

Mathematics I

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

Content:

Introduction to linear algebra - vectors, vector spaces, matrices, determinants, systems of linear equations. Analytic geometry in E3 - straight lines and planes. Calculus of functions of one variable - limit, continuity, derivative, extremes, behaviour of a function, indefinite integral, methods of integration, definite integral.

- [Preliminary plan](#) of lectures (level Alpha) in academic year 2017/18

Lecturers

[Ing. Mgr. Tomáš Bodnár, CSc.](#), Office: KN:D-303

[RNDr. Tomáš Neustupa, Ph.D.](#), Office: KN:B-214

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. 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 2017/18

Exams

Students can choose between the levels A (Alpha-standard) or B (Beta-lower), not later than 2 days before the exam. The exam has a written form. Students are supposed to know and understand notions named in the plan of lectures, to know and understand named theorems (including their assumptions) and to be able to apply the theorems to simple problems. Students are recommended to solve individually problems from exam tests from previous years. The level of these problems corresponds to the exam of level A. Material required for the exam of level A coincides with the contents of lectures (without the 13th week) and with the contents of tutorials. The difference between the exams of levels A and B is especially in the choice and complexity of problems solved in the exam test.

Advantage of exam level A: The exam of level A provides two more credits than the exam of level B. Students, who finish the named courses (exact information on the list of these courses is provided by the study department) with the exam of level A, can complete the bachelor programme already after three years (in an individual study programme) and they are accepted to the master programme

without entrance exams.

Literature:

- Neustupa, J.: Mathematics I, CTU Publishing House, Prague, 1996,
- Finney, R. L., Thomas, G.B.: Calculus, Addison-Wesley, New York, Ontario, Sydney, 1994
- [Selected problems](#) from the textbook Problems in Mathematics I (the textbook is in Czech only)
- [Selected problems](#) from the exam tests in previous years

Timetable:

Rozvrh předmětu Mathematics I. Semestr Zimní 2017-8, Kód E011067, Rozsah 4+4												Přednášky	Cvičení	Laborat.	Ostatní
	1. 7:15	2. 8:00	3. 9:00	4. 9:45	5. 10:45	6. 11:30	7. 12:30	8. 13:15	9. 14:15	10. 15:00	11. 16:00	12. 16:45	13. 17:45	14. 18:30	15. 19:30
PO										KN-A-312 Bodnár T. P1, obs./kap.: [0/55]					
ÚT											KN-A-311 C1, obs./kap.: [1/30]				
											KN-A-311 C2, obs./kap.: [0/30]				
ST			KN-A-312 Bodnár T. P1, obs./kap.: [0/55]												
ČT					KN-A-311 C1, obs./kap.: [1/30]										
					KN-A-311 C2, obs./kap.: [0/30]										
PÁ															

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