

**Research Methods, Design and Techniques**

Code: 102566  
ECTS Credits: 9

Degree	Type	Year	Semester
2502443 Psychology	FB	1	2

### Contact

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### Use of Languages

Principal working language: catalan (cat)

Some groups entirely in English: No

Some groups entirely in Catalan: Yes

Some groups entirely in Spanish: No

### Teachers

Jordi Fauquet Ars

Albert Fornieles Deu

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Jaume Vives Brosa

Diego Redolar Ripoll

Sonia Lorente Sanchez

### Prerequisites

There is no prerequisite regarding mathematical content, except for the basics of data analysis already included in the different syllabuses of the University Access Course and/or Secondary Education. Basic computer skills are essential.

### Objectives and Contextualisation

Methods, Designs and Research Techniques is the first methodological subject of the Psychology syllabus, and it belongs to the area of Statistics. It is scheduled for the second semester of the first year of the syllabus, in order to facilitate transfer of the methodological competences to the other subjects. Likewise, it should provide the essential basis for correctly applying the content of the remaining methodological subjects.

The main objectives of the subject are to do the following.

- Enable students to understand the logic of psychological research and the basic elements underlying the validity of a scientific study.
- Introduce students to literature searching and to the critical reading of research articles, assessing the suitability of different methods, designs and techniques to the characteristics of the research problems.
- Introduce and present the ideas and fundamental concepts of data analysis, with specific examples, both from research and from applied psychology.

It is expected that at the end of the course the student will be able to do the following.

- Understand the assumptions on which the logic of scientific research is based.
- Know the ethical principles of psychological research.
- Identify the elements and phases involved in carrying out scientific research.
- Differentiate between the methodological perspectives used in psychological research.
- Know the characteristics of the designs commonly used in Psychology.
- Evaluate the research process through the quality criteria developed within each tradition (reliability, validity, triangulation, relevance, etc.).
- Apply basic procedures related to literature searching and organize and systematize the scientific sources reviewed.
- Distinguish the level of measurement for the data obtained and analyzed, as an indispensable requirement for properly selecting the appropriate graphical procedures and the statistical indices/methods.
- Manage descriptive statistical indices in order to summarize the data and correctly interpret the results obtained.
- Know the basic methodological vocabulary in Catalan, Spanish and English languages.
- Know the standards of publication of research works of the American Psychological Association and the British Psychological Society.
- Know the basic elements of the management of statistical analysis programs.

## Competences

- Demonstrate a critical approach using constructive scepticism, creativity and an orientative attitude to research in professional activities.
- Distinguish between the design of research, procedures and techniques to evaluate hypotheses, contrast them and interpret the results.
- Maintain a favourable attitude towards the permanent updating through critical evaluation of scientific documentation, taking into account its origin, situating it in an epistemological framework and identifying and contrasting its contributions in relation to the available disciplinary knowledge.
- Recognise the epistemological foundations of the different research methods in psychology, their functions, characteristics and limitations.
- Take decisions in a critical manner about the different research methods in psychology, their application and the interpretation of the results deriving from them.
- Use different ICTs for different purposes.

## Learning Outcomes

1. Assess, contrast and make decisions about choosing the most appropriate methods and techniques in each research context.
2. Classify applied studies based on the research methods and techniques used to obtain evidence.
3. Critically evaluate and reflect on features, advantages and limitations of the research methods used in the field of psychology.
4. Decide which research methods are more appropriate to respond to a research hypothesis formulated in different applied fields of psychology.
5. Describe how the scientific method for obtaining and accumulating evidence in the different fields of application of applied psychology.
6. Develop proposals on the implementation of data collection techniques to study the behaviour of individuals, groups or organizations.
7. Draw reasoned conclusions on the advantages and limitations of different methodological approaches to address problems of applied psychology.
8. Formulate and plan the contrast of hypotheses about the demands and needs of recipients and research.
9. Identify research designs used for hypothesis testing applied in various fields of discipline.
10. Identify the characteristics of the main techniques of descriptive statistics.
11. Identify the specific characteristics of the different directions in psychological research.

12. Interpret the content and scope of a claim of scientific evidence and the best type of study to be analysed to respond.
13. Maintain a favourable attitude towards the permanent updating through critical evaluation of scientific documentation, taking into account its origin, situating it in an epistemological framework and identifying and contrasting its contributions in relation to the available disciplinary knowledge.
14. Make a critical and reflexive analysis of the scientific literature and place it within an epistemological framework.
15. Make adequate use of document search tools.
16. Make reasoned proposals on methods of acquiring new evidence in psychology.
17. Produce proper reasoning within the framework of statistical thinking.
18. Properly identify key components involved and participate in the process of scientific research.
19. Properly interpret the results derived from the implementation of various strategies descriptive analysis and obtain epidemiological indices.
20. Solve practical problems that use strategies of the scientific method in the search for evidence in psychology.
21. Use different ICTs for different purposes.

## **Content**

The subject is organized into three blocks:

Block A. Methodological foundations and introduction to research designs

A1. Principles of research methodology

A2. Experiments and quasi-experiments

A3. Single-case designs

A4. Ex post facto designs

A5. Survey methodology

A6. Observational methodology

A7. Qualitative methodology and mixed methods

Block B. Documentation and literature search

B1. Literature search: PsycINFO, Medline and ISI-WoK (Wozs and JCR)

B2. Reference management with Mendeley

Block C. Data analysis: descriptive statistics

C1. Description of quantitative data

C2. Description of categorical data

C3. Basic concepts of probability and description of screening/diagnostic assessment tools

## **Methodology**

In this course we propose different activities based on active, student-centred learning methodologies. A mixed approach is adopted in which we combine traditional didactic techniques with other resources aimed at encouraging significant learning.

## **Activities**

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Practice season in group 1/2	18	0.72	5, 4, 6, 16, 8, 18, 9, 10, 19, 12, 17, 20, 15, 21, 3, 1
Practice season in small group (1/4)	4	0.16	5, 4, 6, 16, 8, 18, 9, 10, 19, 12, 17, 20, 15, 21, 3, 1
Theoretical season in group 1/1	55.5	2.22	5, 4, 6, 16, 8, 18, 9, 10, 19, 12, 13, 17, 20, 15, 3, 1
Type: Supervised			
Face-to-face tutorials	5	0.2	5, 4, 6, 16, 8, 18, 9, 10, 19, 12, 17, 20, 15, 3, 1
Review of integrated problems	4	0.16	21
Type: Autonomous			
Application of statistical descriptive procedures and interpretation of the results of data analysis systems	12	0.48	5, 4, 7, 6, 16, 10, 19, 20, 3, 1
Critical reading activities	30	1.2	5, 4, 6, 16, 8, 18, 9, 10, 19, 12, 17, 20, 15, 3, 1
Execution of tutorials for documentation	26	1.04	5, 4, 16, 8, 18, 9, 12, 13, 17, 20, 15, 21, 3
Reading of documents for practical seasons	30	1.2	5, 4, 6, 16, 8, 18, 9, 10, 19, 12, 17, 20, 15, 3, 1
Study and creation (individual or groups) of summaries, schemes and conceptual maps	37.5	1.5	5, 4, 6, 16, 8, 18, 9, 10, 19, 12, 17, 20, 15, 3, 1

## Assessment

The evaluation process is based on the active student-centred learning model, through a flexible continuous evaluation system that helps students to achieve maximum performance. Three activity types are available, with types 2 and 3 allowing combinations in different assessment itineraries. The evidence of learning is distributed as follows.

Activity Type 1: written, individual, theoretical-practical examinations.

These examinations are mandatory and they include the following.

- Evidence 1 (EE1). First assessment period

It counts for up to 4 of the 10 marks available overall.

It evaluates the contents of the first part of Block A (A1-A4) and Block B.

- Evidence 2 (EE2). Second assessment period

It is divided into two individual parts/tests:

- EE2a evaluates the contents of Block C, and counts for up to 3 of the 10 marks available overall.

- EE2b evaluates the contents of the second part of Block A (A5-A7) and counts for up to 1 of the 10 marks available overall.

Exceptionally, students who do not attend one of these examinations (EE1 or EE2) due to compelling circumstances may be allowed to provide the missing evidence during the reassessment week. They must provide documentary proof of the circumstances that justify their absence, and the decision on whether they are allowed to resit the examination will be taken by the teaching team.

Activity Type 2: virtual practical exercises.

These are optional activities which include the following evidences.

- Evidence 3 (EE3). It corresponds to the contents of Block A.

It counts for up to 1 of the 10 marks available overall.

- Evidence 4 (EE4). It evaluates the contents of Block C.

It counts for up to 1 of the 10 marks available overall.

Activity Type 3: face-to-face classroom participation.

This is an optional activity and includes the following evidence.

- Evidence 5 (EE5). The quality of the students' participation during the practical sessions of Block A counts for up to 1 of the 10 marks available overall.

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

## Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Evidence 1. Written examination	40%	1.25	0.05	14, 2, 5, 4, 7, 6, 16, 18, 9, 11, 12, 13, 17, 20, 15, 21, 3, 1
Evidence 2a. Written examination.	30%	1.5	0.06	5, 16, 8, 9, 10, 19, 17, 20, 3
Evidence 2b. Written examination.	10%	0.25	0.01	14, 2, 5, 4, 7, 6, 16, 8, 18, 9, 10, 11, 19, 12, 13, 17, 20, 15, 21, 3, 1
Evidence 3. Practical exercises for research designs	10%	0	0	5, 4, 6, 16, 8, 18, 9, 12, 13, 20, 15, 21, 3, 1
Evidence 4. Practical exercises for management and data analysis	10%	0	0	8, 18, 10, 19, 17, 20, 1
Evidence 5. Face-to-face classroom participation	10%	0	0	5, 4, 6, 16, 18, 20, 15, 3, 1

## Bibliography

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