

Study programmes: BACHELOR STUDIES - Mathematics				
Course name: Introduction to Dynamic Systems Theory				
Lecturers: : Darko Milinković, Jelena Katić				
Status: Optional				
ECTS: 5				
Attendance prerequisites: Analysis 2, Linear algebra, Differential equations				
Course aims: Acquiring basic knowledge of basic concepts of the theory of finite-dimensional dynamical systems.				
Course outcome: The student needs to master the most important dynamic aspects of the theory of ordinary differential equations, and to gain the ability to apply the theory of dynamic systems in some scientific fields beyond pure mathematics.				
Course content: Basic concepts of dynamics. Equilibrium stability, Poenkare-Bendixson's theorem, periodic attractors. Applications in the theory of electric currents, ecology and classical mechanics.				
Literature: M.W. Hirsh, S. Smale, "Differential Equations, Dynamical Systems and Linear Algebra", Academic Press, 1974.				
Number of hours: 4	Lectures: 2	Tutorials: 2	Laboratory: -	Research: -
Teaching and learning methods: Frontal / Tutorial				
Assessment (maximal 100 points)				
Course assignments	points	Final exam		points
Lectures	-	Written exam		-
Exercises / Tutorials	10	Oral exam		60
Colloquia	10	Written-oral exam		-
Essay / Project	20			