Obuda University John von Neumann Faculty of Informatics	Institute of Applied Mathematics

Name and code: **Credits*:***

NAMSC1EVND Scientific Computing

2023/23 year I. semester

Subject lecturers: Dr Kósi Krisztián

Prerequisites (with code):				
Weekly hours:	Lecture:	Seminar.:	Lab. hours:4	Consultation:
Way of assessment:				

Course description:

Goal: trol. The course contains the necessary mathematical tools, and extends the basic ideas of the Non-Linear systems to the Adaptive Non-Linear control.

Course description: To give the students an overview of mathematical methods used in Control Theory. The course contains a programming part that shows the algorithms in Julia language and discusses the coding efficiency in sense of efficient code writing, and efficient code running time.

Lecture schedule

Education week	*Topic*
1.	Introduction to LaTeX typesetting
2.	Intrroduction to Julia language
3.	Mathematical background
4.	Mathematical background
5.	Numerical methods
6.	Fractals
7.	Introduction to Machine Learning
8.	Metric Space
9.	Genetic algorithms
10.	Modelling and simulations
11.	Adaptive Control SISO
12.	Adaptive Control MIMO
13.	Extra content
14.	Project Presentation

Midterm requirements

Education week	*Topic*

2022. 06. 08.

Final grade calculation methods

The final grade calculated from the homeworks, or can be done a home project. If someone absent at lecture and lab, more than 30% will have denied from the course.

Achieved result	Grade
89%-100%	excellent (5)
76%-88<%	good (4)
63%-75<%	average (3)
51%-62<%	satisfactory (2)
0%-50<%	failed (1)

Type of exam

Type of replacement

References

Mandatory:
Lecutre Notes

Recommended: