

Numerical methods 2023 autumn

courses	EN1	EN5
lecturers	Bence Ambrus	Kristóf Kapitány
place	Kf27c	K142
	+Mon 12-14	+Tue 12-14
week	Thu 8-10	Wen 10-12
1.	M1,M2	M1,M2
2.	ERR	ERR
3.	NL1,LIN1	NL1,LIN1
4.	LIN2	LIN2
5.	NL2,REG	NL2,REG
6.	IP1	IP1
7.	MT1 (10.16.),M3	M3,MT1 (10.18)
8.	IP2	IP2
9.	DER,INT	DER,-
10.	OP1	INT
11.	OP2,-	OP1,OP2
12.	ODE1	ODE1
13.	ODE2,P2	ODE2,P2
14.	MT2 (12.07.)	MT2 (12.06.)
classes off:	1x90 min	1x90 min

Deadlines for the practice exercises

Practice exercises (10x3p)	Available
1: Matlab	09.04-10.01.
2: NL1	09.18-10.01.
3: LIN 1-2	09.20-10.08.
4: NL2	10.02-10.15.
5: REG,IP1	10.04-10.22.
6: IP2	10.25-11.05.
7: DIF	10.30-11.12.
8: INT	11.02-11.19.
9: OP 1-2	11.09-11.26.
10: ODE 1-2	11.22-12.10

10 practice exercises. The tasks are available for at least 1 week after the related topic.

Retake of the first mid-term test: Dec. 13. 10-12. K142, Retake of the second mid-term test: Dec.14. 10-12 K142

Days off: Sept.12. (2. week, Tue), Oct.23. (8. week, Mon), Nov. 1. (9. week, Wen), Nov.16. (11. week, Thu), Nov.24. (12. week, Fri)

	Lectures:	Code		Lectures:	Code
1.	Matlab basics 1.	M1	12.	Matlab 3D Graphics (optional)	M3
2.	Matlab basics 2.	M2	13.	2-D interpolation, regression	IP2
3.	Computational errors	ERR	14.	Numerical differentiation	DIF
4.	Nonlinear equations	NL1	15.	Numerical integration	INT
5.	System of linear equations 1.	LIN1	16.	Optimization 1.	OP1
6.	System of linear equations 2.	LIN2	17.	Optimization 2.	OP2
7.	System of nonlinear equations	NL2	18.	Ordinary Differential Equations 1.	ODE1
8.	1-D regression	REG	19.	Ordinary Differential Equations 2.	ODE2
9.	1-D interpolation	IP1	20.	(Practice 2 - overview - optional)	P2
10.	(Practice 1 - overview - optional)	P1	21.	Midterm test 2	MT2
11.	Midterm test 1	MT1			