

Rules and criteria for grading  
the **Functional Analysis „T”** course (WMI.IM-AF-OL.3"T")  
in the winter semester of 2024/25

1. The rules for passing the exercises are determined by the teacher leading the classes. Students who receive the entry 'NZAL' or a grade of 2.0 for the exercises must pass a retake test before taking the final exam for the course, as described in point 2 below. Students who do not pass the exercises – either during the regular time or in the retake – will not be allowed to take the exam.
2. All students who receive a passing grade (i.e., 3.0 or higher) for the exercises will be allowed to take the exam. Additionally, all other students will have the opportunity to take a one-time retake test for the exercises. This test will be organized no earlier than the last week of classes. Students retaking the exercises graded at 2.0 can receive no higher than a 3.0 from this test. The final grade from the retake for other students will depend on their performance in the course exercises. The content and duration of the test will also depend on this. If a passing grade is obtained, the exercise grade will be replaced by the grade from the retake test for calculating the final grade  $K$  in the course (see point 11 below).
3. The date for the retake test for the exercises will be scheduled only once (i.e., even for those who can justify their absence during this test, no additional test will be organized).
4. The exam will consist of two parts: a preliminary part and a main part, which can only be taken after passing the preliminary part. In the preliminary part, students will respond in writing to questions on definitions, theorems, and simple examples related to the covered material. Each exam session will offer three attempts to pass this part. A student who attempts the preliminary part at least once in a given exam session will receive a final grade (for that session), calculated according to the formula described in point 9 below. The preliminary part will consist of 10 questions, with each question earning 0, 1, 2, or 3 points. The preliminary part is considered passed if the total score for the 10 questions exceeds 20 points. Passing the preliminary part carries over to subsequent exam sessions.
5. The exam questions (i.e., the material required for the main part of the exam) will concern the proofs and statements of theorems (lemmas, etc.) presented during the lecture and will be divided into two pools: for a grade of 4.0 and for a grade of 5.0. The full list of exam questions (with the division into the aforementioned pools) will be provided to students no later than during the last lecture. This list will also be available for download from the website:

<http://www2.im.uj.edu.pl/PiotrNiemiec/student/>

6. During the main part of the exam, the student will draw a question number twice (excluding the provisions of point 8 below) from a pool of their choice each time and answer the drawn question orally. If a star is drawn instead of a question number, the student will choose any question number (from the same pool) they have not yet answered during that exam (switching pools is not allowed!). The choice of question number may be postponed (e.g., it can be made after answering the remaining questions). If the same number is drawn again (from the same pool!), the student will continue drawing (within the same draw) until a 'new' number is drawn – this does not apply to the star, which can be drawn multiple times. During the main part of the exam, answers can be supplemented, especially at the examiner's request. After 30 minutes of answering the drawn/selected question, the examiner may interrupt and assess only what has been said up to that point.
7. In the main part of the exam, at least one question must be drawn from the pool for a grade of 4.0. Students aiming for a grade of 5.0 will need to draw at least one question from the pool for a grade of 5.0.

8. Each question answered by the student in the main part of the exam will be graded with one of the grades: 2.0, 3.0, 4.0, or 5.0, but not higher than the grade assigned to the selected pool. In this way, the student will receive two (ordered in ascending order) partial grades A and B. If A = 2.0 and B is positive, the student will draw an additional (third) question from the pool of their choice, with the stipulation that if the second (passed) question was drawn from the pool for a grade of 5.0, the third question must be drawn from the pool for a grade of 4.0. Denoting the grade for the third question as A', the initial set of grades A and B will be replaced by a new (final) set according to the following rules:
- if A' = 2.0, the new set is A = B = 2.0;
  - if A' is positive, the new set is A = 3.0, B remains unchanged.
9. The exam grade E is defined as follows:
- E = 2.0, if A = B = 2.0 or if the student has attempted the preliminary part of the exam at least once but did not pass or did not attempt the main part;
  - E = 3.0, if A = B = 3.0;
  - E = 3.5, if A = 3.0 and B = 4.0;
  - E = 4.0, if A = B = 4.0;
  - E = 4.5, if A = 3.0 and B = 5.0;
  - E = 5.0, if A = 4.0 and B = 5.0,
- where A and B are the final set of grades (ordered in ascending order) awarded according to point 8 above.
10. Any student with an average S (weighted by ECTS points) of 4.0 or higher from the previous academic year (in calculating which all mathematical and computer science courses outlined in the student's curriculum were considered, including those for which the student extended their program of study – the courses included in the average will be selected by the examiner) will have the right to one-time opt-out of the exam grade if they have passed the preliminary part of the exam and the grade obtained is lower than the average S and suboptimal given the choice of pools. If a student wishes to take advantage of this privilege, they must provide the examiner with documentation confirming the value of their average. In the case of opting out of the grade as described above, the main part of the exam will be considered not taken, and the student who exercises this privilege will retain the same rights they had before that exam, excluding the aforementioned privilege. In particular, the preliminary part of the exam (within the current exam session) will be automatically passed. This privilege applies in both exam sessions.
11. The final grade K (= the entry in the USOS system) for the course (in the given exam session) will be determined according to the formula below, where C is the grade/entry from the exercise assessment (see point 2 above), and E is the exam grade:
- if the student did not attempt the preliminary part of the exam even once, then  $K = \text{NZAL}$ ;
  - if E = 2.0, then  $K = 2.0$ ;
  - if both grades C and E are positive, then  $K = (C + E) / 2^*$ .
- \* If the resulting score is not a valid grade, it will be increased by 0.25 if grade E is greater than K, or decreased by 0.25 in the opposite case.
12. The necessity to take the retake for the exercises may result in the loss of the first exam session if the retake occurs after that session. In particular, the first exam session will not be reinstated if the only reason provided is participation in the retake for the course exercises.
13. The exam will be conducted in English – students are required to answer in this language.