

Study programmes: PhD studies – Mathematics – Analysis and Differential equations			
Course name: Stability of a solution of ordinary differential equations			
Lecturers: Darko Milinković			
Status: Optional			
ECTS: 9			
Attendance prerequisites: none			
Course aims: Acquisition of general and special knowledge from the stability of solutions of ordinary differential equations.			
Course outcome: Upon completion of the course, the student has the necessary knowledge of the stability of solutions of ordinary differential equations. He is able to solve these problems for various types of differential equations. He is able to apply knowledge in theory and applications in order to solve known and new problems independently.			
Course content: Basic definitions of stability theory. Stability by Lyapunov. Lyapunov theorems. Stability of solutions of linear systems of differential equations.			
Literature: V. I. Arnold: Ordinary differential equations. M. Hirsch, S. Smale: Differential equations, dynamical systems and linear algebra Н.П. Еругин, В.В. Степанов, А.И. Яблонский.			
Number of hours: 10	Lectures: 4	Research: 6	
Teaching and learning methods: Tutorial			
Assessment (maximal 100 points)			
Course assignments	points	Final exam	points
Lectures		Written exam	
Exercises / Tutorials		Oral exam	100
Colloquia		Written-oral exam	
Essay / Project			