Study programmes: Bachelor studies – Mathematics	
Course name: Signal Processing	
Lecturers: Sandra Živanović	
Status: Optional	
ECTS: 5	
Attendance prerequisites: -	
Course aims: Accomplish general and practical knowledge in signal processing	
Course outcome: After completing this course, the student has fundamental knowledge about the signal processing. He is able to transform digital signal from time domain into frequency domain applying the fast Fourier Transformation (FFT) and also to decompose signal into frequency groups (multiresolution) using fast wavelet transformation (FWT).	
Course content: Discrete signals. Continuous signals. Analysis of signals in time domain. Analysis of signal in frequency domain. Fourier transformation. Discrete Fourier transformation. Fast Fourier transformation. Wavelets. Digital signal processing. Linear time invariant systems: transfer function and frequency response. Digital filters. Impulse response. Software implementation in Matlab.	
Literature:	

Literature:
1. Radunović D., Talasići, Akademska misao, 2005.
2. Радуновић Д., Нумеричке методе, Академска мисао, 2004
3. Lj. Stanković, Digitalna obrada signala, Naučna knjiga Beograd, 1990.
4. Z. Dobrosavljević, Lj. Milić, Uvod u digitalnu obradu signala, Akademska misao, 2004.

Number of hours: 4	Lecures: 2	Tutorials: 2	Laboratory: -	Research: -

Teaching and learning methods: Frontal / Individual / Interactive / Tutorials / Lectures / Exercises

Assessment (maximal 100 points)				
Course assignments	**points**	**Final exam**	**points**	
Lectures	5	Written exam	20	
Exercises / Tutorials	5	Oral exam	40	
Colloquia	30	Written-oral exam	-	
Essay / Project	-			