Study programme(s): Computer Science	
Level: bachelor	
Course title: Mathematical Analysis 1	
Lecturer: Ivana Štajner-Papuga	
Status: obligatory	
ECTS: 8	
Requirements: ---	

Learning objectives

Acquiring basic knowledge and skills in differential calculus and inegrations for real functions of one variable, number and power series as well as in some basic ODJ.

Learning outcomes

Successfull students will be able to recognize the type of a problem and to apply techniques studied during the course. They will be able to use the proper softwer support.

Syllabus

- Some general mathematical concepts
- Real functions of one variable
- Limits
- Differential calculus and integration
- Number series
- Power series
- Basic ODE
- Software support (*Mathematica* or similar)

Literature

1. V. A. Zorich, Mathematical Analysis I, Springer –selected chapters
2. F. Ayres, E. Mendelson, Schaum's Outline of Calaculus, McGraw-Hill BookCompany –selected chapters

Weekly teaching load

Lectures: 3	Exercises: 3	Practical Exercises: 0	Student research: 0	Other: **0**

Teaching methodology:

- classical teaching methods;
- demonstrations of softwer;
- exercises.

Grading method (maximal number of points 100)

Pre-exam obligations	points	Final exam	points
Written test	**40**	*Oral exam*	*40*
Practical test	**20**		