
QUANTITATIVE TOOLS FOR STUDYING PEOPLE

**Grado en Comportamiento y Ciencias Sociales BBSS SEP-
2023 QTTSP-N-BS.1.M.A**

Area Human Resources and Organisational Behaviour

Number of sessions: 30

Academic year: 23-24

Degree course: FIRST

Number of credits: 6.0

Semester: 2º

Category: COMPULSORY

Language: English

Professor: **BORJA PAREDES SANSINENEA**

E-mail: bparedes@faculty.ie.edu

Professor: BORJA PAREDES SANSINENEA

E-mail: bparedes@faculty.ie.edu

His research interests are related to the fields of persuasion, group bonding, terrorism and psychometrics. His work has been published in referred international Journals of the field.

He got his Bachelor in Psychology from Universidad Autónoma de Madrid (2011) and his Master's Degree in Methodology of Social Sciences from Universidad Autónoma de Madrid (2013), where he collaborates as a researcher in different projects.

Borja obtained his PhD in Social Psychology at UNED in 2018. He is an adjunct professor at IE University, where he has taught courses such as "Human Intelligence", "Learning to Observe, Experiment and Survey", "Social Fundamentals of Behavior", "Motivation & Emotion", "Program Evaluation", "Persuasion & Negotiation", "Individual Differences", "Diagnostic Techniques", among others.

Office Hours

Office hours will be on request. Please contact at:

bparedes@faculty.ie.edu

SUBJECT DESCRIPTION

A large company asks you to pulse the opinion of its employees on their new online-work policy. A police department wants you to be in charge of implementing tools to reduce prejudiced judgments in their police officers. A crime investigator asks you to optimize the suspect interrogation processes. A tech brand wants you to measure the impact of their last marketing campaign on social networks. In all of these instances, an expert on human behavior with a quantitative mindset is needed. Quantitative Tools for Studying People is where you will acquire this mindset. This course completes your training in conducting research and you become a well-rounded behavioral researcher.

Quantitative Tools for Studying People is an intermediate course on quantitative research methods used in behavioral and social sciences. The course is designed to provide students with an understanding of the theoretical, methodological and applied approaches to quantitative research. In this class, students will explore the limits and possibilities of conducting and analyzing quantitative research. They will examine different approaches to the study of social life using methods such as surveys, observations, experiments and content analysis.

LEARNING OBJECTIVES

1. Learn the different phases in the completion of a particular research project along with the main research ethical principles.
2. Be able to spot the potential weaknesses or improvement areas of any given research project on human behavior.
3. Swiftly operationalize variables, and know which research design and data analysis strategy is best for any given project.
4. Evaluate the research process through classic quality standards within a quantitative paradigm (reliability, validity, generalisability, etc.).
5. Know the different features of research design in behavioral and data sciences in general (hypothesis testing, controlling for extraneous variables, inference of causality, generalizability of results, etc.).
6. Elaborate research reports with a structure and format similar to top scientific journals.
7. Communicate your research within academic standards, incorporating critiques to improve the research and address such concerns correctly.

TEACHING METHODOLOGY

IE University teaching method is defined by its collaborative, active, and applied nature. Students actively participate in the whole process to build their knowledge and sharpen their skills. Professor's main role is to lead and guide students to achieve the learning objectives of the course. This is done by engaging in a diverse range of teaching techniques and different types of learning activities such as the following:

Learning Activity	Weighting	Estimated time a student should dedicate to prepare for and participate in
Lectures	20.0 %	30.0 hours
Discussions	10.0 %	15.0 hours

Exercises in class, Asynchronous sessions, Field Work	22.0 %	33.0 hours
Group work	22.0 %	33.0 hours
Individual studying	26.0 %	39.0 hours
TOTAL	100.0 %	150.0 hours

PROGRAM

DISCLAIMER

The following description of the material covered is tentative. An attempt will be made to cover all listed topics. However; the pace in the classes will depend on the group performance.

SESSIONS 1 - 2 (LIVE IN-PERSON)

Introduction to Quantitative Research in the Social Sciences

This session will have one practical activity/assignment:

Participants will be required to formulate refutable hypothesis about the following short list of topics:

- Coffee in moderate amounts is very healthy
- Your Zodiac sign can tell you some true things about yourself
- Reiki sessions are able to realign your energies and make you feel better
- If you want to seduce the person you have a crush on, the best thing you can do is to play "hard to get"

This session will be a classic lecture in which we cover the following topics:

- Introduction to Quantitative Research in the Social Sciences
- Quantitative Research in the Social Sciences
- Concepts and their measurements
- The main preoccupations of quantitative researchers
- The critique of quantitative research

Suggested reading:

Book Chapters: SRM – Chapter 7 (See Bibliography)

SESSIONS 3 - 4 (LIVE IN-PERSON)

In these sessions, students will read part of a research paper (Gawronski & Bodenhausen, 2011) on the evaluation of theories and post their comments about it on a discussion board.

- Quantitative Research Design
- Research design
- Introduction to sampling
- Population and sample size
- Sampling techniques

Suggested reading:

Book Chapters: SRM – Chapter 8 (See Bibliography)

SESSIONS 5 - 6 (LIVE IN-PERSON)

These sessions will be a classic lecture in which we cover the following topics:

- Survey Design
- Type of questions
- Rules for designing questions
- Using existing questions

This topic will have one practical activity/assignment:

Students will have to create a real survey. The following short list of suggested topics is provided:

- Risks of college life (drinking, unprotected sex, drugs, etc.)
- Quality of IE University (facilities, classes, professors, program, career, etc.)
- Handling of the pandemic of different institutions (plans, implementation, communication, etc.)
- Attitudes towards vaccines (anti-vaccine movements, myths about vaccines, etc.)
- Gun rights & Abortion (gun control vs gun rights, pro-choice vs pro-life, etc.)

Suggested reading:

Book Chapters: SRM – Chapter 11 (See Bibliography)

SESSIONS 7 - 8 (LIVE IN-PERSON)

In this session, students will be asked to use a real database on R Studio (<http://www.worldvaluessurvey.org/WVSDocumentationWV7.jsp>) to analyze its results and draw conclusions from it.

- Survey piloting
- Coding
- Lawshe Index
- Cronbach's alpha
- Using R Studio

SESSIONS 9 - 10 (LIVE IN-PERSON)

Conducting survey project (project 1)

This first session will be dedicated to getting familiar with the survey software (i.e., Qualtrics). The class working as a group will decide on the questions included in the survey. Students will be asked to conduct a real survey and produce a report on a topic of their choice.

SESSIONS 11 - 12 (LIVE IN-PERSON)

Participants will be provided with a database of their survey to start analyzing results. Participants will have to start preparing a presentation of their conclusions.

- Observations
- Observing behavior
- The observation form design
- The observation schedule
- Sampling

This topic will have one practical activity/assignment:

Students will have to create a systematic code of observation designed to observe and detect lying behavior.

Suggested reading:

Book Chapters: SRM – Chapter 12 (See Bibliography)

SESSIONS 13 - 14 (LIVE IN-PERSON)

Presentation of project 1 (team work)

SESSION 15 (LIVE IN-PERSON)

Midterm

Book Chapters: SRM – Chapter 12 (See Bibliography)

SESSIONS 16 - 17 (LIVE IN-PERSON)

This session will be used to address the explanations that students came up with regarding the study they were presented with. Additionally, we will review the entire paper and discuss the explanations that the authors themselves provided.

Experiments

- What are the requirements to conduct an experiment?
- Selecting a sample
- How can we manipulate variables?
- Differentiating what happened from why it happened (Mediation)

This topic will have one practical activity/assignment:

Students will be shown a brief procedure and the results of a real study. They will be expected to generate explanations for the effects found and to come up with potential follow-up studies to put such explanations to the test. They will be asked to reason whether causality can be inferred from the results.

Book Chapters: SRM – Chapter 12 (See Bibliography)

SESSIONS 18 - 19 (LIVE IN-PERSON)

This session will be a classic lecture in which we cover the following topics:

Content analysis

- What are the research questions?
- Selecting a sample
- What is to be counted?
- Coding
- The internet as object of content analysis

Conducting content analysis (project 2)

These sessions are dedicated to field work on content analysis. Students are asked to conduct a comparative research analysis on social media and produce a report.

SESSIONS 20 - 21 (LIVE IN-PERSON)

Presentation of project 2 (team work)

SESSIONS 22 - 23 (LIVE IN-PERSON)

Review of real research projects with real data

- Correlational study/Survey
- Quasi-Experimental Study
- Experiment

This topic will have one practical activity/assignment:

Students will practice their role as potential evaluators of real research. They will be provided with a research manuscript and will be in charge of reviewing and writing up a response to the authors.

SESSIONS 24 - 25 (LIVE IN-PERSON)

Advanced Data analysis

- Two-factor and three-factor ANOVAs
- Multiple Regression
- Statistical significance
- Sensitivity and Specificity

This topic will have one practical activity/assignment:

Students will be provided with a real database taken from a real study. Their task will be to provide with exploratory results, as well as to provide the best possible data analysis for the generated hypothesis. Once they analyze the data, they will present their results to the rest of the class.

Book Chapters: SRM – Chapter 15 (See Bibliography)

SESSION 26 (LIVE IN-PERSON)

This session will be a classic lecture in which we cover the following topics:

Advanced Data analysis

- Factor Analysis
- Mediation, process macro
- Research report

Suggested reading:

Book Chapters: SRM – Chapter 15 (See Bibliography)

SESSIONS 27 - 28 (LIVE IN-PERSON)

Final report presentations

Students are asked to make an academic quantitative research report. Instructions will be given on sessions 5-6. This face-to-face session will be used to respond students' questions made to their classmates' presentations. Students will have the chance to address the questions/concerns that their classmates may have raised about their projects. Unlike the previous presentation in which students could prepare their responses in advance, students will have to respond to their classmates' questions instantaneously, similar to a real conference.

SESSIONS 29 - 30 (LIVE IN-PERSON)

General revision of the course and feedback on the final presentations

Final exam

EVALUATION CRITERIA

Your grade will be a composite measure of class participation, a final project, exercises, and the individual exams.

Written exams (individual): 30% of your grade. The midterm and Final exams take place at the midpoint and at the end of the course respectively and include all topics and readings covered in the course. The exams consist of a multiple-choice test where mistakes subtract half the points right answers add, with a maximum of 10 points. Students with a lower than 3.5 points grade in either exam will automatically fail the course.

Final Project (individual/teams): 30% of your grade. Each student will have to create and design a group research project based on the knowledge obtained in class. A further description of the potential projects will be provided the first day of class. Every project will be presented at the end of the subject.

Grades will be structured according the following criteria:

- Quality of the written contents: academic format, APA format, details, citations, sources. (25%)
- Quality of the research project: data analysis, measurement tools, hypothesis, design. (25%)
- Quality of oral presentation and power point presentation, as well as the capability to defend your work. Is it easy to follow and enjoyable to listen? (25%)
- Utility and relevance of the topic within the field: background, needs assessment, justification, limitations, dissemination. (25%)

Assignments: 20% of your grade. Different exercises (three different assignments) will be given to the students during the course. All students must present their exercises on time, and each exercise will be rated according to their quality.

Class participation: 20% of your grade. Participation in class will be evaluated via the completion of weekly in-class exercises.

Note that all written assignments will be submitted via Turnitin on Campus Online. No other submission method will be accepted.

criteria	percentage	Learning Objectives	Comments
Final Exam	30 %		Individual
Projects	20 %		Individual
Final Project	30 %		Group
Class Participation	20 %		Individual

RE-SIT / RE-TAKE POLICY

As per University Policy:

Each student has four (4) chances to pass any given course distributed over two (2) consecutive academic years. Each academic year consists of two calls: one (1) ordinary call (during the semester when the course is taking place); and one (1) extraordinary call (or "re-sit") in June/July.

Students who do not comply with the 80% attendance requirement in each subject during the semester will automatically fail both calls (ordinary and extraordinary) for that Academic Year and have to re-take the course (i.e., re-enroll) during the next Academic Year.

The Extraordinary Call Evaluation criteria will be subject to the following rules:

- Students failing the course in the ordinary call (during the semester) will have to re-

sit evaluation for the course in June / July (except those students who do not comply with the attendance rule, and therefore will not have that opportunity, since they will fail both calls and must directly re-enroll in the course during the next Academic Year).

- It is not permitted to change the format nor the date of the extraordinary call exams or deadlines under any circumstance. All extraordinary call evaluation dates will be announced in advance and must be taken into consideration before planning the summer (e. g. internships, trips, holidays, etc.)
- The June/July re-sit will consist of a comprehensive evaluation of the course. Your final grade for the course will depend on the performance in this exam or evaluation only. I.e., continuous evaluation over the semester (e. g. participation, quizzes, projects and/or other grade components over the semester) will not be taken into consideration on the extraordinary call. Students will have to achieve the minimum passing grade of 5 and the maximum grade will be capped at 8.0 (out of 10.0) – i.e., “notable” in the extraordinary call.
- Re-takers: Students who failed the subject on a previous Academic Year and are now re-enrolled as re-takers in a course will need to check the syllabus of the assigned professor, as well as contact the professor individually, regarding the specific evaluation criteria for them as re-takers in the course during that semester (ordinary call of that Academic Year). The maximum grade that may be obtained as a retaker during the ordinary call (i.e., the 3rd call) is 10.0 (out of 10.0).

After exams and other assessments are graded by the professor (on either the ordinary or extraordinary call), students will have a possibility to attend a review session (whether it be a final exam, a final project, or the final overall grade in a given course). Please be available to attend the session in order to clarify any concerns you might have regarding your grade. Your professor will inform you about the time and place of the review session.

- Students failing more than 18 ECTS credits after the June/July re-sits will be asked to leave the Program. Please, make sure to prepare yourself well for the exams in order to pass your failed subjects.
- In case you decide to skip the opportunity to re-sit for an exam or evaluation during the June/July extraordinary call, you will need to enroll in that course again for the next Academic Year as a re-taker, and pay the corresponding tuition fees. As you know, students have a total of four (4) allowed calls to pass a given subject or course, in order to remain in the program.

BIBLIOGRAPHY

Compulsory

- Bryman, A.. (2021). *Social research methods*. Oxford university press. ISBN 9780198796053 (Printed)

Recommended

- León, O. G., & Montero, I.. (2003). *Métodos de investigación en psicología y educación*. McGraw-Hill Interamericana. ISBN 9788448136703 (Printed)

- Mertens, D. M.. (2014). *Research and evaluation in education and psychology: Integrating diversity with quantitative, qualit.* Sage publications.. ISBN 9781412971904 (Printed)

BEHAVIOR RULES

Please, check the University's Code of Conduct [here](#). The Program Director may provide further indications.

ATTENDANCE POLICY

Please, check the University's Attendance Policy [here](#). The Program Director may provide further indications.

ETHICAL POLICY

Please, check the University's Ethics Code [here](#). The Program Director may provide further indications.