

Study Program: Mathematics				
Type and level of studies: Bachelor studies, IV semester				
Course name: Ordinary Differential Equations				
Lecturer: Stana D. Cvejić				
Status: Compulsory				
ECTS: 8				
Attendance Prerequisites: Mathematical analysis.				
Course aims				
Students are familiarized to the basic concepts of ordinary differential equations of functions of one real variable (first and higher order differential equations, application with variable and constant coefficients, solving methods, systems of ordinary differential equations). The students should acquire knowledge necessary for understanding other subjects within the study program.				
Course outcome				
The students have developed a sense for qualitative analysis of differential equations, as well as for independent modelling of various phenomena.				
Course content				
<i>Theoretical part</i>				
The concept of differential equations. First order differential equations, higher order ordinary differential equations, general theory of linear differential equations, linear differential equations with constant coefficients, series methods for integration, systems of ordinary differential equations.				
<i>Practical part: exercises, other forms of teaching, student research work</i>				
Solving problems related to the aforementioned fields.				
Literature				
1. С. Цвејић: <i>Обичне диференцијалне једначине</i> , Природно-математички факултет у Приштини, Косовска Митровица, 2006.				
2. М.Петровић: <i>Диференцијалне једначине – први и други део</i> , Завод за уџбенике и наставна средства, 1999.				
3. С. Јанковић, Ј. К. Мирановић, <i>Диференцијалне једначине I</i> , Математички факултет Београд, 2000.				
Number of active classes				Other classes
Lectures: 3	Practical classes: 3	Other forms of teaching:	Students' research work	
Teaching methods				
Standard lecturing methods are used during lectures. In practical classes, the principles and problems are analysed.				
Assessment (maximum 100 points)				
Course assignments	points	Final exam		points
activity during lectures	5	written exam		30
practical classes	-	oral exam		35
term test(s)	30		
seminar(s)				
Total	35			65