COURSE DATA

DATA SUBJECT

Code: 33337
Name: Measuring instruments in educational contexts
Cycle: Undergraduate Studies
ECTS Credits: 4.5
Academic year: 2025-26

STUDY (S)

Degree	Center	Acad. year	Period
1319 - Degree in Psychology	Facultat de Psicologia i Logopèdia	4	First quarter

SUBJECT-MATTER

Degree	Subject-matter	Character
1319 - Degree in Psychology	Measuring instruments in educational contexts	ELECTIVES

COORDINATION

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SUMMARY

The subject "Measurement Instruments in Educational Contexts" is an optional, semester-long course that is taught in the first semester of the 4th year of the Psychology Degree. It consists of 4.5 ECTS credits. This subject aims for students to master the basic aspects related to educational measurement through scales and tests: their characteristics, the basic methods for constructing scales and tests, the most important test theories, the evaluation of the quality of these measures, and their interpretation.

The subject has a theoretical-practical nature, so practical components are added to the theoretical ones, in order to reinforce the concepts of the theoretical contents.

This subject takes into account the Sustainable Development Goals, especially number 3: "Health and well-being", number 4: "Quality education", number 5: "Gender equality", and number 10: "Reduced inequalities".

PREVIOUS KNOWLEDGE

RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE

There are no specified enrollment restrictions with other subjects of the curriculum.

OTHER REQUIREMENTS

It is recommended to have passed the second-year course Psychometrics.

COMPETENCES / LEARNING OUTCOMES

1319 - Degree in Psychology

Be able to analyse data through statistical software and other information technologies.

Be able to design and apply performance tests to solve the problems arising in professional practice.

Be able to identify differences, problems and needs.

Know and comply with professional ethics of Psychology.

Know the methodology for designing performance tests.

DESCRIPTION OF CONTENTS

1. ASSESSMENT RELATED TO KNOWLEDGE AND COMPETENCES.

Introduction
Assessment in educational contexts
Knowledge vs. competence

2. CRITERION-REFERENCED TESTS: OBJECTIVES, CONTENTS, AND CRITERIA.

Objectives of criterion-referenced tests
Characteristics of criterion-referenced tests
The importance of content specification

3. THE MEASUREMENT OF PERFORMANCE: CLASSICAL TESTS AND CRITERION-REFERENCED TESTS.

The measurement of performance
The assessment process
Differences between norm-referenced tests and criterion-referenced tests

4. TEST CONSTRUCTION.

Introduction to phases in the construction of criterion-referenced tests:
- Content specification
- Item development
- Scoring assignment
- Item analysis
- Metric quality: reliability and validity
- Interpretation of criterion-referenced scores

5. SCORING SYSTEM AND PASSING THE CUT-OFF.

Specifying the scoring system
Specifying the cut-off points

6. EVALUATING TEST QUALITY.

Analysis of item quality in criterion-referenced tests
Reliability in criterion-referenced tests
Validity in criterion-referenced tests
Interpretation of results and their quality

7. APPLICATIONS: ITEM BANKS AND NEW CONTRIBUTIONS.

Item Banks
New contributions (e.g. adaptive testing)

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours
Theoretical and practical classes	45,00
Total hours	**45,00**

NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	0,00
Individual or group project	25,00
Independent study and work	10,00
Preparation of lessons	2,50
Preparation for assessment activities	20,00
Resolution of case studies	10,00

Total hours	**67,50**

TEACHING METHODOLOGY

Theoretical-practical classes supported by audiovisual media, links to various websites with content related to the subject, textbooks, scientific articles, and other readings and materials.

Practical sessions in computer classrooms, seminars, and workshops focused on applied aspects, where the student, individually or in groups, works with the materials provided (tests, articles, computers, software, and databases) to achieve a goal. An important feature is the group discussion followed by a debate on the relevant learning objective. Here, the student plays a very active role in the learning process.

Completion of exercises on theoretical and applied aspects of criterion reference tests.

EVALUATION

SE1 *Evaluation of theoretical and practical content through oral, written or performance-based tests*. This will be carried out through a written exam. It will account for 70% of the final grade. This component is recoverable in the second exam session.

SE2 *Oral or written presentation of reports, individual or group work, clinical cases, problem-solving and use of diagnostic tools*. Group written reports will be submitted, based on case analysis and solving proposed problems. It will account for 20% of the final grade. This component is recoverable in the second exam session.

SE3 *Active participation in class activities, seminars and workshops, and motivation for the quality of learning outcomes* . Active participation in class activities, their correction, and enrichment of results (10%). It will account for 10% of the final grade. This component is not recoverable.

A minimum achievement of 50% in components SE1 and SE2 is required, as well as a final grade of 5 out of 10 to pass the course, both in the first and second exam sessions.

Additional considerations:

Only the evaluation components will be added together if the minimum requirements for both mandatory components are met. If any of the mandatory components is not passed in the first exam session, the scores from the other components will be retained for the second session.

The evaluation of the course and the appeal of the obtained grade will be subject to the Regulations on Evaluation and Grading of the University of Valencia for Bachelor's and Master's Degrees (ACGUV 108/2017 of May 30, 2017): http://www.uv.es/graus/normatives/2017_108_Reglament_avaluacio_qualificacio.pdf

According to this regulation, grades will be expressed numerically from 0 to 10 with one decimal point, using the

- From 0 to 4.9: Fail
- From 5 to 6.9: Pass
- From 7 to 8.9: Good
- From 9 to 10: Excellent or Excellent with Honours

As stated in the regulations for awarding Honours, it will be assigned strictly based on highest grade. In case of a tie, the Honour will be given to the student with the highest score in Section B of SE1; if the tie remains, SE2 will be used, and finally Section A of SE1. If the tie persists in all of them, the lecturer may require an additional test for the involved students.

Clear copying or plagiarism of any evaluation task will result in failure of the course, and will be subject to the appropriate disciplinary procedures.

Please note that, according to Article 13.d) of the University Student Statute (Royal Decree 1791/2010, of December 30), it is the student's duty to refrain from using or assisting in fraudulent procedures in evaluation tests, coursework, or official university documents.
In the case of fraudulent practices, action will be taken in accordance with the Protocol for addressing fraudulent practices at the University of Valencia (ACGUV 123/2020):
https://www.uv.es/sgeneral/Protocols/C83sp.pdf

The assignments, activities, or exercises submitted by students in this subject must be their own and original work. In case of using artificial intelligence (ChatGPT or others), the student must provide a statement of responsible use.

During office hours, teaching staff may request individual or group interviews to verify the level of participation and achievement in any task. Refusing to attend such a verification will result in failure of the corresponding task or activity.

In the course record, the grade obtained in the FIRST CALL will be entered according to the following rules:
- If there is no grade for the component with the highest weight, the grade will be NOT ATTENDED, regardless of the rest.
- If there is a grade in the component with the highest weight, but minimum requirements are not met, the grade will be FAIL with the numerical score out of 10 of that component.
- If the minimum in the main component is met but not in another, the grade will be FAIL and the numerical score of the component not passed.

In the SECOND CALL, the following rules apply:
- The option NOT ATTENDED will only be possible if the student has not submitted more than one evaluation component, including the one with the highest weight.
- If there are grades for all components but minimum requirements are not met in one of them, the grade will be FAIL, and the mark will be that of the component not passed. If several components are failed, the highest failing grade (maximum 4.9) will be recorded.
- If one or more minimum requirements are not met and one evaluation component is missing, the grade will be FAIL with the numerical mark of the failed component.
- If two components are passed, but no evidence is submitted for the third, the grade will be FAIL, and the average score will be calculated with 0.0 for the missing part (maximum possible: 4.9).
- If the component with the highest weight is passed, but there is no evidence in one or more of the remaining components, the grade will be FAIL. The scores will be summed and: a) if the total is less than 5, that will be the final mark; b) if the total is higher than 5, the grade will be 4.9.

If the course is passed in the first exam session, the student CANNOT retake it in the second exam session to improve the grade.

REFERENCES

***Basic References*:**

Martínez Arias, R. Hernández, M. J. y Hernández, M. V. (2006). *Psicometría.* Alianza Editorial.

Mateo, J. y Martínez, F. (2008). *Medición y evaluación educativa.* Madrid. La Muralla.

Muñiz, J. (2018). *Introducción a la Psicometría.* Pirámide.

***Supplementary References*:**

Smith, E. V. & Stone, G. E. (2009). *Criterion referenced testing: practice analysis to score reporting using Rasch measurement models.* JAM Press.

Shrock, S. A. & Coscarelli, W. C. (2007). *Criterion-Referenced Test Development: technical and legal guidelines for Corporate Training.* John Wiley & Sons.

Berk, R.A. (1984). *A guide to criterion-referenced test construction.* Baltimore, MD: John Hopkins University Press.

Keeves, J. P. (1997). *Educational research, methodology, and measurement: an international hadbook*. Cambridge, Pergamon.

Hambleton, R. K. & Simon, R. A. (1980). *Steps for Constructting Criterion-Referenced Test.* Laboratory of Psychometric and Evaluative research Report No. 104. Massachussets University.