
		UNIVERSITY OF EAST SARAJEVO Production and Management Faculty Trebinje					
		<i>Study programme: Industrial Management</i>					
		First cycle	Second year				
Course name		PROBABILITY AND STATISTICS					
Department		Department of Mathematics- Faculty of Philosophy Pale					
Course code		Course status		Semester		ECTS	
IM-24-1-021-4		Required		IV		5	
Lecturer(s)		Dušan Jokanović, Associate professor					
Assistant(s)		Marina Miličević, Teaching assistant					
Lectures (theory and application/lab.) (weekly)			Student workload (hours/per semester)			Coefficient of student workload S_o	
T	App.	Lab.	T	App.	Lab.	S_o	
2	2	0	$2*15*1,4 = 42$	$2*15*1,4 = 42$	$0*15*1,4 = 0$	1,4	
lectures – total (hours per semester) $2*15 + 2*15 + 0*15 = 60$			student workload – total (hours per semester) $2*15*1,4 + 2*15*1,4 + 0*15*1,4 = 84$				
Ukupno opterećenje predmeta (nastavno + studentsko): $60 + 84 = 144$ sati semestralno							
Learning outcomes		By mastering this course the student will be able to: 1. use the acquired knowledge in further education and in professional subjects, 2. construct and solve mathematical models in professional subjects using the material of this course, 3. apply probability theory when modeling problems in practice 4. perform statistical data analysis.					
Prerequisites		Final exam is conditioned by Mathematics 2 passed.					
Teaching methods		Lectures, application, homework, assignments.					
Course description (per week)		1. Introduction to probability theory. Sample space and events. 2. Probabilities defined on events. Conditional probabilities. Bayes' formula. 3. Random variables. Cumulative distribution function. 4. Special random variables. Discrete and continuous random variables. 5. Jointly distributed random variables. 6. Expectation and variance of random variables. 7. Moment generating functions. 8. Laws of large numbers. 9. Central limit theorem. 10. Introduction to statistics. Populations and samples. Distributions of sampling statistics. 11. Parameter estimation. 12. Likelihood estimators. 13. Hypothesis testing. 14. Interval estimates. 15. Regression.					
Required learning material							
Author(s)		Publication title, publisher		Year	Pages (from-to)		
Sheldon M. Ross		Introduction to Probability and Statistics for Engineers and Scientists (Fourth Edition), Academic Press		2009.	1-664		
Suggested learning material							
Author(s)		Publication title, publisher		Year	Pages (from-to)		
Assessment activities and final grade	Assessment				Credits	Percentage	
	Pre-exam activities						
	First homework				2	2 %	
	Second homework				2	2 %	
	First preliminary examination				30	30 %	
	Second preliminary examination				30	30 %	
	Final exam						
Final exam (oral)				36	36 %		
TOTAL				100	100 %		
Web page		http://fpmtrebinje.com/wp/wp-content/uploads/2016/11/9_IM_Vjerovatnoca_i_statistika.pdf					

Datum ovjere

23.09.2019. - LV Council session of the Faculty of Production and management Trebinje