



**COURSE UNIT INFORMATION SHEET (SYLLABUS)
2022/2023**

Study Program: Postgraduate Diploma in Data Analysis in Psychology

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| Name Data analysis with the support of statistical software |
| Teaching staff (Also indicate the Professor in charge) Ana Isabel Gomes |
| ECTS 3 ECTS |
| Functioning 9 hours/semester of theoretical-practical classes for 15 weeks |
| Learning goals Provide students with basic knowledge regarding the operation and use of the IBM SPSS Statistical (SPSS) statistical software, regarding the definition and preparation of databases, and performing descriptive analysis of data, organizing and describing a set of data through tables, graphs and descriptive measures. Familiarize students with the use of the free and open-source Jamovi platform, as a way to promote the development of basic skills in data analysis and learning the R language in a user-friendly way. |
| Skills to be developed <ol style="list-style-type: none">1. Understand the nature of random variables and measurement scales and know how to classify them;2. Know and manage the data editor, as well as the menus available in the software and their functions;3. Build a database considering the characteristics of the dimensions studied, as well as introduce, transform, convert, export/import data in different formats in the software;4. Interpret the outputs produced by the software, in terms of procedure description performed and in terms of the results obtained in the statistical analyses;5. Build and interpret frequency tables;6. Represent datasets through graphics and interpret them;7. Determine and interpret the main measures of location, dispersion, asymmetry, and kurtosis; |



8. Apply previous knowledge and statistical procedures on the Jamovi platform.

Prerequisites (precedences) *

Not applicable.

Contents

1. Brief introduction to data analysis and statistics using statistical software;
2. Classification of random variables and measurement scales;
3. Design and creation of a database using statistical software;
4. Insertion, transformation, import, and export of data in statistical software;
5. Descriptive Statistics: tabular, and graphical organization and descriptive measures;
6. Jamovi Platform: familiarization with the software regarding data/variables visualization and descriptive analysis of the data procedures

Bibliography

Field, A. (2013). *Discovering statistics using IBM SPSS statistics* (4^a ed.). Sage Publications.

Marôco, J. (2014). *Análise estatística com o SPSS statistics* (6^a ed). Report Number, ISBN: 9789899676343.

Pinto, R. (2012). *Introdução à análise de dados com recurso ao SPSS*. Lisboa: Edições Sílabo. (2^a edição). ISBN: 978-972-618-692-2.

Teaching methods

Theoretical-practical classes with individual and group tasks to familiarize students with statistical software, construction of databases, and data representation.

Evaluation Regimes (General and/or Alternative)

Successfully completing the Postgraduate Diploma course is conditional on the realization of three mandatory evaluations elements:

1. **Global approval on Learning control sheets in each curricular unit.** These sheets are multiple choice sheets in an applied context with questions and random answers alternatives and is performed in the *e-learning ULisboa (Moodle)* at the end of each c. u. (minimum grade of 9.5 values).
2. **At the end of the first semester**, an individual work that consists of a critical analysis of a scientific article, namely its methodological section and how the research hypothesis/objectives/questions are well articulated with the proposed data analysis strategy, the results obtained, and the discussion presented (minimum grade of 9.5 values).
3. **At the end of the second semester**, an individual work aimed at the application skills acquired in the various curricular units, applying advanced data analysis techniques, and including the analysis, interpretation and reporting of a set of data collected by application of a questionnaire.



Evaluation Elements (Dates due, weights, minimum required grades)

Approval in the **Postgraduate Program in Data Analysis in Psychology** requires obtaining a final weighted average (among the three assessment components) **greater than or equal to 9.5 values** among the following results:

1. **Average of the grades of all the Learning Control Sheets related to each curricular unit, with a weighting of 50% in the final grade;**
2. **Grade in the Critical analysis of a scientific article, with a weighting of 25% in the final grade;**
3. **Grade in an individual work with a weighting of 25% in the final grade.**

Rules for grade improvement

The grade improvement may only occur in the assessment elements performed individually.

Rules for students having previously failed the course unit *

Non-applicable

Requirements on attendance and punctuality

Classes operate in a hybrid regime and punctuality and student participation in at least 2/3 of the total number of classes are assumed.

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

General rules of the FPUL.

Language of instruction

Portuguese but English reading domain is necessary.

Disciplinary violations and penalties

Consult the "Regulamento Geral de Avaliação de Conhecimentos e Competências dos Alunos ([RGACCA](#)) (Capítulo IV)".

* If applicable