

Study programme(s): Mathematics AN-02				
Level: PhD studies				
Course title: Analysis on manifolds				
Lecturer: Stevan Pilipović				
Status: obligatory				
ECTS: 10				
Requirements: none				
Learning objectives Development of the differential calculus on manifolds				
Learning outcomes Necessary knowledge for the differential calculus on manifolds. Differential calculus on manifolds				
Syllabus <i>Theoretical instruction</i> Manifolds, Vector bundles. Differential calculus on manifolds. Sheaf theory. Resolvent. Differential geometry. Riemann geometry. Generalized functions on manifolds. <i>Practical instruction</i> Seminar work of a student				
Literature F. Varner, Foundation of Differential Manifolds and Lie Groups, Springer-Verlag, New York-Berlin, 1983. 272 pp Aubin, T., A course in differential geometry. Graduate Studies in Mathematics, 27. American Mathematical Society, Providence, RI, 2001. 184 pp Grosser, M., Kunzinger, M., Oberguggenberger, M., Steinbauer, R., Geometric theory of generalized functions with applications to general relativity. Mathematics and its Applications, 537. Kluwer Academic Publishers, Dordrecht, 2001. 505 pp.				
Weekly teaching load				Other: 0
Lectures: 2	Exercise:	Other forms of teaching: 0	Student research: 6	
Teaching methodology Classical lectures, exercises, students seminar works				
Grading method (maximal number of points 100)				
Pre-exam obligations	points	Written exam		50
		Oral exam		50