

Course Code SPSC- 601	Course Title Advanced statistics with applications in SPSS	ECTS 10
Department Sport Science	Semester Spring or Fall	Prerequisites non
Type of Course Required	Field	Language of Instruction Greek/English
Level of Course PHD	Year of Study 1st or 2nd	Lecturer Pouloukas Stavros
Mode of Delivery face-to-face	Work Placement N/A	Co-requisites None

Objectives of the Course:

This subject aims to provide students with the statistical knowledge and skills to support their concurrent and future studies and to teach students advance procedures available in the statistical package SPSS for windows. Students will develop the capacity to carry out and report independent statistical investigations, together with an awareness of the assumptions and limitations involved with the generalization of results of such investigations. In particular this subject guides students through the key statistical techniques used to evaluate performance, predictions and statistical analyses relating to health, sport and sport pedagogy. Real-life examples will be used to illustrate relevant statistical concepts and methods.

Learning Outcomes:

After successfully completion of this course, students would be able to:

- Understand basic concepts of using appropriate statistics in sport science and sport pedagogy.
- Know how to use appropriate SPSS analysis for their interest
- Apply and compare different techniques of statistics in the context of sports performance.
- Understand and interpret the use of statistical analysis in the context of sport science and sport pedagogy
- Be able to deal with missing and censored data in a sporting context and know how to analyze such data.
- Construct and use relevant analysis for future research purposes.

Course contents

- Always using SPSS package
1. Data and variables
 2. Anova
 3. Ancova (repeated measures)
 4. Manova
 5. Factor analysis
 6. Qui-squared tests
 7. Cluster analysis
 8. Validity/reliability
 9. Regression
 10. Correlation
 11. Non parametric
 12. Meta-analysis

Learning Activities and Teaching Methods:

Lectures, Lab Presentations, Lab Tutorials, Practical Exercises and Assignments.

Assessment Methods:

Homework, Projects, Final Exam.

Required Textbooks/Reading:				
Authors	Title	Publisher	Year	ISBN
	Papers, Chapters from books Depending on Subject			