12.01	19.01	26.01
	24.10.	31.10.	07.11.	14.11.	21.11.	28.11.	05.12.	12.12.	19.12.	09.01.	16.01.	23.01.	30.01.
Tutorial	LA	Ana	L A										
Group exercises	Ana	LA	Ana										

In order to successfully complete the module Mathematics I, you must pass both the compulsory coursework<sup>1</sup> and an exam (details further below).

Your schedule: Note that lectures, tutorials and group exercises for Analysis and Linear Algebra take place at the same times and rooms. Therefore, your weekly schedule will not be affected by the change in topic. You will have your lecture/tutorial/exercise at the same place and at the same time every week.

# Lectures

Tue, 13:15–14:45 – Audimax 2 LA, Prof. Dr. Sabine Le Borne Thu, 11:30–13:00 – Audimax 2 Ana, Prof. Dr. Marko Lindner

# **Tutorials**

Fri, 11:30–13:00 – Audimax 2 LA, Dr. Jens-Peter M. Zemke

Ana, PD Dr. habil. Christian Seifert

## Group exercises

Please register for one of the group exercises available for your degree programme via TUNE starting from 13.10.2025.

#### Important dates

- The first lecture will take place Tuesday, 21.10., from 13:15 to 14:45. The first tutorial will take place Friday, 24.10., from 11:30 to 13:00.
- The exercise groups start in the week of Oct. 20.
- The date of the exam will be announced later, e.g. at: https://intranet.tuhh.de/stud/pruefung/index.php. For Mathematics I, the registration is obligatory. There will be a time period of one week in which several time slots are offered for the exam. The distribution of the time slots will be done towards the end of the lecture time via Stud.IP.
- If you want to fulfil the compulsory coursework ("Studienleistung") in the current semester, you must register via TUNE for

"Compulsory Course Work Mathematics I (EN) - Exercises" (vl421-2022)

in the period December 1st - 14th.

• Break: 21.12.2025–04.01.2026.

**Presence**, recordings: The lectures, tutorials and group exercises will take place in-person on campus. Recordings of the lectures and tutorials will be provided for limited time.

 $<sup>^{1}</sup>$ The coursework is only required by students who started their studies in the Winter Semester 2022/2023 or later.

- The lectures and tutorials will take place in Audimax 2 and will be recorded.
- Group exercises will take place in smaller rooms an campus and will not be recorded. Under the supervision of teachers, you will solve exercises on your own and have the chance to ask questions. The problem sheet for the group exercises will be made available on Stud.IP before the start of the exercise week.

Office hours: Do you want us to explain something from the lecture again or see another example? Do you have questions regarding the homework sheets or problems from the group exercises? Do you want to find out whether your solution to some exercise is correct? Such and other requests regarding the course can easily be addressed in our weekly office hours. Almost every day, we offer at least one office hour (in-person or online). An overview with further details can be found in the Wiki of Stud.IP.

**Contact:** If you have questions, please first try to get an answer in the forum of Stud.IP, in your group exercise or in one of our office hours. If this is not possible:

- in case of organizational questions please consult mathel@tuhh.de;
- in case of technical questions about WeBWorK (e.g., problems with login, display, or grading) please use the button "Email Instructor" under the respective exercise if possible. Otherwise please consult mathel@tuhh.de;
- in all other cases please consult the persons who are mentioned in the Wiki in Stud.IP.

### Weekly homework:

- Each week, there will be one homework sheet (see below).
- The homework sheets are part of the compulsory coursework (see below).
- With the help of the homework sheets you can collect bonus points for the exam (see below).
- You can earn up to three homework points for your solution each week.
- In total, there will be twelve homework exercises so you can reach up to 36 homework points.

# Weekly online assignments (WeBWorK):

- Each week there will be an online assignment with three questions available on WeBWorK.
- The online assignments are part of the compulsory coursework (see below).
- With the help of the online assignments you can collect bonus points for the exam (see below).
- You typically have multiple attempts to solve the exercises of the assignments. The number of attempts will be indicated in the respective exercise.
- You can earn up to three online points each week.
- In total there will be twelve online assignments so you can reach up to 36 online points.
- The online assignments are available at

https://webwork.mat.tuhh.de/webwork2/Mathematics\_I\_EN\_WiSe2025,

where you need to log in with your usual TUHH credentials. Please pay attention to the \_EN\_, there also exists a German course and points obtained in that one do not count for you!

#### Mock exam:

- Towards the end of the lecture period we provide a mock exam.
- The mock exam is part of the mandatory coursework and the bonus points (see below).
- Only participation at the mock exam is important for the mandatorsy coursework and the bonus points.
- Further information on the mock exam will be provided in due course.

## MINTFIT:

- At the beginning of the semester there will be a *MINTFIT test* for practicing different mathematical topics from school. The test with the name "TUHH Mathematik (Studienleistung/Bonus)" is part of the compulsory coursework (see below).
- Time interval: 20.10.2025 (from 8am) 05.11.2025 (until 12pm, i.e. midday)
- Name of the test: TUHH Mathematik (Studienleistung/Bonus)

• Important! Please register at www.mintfit.hamburg with your TUHH email address (ending in @tuhh.de). Select the above test and complete the two parts "Basic Skills I" (Grundwissen I) and "Basic Skills II" (Grundwissen II); each will take roughly 45 minutes.

Link: https://tests.mintfit.hamburg/course/view.php?id=9

Login key: tuhh-ws2526-mathe

Only this test is relevant for the compulsary coursework and the bonus points. If you take another MINTFIT test, it will not be considered by us!

- You have only one attempt. The sum of both test parts will be evaluated and transferred into online points. In total, you can reach up to six online points.<sup>2</sup>
- Hint: For preparation, you can take the standard test of MINTFIT as often as you wish.

# Compulsory coursework and exam:

- In order to successfully complete the module **Mathematics I**, you must pass the compulsary coursework<sup>3</sup> and pass an exam.
- For the compulsory coursework, you must achieve at least 39 points as the sum of your online points (MINTFIT + WeBWorK) and homework points as well as sit the mock exam (via WeBWorK). Please note that your points are a decimal number, we do not round. (Example: with 38.9 points in total you do not pass the compulsory coursework.) Once you passed the mandatory coursework, it will be valid for the following semesters as well.
- Place, date, and time of the exam will be announced as soon as possible. Note: the webpages of TUHH show the starting date, but the examination period stretches over a few days. Your date of examination could be later than the start date.
- Half the questions will be on Linear Algebra, the other half on Analysis.
- The exam takes 120 minutes.
- You will be allowed to bring two sheets of paper (DIN A4) with handwritten notes on both sides of them. Digitally produced notes, printouts, or copies are not allowed.
- In the exam you will **not** be allowed to use a calculator (it is not required).
- There will be 40 exam points in the exam. You will pass the exam if you have reached at least 20 exam points. Note that you can get bonus points (see below). Your exam points will be a decimal number, we do not round. (Example: with 19.9 points in total you do not pass the exam.)
- Important: The exam will be administered electronically using WeBWorK. We strongly suggest that you practice with WeBWorK to familiarise yourself with the system.

#### Further details on the homeworks:

- Homework sheets and online assignments become available Friday at 2 pm at the latest. They are due nine days later on Sunday at 11:59 pm.
- Submission is done via abGabi (https://www.mat.tuhh.de/lehre/abgabi/ma1en) in the form of a pdf file. Scanned or photographed handwritten submissions are accepted.
- You are allowed to and should **submit in pairs**. If you did not find a partner yet, please use the category "Finding learning groups / learning partners" in the Stud.IP forum. In case that you work in a larger group, you still need to submit in pairs or alone. Direct copying from others or fully identical solutions may lead to zero points. **Only one of you should submit the homework!**
- Write **both** your names and your matriculation numbers by hand on *each* of your submissions. We cannot give credit for homework that we cannot assign to a student.

<sup>&</sup>lt;sup>2</sup>In the case that you did the test "TUHH Mathematik" already in an earlier semester, your result will automatically be transferred to the new semester. Alternatively, you can write to hilfe@mintfit.hamburg (contact person: Ute Carina Müller) if you want to have a new attempt. However, in this case your earlier result will be deleted, and for technical reasons you will not receive an automated email with your new result.

<sup>&</sup>lt;sup>3</sup>See the footnote on page 1.

## Bonus points for the exam (0, 1, 2, 3 or 4 bonus points):

- With the completion of the homework sheets, online assignments, the MINTFIT test, as well as participation at the mock exam, you can obtain bonus points which may improve your final grade on the condition that you passed the exam without any bonus points<sup>4</sup>. Still, the total points in the exam cannot exceed 40.
- The following table shows which requirement has to be fulfilled in order to get a certain number of bonus points:

Achieved number of points	Bonus points for the exam				
(Homework + WeBWorK + MINTFIT)	in WiSe $2025/2026$				
39.0	compulsory coursework fulfilled				
46.0	1 bonus point				
54.0	2 bonus points				
62.0	3 bonus points				
70.0	4 bonus points				

- Note that your overall points will be a decimal number, we do not round.
- Important: Bonus points, in contrast to completed compulsory coursework, are not carried over to future semesters but need to be earned again.

Study times: (cf. study plans at https://studienplaene.tuhh.de.)

Lectures: 52 hoursTutorials: 26 hoursExercise groups: 26 hours

• Independent study time (including homework): 136 hours

Please take the independent study time seriously. There is no other way to learning mathematics than attempting to solve problems yourself. Often you learn as much as (or even more) by a failed attempt as you do by a successful attempt to solve a problem.

<sup>&</sup>lt;sup>4</sup>See § 17 (3) b. ASPO,