Lifelong Learning Centre

SYLLABUS OF THE CURRICULAR UNIT

ACADEMIC YEAR 2024 / 2025 **[ENG]**

Pendente de Aprovação

1. Curricular Unit

Name	.										
Curricular Year	1	**Period**	Annual					**ECTS**	0.5		
Regime	**T:** 0	**TP:** 12.5	**PL:** 0	**P:** 0	**TC:** 0	**S/E:** 0	**OT:** 0	**L:** 0	**O:** 0		
Course	.					**Study Cycle**					

2. Name of teacher responsible

	Degree
José Daniel Ferreira Nunes Barbosa de Castro	

3. Other academic staff in the curricular unit

	Degree

4. Learning outcomes of the curricular unit (knowledge, skills and competences to be acquired by students)

This training focuses on the development and management of question banks using the R/exams package for the R programming language. It will cover how to develop different types of questions with R/exams (e.g., multiple choice, true/false, cloze), as well as the creation of randomized questions. The training will also address a set of R-based tools designed to streamline the assessment process in the Moodle platform.

Learning Objectives:

1. Develop and customize different types of questions using the R/exams package.
2. Generate question banks with automatic variations of statements and answers.
3. Integrate the produced content into Moodle.
4. Explore complementary R tools to facilitate the assessment process.

5. Syllabus

1. Introduction to the R/exams package.
2. Key components of the script for question development.
3. Development of practical examples.
4. Presentation of complementary tools.

6. Demonstration of the syllabus coherence with the curricular units objectives

The objectives of this training focus on enabling participants to develop question banks using the R software and the R/exams package. Accordingly, the program content is centered on presenting and explaining the functioning of the software and the R/exams package, in order to foster understanding of their utility and operation. In addition, participants will have the opportunity to work through several practical examples of building question banks and to test the complete process of importing and exporting the questions created with the software. This will allow participants to understand and apply all the necessary steps for creating question banks with this tool, thereby equipping them for its effective use.

7. Teaching and assessment methodologies

The training will be delivered in a blended learning format, allowing participants to complete a set of tasks independently with the support of the instructor, complemented by face-to-face and online sessions with a theoretical–practical focus.

7.a) Assessment criteria

General Regime Students

Continuous Assessment

Assessment Moment	Description	Weight
M1	IndividualAssessment	100.00 %

Mobility Students

Continuous Assessment

Assessment Moment	Description	Weight
M1	IndividualAssessment	100.00 %

9. Bibliography

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Zeileis A, Umlauf N, Leisch F (2014). “Flexible Generation of E-Learning Exams in R: Moodle Quizzes, OLAT Assessments, and Beyond.” Journal of Statistical Software, 58(1), 1-36. doi:10.18637/jss.v058.i01

Zeileis, A. (2017, September 9). Installing R/exams. https://www.r-exams.org/tutorials/installation/

Zeileis, A. (2017, September 10). R/exams first steps. https://www.r-exams.org/tutorials/first_steps/

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