Universitat Autònoma de Barcelona

2022/2023

Applied Statistics in Advertising and Public Relations

Code: 103132
ECTS Credits: 6

Degree	Type	Year	Semester
2501935 Advertising and Public Relations	OB	3	1

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

David Badajoz Dávila
Sara Vinyals Mirabent

Prerequisites

This course has no prerequisites; however, it is advisable to review the notes of the second year methodology course (104899 Research Methods in Persuasive Communication).

Objectives and Contextualisation

General Objectives
- Og1. Losing the fear of statistics
- Og2. Gain confidence to ask for an appointment
- Og3. Be able to perform a whole experiment applied in the field of advertising and public relations.
- Og4. To be able to think in the future in an experimental TFG.

Specific objectives
- Oe1. To provide students with the basic statistical techniques and tools for the treatment, collection, analysis and presentation of data.
- Oe2. To know the use, possibilities and limits of statistics as a tool for data analysis.
- Oe3. Promote the ability to interpret statistical reports derived from an investigation.
- Oe4. To know the Jamovi program and its application in advertising and public relations research.

Competences

- Rigorously apply scientific thinking.
- Students can apply the knowledge to their own work or vocation in a professional manner and have the powers generally demonstrated by preparing and defending arguments and solving problems within their area of study.

- Students must be capable of collecting and interpreting relevant data (usually within their area of study) in order to make statements that reflect social, scientific or ethical relevant issues.
- Students must be capable of communicating information, ideas, problems and solutions to both specialised and non-specialised audiences.
- Students must develop the necessary learning skills in order to undertake further training with a high degree of autonomy.
- Students must have and understand knowledge of an area of study built on the basis of general secondary education, and while it relies on some advanced textbooks it also includes some aspects coming from the forefront of its field of study.
- Take account of social, economic and environmental impacts when operating within one's own area of knowledge.
- Take sex- or gender-based inequalities into consideration when operating within one's own area of knowledge.
- Use the different analysis methods and tools that are common in communication research.

Learning Outcomes

1. Apply the basic principles of audience measurement to a specific case study using the most relevant tools for effective media planning.
2. Critically analyse the principles, values and procedures that govern the exercise of the profession.
3. Propose projects and actions that incorporate the gender perspective.
4. Rigorously apply scientific thinking.
5. Students can apply the knowledge to their own work or vocation in a professional manner and have the powers generally demonstrated by preparing and defending arguments and solving problems within their area of study.
6. Students must be capable of collecting and interpreting relevant data (usually within their area of study) in order to make statements that reflect social, scientific or ethical relevant issues.
7. Students must be capable of communicating information, ideas, problems and solutions to both specialised and non-specialised audiences.
8. Students must develop the necessary learning skills in order to undertake further training with a high degree of autonomy.
9. Students must have and understand knowledge of an area of study built on the basis of general secondary education, and while it relies on some advanced textbooks it also includes some aspects coming from the forefront of its field of study.
10. Use statistical analysis tools.

Content

Presentation of the course

- Philosophy
- Administration of a questionnaire (collaborative work for the course project)
- Quiz (virtual campus) and tests (classroom)
- Posters of the project: descriptive and inferential statistics
- Calendar (approximation)

Block 1: Descriptive statistics

Theme 0

0.1. Presentation

0.2. Data bank

Theme 1. Variable types

1.1. Variables by measurement

1.2. Role Variables by roles

1.3. Variables in our area

1.4. Working with variables (cleaning database, filters, recodes, split by...)

Theme 2. Descriptive measures

2.1. Percentages

2.2. Central trend measures (mean, median, mode)

2.3. Dispersion measures (variance, standard deviation, standard error)

2.4. Univariate and bivariant descriptives

2.5. First Distribution Points (normality)

Theme 3. Descriptive graphics

3.1. Bar charts

3.2. Comparison Graphics

3.3. Association Graphics

Block 2: Inferential Statistics

Theme 4. Inferential statistics

4.1. Definitions

4.2. Central Limit Theorem

4.3. Confidence Interval

4.4. Hypothesis

4.5. Type I and II errors (sample power)

Theme 5. Qualitative associations: Khi Square

5.1. Presentation: contingency tables (2x2)

5.2. Requirements

5.3. Graphics

5.4.Proceeding

5.5. Effect size

5.6. Other contingency tables

5.7. Post-hoc

5.8. How to write

Theme 6. Quantitative associations: correlations

6.1. Presentation: correlations

6.2. Requirements

6.3. Graphics

6.4. Proceeding

6.5. Effect size

6.6. Partial Correlation

6.7. How to write

Theme 7. Comparisons i: T-test

7.1. Presentation: two group comparison

7.2. Requirements

7.3. Graphics

7.4. Procedure

7.5. Effect size

7.6. How to write

Theme 8. Comparisons ii: Anova one way

8.1. Presentation: comparisons of more than two groups

8.2. Requirements

8.3. Graphics

8.4. Procedure

8.5. Effect size

8.6. How to write

Theme 9. Comparisons iii: Anova two-way

9.1. Presentation: direct effects and interactions*

9.2. Requirements

9.3. Graphics

9.4. Procedure

9.5. Effect size

9.6. How to write

Theme 10. GLM

Theme 11. Other themes

11.1. Measure and sample theory

11.2 Experiment notes

Note: According to the evolution of Covid-19, other unforeseen (strikes...) or the achievement of the stated objectives, contentsmight be modified.

Methodology

1. Theoretical classes and exercises (quiz)

2. Practice Classes with Jamovi (quiz)

3. Vision of videos, readings and mental maps.

4. Tuition about the experimental project.

5. Gender issues will be considered.

6. The subject awaits a mature attitude of the student (not speaking to class, not using the mobile phone, etc.).

The calendar will be available on the first day of class. Students will find all information on the Virtual Campus: the description of the activities, teaching materials, and any necessary information for the proper follow-up of the subject.

Note: according to developments in Covid-19, other unforeseen or achievement of the objectives set, this methodology and/or timetable could be modified

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			
Practical exercises	37	1.48	1, 10
Theory	15	0.6	1, 10
Type: Supervised			
Tutoring, exercise review, etc.	7.5	0.3	1, 10
Type: Autonomous			
Data analysis, group work, video viewing, mind mapping, etc.	82.5	3.3	1, 10

Assessment

Evaluation activities are:

- Project (15% + 25%) = 40%

  Questionnaires: 20%

Theoretical tests (20% + 20%) = 40% (minimum mark to pass: 5 points in each test)

These percentages could vary depending on the development of the subject or contingencies (Covid-19, strikes…).

- The student will have the right to recover the assignment if it has been evaluated from the set of activities whose weight is equivalent to at least 2/3 of the total assignment rating.
- To be able to present for the assignment recovery, the 3.5-point note per test has to be obtained
- Activities excluded from the recovery process are: quizzes, mental maps (bonus) and the first poster of the project.

In the case of the second enrollment, the student will be able to perform a single synthesis test consisting of a theoretical and practical test. Assignment grade will correspond to the Synthesis Assessment grade.

In case the student performs any irregularity that can lead to a significant variation in the rating of an assessment act, this assessment act will be graded with 0 regardless of the disciplinary process that can be instructed. In the event of various irregularities in the acts of evaluation of the same subject, the final qualification of that subject will be 0.

The project will work on the gender perspective of the data.

Note: According to the evolution of Covid-19, other unforeseen or the achievement of the stated objectives, these tests could be modified

Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Projects (presentation)	40%	3	0.12	2, 1, 3, 7, 10
Quiz	20%	3	0.12	4, 9, 8, 5, 6, 10
Theoretical Tests	20%	1	0.04	1, 10
Theoretical test (inferential)	20%	1	0.04	1, 10

Bibliography

BIBLIOGRAFIA Jamovi

Badiella, L., Blasco, A., Boixadera, E., Valero, O., Vázquez, A.(2021). Manual de Introducción a Jamovi: una interfaz gráfica para usuarios de R. Barcelona: SEA (UAB).

Elosua Oliden, P., & Egaña, M. (2020). Psicometría aplicada. Guía para el análisis de datos y escalas con jamovi. EHU.

Navarro, D., & Foxcroft, D. (2019). Learning statistics with jamovi: A tutorial for psychology students and other beginners (Version 0.70). *Tillgänglig online: http://learnstatswithjamovi. com [Hämtad 14 december]*.

Quesada, M., Ajenjo, M., & Griera, O. (2021). MUJADES: Manual d'us de jamovi per anàlisi de dades en estudis socials. Barcelona: UAB.

Software

Jamovi (https://www.jamovi.org/)