

Study Programme: Psychology
Course Unit Title: Advanced Statistics
Course Unit Code: 21PIC024
Name of Lecturer(s): Associate Professor Tanja Jevremov, Full Professor Dejan Pajić, Luna Radević
Type and Level of Studies: Bachelor Academic Degree
Course Status (compulsory/elective): Compulsory
Semester (winter/summer): Summer
Language of instruction: Serbian / English
Mode of course unit delivery (face-to-face/distance learning): face-to-face
Number of ECTS Allocated: 5
Prerequisites: Basic knowledge on descriptive and inferential statistics
<p>Course Aims:</p> <p>a) Introducing students:</p> <ul style="list-style-type: none"> - to complex statistical concepts, constructs, and operators which are used in psychology studies - to complex statistical thinking necessary to understanding psychological phenomena and processes <p>b) Train students:</p> <ul style="list-style-type: none"> - to choose methods of statistical analyses - to use statistical programs for data analyses - to understand multiple relations among variables as an assumption for studying multivariate analysis
<p>Learning Outcomes:</p> <p>At the end of this course, students are expected to be prepared:</p> <ul style="list-style-type: none"> - to choose adequate statistical methods for research plots which are frequently used in statistical investigations with larger number of variables and/or multiple measures - to transform data in order to adjust them for the adequate model of statistical analysis - to carry out data analyses in the specified statistical programs - to interpret results of data analyses
<p>Syllabus:</p> <p><i>Theory</i></p> <p>I Simple linear regression analysis; II Special problems in correlations among variables; III Multiple regression analysis; IV Univariate analysis of variance; V Multivariate analysis of variance, VI Analysis of variance with repeated measures; VII Explorative data analysis (visualization); VIII Selection of the methods for data analysis (statistical advisors)</p> <p><i>Practice</i></p> <p>Conducting the statistical analysis using adequate statistical software and interpretation of the results</p>
<p>Required Reading:</p> <p>Petz, B. (2004). Osnovne statističke metode za nematematičare. Jastrebarsko: Naklada Slap. (pp. 299-354)</p> <p>Jevremov T. (2023). Primena tehnika vizualizacije u naprednoj statistici. Novi Sad: Filozofski fakultet. Available at https://digitalna.ff.uns.ac.rs/sadrzaj/2023/978-86-6065-734-5</p> <p>Supplementary literature: StatSoft, Inc. (2018). Electronic Statistics Textbook. Tulsa, OK: StatSoft.</p>

Weekly Contact Hours: 4 hours weekly	Lectures: 8 lectures / themes	Practical work: 2 hours weekly	
Teaching Methods: Lectures and exercises			
Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	points	Final exam	points
Active class participation	10	written exam	30
Practical work	20	oral exam	40
Preliminary exam(s)		
Seminar(s)			
The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.			