

<b>Course:</b>	<b>Measure and integration</b>	
<b>Teacher(s):</b>	<b>Dora Seleši</b>	
Course status:	Elective	
ECTS:	12	
<b>Prerequisites:</b>	None	
Goal Understaning classical results in measure and integration		
Outcomes  Student can use methods of measure and integration in other topics of functional analysis, as well as the other way around: student can use functional analytic methods in the theory of measure and integration.		
Contents  Theoretical lectures:  Positive Borel measures on locally compact Hausdorff spaces, Lebesgue measure. Lp-spaces, dual spaces. Complex measures. Radon-Nykodem theorem. Representations of bounded linear functionals. Differentiation of measures and functions. Fubini theorem.		
Recommended bibliography.  1. W. Rudin, <i>Real and complex analysis</i> , McGrow Hill, New York, 1986. 2. S. Pilipović, D. Seleši, <i>Mera i integral – fundamenti teorije verovatnoće</i> , Beograd 2012. 3. B. Mirković, <i>Teorija mera i integrala</i> , Naučna knjiga, Beograd, 1990. 4. V. Bogachev, <i>Measure theory, volumes 1 and 2</i> , Springer, Berlin-Heidelberg, 2007.		
Number of classes per week	Theoretical: 4	Practical:
Methods of teaching  Group, individual, interactive.		
Knowledge rating (max 100 points)		
Knowledge estimation: Seminars: 30 points Final exam: 70 points		