

COURSE DATA

Data Subject					
Code	33731				
Name	Data analysis in education				
Cycle	Grade	~UO 07.	57	\mathbf{V}	
ECTS Credits	6.0				
Academic year	2023 - 2024				
Study (s)					
Degree		Center		Acad. Period year	
1307 - Degree in Pedagogy		Faculty of Philosophy and Educational Sciences		2 Second term	
Subject-matter					
Degree		Subject-matter		Character	
1307 - Degree in Pedagogy		72 - Methods of educational research		Obligatory	
Coordination					
Name		Depart	ment	3 / / /	
BO BONET, ROSA I	MARIA	270 - R Diagno	270 - Research Methodology, Educational Diagnosis and Assessment		
LOPEZ GONZALEZ, MARIA EMELINA		270 - Research Methodology, Educational Diagnosis and Assessment			
MOLLA ESPARZA, CRISTIAN		270 - Research Methodology, Educational Diagnosis and Assessment			

SUMMARY

Through this subject, the aim is to provide the student with basic information so that they can understand the fundamentals of the methods and techniques for Data Analysis, predominantly quantitative, and their application in the field of education. The approach to Data Analysis will occur in terms of one more component of any professional performance of the pedagogue, in the general process aimed at answering the questions that concern him. The main descriptive and explanatory techniques in accordance with the predominant research strategies in the educational field will be reviewed.



The approach will be based essentially on understanding, adjusting to the question to be answered (decision making) and interpretation of the information obtained. For this reason, learning within practice is considered fundamental to connect the different theoretical and methodological aspects with the reality that we are interested in addressing.

PREVIOUS KNOWLEDGE

Relationship to other subjects of the same degree

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

Other requirements

Those who check verifies.

OUTCOMES

1307 - Degree in Pedagogy

- Be prepared for independent lifelong learning.
- Design educational plans, programmes, projects, actions and resources in different contexts.
- Apply and coordinate educational programmes and methodologies for personal, social and professional development.
- Prepare and interpret technical, research and evaluation reports on educational actions, processes and results.
- Conduct prospective and evaluative studies on educational characteristics, needs and demands.
- Design training plans for teachers, trainers and other professionals that are suited to new situations, needs and contexts.
- Design programmes, projects and innovative proposals for training and for developing educational resources in work, family and institutional contexts, in both face-to-face and virtual environments.
- Develop strategies and techniques to promote participation and lifelong learning.
- Be able to evaluate the teaching-learning processes and the educational agents.
- Organise and manage schools and educational institutions, services and resources.
- Develop quality management models and processes for education and training.
- Capacidad de resolución de problemas y toma de decisiones.
- Capacidad crítica y autocrítica.
- Gestión de la calidad.
- Diagnosticar necesidades, situaciones complejas y posibilidades de las personas para fundamentar las acciones educativas.



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- Elaborar instrumentos para la recogida y análisis de información educativa.
- Supervisar y evaluar planes, programas, proyectos y centros.
- Capacidad de comunicación profesional oral y escrita en las lenguas propias de la Universitat de València.
- Capacidad de gestión de la información.
- Capacidad para integrarse y comunicarse con expertos de otras áreas y en distintos contextos.
- Capacidad para desarrollar, promover y dinamizar habilidades de comunicación interpersonal.
- Compromiso con la identidad, desarrollo y ética profesional.
- Develop the capacity for organisation and planning.
- Capacidad de utilización de las TIC en el ámbito de estudio y contexto profesional.
- Skills in analysis and synthesis.
- Capacidad de adaptación a situaciones nuevas.
- Desarrollo de la innovación y la creatividad en la práctica profesional.
- Capacidad para realizar investigación educativa en diferentes contextos.
- Compromiso ético activo con los derechos humanos y la sostenibilidad.

LEARNING OUTCOMES

a) Knows and uses, with appropriate language, data analysis techniques typical of educational research, both in terms of descriptive strategies and inferential models.

b) Knows the role of data analysis in the overall research process

c) Identifies different models of Data Analysis according to the metric characteristics of the variables used.

d) Is able to decide which is the most appropriate statistical technique taking into account the levels of inquiry and the data collection methodologies that arise in the investigations.

e) Knows how to make statistical interpretations of the results obtained.

f) Is capable of making substantive interpretations that connect the statistical results with the hypothesis and the problem under investigation.

g) Understands how the results of a data analysis are treated in research reports, following common scientific criteria in the field of social sciences.

h) Understands the importance of ethical behavior in any data analysis process within the framework of scientific research.

DESCRIPTION OF CONTENTS



1. Bases

2. Análisis descriptivo de datos

3. Análisis inferencial de datos (bases)

4. Análisis inferencial de datos (contraste de hipótesis)

5. Correlación y regresión

6. Introducción modelos multivariantes

WORKLOAD

ACTIVITY	Hours	% To be attended
Computer classroom practice	45,00	100
Theory classes	15,00	100
Attendance at events and external activities	7,50	0
Development of group work	30,00	0
Study and independent work	12,50	0
Readings supplementary material	7,50	0
Preparation of evaluation activities	2,50	0
Preparing lectures	10,00	0
Preparation of practical classes and problem	20,00	0
ΤΟΤΑ	L 150,00	

TEACHING METHODOLOGY

Theoretical classes

The theoretical classes consist of explanations by the teachers and the contributions and comments that the students want to make about the essential readings and the complementary bibliography of each one of the topics.

As support, the materials located in the virtual space and the different resources that are required with the dynamics of the subject are available. The theoretical contents are intertwined with the work of the practices of the subject.



Practical classes

The practices on the theoretical contents consist of solving simple questions, with complementary comments, or in the analysis of research reports to recognize and interpret in their context the elements of key data analysis in the study in question. The objective is that the concepts of a certain complexity of the subject can be gradually approached in a more simplified way. At the same time, it is intended that the student become familiar with the type of issues that she must address in the evaluation of the subject. Specific data analysis practices are carried out in the computer room with statistical packages commonly used in the field of educational research, such as SPSS or Excel. It is important to highlight the essential function that these tools have in the data analysis of educational research.

The students have the possibility of voluntarily carrying out and submitting the practices that are proposed, which must be uploaded to the Virtual Classroom on the set date. The evaluation of these practices will have a direct impact, and always positively, on your final grade.

Specialized tutorials

If the student needs it, there is the possibility of using specialized tutoring sessions -collective or individual- during the time allotted for this purpose. These tutorials are carried out in the teachers' offices or in the designated classroom, if they are in groups, also serving as a mechanism for monitoring and supporting the study of the subject.

Complementary activities

Students receive information on the different complementary activities proposed by the Degree Academic Committee and on in-depth seminars on different aspects.

Materials

In the Virtual Classroom the materials used for the explanation of the topics are available. In each of the topics it is indicated:

(a) The essential and complementary bibliography.

(b) The presentation schemes that are used in the sessions.

(c) The practices that are worked on.

The three types of materials are necessary to approach the subject, whether the student regularly attends the class sessions or not.

(d) Students also have this Teaching Guide for their group, which specifies the objectives, skills, learning outcomes, content, volume of work, methodology, evaluation and bibliography.

EVALUATION

The evaluation of the subject is carried out according to:



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- (a) the bibliographic material indicated in each of the topics,
- (b) the contents covered in the theoretical classes as an explanation of the bibliographic material indicated in each topic,
- (c) the contents worked on in the practices,
- (d) the score obtained in the practices delivered.

Instruments

• Objective test on the theoretical and practical contents.practices carried out

Criteria

• Level of theoretical knowledge acquired.Resolution of the practical questions proposed in the evaluation exercise.

REFERENCES

Basic

 Tourón, J. (Ed.), Lizasoain Hernández, L., Navarro Asencio, E. y López-González, E. (2023). Análisis de Datos y Medida en Educación. Vol. I. UNIR Editorial.

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Additional

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Cohen, L., Manion, L. y Morrison, K. (2011). Research Methods in Education (7^a ed.). London: Routledge (Caps. 34, 35, 36 y 38).

Mafokozi, J. (2009). Introducción a la estadística para gente de letras. Madrid: CCS.

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