

Faculty of Science and Mathematics / BIOLOGY / MATHEMATICS

Course:	MATHEMATICS			
Course ID	Course status	Semester	ECTS credits	Lessons (Lessons+Exercises+Laboratory)
554	Mandatory	2	3	2+1+0
Programs	BIOLOGY			
Prerequisites	No			
Aims	Students will gain basic knowledges of mathematics and statistics with emphasizes on applications in biology			
Learning outcomes	After passing this exam, will be able to: 1. Moderated first and doing the basic analysis of the data set (mean, standard deviation, histogram drawing ...) 2. Recognizes the second data distributed by the binomial, Poisson and Gaussian distribution 3. The accounts of the probability of certain events 4. In the method for estimating standard statistical parameters 5. interprets the results obtained by analyzing data 6. Line graphics core functions			
Lecturer / Teaching assistant	Darko Mitrovic			
Methodology	Lectures, practical problems, homework, written and oral tests. Consultations.			
Plan and program of work				
Preparing week	Preparation and registration of the semester			
I week lectures	Data and representation of data			
I week exercises				
II week lectures	Quantities characterizing one dimensional data			
II week exercises				
III week lectures	Quantities characterizing multi dimensional data			
III week exercises				
IV week lectures	Basic notions in the probability theory.			
IV week exercises				
V week lectures	I colloquium			
V week exercises				
VI week lectures	Poisson and binomial distribution			
VI week exercises				
VII week lectures	Correction of I colloquium			
VII week exercises				
VIII week lectures	Gauss distribution			
VIII week exercises				
IX week lectures	Definition of estimators and their properties			
IX week exercises				
X week lectures	Basic estimators			
X week exercises				
XI week lectures	II colloquium			
XI week exercises				
XII week lectures	Correction of II colloquium			
XII week exercises				
XIII week lectures	Real functions – basic properties			
XIII week exercises				
XIV week lectures	First and second derivative of function			

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XIV week exercises						
XV week lectures	Function graphs					
XV week exercises						
Student workload	4h/week					
Per week			Per semester			
3 credits x 40/30=4 hours and 0 minuts 2 sat(a) theoretical classes 0 sat(a) practical classes 1 excercises 1 hour(s) i 0 minuts of independent work, including consultations			Classes and final exam: 4 hour(s) i 0 minuts x 16 =64 hour(s) i 0 minuts Necessary preparation before the beginning of the semester (administration, registration, certification): 4 hour(s) i 0 minuts x 2 =8 hour(s) i 0 minuts Total workload for the subject: 3 x 30=90 hour(s) Additional work for exam preparation in the preparing exam period, including taking the remedial exam from 0 to 30 hours (remaining time from the first two items to the total load for the item) 18 hour(s) i 0 minuts Workload structure: 64 hour(s) i 0 minuts (cources), 8 hour(s) i 0 minuts (preparation), 18 hour(s) i 0 minuts (additional work)			
Student obligations			Students are obliged to attend lectures and do their homework.			
Consultations			1h/week			
Literature			Statistics, R.J.Barlow, Zbirka zadataka iz Vise matematike I, P.Uscumlic, D.Milicic			
Examination methods			2 colloquims 30 points each (60 points). 2 homeworks 4 point each (8 points). Attending classes: 2 points. Final exam - 30 points. Success level is 50 points.			
Special remarks						
Comment						
Grade:	F	E	D	C	B	A
Number of points	less than 50 points	greater than or equal to 50 points and less than 60 points	greater than or equal to 60 points and less than 70 points	greater than or equal to 70 points and less than 80 points	greater than or equal to 80 points and less than 90 points	greater than or equal to 90 points