Mathematics I

This course is intended for foreign students studying at our faculty and domestic students who registered it.

Content of the course:

Introduction to linear algebra - vectors, vector spaces, matrices, determinants, systems of linear equations. Analytic geometry in E_3 - straight lines and planes. Calculus of functions of single variable - limit, continuity, derivative, extrema, behaviour of a function, indefinite integral, methods of integration, definite integral.

- Plan of lectures in academic year 2026/27
- Weekly time schedule in academic year 2026/27
- Examination requirements in academic year 2026/27

Lecturers

doc. Mgr. Ing. Tomáš Bodnár, Ph.D., Office: KN:D-303

- lectures: Monday, 12:30 - 14:00 and Thursday, 14:15 - 15:45.
- tutorials: Wednesday, 14:15 - 15:45 and Friday 10:45 - 12:15.

Ing. Anna Lancmanová, Office: KN:D-305a

- tutorials: Wednesday, 17:45 - 19:15 and Friday 14:15 - 15:45.

In the case of any problem (especially with assessments from tutorials, or with exams) contact your teacher.

Tutorials, assessments

Tutorials are obligatory. Assessment from tutorials (written in the study record) confirms *student's presence and activity* at the tutorials and elaboration of homework and tests. During the semester only 4 absences are allowed (without additional homework), or up to 6 with additional homework. Higher number of absences in tutorials will automatically lead to the assessment not being awarded. Assessment is a necessary condition for the exam. (i.e. student can make the exam only with the assessment written in the study record.) The assessments are written in the last semestral week, not later than one week after. Exceptions are possible only with the explicit agreement of the chair of the institute.

- Preliminary plan of tutorials in academic year 2026/27
- Weekly time schedule of tutorials in academic year 2026/27

Exams

There are several necessary conditions to be fulfilled by students in order to be admitted to the exam:

- Student must have a *valid assessment* from tutorials registered in the electronic system KOS. (students without valid assessment can't subscribe for the exam)
- Student has to *subscribe (register) in the KOS* system for the chosen date and level of the exam. (students who will be not subscribed for the exam in the KOS system can't participate in the exam)
- Student should come to the exam *in time*, i.e. he/she should be present in the examination room at least 10 minutes before the official start of the exam. (students who will come late, will be not allowed to participate in the exam)
- Student has to bring his/her *Student Identification Card*. (students will be not allowed to participate in the exam without presenting this card)
- The use of smartphones, smart-watch or any other kind of communication devices during the exam is strictly prohibited.
- It is advised to bring a watch (non-smart, showing just the time) allowing to follow the time remaining for completing the written test.

These conditions will be followed strictly, without any exceptions.

The detailed information is available in the

Notice of exams
from Mathematics I for the academic year 2025/26.

Sample exam tests:

Exam 1
,
Exam 2
,
Exam 3
,
Exam 4
,
Exam 5

Some notes & Common mistakes:

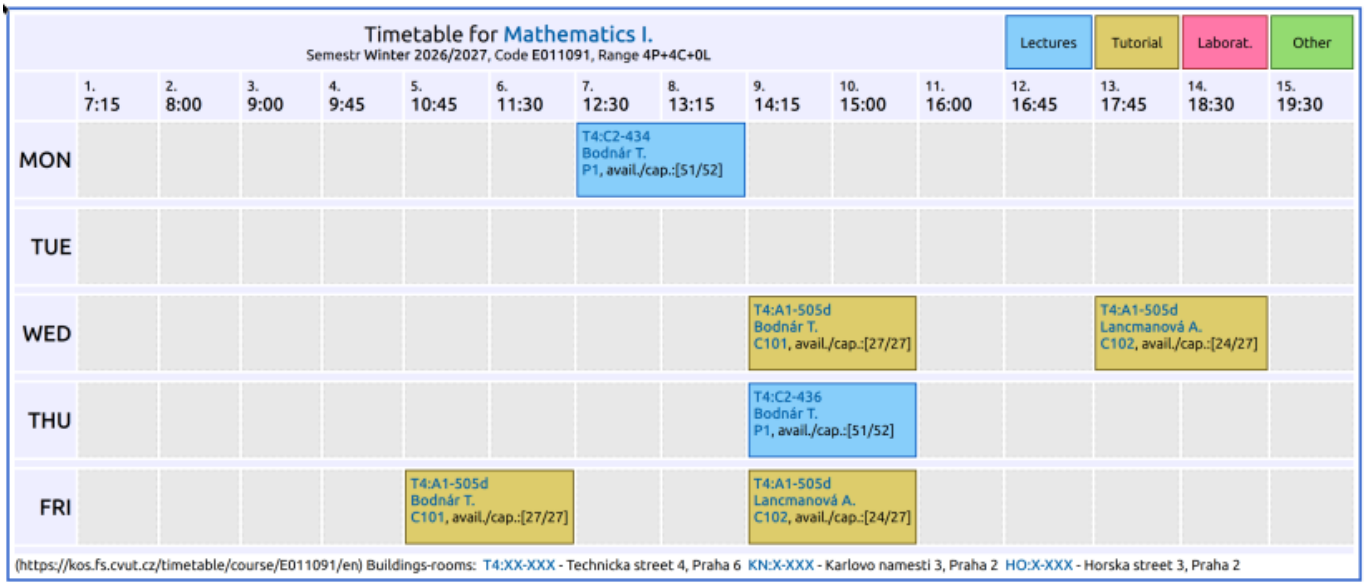
Notes & Mistakes

Literature:

- Neustupa, J.: Mathematics I, CTU Publishing House, Prague, 1996
- Neustupa, J.: Mathematics I, updated electronic version Part I, Part II, Part III-old version
- **Textbook of Mathematics I, new experimental electronic version Mathematics I**. *(If you find any mistakes or inconsistent notation, please contact Anna Lancmanová, Tomáš Bodnár)*
- Neustupa, J. and Kračmar, S.: Problems in Mathematics I, CTU Publishing House, Prague, 1999
- **Selected problems from the textbook Problems in Mathematics I**

- **Selected problems from the exam tests in previous years**
- **Solved exercises from linear algebra and analytical geometry.**
- Recommended Czech materials Základní literatura:
- Keisler, H. J.: Elementary Calculus: An Infinitesimal Approach, 2nd edition, Prindle, Weber & Schmidt, 1986.
- Calculus Volume I., Volume II., Volume III., provided by https://cnx.org/.
- College algebra, provided by https://cnx.org/

Timetable:



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