Study programmes: Doctoral studies – Mathematics – Probability and statistics			
Course name: Information theory			
Lecturers: Vladimir Božin, Marko Obradović			
Status: Optional			
ECTS: 9			
Attendance prerequisites: none			
Course aims: Acquiring general and specific knowledge concerning information theory			
Course outcome: Upon completing the course, a student is capable of applying the acquired knowledge and conducting individual scientific research in this field.			
Course content: Entropy as a measure of uncertainty. Joint entropy. Conditional entropy. Properties of entropy. The measure of information. Applications of entropy in problem solving. Applications of information theory to communication channels.			
Literature: **R.B. Ash:** ***Information Theory,*** Dover Publications, New York, 1990. **А.М. Яглом, И.М. Яглом,** ***Вероятность и информация***, Наука, Москва, 1973.			
Number of hours : 10	**Lectures**: 4	**Research:** 6	
Teaching and learning methods: Frontal / Individual			
Assessment (maximal 100 points)			
Course assignments	points	**Final exam**	points
homework	20	Written exam	
Exercises / Tutorials		Oral exam	60
Colloquia			
Essay/Project	20		