Study programmes: BACHELOR STUDIES - Mathematics				
Course name: Mathematical Methods of Quantum Mechanics				
Lecturers: Darko Milinković, Zoran Rakić, Jelena Katić				
Status: Optional				
ECTS: 5				
Attendance prerequisites: Analysis 3A, Analysis 3B, Differential equations A, Differential equations B				
Course aims: Gaining a basic knowledge about the basic notions of Quantum Mechanics and about their mathematical content.				
Course outcome: The student should get to know, through mastering the basic structure of quantum mechanics, the use of some mathematical theories in the strict establishment of physical concepts and the mathematical checking of physical laws.				
Course content: Basic notions and postulates of quantum mechanics; their mathematical structure. Elementary theory of scattering, multi-particle systems, resonances, quantum field theory, quantum electrodynamics, renormalization. A brief overview of mathematical theories that structure these quantum theories.				
Literature: S. J. Gustafson, I.M. Sigal, "Mathematical Concepts of Quantum Mechanics", Springer, 2003; E. Zeidler, "Quantum Field Theory I", Springer, 2006				
Number of hours: 4	**Lectures**: 2	**Tutorials**: 2	**Laboratory**: -	**Research**: -
Teaching and learning methods: Frontal / Tutorial				

Assessment (maximal 100 points)			
Course assignments	**points**	**Final exam**	**points**
Lectures	-	Written exam	-
Exercises / Tutorials	10	Oral exam	60
Colloquia	10	Written-oral exam	-
Essay / Project	20		