

Faculty for Sport and Physical Education / Physical education / Methods for Data Analysis in Kinesiology

Course:	Methods for Data Analysis in Kinesiology			
Course ID	Course status	Semester	ECTS credits	Lessons (Lessons+Exercises+Laboratory)
8224	Mandatory	1	7	5+0+0
Programs	Physical education			
Prerequisites	Prerequisites: There are no prerequisites required for signing up for this course			
Aims	Course objectives: Acquiring knowledge of the independent scientific and research work, of analysing multivariant statistical methods, following the literature and applying one's own knowledge.			
Learning outcomes	Learning Outcomes: Upon the completion of this course, the student will show the ability to: 1. Recognise theoretical propositions, standard methods and tools for data analysis that are applied in research in sport and physical education. 2. Analyse the testing of normality distribution, assessment of the normality distribution, assessment of the reliability interval and population parameters, independent and dependent T-test. 3. Use multivariate statistical methods: Factor analysis, Taxonomic analysis, Regression analysis, Canonical correlation analysis, ANOVA/MANOVA; ANKOVA/MANKOVA, analysis of the main components and cluster analysis. 4. Interpret data analysis and research results. 5. Independently create and solve research problems in sport and physical education. 6. Select statistical methods and approaches, their valid realisation and interpretation.			
Lecturer / Teaching assistant	Names of the teacher(s) and teaching assistant(s): Prof. dr Dobrislav Vujović, Prof. dr Branimir Mikić.			
Methodology	Teaching methods: Lectures, seminars, consultations, assessment.			
Plan and program of work				
Preparing week	Preparation and registration of the semester			
I week lectures	Linear algebra			
I week exercises				
II week lectures	Vector space, Linear combination of vectors			
II week exercises				
III week lectures	Linear independence of vectors			
III week exercises				
IV week lectures	Dimension of space, Subspace			
IV week exercises				
V week lectures	Reflection of vector spaces, Linear reflections, Algebra of reflections			
V week exercises				
VI week lectures	Mid-term exam			
VI week exercises				
VII week lectures	Multivariate statistical methods			
VII week exercises				
VIII week lectures	Factor analysis, Taxonomic analysis			
VIII week exercises				
IX week lectures	Regression analysis, Canonical correlation analysis			
IX week exercises				
X week lectures	ANOVA/MANOVA; ANKOVA/MANKOVA, Canonical discriminant analysis			
X week exercises				
XI week lectures	Canonical analysis of changes, Developmental curve analysis			
XI week exercises				
XII week lectures	Second exam			
XII week exercises				

XIII week lectures	Methods for determining homogeneous sets					
XIII week exercises						
XIV week lectures	Revision of course contents					
XIV week exercises						
XV week lectures	Final exam					
XV week exercises						
Student workload	Weekly: 7 credits x 40/30 = 9 hours Structure of the load: 5 hour of theoretical lectures 4 hours of independent work including consultations During the semester: Lectures and final exam: 9 hours x 16 = 144 hours Necessary preparations before the start of the semester (administration, registration, certification) 2 x (9 hours) = 18 hours Total hours for the course: 7x30 = 210 hours Additional work for the preparation of the remedial final exam, including the taking the remedial final exam from 0 to 48 hours (the remaining time of the first two items to the total load of the course) Structure of the load: 144 hours (teaching) + 18 hours (preparation) + 48 hours (additional work)					
Per week			Per semester			
7 credits x 40/30=9 hours and 20 minuts 5 sat(a) theoretical classes 0 sat(a) practical classes 0 excercises 4 hour(s) i 20 minuts of independent work, including consultations			Classes and final exam: 9 hour(s) i 20 minuts x 16 =149 hour(s) i 20 minuts Necessary preparation before the beginning of the semester (administration, registration, certification): 9 hour(s) i 20 minuts x 2 =18 hour(s) i 40 minuts Total workload for the subject: 7 x 30=210 hour(s) Additional work for exam preparation in the preparing exam period, including taking the remedial exam from 0 to 30 hours (remaining time from the first two items to the total load for the item) 42 hour(s) i 0 minuts Workload structure: 149 hour(s) i 20 minuts (courses), 18 hour(s) i 40 minuts (preparation), 42 hour(s) i 0 minuts (additional work)			
Student obligations			Requirements for students: Students are obliged to attend the lectures and exercises, research assigned topics, and take two exams.			
Consultations			Consultations: Fridays from 13.00 (classroom)			
Literature			Literature: Literatura: Malacko, j., Popović, D. (1997). Metodologija kineziološko antropoloških istraživanja. Fakultet za fiz. Kult., Univerziteta u Prištini. Manly, B.F.J. (1994). Multivariate Statistical Methods. A primer. II ed. London: Champan&Hall.			
Examination methods			Forms of assessment: Attendance, exams, seminar papers, homework, tests, final exam. Marks: E (51-60); D (61-70), C (71-80); B (81-90); A (91-100)			
Special remarks			No			
Comment			Further comments: The realisation plan for the teaching programme will be handed out to students at the beginning of the semester.			
Grade:	F	E	D	C	B	A
Number of points	less than 50 points	greater than or equal to 50 points and less than 60 points	greater than or equal to 60 points and less than 70 points	greater than or equal to 70 points and less than 80 points	greater than or equal to 80 points and less than 90 points	greater than or equal to 90 points