Study programmes: Master studies – Mathematics	
Course name: Introduction to Morse theory	
Lecturers: Darko Milinković, Jelena Katić, Vladimir Grujić	
Status: Optional	
ECTS: 8	
Attendance prerequisites: Analysis 2, Differential geometry, Topology	
Course aims: Acquiring basic knowledge from Morse theory.	
Course outcome: Upon completion of the course, the student has basic knowledge from Morse theory that he knows to apply, for example, to calculate the Morse homology of simple manifolds.	
Course content: Morse functions. Morse lemma. Gradient flow. Reeb 's theorem. Passing through critical points. Stable and unstable manifold, Morse - Smale dynamical systems. CW - complex associated with Morse function. Morse homology. Morse inequalities.	
Literature: A. Banyaga, D. Hurtubise: *Lectures on Morse Homology,* Kluwer, 2004. В. Драговић, Д. Милинковић: *Анализа на многострукостима*, Математички факултет, Београд, 2003.	

Number of hours: **5**	Lectures: **3**	Tutorials: **2**	Laboratory: **-**	Research: **-**

Teaching and learning methods: Frontal , Interactive, Exercises

Assessment (maximal 100 points)			
Course assignments	**points**	**Final exam**	**points**
Lectures	-	Written exam	-
Exercises / Tutorials	10	Oral exam	-
Colloquia	30	Written-oral exam	60
Essay / Project	-		