Study Program: Mathematics

Type and level of studies: Bachelor studies, II semester

Course name: Mathematical analysis 2

Lecturer: Stana D. Cvejić

Status: Compulsory

ECTS: 9

Attendance Prerequisites: Mathematical analysis 1

Course aims

The basics of mathematics; determining the logical reasoning procedures and developing students' abilities for proper and creative problem solving.

Course outcome

Independent and creative use of the rules of mathematical and logical reasoning in solving more complex problems and in proving theorems. Understanding the interpretation and constructing models of predicate formulas. Ability to apply the knowledge of set constructions, relations and functions within other areas of mathematics.

Course content

Theoretical part:

Systematic examination of functions using derivatives; integral calculus (indefinite integral, notions and properties, tables, methods of integration- substitution, integration by parts, integration of rational, irrational and trigonometric functions, binomial differential; definite integral- notion, geometric interpretation, basic formula and properties, mean value theorems, relation to indefinite integral, application – circular arc length, surface and volume), improper integrals.

Practical part:

Practice is done in accordance with the theoretical part

Literature

1. Д. Аднађевић, З. Каделбург: Математичка анализа I, Математички факултет, Београд, 2008,
2. И.И.Љашко, А.К.Бојарчук, Ј.Д.Головач: *Збирка задатака из математичке анализе* „IBC" 98, Београд 2002
3. Љ.Ђ.Такачи и аутори: *Збирка задатака из Анализе I*, Институт за матем. ПМФ, Нови Сад, 2000

Number of active classes				Other classes
Lectures: 3	Practical classes: 3	Other forms of teaching:	Students' research work	

Teaching methods

Lectures, auditory lessons, consulting, term tests, homework, written exam.

Assessment (maximum 100 points)

Course assignments	**points**	Final exam	**points**
activity during lectures	**5**	written exam	**25**
practical classes	**-**	oral exam	**40**
term test(s)	**30**	.....	
seminar(s)			
Total	**35**		**65**