Study programme: MAS Geography

Course title: Mathematical methods in geoinformatics

Teacher(s): dr Vladimir R. Kostić

Status: elective

ECTS: 5

Requirements: none

Learning objectives

Introducing master students to mathematical and statistical methods applied in geoinformatics, especially in the spatial and temporal analysis of various natural and human geographic parameters.

Learning outcomes

Students will learn to use various methods and and software packages for statistical and mathematical analysis. Application of the knowledge acquired in a variety of spatial analysis and projections, which is the main purpose of geoinformatics as a scientific and technical discipline.

Syllabus

Theoretical part: Mathematical statistics Random variables Statistical predictions Different models of cluster analysis Geovisualization

Practical part:

Individual work with students during assignments. Using software packages (SPSS and Statistica).

Literature

Хаџић, О., Николић-Деспотовић, Д. 1987. Вероватноћа и математичка статистика. Завод за издавање уџбеника, Нови Сад: 1-279.

Wilks, D.S. 2006. Statistical methods in the atmospheric sciences. International Geophysics Series, volume 91: 630 pp.

Miller, H.J., Han, J. 2009. Geographic Data Mining and Knowledge Discovery. CRC Press: 486 pp.

Weekly teaching load 4 (60)	Lectures 2	Exercises 2	
Methods of Teaching	·		
Oral presentation and PowerPoint presen	tation. Interactive	teaching. Illustrative-demonstrative r	nethods. Field work.
Grading method (maximu 100 points)			
Pre-examination assignments	points	Final examination	points
Activities during lectures	0-5	Written examination	
Activities during exercises	0-5	Oral examination	30-45
Colloquia	20-40		
Seminar paper	0-5		