

Title	Statistical methods in environmental research						
Code	ZDOB02						
Study Program	Postgraduate study in nature and environmental protection						
Semester	I						
ECTS	6						
Status	Obligatory						
Lecturer	Dr.sc. Branimir Hackenberger, assoc. Prof.						
Co-Lecturers	Dr.sc. tarzan legović, full prof.						
Requirements for Enrolment	One course in mathematics for biology, or quantitative methods						
Objectives	To become competent in data analysis from experiments or field work						
Learning Outcomes	<ol style="list-style-type: none"> 1. Describe collected data in statistical terms 2. Construct and interpret adequate data graphs 3. Calculate errors in data and computed variables 4. Apply statistical testing of univariate and multivariate data 5. Apply methods for calculating indices of biodiversity 						
Connection between Learning Outcomes, Curricular and Student Activities	Student Activities	ECTS	Learning Outcomes	Curricular Activities	Methods of Assessment	Credits*	
						min	max
	Active participation	1	1-4	lectures	monitoring	3	5
	Active participation	1	1-4	exercises	monitoring	3	5
	Preparation for exam	4	1-4	exercises	exam	7	12
Total	6					13	22
Consultations							
Learning Activities	Lectures		Seminars		Practice		
Hours	15				10		
Contents / Teaching Units	<ol style="list-style-type: none"> 1. Introduction; 2. Sources of data, variables, measurement scales, computed variables; 3. Errors in measurements and computed variables; 4. Basic statistical measures, graphical analysis, Box-Whiskers plot; 5. Discrete and continuous distributions. 6. Spatial distributions of organisms. 7. Parametric methods 8. Nonparametric methods. 9. Least square methods and applications. 10. Indices of biodiversity. 						
Obligatory Literature	Zar J.H. Biostatistical Analysis, Pearson, 2010 Krebs C.J. Ecological Methodology, Addison_Wesley, 2014 http://www.zoology.ubc.ca/~krebs/books.html						
Recommended literature	Hackenberger B. i Legović T. Alexandrina statistica, BioQuant, Osijek, 2014. Hopkins W.G. A New View to Statistics, 2013 http://www.sportsci.org/resource/stats/						
Requirements for Aquiring Signature	Active participation during lectures and exercises						
Type of Exam	Written and oral						
Lectures Language	English and Croatian						
Quality Monitoring	Questionnaire after lectures and exercises						