COURSE OUTLINE

1. GENERAL

SCHOOL	SOCIAL SCIENCES
DEPARTMENT	PSYCHOLOGY
LEVEL	*Undergraduate*

COURSE CODE	**PSY-2201**	**SEMESTER**	3rd

COURSE TITLE	Statistics II

TEACHING ACTIVITIES	**WEEKLY HOURS**	**ECTS**
Lectures	**3**	**5**

COURSE TYPE	Special Background (Compulsory)
PREREQUISITES COURSES:	Statistics I (PSY1202) Research Methods I (PSY1201)
INSTRUCTION/EXAM LANGUAGE:	Greek
OFFERED TO ERASMUS STUDENTS	YES (independent study of English literature, 1 assignment, and term paper)
COURSE WEB PAGE (URL)	

2. LEARNING OUTCOMES

Learning Outcomes
This course is designed to enhance the student's basic knowledge and understanding of the statistical method as it pertains to hypothesis testing. During the course, students become familiar with many of the concepts needed to understand, conduct, and interpret common statistical procedures and techniques. The emphasis of this course is on the acquisition of conceptual, rather than procedural, knowledge that can be demonstrated by selecting, applying and interpreting appropriate statistical procedures.   At the end of the course, the students should be able to: • expose the student to advanced statistical techniques,   • develop the skills necessary to identify an appropriate technique, estimate models, and interpret results for independent research make the student proficient in the use of the commonest statistical techniques used in social sciences,   • give the student exposure to different analytic strategies and philosophies and to critically evaluate contemporary social research using advanced quantitative method.   • give the student the expertise to "think" about appropriate statistical techniques for the problems they will face in-and-out of the academic settings, and become familiar with the basic SPSS commands, and know how to interpret its outputs
General Competences
• Search for, analysis and synthesis of data and information, with the use of the necessary

technology

- Decision-making
- Working independently
- Production of free, creative and inductive thinking

3. COURSE CONTENT

- Lecture 1: Revision: Hypothesis Testing
- Lecture 2: Mean Differences – t-test (one- and two-samples)
- Lecture 3: Introduction to Analysis of Variance
- Lecture 4: One-way Analysis of Variance (One-way ANOVA)
- Lecture 5: Midterm Exam I
- Lecture 6: Factorial ANOVA (Part I)
- Lecture 7: Factorial ANOVA (Part II)
- Lecture 8: Regression (Simple and Multiple)
- Lecture 9: Exploratory Factor Analysis (EFA)
- Lecture 10: Midterm Exam II
- Lecture 11: Confirmatory Factor Analysis (CFA)
- Lecture 12: Introduction to Path Analysis and SEM
- Lecture 13: Non-parametric tests

4. INSTRUCTIONAL AND LEARNING METHODS - EVALUATION

INSTRUCTION METHOD	In class		
INFORMATION AND COMMUNICATION TECHNOLOGIES USED	Use of ICT in teaching Support for learning through the E-learn online platform		
TEACHING ORGANIZATION	*Activity*	*Semester Work load*	*ECTS credits*
	Lectures	39	1,56
	Laboratory Practice I	39	1,56
	Laboratory Practice II	20	0,80
	Independent Study	52	2.08
	Final Exams	3	0,12
	Course Total	***130***	***6,12***

STUDENT EVALUATION	Evaluation is in Greek and in English for Erasmus students.
	
	   I. 2 Midterm Exams (30% - 10%, 20%)
	
	   II. Final Exams (70%)
	
	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.		

5. BIBLIOGRAPHY

Basic bibliography:

- Roussos, P. & Tsaousis, I. (2011). *Statistics for Behavioral Sciences with the use of SPSS*. Athens: Topos [In Greek].

- Katsis, A., Sideridis, G., & Emvalotis, A. (2011). *Statistical Methods in Social Sciences*. Athens: Topos [In Greek].

Additional Reading:

- Cohen, J. (1994). The earth is round (p<.05). *American Psychologist, 49*(12), 997-1003.

- Dwyer, C. A. (1996). "Cut scores and testing: Statistics, judgment, truth, and error." *Psychological Assessment, 8*(4), 360-362.

- Roussos, P. (2011). Hypothesis testing: procedure, misunderstandings and some suggestions for best practices, *Psychology*, *18*, 224-239 [In Greek].

- Russell, D. W. (2002). In Search of Underlying Dimensions: The Use (and Abuse) of Factor Analysis in Personality and Social Psychology Bulletin. *Personality & Social Psychology Bulletin, 28*, 1629-1646.

- Schmidt, F. L. and J. E. Hunter (1996). Measurement error in psychological research: Lessons from 26 research senarios. *Psychological Methods, 1*(2), 199-223.