

LAB COURSE OUTLINE

1. GENERAL

SCHOOL	SOCIAL SCIENCES		
DEPARTMENT	PSYCHOLOGY		
LEVEL	<i>Undergraduate</i>		
COURSE CODE	PSY-4208	SEMESTER	6o
COURSE TITLE	Computer Software in Data Analysis		
COURSE INSTRUCTOR	Eirini Marina Mitropoulou Adjunct Professor Psychometrics		
TEACHING ACTIVITIES		WEEKLY HOURS	ECTS
Lab Lectures		3	6
COURSE TYPE	Skills development (Laboratory)		
PREREQUISITE COURSES	Statistics I (PSY - 1202) Statistics II (PSY - 2201)		
INSTRUCTION / EXAM LANGUAGE:	Greek		
OFFERED TO ERASMUS STUDENTS	No		
COURSE WEB PAGE (URL)	https://elearn.uoc.gr/course/view.php?id=1660		

2. LEARNING OUTCOMES

Learning Outcomes
<i>This lab course is designed to familiarize students with data analysis, using specific statistical software. Students will gain a firm grasp on the technical skills required to effectively implement data analysis and gain a better understanding at how statistics are used for the assessment of psychological and other social sciences characteristics/traits. Student will become familiar with the strengths, limitations, the uses and abuses of certain different statistical techniques. They will also learn how to interpret statistical analyses and how to visualize statistical outputs. Some of the topics that will be instructed throughout this course lab are the followings: data entry, descriptive statistics, creation of various plots and charts, as well as inductive statistics.</i> At the end of the course, the students should be able to: • Know how to use statistical software for analyzing data. • Manage, control and modify databases. • Summarize and identify statistical patterns in research data. • Learn how to apply a series of statistical techniques that are used in the

context of psychological research as well as interpret the results obtained from specific analyses. • Visualize data and learn how to write reports for summarizing the statistical analyses they performed.
General Competencies
• Data analysis and synthesis of data and information, with the use of appropriate statistical software and techniques. • Generation of research ideas • Decision making • Working independently • Promotion of inductive thinking • Project design and management

COURSE CONTENT

• Lecture 1: Introduction to the statistical software • Lecture 2: Data entry and management • Lecture 3: Implementation of basic statistical analyses – Creation of plots and charts • Lecture 4: Correlation coefficient and chi-squared χ^2 test • Lecture 5: Information to students regarding the autonomous research project. • Lecture 6: 1° Test of Evaluation • Lecture 7: Simple and multiple Regression Analysis • Lecture 8: Criterion t • Lecture 9: ANOVA • Lecture 10: 2° Test of Evaluation • Lecture 11: Exploratory Factor Analysis • Lecture 12: Confirmatory Factor Analysis • Lecture 13: Data report instruction
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3. INSTRUCTIONAL AND LEARNING METHODS - EVALUATION

INSTRUCTION METHOD	In department's Laboratory facilities		
INFORMATION AND COMMUNICATION TECHNOLOGIES USED	Use of ICT in teaching. Support of learning through the E-learn online platform		
TEACHING ORGANIZATION	<i>Activity</i>	<i>Semester Work-load</i>	<i>ECTS Credits</i>
	Lectures	40	1,60
	Evaluation Examination I	15	0,80
	Evaluation	15	0,80

	Examination II		
	Research activity	60	2,00
	Independent project	20	0,80
	Course Totals	150	6,0
STUDENT EVALUATION	Students' evaluations are in Greek. The final grade is comprised by: I. Independent Examinations (40%) ➤ 1° Test of evaluation: (20%) ➤ 2° Test of evaluation: (20%) II. Independent Project (60%) Evaluation criteria are presented during the 1st Lecture of the Semester. Moreover, all criteria are available to the students via the UoC e-learn platform.		

4. BIBLIOGRAPHY

Suggested bibliography:

- Navarro, D. J., & Foxcroft, D. R. (2019). *Learning statistics with jamovi: a tutorial for psychology students and other beginners*. (Version 0.70). [Available from url: <http://learnstatswithjamovi.com>]
- Roussos, P., & Tsaousis, I. (2011). *Statistics in Social Sciences using the Statistical Software SPSS*. Athens: Topos [in Greek].

Additional reading:

- Rafi, J. (2019). *The Jamoviquickstart guide*. [Available from url: <https://www.jamoviguide.com/index.html>]
- Datalab.cc. *Jamovi: A video Introduction* [Available from url: <https://datalab.cc/tools/jamovi>]