

## COURSE UNIT INFORMATION SHEET (SYLLABUS)

2021/2022

### Study Programme: Licenciatura in Psychology

<p><b>Name</b></p> <p>Statistics Applied to Psychology</p>
<p><b>Teaching staff</b> (Also indicate the Professor in charge)</p> <p>Ana Luísa Raposo (Professor in charge), Sérgio Moreira</p>
<p><b>ECTS</b></p> <p>6</p>
<p><b>Functioning</b></p> <p>2 hours per week of theoretical classes, 2 hours per week of practical classes, total of 14 weeks.</p>
<p><b>Learning goals</b></p> <p>To acquire knowledge on, carry out and interpret statistical data analyses commonly used in Psychology.</p>
<p><b>Skills to be developed</b></p> <ol style="list-style-type: none"> <li>1. To apply the most common methods of statistical analyses for parametric and non-parametric data for independent and related measures.</li> <li>2. To interpret the results of data analyses.</li> <li>3. To use the statistical software SPSS.</li> </ol>
<p><b>Prerequisites</b> (precedences) *</p> <p>Non-applicable</p>
<p><b>Contents</b></p> <ol style="list-style-type: none"> <li>1. Model comparison approach; null and proposed models.</li> <li>2. Statistical models for hypothesis testing of parametric data with independent measures:             <ol style="list-style-type: none"> <li>2.2. With continuous dependent variable and continuous predictor (simple linear regression)</li> <li>2.3. With continuous dependent variable and dichotomous predictor (linear regression with dummy and independent sample t-test)</li> <li>2.4. With continuous dependent variable and predictor with more than two categories (linear regression with</li> </ol> </li> </ol>

dummies and one-way anova)  
2.5. With continuous dependent variable and various continuous predictors (multiple linear regression)

3. Statistical models for hypothesis testing of non-parametric data with independent measures:  
3.1. With ordinal dependent variable and dichotomous predictor (Mann-Whitney test)  
3.2. With ordinal dependent variable and predictor with more than two categories (Kruskal-Wallis test)  
3.3. With dichotomous dependent and independent variables (Qui-square)

4. Assumptions of parametric data:  
4.1. Detection of outliers  
4.2. Normality of the error distribution  
4.3. Homogeneity of variance  
4.4. No multicollinearity

### **Bibliography**

Field, A. (2009). *Discovering statistics using SPSS* (3th edition). Sage Publications.  
Field, A. (2016). *An adventure in statistics: the reality enigma* (1st edition). Sage Publications.  
Judd, C. M., McClelland, G. H., & Ryan, C. S. (2008). *Data Analysis: A Model Comparison Approach*.  
Routledge.

### **Teaching methods**

Theoretical classes (2h per week): introduction of main concepts and statistical models, examples of data and analyses.

Practical classes (2h per week): exercises using SPSS.

### **Evaluation Regimes** (General and/or Alternative)

Approval is contingent upon doing evaluation components 1 and 2. Component 3 is optional. Final grade corresponds to the sum of the partial grades.

Component 1. Group presentation. It consists in presenting a research problem, analysing and interpreting the data. The presentation must be done in class and all members of the group must be present. Specific guidelines and evaluation criteria will be given in class.

Component 2. Exam. Individual and presential.

Component 3. Participation in one research study (optional).

### **Evaluation Elements**

(Dates due, weights, minimum required grades)

Each evaluation component has the following weight:

Component 1. Group presentation: Total of 6 in 20. Scheduling of the group presentation will be done in class.

Component 2. Exam: Total of 14 in 20 if component 3 is not carried out or a total of 13 in 20 if component 3 is carried out. Date of the exam will be defined according to the academic schedule. Approval on the course unit requires a minimum grade of 9,5 in 20 in the exam.

Component 3. Participation in one research study: 1 in 20, optional. Signing up for experiments will be

announced along the semester.

Final grade corresponds to the sum of the partial grades.

**Rules for grade improvement**

Grade improvement can be done only after a final grade is officially published. Only component 2 is subject to grade improvement from the 1<sup>st</sup> to the 2<sup>nd</sup> phase of the exams.

**Rules for students having previously failed the course unit \***

Students who did the group presentation in the academic year of 2020/2021 may keep that grade if they wish so. Students who did the group presentation in academic years previous to 2020/2021 must do a new group presentation.

Class attendance is recommended to all students.

**Requirements on attendance and punctuality**

Class attendance is recommended to all students.

**Rules for special students**

(workers, elite athletes, student body leaders, military, fathers/mothers, with special needs) \*

Non-applicable

**Language of instruction**

Portuguese

**Disciplinary violations and penalties**

See Regulamento Geral de Avaliação de Conhecimentos e Competências dos Alunos ([RGACCA](#)) (Chapter IV)

\* If applicable