

Study programme(s): M3 - Mathematics				
Level: Bachelor				
Course title: Analysis 2				
Lecturer: Sanja V. Konjik				
Status: Obligatory				
ECTS: 8				
Requirements: Passed exams in Introduction to analysis and Analysis 1				
Learning objectives Acquiring knowledge and skills in the selected topics of differential and integral calculus of functions of several variables.				
Learning outcomes Students should be capable of applying the acquired knowledge and skills to specific problems.				
Syllabus <i>Theoretical classes</i> The space \mathbb{R}^n – topological concepts, convergence and continuity, compactness, partial derivatives and differentiability, the mean value theorem, parameter integrals, the Taylor theorem, local extrema, conditional extrema, the implicit and inverse function theorems, double and triple integrals, multiple integrals, change of variables in multiple integrals, curves in \mathbb{R}^2 and \mathbb{R}^3 , line integrals, surfaces in \mathbb{R}^3 , surface integrals, the fundamental theorems of integral calculus <i>Practical classes</i> The application of knowledge gained in the theoretical classes in solving practical problems (exercises).				
Literature - Perišić, D., Pilipović, S., Stojanović, M., Funkcije više promenljivih. Diferencijalni i integralni račun, Univerzitet u Novom Sadu, PMF, Novi Sad, 1997. - Stewart, J., Multivariable Calculus, 6th edition, Thompson Books/Cole, Toronto, 2009. - Stewart, J., Calculus, 7th edition, Brooks/Cole, Belmont, 2012. - Marsden, J.E., Weinstein, A., Calculus III, 2nd edition, Springer-Verlag, New York, 1985. - Radenović, S., Matematička analiza II. Metodiska zbirka zadataka, 3. izdanje, D.P. Studentski trg, Beograd, 2002.				
Weekly teaching load				Other: 0
Lectures: 4	Exercises 3	Other forms of teaching: 0	Student research: 0	
Teaching methodology Oral presentation by the teacher, discussions and exchange of opinion between the teacher and students, problems solving, use of computers in teaching, group work, students' individual work.				
Grading (maximum number of points 100)				
Pre-exam obligations	points	Final exam	points	
Activity during lectures		Written exam		
Practical classes		Oral exam	50	
Colloquia	50			