Study programmes: PhD studies – Mathematics – Analysis and Differential equations			
Course name: Symplectic manifolds			
Lecturers: Darko Milinković			
Status: Optional			
ECTS: 9			
Attendance prerequisites: Analysis on manifolds			
Course aims: Mastering concepts and methods of analysis on simplectic manifolds			
Course outcome: The student should understand well and be able to apply the concepts and techniques of analysis to simplectic manifolds.			
Course content: Symplectic forms, examples, relations to classical mechanics, almost complex structures, symplectomorphisms, Hamiltonian differential equations, symmetries and conservation laws, Lagrange submanifolds, Poisson manifolds, symplectic reduction, applications.			
Literature: **H. Hofer, E. Zehnder,** ***Symplectic Invariants and Hamiltonian Dynamics.*** **D. McDuff, D. Salamon,** ***Introduction to Symplectic Topology.***			
Number of hours: 10	**Lectures:** 4	**Research:** 6	
Teaching and learning methods: Frontal, individual, research			
Assessment (maximal 100 points)			
Course assignments	points	**Final exam**	points
Lectures		Written exam	
Exercises / Tutorials	50	Oral exam	50
Colloquia		Written-oral exam	
Essay / Project			