Universitat Autònoma de Barcelona

2022/2023

Data Analysis Techniques in Research

Code: 44391
ECTS Credits: 6

Degree	Type	Year	Semester
4315497 Communication and Language Disorders	OB	0	2

Contact

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Use of Languages

Principal working language: catalan (cat)

Other comments on languages

If there are students who do not understand in the Catalan language, the teaching will be conducted in Spanish.

Teachers

Eduardo Doval Dieguez

Cristina Mumbardó Adam

External teachers

Cristina Mumbardó Adam

Prerequisites

There are no specific prerequisites.

Objectives and Contextualisation

The general objective of this course is to offer students the necessary knowledge and skills to carry out the data analysis of empirical research in the field of communication disorders, as well as to develop or adapt measurement tools in this filed.

The student learns to adequately define research objectives and hypotheses. Skills related to the management, analysis and interpretation of data are developed, as well as those related to design and adaptation of measuring instruments.

Finally, the student learn to identify and discuss the practical, methodological and technical implications of the research, as well as its repercussions on the health care services and on the progress of scientific knowledge.

Competences

- Apply the scientific method in professional practice.

- Knowledge and understanding that provide a basis or opportunity for originality in developing and / or applying ideas, often in a research context.
- That students have the learning skills that enable them to continue studying in a way that will be largely self-directed or autonomous.

Learning Outcomes

1. Design or adapt techniques and instrument for collecting information in accordance with the standards for developing tailor-made instruments.
2. Knowledge and understanding that provide a basis or opportunity for originality in developing and / or applying ideas, often in a research context.
3. Manage, analyze and interpret data optimally an investigation.
4. Select and evaluate their quality, procedures, techniques and tools most appropriate measure in terms of the objectives or hypotheses.
5. That students have the learning skills that enable them to continue studying in a way that will be largely self-directed or autonomous.

Content

- Skills of critical reading of scientific publications.
- Management and computerized data analysis (descriptive statistics and introduction to inference).
- Synthesis of scientific evidence.
- Fundamentals of design and adaptation of measuring instruments.

Methodology

Traditional teaching techniques are combined with other resources aimed at encouraging meaningful learning.

N.B. The proposed teaching and assessment methodologies may experience some modifications as a result of the restrictions on face-to-face learning imposed by the health authorities. The teaching staff will use the Moodle classroom or the usual communication channel to specify whether the different directed and assessment activities are to be carried out on site or online, as instructed by the Faculty.

The teachers will allocate a time of 15 minutes during one of the class sessions for the students to answer the evaluation surveys of the teaching performance and the evaluation of the module.

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

Activities

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Computerized practices	14	0.56	1, 3, 4
Theoretical presentation	17.5	0.7	1, 3, 5, 4, 2
Type: Supervised			
Review of integrated problems	15.5	0.62	1, 3, 4
Tutoring	6	0.24	1, 3, 4
Type: Autonomous			

Comprehensive reading of the materials proposed by the teachers	40	1.6	1, 3, 5, 4, 2
Realization of schemes, conceptual maps and summaries	5	0.2	5, 4, 2
Training in computer programs based on guides and tutorials	45	1.8	1, 3, 5, 4, 2

Assessment

In this course the assessment is intended to fulfil a pedagogical function and not just accreditation, and all the evidences are programmed so that they can achieve the corresponding formative return.
Below are the learning evidences that the student will have to contribute, their type and weight in the final qualification:

- Evidence 1 (week 4). Individual classroom examination. Content: Data analysis. Up to 5 points.

- Evidence 2 (week 6). Individual examination (moodle). Content: Textual analysis. Up to 1 point.

- Evidence 3 (week 9). Individual classroom examination. Content: Creation and adaptation of tests and questionnaires. Up to 4 points.

Assessable students: a student is considered assessable when they have presented evidences of learning with a weight greater than or equal to 4 points; otherwise it will appear in final grade sheets as Not Assessable (NA).
Course passed: students have passed the course when they have obtained a minimum score of 5 points and at least 2 points come from EV1 and 2 points from EV3.
Resit examination: may choose to resit the evidences not passed those students who have not achieved the established criteria to pass the course and who, in addition, have previously been assessed on a set of activities whose weight equals a minimum of 2/3 of the total score of the course.

Note: No unique final synthesis test for students who enroll for the second time or more is anticipated.

In this link you can check the evaluation guidelines of the Faculty:

https://www.uab.cat/web/estudiar/graus/graus/avaluacions-1345722525858.html

Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
EV1 - Data analysis (semana 4)	5 points	3	0.12	3, 2
EV2 - Textual analysis (semana 6)	1 point	2	0.08	3, 5, 2
EV3 - Measuring instruments (semana 9)	4 points	2	0.08	1, 4

Bibliography

Basic bibliography

Students will have access through moodle to the documents in pdf format that constitute the basic bibliography of the course.

Complementary bibliography

Abad, F.J., Olea, J., Ponsoda, V. y García, C. (2011). *Medición en ciencias sociales y de la salud.* Madrid: Síntesis.

Ato, M., Losilla, J.M., Navarro, B., Palmer, A., y Rodrigo, M.F. (2005). *Modelo Lineal Generalizado.* Girona: Documenta Universitaria - EAP.
Botella, J. y Sánchez Meca, J. (2015). *Meta-análisis en ciencias sociales y de la salud.* Madrid: Síntesis.
Losilla, J.M., Navarro, B., Palmer, A., Rodrigo, M.F. y Ato, M. (2005). *Del Contraste de Hipótesis al Modelado Estadístico.* Girona: Documenta Universitaria - EAP.
Losilla, J.M. y Vives, J. (2007). L'Ordinador en Psicologia. Barcelona: Universitat Autònoma de Barcelona. Servei de Publicacions.
Martínez Arias, M.R., Hernández, M.J. y Hernández, M.V. (2006). *Psicometría.* Madrid: Alianza Editorial, S.A.
Pardo, A., Ruiz, M.A.. y San Martín, R. (2009). *Análisis de datos en ciencias sociales y de la salud I.* Madrid: Síntesis.
Pardo, A.,y Ruiz, M.A.. (2012). *Análisis de datos en ciencias sociales y de la salud III.* Madrid: Síntesis.
Pardo, A. y San Martín, R. (2010). *Análisis de datos en ciencias sociales y de la salud II.* Madrid: Síntesis.
Solanas, A., Salafranca, L., Fauquet,J. i Núñez, M.I. (2005). *Estadística descriptiva en Ciencias del Comportamiento*. Madrid: Thomson.

Software

The free access software jamovi (https://www.jamovi.org/) will be used to perform statistical and psychometric analyses presented in the course.