Study programmes: Master studies – Mathematics	
Course name: Selected topics of ordinary differential equations	
Lecturers: Darko Milinković, Jelena Katić, Nebojša Lažetić	
Status: Optional	
ECTS: 8	
Attendance prerequisites: none	
Course aims: Acquisition of general and special knowledge from qualitative analyses of differential equations	
Course outcome: Upon completion of the course, the student has the necessary knowledge of ordinary differential equations (existence of solutions, bounded, periodic, boundary, stable and other solutions of differential equations). He is able to apply knowledge in theory and applications in order to independently solve known and new problems, prepare and defend his master's thesis.	
Course content: Existence and uniqueness of the solution. Differential inequalities. Linear differential equations. Dependence on initial conditions and parameters. Linear equations of second order. Grunting problems. Sturm-Liouville problem. Stability of solutions of ordinary differential equations.	
Literature: V. I. Arnold: *Ordinaty differential equations* И.Г. Петровский,В.И. Арнолд, Н.П.Еругин	

Number of hours: 8	Lectures: 4	Tutorials: 4

Teaching and learning methods: menthoring work

Assessment (maximal 100 points)			
Course assignments	**points**	**Final exam**	**points**
Lectures	10	Written exam	30
Exercises / Tutorials		Oral exam	40
Colloquia			
Essay / Project	20		