COURSE OUTLINE

1. GENERAL

SCHOOL	SOCIAL SCIENCES		
DEPARTMENT	PSYCHOLOGY		
LEVEL OF STUDY	UNDERGRADUATE		
COURSE CODE	PSY-3105	**SEMESTER OF STUDIES**	5th
COURSE TITLE	**STATISTICAL ANALYSIS OF DATA IN PSYCHOLOGICAL RESEARCH**		

INDEPENDENT TEACHING ACTIVITIES *in case the credits are awarded in 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**
Lectures, Laboratory Exercises, Training in Techniques	3	6
Add rows if needed. The teaching organization and the teaching methods used are described in detail in 4.		

COURSE TYPE *background, general knowledge, scientific area, skills development*	Skills Development (Workshop)
PREREQUISITE COURSES:	Research Methodology in the Social Sciences I Statistics I
LANGUAGE OF INSTRUCTION AND EXAMINATIONS:	GREEK
THE COURSE IS OFFERED TO ERASMUS STUDENTS	NO
ONLINE COURSE PAGE (URL)	Online course is not available in English

2. LEARNING OUTCOMES

Learning Outcomes

The learning outcomes of the course are described, the specific knowledge, skills and abilities of an appropriate level that the 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 European Higher Education Area Qualifications Framework*
- *Descriptive Indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning*

and Annex B

- *Summary Guide to Writing Learning Outcomes*

The course starts with basic theoretical knowledge from the fields of Research Methodology and Statistical Data Analysis which students acquired in the context of the background courses of Research Methodology in Social Sciences I and Statistics I and II.

While students are familiar with the above approaches, they often do not have the opportunity to apply this knowledge extensively to real-life examples of psychological research. Thus, this workshop aims to help students remember and solidify the knowledge already acquired. It also aims to explore more advanced analyses of statistical data as well as the cultivation of skills for the practical application of this knowledge in the completion of a research project.

During the meetings, students are expected to:
- To be able to read the procedures and research questions of a research project and extract the variables included in the design, the level of measurement of the variables and the research design.
- Be able to identify the research scenarios in which each statistical analysis/criterion can be used. By extension, to be able to choose the right statistical test for each case.
- Be able to perform advanced statistical analyses with the Jamovi program and interpret the results tables.

- Effectively write up the "Methodology" and "Results" sections of a research paper.

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 is the course aimed 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	*Demonstration of social, professional and ethical responsibility and sensitivity to gender issues*
Teamwork	*Exercise of criticism and self-criticism*
Working in an international environment	*Promoting free, creative and inductive thinking*
Working in an interdisciplinary environment	
Deriving new research ideas	

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

3. COURSE CONTENT

The content of the course is linked to the 5 main axes of the curriculum: Scientific Foundations [1], Scientific Research and Critical Thinking [2], Ethical and Social Responsibility [3], Communication Ability [4], Basic Preparation for Career and Professional Decisions [5]. Next to each week is the number of the axis to which it is connected

Week 1: Introduction to the Lab and Revision of Key Concepts – Part A [1, 2]
- How the course is structured and assesed
- Revision of basic concepts (Research Question, Hypothesis Checking and the p-values).

Week 2: Revision of Key Concepts – Part B [1, 2]
- Quantitative Variables
- Sampling Methods
- Consolidation Exercises

Week 3: Practical Skills - Data Handling [2, 5]
- Setting up a database.
- Calculating and transforming new variables.
- Consolidation Exercises

Week 4: Preparation of Final Assessment [2, 4]
- Detailed presentation of the final coursework (75% of the final grade).
- Consolidation Exercises

Week 5: Research Decision Making: Statistical Test Selection [2, 5]
- Detailed presentation of the most used statistical tests (t-tests, ANOVAs, Linear Regressions and Logistic Regressions) and when it's appropriate to use them.
- Selecting the appropriate statistical test for each research question.
- Consolidation Exercises

Week 6: Statistical Analyses in Jamovi – Part A [2]
- Descriptive statistics tables
- One-way and Two-way Between Subjects ANOVA

Week 7: Statistical Analyses in Jamovi – Part B [2]
- Mixed Design Anova

Week 8: Statistical Analyses in Jamovi – Part C [2]
- Multiple Linear Regression

Week 9: Statistical Analyses in Jamovi – Part D [2]
- Logistic Regression

Week 10: Mediation Analysis[2]
- Simple Mediation analysis

Week 11: Statistics Exercises - Revision and Preparation [2]

- Practical in-class exercises to consolidate knowledge and prepare for the marked activity next week.

Week 12: Statistics Exercises - Marked Activity [2]

- In-class marked exercises (25% of the final grade)

Week 13: Closing the Workshop [1, 5]

- QandA session on topics related to the assessment or the course content.
- Reflective discussion on the students' experience in the laboratory, the skills they acquired and their possible fields of application.

4. TEACHING and LEARNING METHODS - ASSESSMENT

DELIVERY *METHOD Face-to-face, Distance learning, etc.*	In person
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES *Use of ICT in Teaching, Laboratory Training, Communication with Students*	- **Power Point presentations** - **Computer Quantitative Data Analysis Programs (Jamovi)** - **Support of learning processes through the electronic e-learning platform.**
TEACHING ORGANIZATION *The way and methods of teaching are described in detail.* *Lectures, Seminars, Laboratory Exercise, Field Exercise, Literature Study & Analysis, Tutoring, Practical (Placement), Clinical Practice, Art Workshop, Interactive Teaching, Educational Visits, Project Preparation, Writing a Paper / Assignments, Artistic Creation, etc.* *The student's study hours for each learning activity as well as the hours of unguided study are listed so that the total workload at semester level corresponds to the ECTS standards*	
STUDENT EVALUATION *Description of the evaluation process* *Assessment Language, Assessment Methods, Formative or Inferential, Multiple Choice Test, Short Answer Questions, Essay Development Questions, Problem Solving, Written Assignment, Essay / Report, Oral Examination, Public Presentation, Laboratory Paper, Clinical Patient Examination, Artistic Interpretation, Other/Others* *Explicitly identified evaluation criteria and whether and where they are accessible to students are mentioned.*	- In-class statistics exercises (25%) - Final individual written assignment (75%) Details regarding the course assessment can be found in the document "Assessment Brief" on the course's e-learn web-page.

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

5. RECOMMENDED-LITERATURE

-Suggested Bibliography:

1. Dancey C. and Reidy J. (2020). *Statistics without mathematics*. Kritiki Publications.

2. Sarris V. and Reiss S. (2009). ***Research methodology and experimental psychology. Contemporary Publishing.***
As well as a collection of articles from the international bibliography.