Course Unit Descriptor

Study Programme: Computer Science	
Course Unit Title: Mathematical Analysis 2	
Course Unit Code: CS153	
Name of Lecturer(s): Ivana Štajner Papuga	
Type and Level of Studies: Bachelor Academic Degree	
Course Status (compulsory/elective): Compulsory	
Semester (winter/summer): Summer	
Language of instruction: Serbian (primary), English (secondary)	
Mode of course unit delivery (face-to-face/distance learning): Face-to-face	
Number of ECTS Allocated: 6	
Prerequisites: Mathematical Analysis 1	

Course Aims: Acquiring basic knowledge and skills in differential calculus in several variables and different types of integration (multiple integrals, line and surface integrals).

Learning Outcomes: Successful 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 software support.

Syllabus:

- Functions of several variables
- Differential calculus in several variables
- Multiple integrals
- Line integrals
- Surface integrals
- Software support (*Mathematica* or similar)

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

Weekly Contact Hours: 5	**Lectures:** 2	**Practical work:** 3

Teaching Methods: classical teaching methods – lectures and exercises; students' demonstrations of software.

Knowledge Assessment (maximum of 100 points):

Pre-exam obligations	points	**Final exam**	Points
Active class participation		written exam	
Practical work	20	oral exam	40
Preliminary written exam(s)	40	…….	
Seminar(s)			

The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.