Name of the subject: **Applied Mathematics**	NEPTUN-code: *BMXAME1MNE*	Credits: 8 ECTS: 10
Subject leader: Dr. László Hanka	Title: ass. prof.	

Course description:
Ordinary linear differential equations and classical solutions to special types of non-linear equations. Also, numerous applications, series solutions, and solutions of systems of linear differential equations. Engineering Applied Mathematics: Laplace Transforms, Fourier Series, Vector Calculus, Partial Differential Equations, Complex Functions and Applications. Operations research, model formulation, linear programming, integer programming, nonlinear programming, network analysis, deterministic and stochastic dynamic programming, game theory and decision theory. Numerical Analysis. Algorithms for Root Finding, Interpolation, Integration, Linear Algebra, and Differential Equations. Introduction to Dynamical Systems and Chaos. Overview methods describing qualitative behavior of solutions on nonlinear differential equations. Phase space analysis of fixed pointed and periodic orbits. Bifurcation methods. Description of strange attractors and chaos. Introductions to maps. Applications.