UNIVERSIDADE LUSÍADA
LISBOA

Course Unit Program
Psychometrics

Academic Year 2023/2024

1. Organic Unit

Institute of Psychology and Educational Sciences

2. Course

PSYCHOLOGY

3. Cycle

1st

4. Course Unit

Psychometrics (20316)

5. Scientific Area

6. Curricular Year

2nd

7. Type of Curricular Unit / Semester

2nd Semester

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8. Class type and workload (work time)

Theoretical classes:	
Practical classes:	
Theoretical-Practical Classes	30,00
Tutorial Guidance:	20,00

9. ECTS Credits

6,00

10. Scientific Area Coordinator

11. Regent

Prof. Doutor MIGUEL DA COSTA NUNES DE FREITAS

12. Assistants

13. Teaching Language

Portuguese

14. General Objectives

To raise students' awareness of the importance of Psychometrics as an area of interest that is transversal to the different areas of Psychology and endow them with knowledge for the validation of
scales and tests.

15. Specific Objectives

Promote the development of skills regarding the process of elaboration, validation
and assessment of psychological tests.
Gain familiarity with different types of psychological tests.
Develop the necessary knowledge for application, coding, interpretation and description of psychological tests.

16. Skills to be acquired

Students should:
- Understand what a psychological assessment instrument is;
- Develop the ability to select relevant evidence to assess psychological constructs, based on psychometric criteria;
- Understand psychometric theory and its relation to the construction of psychological tests;
- Use psychometric techniques;
- Carry out, with relative autonomy, psychometric studies of instruments used in psychological assessment.

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17. Teaching Methodology

Classes are theoretical and practical, using the expository, interrogative and active method, with discussion of the themes and
their practical implications, as well as the realization of practical exercises for application of knowledge. We will use
pedagogical techniques that value peer collaboration and learning by guided discovery, by exploring statistical analysis
software. Autonomy and critical thinking will be encouraged.

18. Course Unit Program

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1. introduction
1.1 Psychometrics: definition, basic concepts
1.2 Psychometrics field of reference
1.3. the relation of Psychometrics with different areas of Psychology
2. Psychological Tests
2.1 Historical aspects about the emergence of tests
2.2 Definition of test as a standardized measuring instrument
2.3 Public opinion and attitudes of psychologists towards tests.
2.4 Advantages of using standardized measuring instruments.
2.5 Advantages of tests in relation to other assessment processes.
2.6 Criticism and objections to tests.
2.7 Classification of tests:
2.7.1. maximum performance tests, typical response tests and projective tests.
2.7.2 Other possible classifications.
2.8. The process of constructing a test
2.9 The process of adapting a test
2.10. The item response theory (IRT) versus classic theory
3. Different types of tests
3.1 General intelligence and specific aptitudes tests
3.2 Personality tests: unidimensional and multidimensional questionnaires and inventories
3.3 Interests and values questionnaires.
3.4. Sensorial and psychomotor tests
4. Metric characteristics of the tests
4.1 Sensitivity
4.1.1 Definition
4.1.2 Factors that can alter the sensitivity of a test
4.1.3 How to perform the sensitivity study
4.2 Reliability
4.2.1 Definition of Reliability
4.2.2 Calculating the reliability coefficient: test-retest method, method of parallel forms (alternative or equivalent), split-half method, and internal consistency method (Cronbach's alpha)
4.3 Validity
4.3.1 Definition of validity
4.3.2.Types of validity: content validity, construct validity (by the exploratory and confirmatory factorial analysis method), criterion validity (predictive validity and concurrent validity)
5. The process of creating Norms
5.1. The importance of norms
5.2 Different types of norms
5.2.1 Norms focused on age / developmental norms: e.g. I.Q. mental age
5.2.2. Frequency-centered norms: quartiles, deciles, percentiles
5.2.3.Norms focused on mean and standard deviation (typical norms) / Intra-group norms: T-scores, Z-scores

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6. The concepts of standardization and adaptation
7. Ethical and deontological questions posed to the use of psychological tests
8. Rules for administering tests
9. Computerized testing: the new reality!
10. Psychometric study of a scale
11. Consultation and critical analysis of a test manual

19. Assessment Methods

According to the Regulamento Geral de Avaliação da Universidade Lusíada, students must sit:
A) Two written tests (60%)
B) Final written Exam (40%)

20. Didactic Resources

Powerpoints and databases
Computers and IBM SPSS software
Scientific papers
Recommended bibliography

21. Sustainability Objectives

Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

Target 4.4: By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship

Target 4.7: By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development.

22. Keywords

Tests
Scales
Validation
Validity
Reliability

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23. Main Bibliography

Author(s): H. Cooper, P. M. Camic, D. L. Long, A. T. Panter, D. Rindskopf, and K. J. Sher (Eds.)
Title: APA Handbook of Research Methods in Psychology, Vol 1: Foundations, Planning, Measures, and Psychome
Edition: Year: 2012
Local:
Publisher: American Psychological Association

Author(s): Finch, H., French, B. F. & Immekus, J. C.
Title: Applied Psychometrics using SPSS and AMOS
Edition: Year: 2016
Local:
Publisher: IAP, Information, Age Publishing

Author(s): Hutz, C., Bandeira, D., Trentini, C
Title: Psicometria
Edition: Year: 2015
Local:
Publisher: Artmed

24. Complementary Bibliography

Author(s): Kline, T. J. B.
Title: Psychological testing: a practical approach to design and evaluation
Edition: Year: 2005
Local:
Publisher: Routledge

Author(s): Pasquali, L.
Title: Psicometria
Edition: Year: 2003
Local:
Publisher: Editora Vozes

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