

Study programmes: PhD studies – Mathematics – Analysis and differential equations			
Course name: 3M135 Spectral theory			
Lecturers: Danko Jocić			
Status: Optional			
ECTS: 9			
Attendance prerequisites: -			
Course aims: Mastering of notions and methods of spectral theory.			
Course outcome: Student should understand and be able to apply notions and techniques of spectral theory.			
Course content: Linear operators in Hilbert's spaces. Unbounded operators. Symmetric and isometric operators. Spectral measure and integration. Spectral theorem and applications. Theory of perturbations.			
Literature:			
1. M. Sh. Birman, M.Z. Solomyak, Spektralnaya teoriya samosopryazhenyh operatorov v Gilbertovom prostranstve, Leningrad, 1980.			
2. Gilbertovom prostranstve, Leningrad, 1980.			
3. N. Dunford and J. Schwartz, Linear Operators, Part II, Spectral Theory, Wiley, 1988.			
4. J. Weidmann, Linear Operators in Hilbert Spaces, Springer-Verlag, Berlin, 1980.			
Number of hours: 10	Lectures: 4	Research: 6	
Teaching and learning methods: Frontal / Individual / Research			
Assessment (maximal 100 points)			
Course assignments	Points	Final exam	points
Lectures		Written exam	
Exercises / Tutorials	50	Oral exam	50
Colloquia		Written-oral exam	
Essay / Project			