Study program: Faculty of Environmental protection
Type and level of study: Doctoral academic studies
Course Title: STATISTICAL METHODS
Teacher(s): **Zorica Uzelac**
Status: OBLIGATORY, I semester
ECTS: 15
Prerequisite: None
The goal of the course: Enabling students to think abstractly and getting basic knowledge in statistics modeling and its applications. The aim of the course is to develop at students a special way of thinking in the study of mass phenomena in the field of environmental protection. The character of the course is aplicative, and special attention is given to the knowledge that can clarify the quantitative approach to problems in the field of study. The aim is to enable students to select appropriate statistical model and its treatment. Students are also trained to use statistical package (Statistica, etc..).
The outcome of the subject: The student is qualified to formulate and solve the statistical models and to apply acquired knowledge in other subjects and practical problems
Syllabus: Theoretical study – Lectures are conducted in combination. Lectures presents the theoretical part of the subject matter and do the typical examples that serve to facilitate understanding of the theory exposed. Areas to be covered: • Basic concepts of probability theory (definition of probability, random variables discrete and continuous type). • Numerical characteristics of the sample and the population (mean, measures of variation, measures of shape). • Interval evaluation parameters (confidence interval for proportion, mean and dispersion). • Testing the hypothesis (hypotheses about the mean of the population and hypotheses on the percentage of the population). • Regression and correlation (matrix form of the regression model, multiple regression and correlation, curvilinear regression). • Dispersion analysis (classification of single and double classification) Using the software package Statistica 8.0.
Literature: Hadzivukov, S., 1989, Statistika, Privredni pregled, Beograd. Hadzivukov, S., 1975, Tehnika metoda uzorka, Naucna knjiga, Beograd. Stojakovic, M., 2007, Verovatnoca, statistika i slucajni procesi, FTN, Novi Sad. Barnett, V., 2004, Environmental Statistics: Methods and Applications, Wiley. Dekking, F.M., Kraaikamp, C., Lopuhaä, H.P., Meester, L.E., 2007, A Modern Introduction to Probability and Statistics: Understanding Why and How (Springer Texts in Statistics), Springer

Number of lectures:				Other Classes
Lectures:2	Practices:8	Other forms of teaching:	Student research work:	

Teaching methods: Lectures, consultations, individual work and group work.

Score for grading (maximal 100 points)

Pre-commitments	Poens	The final exam	Poens
Activity during lectures		Written exam	
Practical classes	20	Oral examination	30
Colloquia			
Seminars	50		
Total	70		30