COURSE OUTLINE

1. GENERAL

FACULTY	SOCIAL SCIENCES
DEPARTMENT	PSYCHOLOGY
LEVEL OF STUDY	UNDERGRADUATE

COURSE CODE	**Ψ4212**	**SEMESTER OF STUDY**	F (6th)
COURSE TITLE	STATISTICAL DATA ANALYSIS IN PSYCHOLOGICAL RESEARCH		

INDEPENDENT TEACHING ACTIVITIES *in case the credits are awarded to distinct parts of the course e.g. lectures, laboratory exercises, etc. If the credits are awarded uniformly for the entire course, indicate the weekly teaching hours and the total credits*	**WEEKLY TEACHING HOURS**	**CREDITS**
	3	6
Add rows if needed. The teaching organization and teaching methods used are described in detail in 4.		

COURSE TYPE *Background, General Knowledge, Scientific Area, Skills Development*	Workshop / Skills Development
PREREQUISITE COURSES:	Research Methodology in Social Sciences Statistics I Statistics II
LANGUAGE OF INSTRUCTION AND EXAMINATIONS:	GREEK
THE COURSE IS OFFERED TO ERASMUS STUDENTS	NO
COURSE WEBSITE (URL)	https://elearn.uoc.gr/course/view.php?id=4897

2. LEARNING OUTCOMES

Learning Outcomes

The learning outcomes of the course are described, the specific knowledge, skills and competences of an appropriate level that students will acquire after the successful completion of the course.

Consult Appendix A
- *Description of the Level of Learning Outcomes for each cycle of study according to the Qualifications Framework of the European Higher Education Area*
- *Descriptors of Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning*

and Appendix B
- *Learning Outcomes Writing Summary Guide*

While students are familiar with basic concepts of methodology and statistical analysis, they often do not have the opportunity to apply this knowledge extensively to real examples of psychological research.

On the one hand this workshop will help students consolidate the knowledge gained in compulsory courses of methods and statistics. On the other hand, it will help students to expand their knowledge to more advanced statistical analyses and train in practical applications of this knowledge to set up a research project.

At the end of the workshop, students are expected to:
- Feel confident applying the statistical knowledge they gained in compulsory courses.
- Understand some more advanced statistical analyses, in addition to what was taught in compulsory courses.
- Be able to design a thorough analysis plan depending on the type of data collected and the questions they expect to answer.
- Understand the basic principles of proper data management and analysis, avoiding practices that may lead to incorrect or biased results.

- Feel confident using quantitative analysis programs like Jamovi.

General Competencies

Taking into account the general competencies that the graduate must have acquired (as listed in the Diploma Supplement and listed below), which of them does the course aim at?.

Search, analyze and synthesize data and information, using the necessary technologies	*Project planning and management*
Adapting to new situations	*Respect for diversity and multiculturalism*
Decision-making	*Respect for the natural environment*
Autonomous work	*Demonstrate social, professional and ethical responsibility and sensitivity to gender issues*
Teamwork	*Criticism and self-criticism*
Working in an international environment	*Promoting free, creative and inductive thinking*
Working in an interdisciplinary environment	
Generation of new research ideas	

- Search, analyze and synthesize data and information, using both necessary technologies
- Decision-making
- Autonomous work
- Generation of new research ideas

3. COURSE CONTENT

The workshop covers the following themes, which will be further analyzed during the semester:

- **Formulate questions to answer through quantitative data analysis:**
  - Formulating a research question
  - Understanding methods to test hypotheses
  - Correct parameterization of the psychological phenomena to be measured and selection of appropriate measurement tools.
- **Data collection sources:**
  - Deciding what my sample will be, how much and where to find it.
  - Statistical power and sample calculation
- **Prepare the data for analysis:**
  - Create a database
  - Create new variables from raw data.
- **Quantitative analysis in practice:**
  - Correct selection of the appropriate statistical analysis based on data and questions at hand.
  - Understand the occassions in which many popular statistical tests are used (t-tests, and families of ANOVA, MANOVA, and Regressions)
- **Upgrading statistical knowledge**
  - Mixed Design ANOVA
  - Logistic Regression
  - Hierarchical Regressions
  - Moderation Analysis
- **Critical thinking and ethics in quantitative analysis**
  - Bias and dishonesty in the analysis and presentation of results.
  - Misrepresentation of quantitative data in public discourse.
  - Pre-registration of analysis plans and open access data.
- **Dissemination of results**

- o   Modern dissemination methods (podcasts, infogrpahics, etc.)
- o   The importance of dissemination outside academia (public engagement)
- o   Oral presentation skill for presenting research results.

*The workshop will be conducted using the Jamovi software.

4.   TEACHING AND LEARNING METHODS - ASSESSMENT

DELIVERY *METHOD Face to face, Distance learning, etc.*	Face to face
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES *Use of ICT in Teaching, Laboratory Training, Communication with students*	• **Power Point Presentations** • **Quantitative data analysis programs on your computer**

TEACHING ORGANIZATION

The method and methods of teaching are described in detail.
Lectures, Seminars, Laboratory Exercise, Field Exercise, Bibliography Study & Analysis, Tutorial, Internship (Placement), Clinical Practicing, Art Workshop, Interactive Teaching, Educational visits, Project Writing, Writing a project / assignments, Artistic creation, etc.

The student's study hours for each learning activity are listed as well as the hours of unguided study so that the total workload at semester level corresponds to ECTS standards

Activity	Semester Workload (hours)	ECTS
Weekly meetings	39 hours (1.6 ECTS)	1.6
Independent study	56 hours (2.2 ECTS)	2.2
In-lab exercises	6 hours (0.2 ECTS)	0.2
Preparation and completion of final coursework	49 hours (1.96 ECTS)	1.96
Total Course (25 hours of workload per credit)		**150 (6 ECTS)**

STUDENT EVALUATION

Description of the evaluation process

Assessment Language, Assessment Methods, Formative or Summative, Multiple Choice Test, Short Answer Questions, Essay Development Questions, Problem Solving, Written Assignment, Essay/Report, Oral Examination, Public Presentation, Laboratory Work, Clinical Examination of a Patient, Artistic Interpretation, Other/Others

Explicitly defined evaluation criteria and whether and where they are accessible to students are mentioned.

The evaluation is conducted in Greek.

- In-lab exercises (25%)
- Final individual written assignment (75%)

5.   RECOMMENDED-BIBLIOGRAPHY

-Suggested Bibliography :
1. Dancey C. and Reidy J. (2020). Statistics without mathematics. Publications Review.
2. Sarris V. and Reiss S. (2009). Research methodology and experimental psychology. Modern publishing.
As well as a collection of articles of international bibliography.