

**COURSE DATA****Data Subject**

Code	33487
Name	Educational measurement
Cycle	Grade
ECTS Credits	6.0
Academic year	2023 - 2024

Study (s)

Degree	Center	Acad. Period
1306 - Degree in Social Education	Faculty of Philosophy and Educational Sciences	2 Second term

Subject-matter

Degree	Subject-matter	Character
1306 - Degree in Social Education	326 - Methods and techniques for educational research	Obligatory

Coordination

Name	Department
BAKIEVA KARIMOVA, MARGARITA	270 - Research Methodology, Educational Diagnosis and Assessment
SANCHO ALVAREZ, CARLOS	270 - Research Methodology, Educational Diagnosis and Assessment

SUMMARY

The socio-educational intervention starting point is the analysis of the situation, the knowledge of people, groups and contexts. There are different techniques for gathering information that will allow us to approach these elements, a more qualitative (subjective) and more quantitative (objective), some more and some less standardized. This course provides theoretical and methodological resources, based on quantitative technics, to analyse, design and implement measurement processes in education and social contexts, all aimed at improving the socio-educational intervention.



PREVIOUS KNOWLEDGE

Relationship to other subjects of the same degree

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

Other requirements

This course is part of the fourth semester of the degree Degree (2nd semester of 2nd year). Regarding the program content, it is linked to the other subjects in the educational research area, such as Data Analysis in Education and Methods for Data Gathering in Education, forming the module of Methods and Techniques for Educational Research.

COMPETENCES (RD 1393/2007) // LEARNING OUTCOMES (RD 822/2021)

1306 - Degree in Social Education

- Have skills for information management.
- Be able to integrate and communicate with experts in other areas and in different contexts.
- Be able to conduct educational research in different contexts.
- Have abilities for quality management.
- Diagnose needs, complex situations and possibilities of people as a basis for educational actions.
- Conduct prospective and evaluative studies on educational characteristics, needs and demands.
- Develop tools for gathering and analysing educational information.
- Identify and make reasoned judgments about socio-educational problems in order to improve professional practice in non-formal contexts.
- Prepare and interpret technical, research and evaluation reports on educational actions, processes and results.

LEARNING OUTCOMES (RD 1393/2007) // NO CONTENT (RD 822/2021)

Once established the powers intend to work with students to ensure correspondence between the teaching-learning process, activities or tasks and learning products, we defined what students have learned at the end of the subject of Educational Measurement, what we expect from students, the learning outcomes. These are specific performances with certain levels of performance or achievement that demonstrate mastery of competences and are oriented towards what students learn, what they are capable to do and what they demonstrate. These are:

R1. Perform a technical review process of an objective test (test).



R2. Develop and interpret a process of statistical analysis of an objective test by calculating and interpreting its metric characteristics:

- a. to calculate and analyse the metric characteristics of the test items, according to quality criteria;
- b. to calculate and interpret the reliability, validity, and normality of the test as a measuring instrument.

R3. Write a report in which the usefulness of educational measurement processes for their implementation in accordance with formal and ethical quality criteria is considered.

DESCRIPTION OF CONTENTS

1. 1. Introduction to educational measurement.

- 1.1. Educational measurement in the process of socio-educational intervention.
- 1.2. Measurement models: Normative, Behavioral Assessment and Criterion Assessment.
- 1.3. The tests as measurement scales.
- 1.4. Some scales used in the socio-educational field.

2. 2. The tests as measurement scales.

- 2.1. Test concept
- 2.2. Test types
- 2.3. Features, Advantages and Disadvantages
- 2.4. Process of elaboration of a scale for the socio-educational field: Phases in the construction of a test.

3. 3. Evidence quality criteria.

- 3.1. Construct delimitation
- 3.2. Technical Quality Criteria of the Items: Logical Review. Empirical Review.
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- 3.3. Technical Quality Criteria of the scale-test: Reliability. Validity
- 3.4. Standardisation and scoring.

4. 4. Alternative models, report preparation and ethical criteria.

- 4.1. Item Response Theory and Generalizability Theory.
- 4.2. Computer-assisted and/or computer-administered educational tests.
- 4.3. Technical reports.
- 4.5. Ethics and quality.

**WORKLOAD**

ACTIVITY	Hours	% To be attended
Theory classes	30,00	100
Computer classroom practice	30,00	100
Attendance at events and external activities	5,00	0
Development of group work	10,00	0
Development of individual work	5,00	0
Study and independent work	20,00	0
Readings supplementary material	5,00	0
Preparation of evaluation activities	18,00	0
Preparing lectures	5,00	0
Preparation of practical classes and problem	15,00	0
Resolution of case studies	5,00	0
Resolution of online questionnaires	2,00	0
TOTAL	150,00	

TEACHING METHODOLOGY

The teaching methodology is based on the development of content through a close connection between theory and practice, combining both group work and collaborative and individual work though:

- Participatory the lecture. Theoretical explanation of the teacher as a working guide.
- Group learning tasks to solve.
- Autonomous Learning to solve individual tasks, such as reading articles, individual reflection and argument...
- Group and individual tutorials: personal attention to students.
- Using the virtual platform of the University training- Virtual Classroom, to facilitate student access to all necessary resources for the development of the teaching-learning material (Teaching guide, activities/tasks, agenda, questionnaires, portfolios, evaluation...) and to facilitate communication between students and between students and the teacher.
- Involvement of specific and general seminars related to the contents of the subject.



- Joint/cross with students of other subjects on cross-cutting themes of the training entitled.

MATERIALS a) Academic Guide: specifies the objectives, content, workload distribution issues, methodology, evaluation, and bibliography. b) Bibliography: required reading, given in the same Academic Guide. c) Resolution of practical activities proposed by professors. All the materials and activities will be located in the virtual classroom- Moodle- of the subject. d) Other: How much relevant information can provide students their own initiative. Report that a cross, present throughout the area, will be the use of computing resources: the technological platform of the University-Virtual-Classroom, Internet, Open Office, Microsoft Office (Word, Excel, PowerPoint) Electronic Resources (Databases, Library Books, journals, ...); Statistical Package for the Social Sciences Package for Windows (SPSS), PSPP y/o Jamovi®. The use of each will be specified in each learning activity specifically.

EVALUATION

They employ different evaluation procedures for evaluating joint acquisition of different skills involved. Each of these procedures must be approved in order to pass the subject. Each of these activities has to be overcome with a value of 5 points out of 10 for the weighting is made and can be overcome total loans of the subject.

Exam	50%
Practices	50%

There is no difference in the evaluation procedure between the first and the second call.

The sections of the evaluation are recoverable on second call.

REFERENCES

Basic

- b1: Muñiz, José. (coord) (2005). Análisis de ítems. La Muralla.
- b2: González-Such, J., Sánchez-Delgado, P. y Sancho-Álvarez, C. (2013). Técnicas evaluativas 2. En J. M. Jornet, J. González-Such, y M. J. Perales, Investigación Evaluativa. Una perspectiva basada en la complementariedad metodológica (cuantitativa-cualitativa). (pp. 114-128). CREA.
- b3: Jornet-Meliá, J. M., González-Such, J. y Perales, M. J. (2013). Técnicas evaluativas I. En J. M. Jornet, J. González-Such, y M. J. Perales, Investigación Evaluativa. Una perspectiva basada en la complementariedad metodológica (cuantitativa-cualitativa). (pp. 96-113). CREA.
- b4: Delgado, C. (2014). Viajando a Ítaca por mares cuantitativos. Amaru Ediciones.
- b5: García Ferrando, M., Ibáñez, J. y Alvira, F. (2003). El análisis de la realidad social: métodos y técnicas de investigación. Alianza.



- b6: InnovaMIDE. Introducció al SPSS. <https://www.uv.es/innovamide/spss/> b7: López, P. y Pacheli, S. (2015). Metodologia de la investigacion socialcuantitativa. Bellatera. <http://ddd.uab.cat/record/129382>
- b8: Martínez, M. y Marín, J.A. (2009). Como Medir y Guiar Cambios hacia Entornos Educativos más Motivadores. Formación Universitaria, (2), 4, 3-14. <https://scielo.conicyt.cl/pdf/formuniv/v2n4/art02.pdf>
- b9: Jornet-Meliá, J.M., González-Such, J., Perales, M.J., Sánchez-Delgado, P., Bisquert, M., Bakieva, M., Sancho-Álvarez, C., Belda, A., Llorens, A., Bodoque, A.R. y Ortega-Gaite, S. (2017). Aproximaciones cualitativas para la definición y validación de constructos de instrumentos estandarizados de medida. En A. Pedro Costa, M.C. Sánchez-Gómez y M.V. Martín-Cilleros, La práctica de la investigación cualitativa: ejemplificación de estudios. Ludomedia. https://ciaiq.org/wp-content/uploads/2017/09/ebook_Practica_Investigacion_Cualitativa_Espanol.pdf

Additional

- c1: Exteberría, I. y Tejedor, F. (2005). Análisis descriptivo de datos en educación. La Muralla.
- c2: Muñoz, J. (coord) (2005). Análisis de ítems. La Muralla.
- c3: Parrilla Latas, A. (2017). Ética para una investigación inclusiva. Revista de Educación Inclusiva, 3(1).
- c4: Sandín, M.P. (2000). Criterios de Validez en la investigación educativa: de la objetividad a la solidaridad. Revista de Investigación Educativa, 18 (1), 223-242
- c5: Suárez, Jesús M. y Jornet, Jesús, M. (1990). Reflexiones en torno a la validación de pruebas psicométricas y edumétricas: Un acercamiento ecléctico. Revista de Investigación Educativa, 8(16), 517-526.
- c6: Sancho-Álvarez, C., Beltrán, M. R., Melià, J. M. J. y González-Such, J. (Eds.). (2022). Un sistema para evaluar la cohesión social en universidades mexicanas: UNIVECS-MX: evidencias y propuestas de aplicación. Publicacions de la Universitat de València.
- c7: González-Such, J., Jornet-Meliá, J. M., Sancho-Álvarez, C. y Bakieva-Karimova, M. (Eds.). (2022). Fundamentos para la evaluación de titulaciones universitarias desde un modelo de cohesión social: el proyecto UNIVECS. Publicacions de la Universitat de València.