Name: **Mathematics I – Calculus I**		*NEPTUN-code:* *NMXAN1EBNE*	*Number of periods/week:* full-time: 3 lec + 3 sem + 0 lab
Credit: 6 *Requirement:* mid-term mark		*Prerequisite:* -	
Responsible: Aurél GALÁNTAI, DSc.	*Position:* professor	*Faculty and Institute name:* John von Neumann Faculty of Informatics Institute of Applied Mathematics	
Way of assessment: - mid-term tests			
Competences			
Course description:			
The aim of the course is to bring up students' mathematical skills to an even level, introduce them to the methods of higher mathematics, to the use of Matlab software, and get them acquainted with the elements of one-variable calculus. Course material: number sets, algebraic expressions, equations and inequalities. Trigonometry. Complex numbers. Vectors and operations. Matrices and operations. Relations and functions, elementary discussion, sketching, elementary functions. Converging series. Continuity and limits of functions. One-variable differential calculus, differentiation rules, applications, curve sketching. Definite integral. Symbolic and numerical integration techniques, applications.			
Literature			
József Kovács, Gábor Takács, Miklós Takács: Analysis. Tankönyvkiadó, Budapest, 1991 (in Hungarian) György Baróti Dr – Miklós Kis – Edit Schmidt – Zsuzsanna Lukács dr. Sréterné: Mathematical Task Collections. BMF KKVFK, Budapest, 2000 (in Hungarian)			